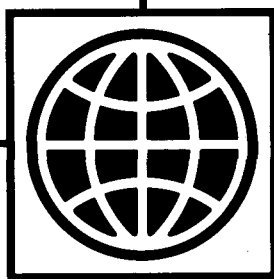


A WORLD BANK COUNTRY STUDY

11207

Russian Economic Reform

Crossing the Threshold of Structural Change



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Crossing the Threshold of Structural Change

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Washington, D.C.**

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Preface

The Russian Federation became a member of the World Bank on June 16, 1992. This report is based on the work of an economic mission which visited Russia in March-April 1992, and has been discussed with the authorities in September 1992. The mission wishes to thank the Russian authorities for their support and cooperation in providing information and data on the Russian economy as well as their comments on earlier drafts of the study.

The report was prepared by a team led by Paulo Vieira da Cunha and comprising Karen Brooks, David Craig, William Easterly, Qimiao Fan, Mari Horne, Gordon Hughes, Timothy King, Geoffrey B. Lamb, Ross Levine, Millard F. Long, Bertrand Renaud, David Tarr, and David Wheeler. The team received valuable contributions and background papers from Reza Amin, Mario Blejer, Mark Dutz, Victor Gabor, Douglas Galbi, April Harding, John A. Holsen, Masayuki Kondo, Ira Lieberman, Eric Nielsen, John Nellis, Richard Westin, and Dennis Whittle. Helpful comments, advice and contributions were provided at various stages in the preparation of the report by Alan Gelb and Sweder van Wijnbergen. Lev Freinkman, Vladimir Konovalov, Joelle Le'Vourch, Adrienne Nassau, Malvina Pollock, Enrique Rueda-Sabater, Martin Schrenk, Sergei Shatalov, Christine Wallich, and Kevin Young helped with the preparation of boxes, statistical material, and with the review of relevant aspects of the report. Mari Horne assisted in managing the task and in editing the report. Nimfa Campos, Shirlene Coward, and Kathy Hannum with the assistance of Prudence Lehaney were responsible for document preparation. Tatiana Frolova and Ksenia Datsko assisted the mission in Moscow. The work was carried out under the general supervision of Yukon Huang.

Though care and attention has been given to the use of statistical material, there are many difficulties in using Russian statistics. The report is based primarily on official data but where appropriate and necessary it also uses estimates provided by various research institutes and outside official agencies, notably the IMF.

Note on Transliteration

The transliteration scheme used in this report has been developed by the US Library of Congress Cataloguing Services. This scheme has been followed in all cases unless a word is widely known by some other transcription (e.g., Yeltsin instead of El'tsin), in which case the common usage has been adopted in the interests of ready identification.

Glossary of Abbreviations

AKKOR	- Association of Peasant Farms & Cooperatives in Russia
BAC	- Bank Advisory Committee
BCB	- Basic Cash Benefit
CBR	- Central Bank of Russia
CEE	- Central and Eastern European
CIS	- Commonwealth of Independent States
CIT	- Corporate Income Tax
CMEA	- Council for Mutual Economic Assistance
CPI	- Consumer Price Index
CSFR	- Czech and Slovak Federated Republic
DAC	- Development Assistance Committee
EC	- European Community
ECA	- Export Credit Agency
EBRD	- European Bank for Reconstruction and Development
FDI	- Foreign Direct Investment
FSU	- Former Soviet Union
G-7	- Group of Seven Industrial Nations
GKAP	- Russian State Committee for Antimonopoly Policy and Promotion of New Economic Structures
GKI	- The State Committee for the Management of State Property
GOR	- Government of Russia
Goskomstat	- State Committee on Statistics
Gosplan	- State Planning Committee
Gossnab	- State Committee of Deliveries and Supplies
IC	- Interstate Council for Debt Servicing & Utilization of Assets
IFC	- International Finance Corporation
IFIs	- International Financial Institutions
IMF	- International Monetary Fund
ISB	- International Standards Bank
ISIC	- International Standard Industrial Classification
JSSE	- The Joint Study of the Soviet Economy
JSC	- Joint-stock company
LLC	- Limited Liability Company
MFA	- Ministry of Foreign Affairs
MIC	- Military-industrial complex
MLT	- Medium and long-term
MOU	- Memorandum of Understanding
MPP	- Mass Privatization Program
NGO	- Non-Government Organization
NIC	- Newly Industrialized Countries
NMP	- Net material Product
NPO	- Scientific Production Association
OECD	- Organization for Economic Cooperation and Development

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PA	- Producing Association
PSD	- Private Sector Development
PTA	- Preferential Trade Area
SME	- Small and medium-sized enterprises
SOE	- State Owned Enterprise
STO	- State Trading Organization
TCP	- Technical Cooperation Program (of the World Bank)
THA	- Treuhandanstalt
UNICEF	- United Nations Children's Fund
VAT	- Value-added tax
VEB	- Bank for External Affairs of the USSR
WHO	- World Health Organization
WPI	- Wholesale price index

CURRENCY EQUIVALENTS

RUBLES PER \$

Period	Official exchange rate (Average)	Auction/ MIFCE rate (Average)
1987	0.6328	n.a.
1988	0.6080	n.a.
1989	0.6274	8.9
1990	0.5856	18.8
1991	0.5819	59.0

	(End of Period)	(End of Period)
December 1991	0.5571	169.2
January 1992	n.a.	230.0
February 1992	n.a.	139.0
March 1992	n.a.	160.3
April 1992	n.a.	143.5
May 1992	n.a.	113.0
June 1992	n.a.	144.0
July 1992	n.a.	161.2
August 1992	n.a.	205.0
10 September 1992	n.a.	203.0

GNP per capita in US\$ in 1991	3,200
General	
Area (1,000 sq. Km)	17,075
Population, 1990, mid-year (millions)	148.3
Growth rate, 1980-90 (percent)	0.4
Density, 1990 (per sq. km)	8.7
Social Indicators	
Population characteristics	
Crude birth rate, 1989 (per 1,000)	14.8
Crude death rate, 1989 (per 1,000)	10.7
Health	
Infant mortality rate, 1989 (per 1000 live)	17.9
Population per physician, 1988	213.0
population per hospital bed, 1988	73.0
Live expectancy at birth, 1989	69.6
Income distribution (% of nation income)	
Highest quintile	NA
Lowest quintile	NA
Distribution of land ownership	
% owned by top 10% of owners	NA
% owned by smallest 10%	NA
Access to safe water 1/	
% of urban population	77
% of rural population	65
Nutrition 1/	
Calories per day	3,386
Per capita protein intake (grams per day)	106
Education 1/	
Primary school enrollment (% of relevant age group)	106
Secondary school enrollment	98
Colleges, universities, specialized schools	NA
Pupil-teacher at primary school	9

1/ United Nations' estimates for the USSR.

Gross Domestic Product

	Current prices (billion rubles)		Real Growth Rates (annual % change)		
	1989	1990	1989	1990	1991
GDP at market prices	573.1	626.3	2.1	0.0	-13.0
Total consumption	366.9	424.8	NA	NA	-3.9
Private consumption	251.8	290.3	NA	NA	-10.2
Government consumption	115.3	134.5	NA	NA	9.8
Gross domestic investment	201.1	205.2	NA	NA	-30.1
Fixed investment	190.7	195.5	4.1	0.1	-26.0
Change in stocks	10.4	9.7	NA	NA	-112.6
Net exports	5.1	-3.7	NA	NA	78.4
Gross domestic saving	206.2	201.5	NA	NA	-32.1

Sources: Roskomstat, CISKomstat and IBRD estimates.

Output, Employment and Productivity

	GDP in 1989		Employment in 1989 3/		GDP per worker	
	bin rbls	% of total	thousan	% of total	rubles	% of average
Agriculture 1/	89.4	15.6	11,545	15.5	7,744	100.7
Industry 2/	267.0	46.8	29,489	39.8	9,054	117.7
Services	216.7	37.8	33,466	44.9	6,475	84.2
Total/Average	573.1	100.0	74,500	100.0	7,693	100.0

Sources: Roskomstat, CISKomstat and IBRD estimates.

Notes: 1/ including forestry. 2/ including construction. 3/ State employment only.

	Consolidated General Government, 1991	
	bln rbl	% of GDP
Total revenues	316.4	28.0
Total expenditures	665.7	68.9
Overall balance	-349.3	-30.9

Sources: Ministries of Finance of the former USSR and Russia; IMF.

Note: Expenditures include net lending through the Central Bank.

Money, Credit and Prices

	1990	1991
Money supply (bln rbl) 1/ 2/	510	1,201
Money and quasi-money as % of GDP	NA	75.7
Net credit to Government 2/ 3/	68.4	-11.7
Credit to enterprises and households 2/ 3/	45.8	62.9
Retail price index of goods (annual % change)	5.6	90.4
Industrial wholesale prices (annual % change)	3.9	138.1

1/ Currency and demand deposits from the monetary survey.

2/ At the end of year.

3/ As a percentage of money supply.

The balance of payments

Preliminary estimates

All currencies, but excluding inter-republic trade

(Billions of \$ at current prices)

	1990	1991
(a) Current Account		
Total Merchandise Exports FOB	82.6	53.1
Oil and Gas	36.7	19.4
Gold	1.7	2.2
Other Exports	44.2	31.5
Total Merchandise Imports CIF	82.9	45.1
Non-Interest Services	-1.3	-1.9
Non-Interest Current Account Balance	-1.8	6.1
Interest Payments	-2.9	-2.7
Current Account Balance	-4.5	3.4
(b) Capital Account		
Scheduled Amortizations	-4.9	-5.0
Net Other Capital Flows including "Inter-republic Residuals"	-2.5	1.1
Net Change of Arrears	2.7	-0.1
Changes in Reserves	9.2	0.6

::

X Country Data

Composition of Exports and Imports in 1989 (billion of rubles)

	Overall		Inter-Republic		Extra-Republic		Overall	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
	At world prices						In % of total	
Oil and gas	43.9	4.5	22.2	3.5	21.7	1.0	31.2	4.1
Ferrous metallurgy	8.4	10.0	6.7	7.3	1.7	2.7	6.0	9.2
Non-ferrous metallurgy	7.8	4.0	4.8	2.3	3.0	1.7	5.5	3.7
Machinery and Metal works	53.5	52.4	34.7	27.1	18.8	25.3	38.0	48.2
Chemicals and Petroleum	8.7	8.7	6.9	4.5	1.8	4.2	6.2	8.0
Sawmill and Lumber	4.9	1.4	2.5	0.3	2.4	1.1	3.5	1.3
Other	13.7	27.8	10.6	15.0	3.1	12.8	9.7	25.8
Total	140.9	108.8	88.4	60.0	52.5	48.8	100.0	100.0

Source: Goskomstat of the Russian Federation.

Rates of Exchange

End of period

(Ruble per U.S. dollar)

	1989	1990	1991	1992	1992	1992	1992	1992	1992
				January	February	March	June	July	August
Commercial/special commercial	0.627	0.59	1.7	55	55	55	126	NA	NA
Quasi market	NA	NA	110	110	90	100	126	NA	NA
Auction/Moscow Inter-Bank FCE	8.92	22.88	169	230	170	160	144	161	205
Tourist	NA	NA	108	120	94	135	141	NA	NA

Sources: USSR Gosbank; Central Bank of the Russian Federation; and Commersant.

External Debt of the Former USSR 1/

End of period

(US\$ Billion)

	1989	1990	1991
Total Outstanding	54.5	61.1	65.3
Medium and Long Term	36.5	46.0	52.9
Official Creditors	NA	NA	21.9
Commercial Banks	NA	NA	24.7
Bonds	NA	NA	1.7
Suppliers' Credits	NA	NA	4.6
Short Term	18.0	15.0	12.4
Arrears	0.5	1.0	4.9

Source: Vneshekonombank.

1/ A memorandum of understanding (October 1991) commits all former republics, including Russia, to be jointly and severally liable for the debt of the former USSR. A debt allocation treaty (December 1991) allocates 61 percent of the debt of the former USSR to Russia.

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Executive Summary

1. The Russian Federation has initiated an unprecedentedly broad, complex and difficult process of economic reform. Moreover, the process must be carried on from a position that is decidedly unfavorable. By mid-1992 the cost of living had increased over tenfold compared with the same period of the previous year, most of which had occurred after the liberalization of prices at the start of 1992. Real output has continued to fall and is estimated to be 15 percent below the level of mid-1991 (which itself represented a substantial drop from 1990). Progress in economic reform is complicated by the political uncertainties and tensions following the break-up of the former Soviet Union during 1991. The Government is faced with the need for urgent stabilization measures in a situation where the usual instruments of macroeconomic policy, as well as the Government's ability to control the actual implementation of policies, are painfully weak.

2. In this volatile situation, slippages and missteps can be expected and have occurred. The overall structure of the reform program, however, has moved forward on a continuing, though uneven, pace. The Government is now reaching a stage where its commitment to the reform program will be severely tested. With the exception of price liberalization, implementation of structural and institutional reforms has lagged and needs to be accelerated. This increases the danger that fiscal and monetary management will be unable to resist the pressures for a major relaxation. The risks are immense, and possible outcomes include a slide into hyperinflation, a decline in output to an unsustainable level, or both, along with the political implications of the failure of the economic reform process. In order to avoid these outcomes and reap the benefits of the reforms already undertaken, the Government needs to set clear priorities among future policy measures. In this report, these actions are identified as:

- Financial stabilization based on a sharp reduction of the fiscal deficit;
- Acceleration of enterprise reform, including (but not restricted to) rapid privatization of existing enterprises;
- Establishment of a social safety net to protect the population most affected by reforms;
- Reducing impediments to trade between enterprises, especially across the territory of the FSU, in order to expand markets and improve input supplies for the enterprises concerned;
- Prompt implementation of reforms in the oil and gas sector and the food sector to reverse the decline in production; and
- Mobilization of external financing resources on the order of \$20 billion a year for the next few years in support of the reforms.

The Roots of the Macroeconomic Crisis (Up to Mid-1992)

3. Several factors over the past five years have contributed to the severe macroeconomic imbalances currently faced by the Russian economy. The Law of State Enterprises was to have signalled

the start of the transition to a market economy as of 1988. Instead, in the absence of clear ownership rights backed up by hard budget constraints, the enterprises responded by increasing wages rapidly and financing them through soft loans and budgetary subsidies. With the removal of restrictions on foreign borrowing, state enterprises began to contract external debts that subsequently went into arrears, marking the first break in the previously impeccable repayment record of the former Soviet Union (FSU).

4. A second set of problems resulted from the political tensions between the Union-level government and the republican governments under the previous regime. Following the delegation of expanded fiscal powers to the republics in 1990, the republican governments, especially Russia, began to withhold revenues from the Union government, as well as to offer tax concessions to induce enterprises to shift from Union to republican jurisdiction. As a result, the consolidated fiscal deficit of the FSU soared to 26 percent of GDP by the end of 1991. Russia's own deficit measured 31 percent of GDP, one of the largest government deficits on recent record. This deficit was financed almost entirely through monetary expansion.

5. A final factor was the breakup of the Council of Mutual Economic Assistance (CMEA) and disruptions in inter-republican trading patterns within the FSU. Russian imports from non-FSU sources (primarily the CMEA) fell by 46 percent in 1991, with selected critical imports such as machinery showing volume declines of close to 50 percent. While data on trade with other FSU states is more sketchy, available sources indicate a fall of 46 percent for imports in 1991 and 29 percent for exports. A further contributing factor was the disruption of established linkages between enterprises under the old regime, including the facilitating role played by the party organization. The most important factors in the recent decline in output, estimated at 9 percent for 1991, are the collapse in trade and the breakdown of enterprise ties, rather than the macroeconomic policies pursued by the Soviet Union. In 1992 price increases, accompanied by a decline in real wages, have resulted in reduced effective demand for many consumer goods. Declines in demand have also been important in the case of military goods and investment activities.

6. In the face of the rapid deterioration of the macroeconomic environment during 1991 and the breakup of the Soviet Union, the Russian Government initiated an ambitious program of macroeconomic stabilization at the beginning of 1992. The centerpiece of the reform program was a sweeping liberalization of prices. About 80 percent of wholesale prices and 90 percent of consumer prices were freed on January 2, 1992, with most remaining consumer prices liberalized on March 7. In the budgetary sector the liberalization of prices was accompanied by increases in social benefits and a 90 percent increase in wages to partially compensate for the expected increase in the cost of living. For the same reason, average wages in the industrial sector more than doubled between November 1991 and January 1992.

7. The inflation that followed was greater than had been expected. There was a nearly ninefold increase in wholesale prices during the first two months of the year, and a fivefold increase in retail prices during the first three months. Price increases eliminated the monetary overhang almost at the start of the program. Nevertheless, price increases have continued at a very rapid pace, with total inflation for calendar 1992 now expected to be in the range of 1500 percent. This is substantially in excess of the inflation experienced by other reforming socialist economies; Poland, for example, experienced inflation of 250 percent in 1990.

8. The explanation for the large and continuing pressure on prices appears to lie in the interaction of monetary and institutional factors. The desire of individuals and enterprises to decrease

their real money balances is understandable in the context of rapid inflation. The general lack of financial instruments other than cash and the unattractive terms for existing monetary assets (for example, interest rates for one-year deposits were 10 percent in nominal terms), further contributed to the flight from money and the decline in real money balances. This fall in the real stock of money was necessarily accompanied by a roughly equivalent fall in the real stock of working capital credit available. Many firms found themselves in growing financial distress and sought to strengthen their own financial positions by raising their prices in the expectation of further inflation—a process that seemed feasible for many individual firms because of the lack of competitive markets, but which had the net effect of adding to the overall rate of inflation.

9. Enterprise managers preferred adding to appreciating inventories rather than holding depreciating cash balances; moreover, traditionally they had been held responsible only for meeting output goals without worrying about how production was to be financed. The contraction in real credit from the banking system was in substantial measure offset by a rapid increase in inter-enterprise arrears, which rose from 39 billion rubles in early 1992 to around 2.5 - 3.0 trillion rubles by July; since that time inter-enterprise arrears appear to have been reduced, but only at the cost of a large expansion in credit from the banking system. The problem of getting credit under control, without placing an unacceptable squeeze on output and employment in the enterprise sector, is not yet resolved. The solution will require strictly limiting credit for the budget (and closely related extrabudgetary activities).

10. Fiscal policy was generally tight during the first half of 1992, with one major exception. A large amount of foreign financing previously contracted under the FSU was passed on to enterprises at highly subsidized exchange rates (generally around an exchange rate of 20 rubles per dollar, as compared to an average exchange rate on the Moscow currency exchange of 155 rubles per dollar for the first half of 1992). These implicit import subsidies contributed significantly to the overall fiscal deficit of 19 percent of GDP during the first half of 1992. Import subsidies have been substantially reduced with the unification of the exchange rate on July 1 (to be replaced in some instances by direct budgetary transfers); this will increase the financial pressure on enterprises that previously had access to subsidized imports. Moreover, new budgetary pressures, including the payment of arrears on domestic and foreign interest and debt and a possible deterioration of local government finances, are expected to put strong pressure on the budget deficit during the second half of the year.

11. Following a very tight monetary stance in January 1992, there was a surge in money creation in February and continued expansion in the money supply through May at the rate of approximately 30 percent of estimated monthly GDP. The expansion of domestic credit took place largely through the actions of the commercial banks, as net credit from the Central Bank to the banking system actually fell during this period (due to an increase in required reserves) and net foreign assets held by the banking sector increased. This situation demonstrates the serious problems faced by the Central Bank in managing monetary policy. Many of the commercial banks are owned by state enterprises and operate without regard to either commercial principles or prudential regulations. In this situation, while monetary policy must support the stabilization program, it cannot be relied on as a primary instrument of macroeconomic policy.

12. While the primary focus of the Government has been on macroeconomic stabilization during the first half of 1992, progress has continued on the preparation of systemic reforms necessary for the longer-term restructuring of the Russian economy. For example, the Privatization Program for 1992 was approved by the Supreme Soviet in June, a Presidential Decree on bankruptcy was issued on June 14, and another recent Presidential Decree requires that all large-scale enterprises (other than joint

ventures and enterprises which are privatized directly) be established as joint stock corporations by November 1 as a first step toward privatization. Also in June, the Government completed a draft medium-term program that looks beyond the immediate problems of macroeconomic stabilization toward measures required to achieve sustainable economic growth. A final version will be forwarded to the Supreme Soviet this fall. Work is proceeding on the design of social protection programs to deal with impending increases in unemployment. Thus, much of the preparatory background work has been completed for moving to the next stage of the reforms.

13. Despite the rapid changes in the economy during the first half of 1992, so far the decline in consumption has been socially and politically manageable. Much of the reduction in output has no doubt taken place as a consequence of reduced military and investment expenditures rather than consumption expenditures. However, data on industrial production by sub-sector show significant declines in production of both durable and non-durable consumer goods in 1991 and continuing into 1992. Despite the rapid increase in prices, a large part of the compensation package (such as housing and other non-wage benefits) has been immune to inflation. Real wages, following a rapid decline in January 1992, have now returned to roughly the level prevailing in 1987. Indeed, most of the increase in wages since 1987 could not be used for consumption because of supply constraints. The result was a build-up of unwanted monetary balances. Consequently the impact of price liberalization has been felt largely through a loss of future claims on consumption, rather than a reduction of current living standards.

14. Notwithstanding the large drop in output during 1991, employment fell by only about 1 percent. The economic decline has been largely reflected in declining labor productivity and real wages, rather than growing unemployment. While these developments have meant that the population at large has accepted the first phase of the reforms with remarkable patience, the scope for relatively painless adjustments has been exhausted. The next phase of economic reforms, if they are to be effective, will have to address the problems of labor force and industrial restructuring. Substantial increases in unemployment and idle plants and equipment seem inevitable. An adequate social safety net is essential to ease the pain for workers and their families. And the phasing out of unnecessary and grossly inefficient capacity should be accompanied by measures to promote new activities and to overcome impediments to continued and expanded output by viable enterprises.

The Medium-Term Outlook

15. The Government's recent agreement on an IMF First Credit Tranche Arrangement and the World Bank's Rehabilitation Loan indicate a political will to move ahead with the reform program, notwithstanding recent setbacks (most notably, the expanding fiscal deficit). However, the Government will face difficult decisions in the near future, just as opposition to the reforms is growing as their implications become clearer. At the same time, the room for maneuver is shrinking, and the cost of slippages may rise sharply, given the unsettled condition of the economy. The Government must therefore act decisively to establish the credibility of the reform program. The most important policy choices are outlined below under the categories of: a) stabilization policies; b) systemic reforms, including the social safety net; c) sectoral reforms; and d) institutional strengthening.

Stabilization policies

16. Macroeconomic stabilization is the fundamental anchor for economic reforms. It remains, however, elusive in the current Russian context. The options for macroeconomic policy are limited.

Enterprises with soft budget constraints and an undisciplined and unsupervised financial system severely undermine the disinflationary effects of monetary policy. Fiscal adjustment must be the cornerstone of financial stabilization—and the challenges for sustained fiscal retrenchment are enormous. With price liberalization many if not most consumer subsidies were eliminated. Subsidies to producers remain, however, and they should be rationalized and, where appropriate, extended in a clearly transparent and transitory basis. Relatively easy cuts in defense expenditures and low priority investment projects have already been accomplished. Yet more needs to be done in this regard. Ultimately, fiscal adjustment hinges on the ability of the Government to stop financing enterprises—either directly, through hidden subsidies, or through the banking system. But there are limits to the extent of expenditure cuts. Basic social programs should be protected and essential operations and maintenance expenditures are already severely underfunded. Fiscal adjustment must therefore rely also on improvements in revenues.

17. The key to improved fiscal revenues is targeting. Although the entire revenue system needs to be overhauled, short-term gains are most likely to come from clearcut reform in energy pricing and taxation. Increases in energy prices, which are currently only a fraction of world prices, can yield a substantial increase in revenues for the budget, as well as improve economic efficiency in the use of natural resources. Domestic energy prices should move to world levels over the next few years. In the meantime, transitory export taxes can be used to capture for the budget the difference between domestic and world prices on that portion of production which is exported to non-ruble area countries. The transitory export tax should be the only "wedge" between domestic and world prices, thus making it possible to eliminate internal price controls on and administrative allocations of crude oil and petroleum products. This transition period should also be used to introduce a tax regime based on profitability (rather than output or gross receipts) that does not penalize higher cost producers. Increases in energy prices will serve both short-term stabilization and the longer-term development needs of the energy sector to expand exports. Such increases are therefore an indispensable part of any realistic economic reform program.

18. Monetary policy is at present a weak tool for economic stabilization. The range of financial assets held by the public is very limited and there is little control on credit expansion by the commercial banks. The payments system is inadequate and inefficient, and there is still no agreement on coordinated monetary policy among the states remaining in the ruble area. Given the unexpectedly high rate of inflation experienced so far in 1992, the targets for monetary expansion must be conservative—and the path of monetary expansion must be monitored closely. A reasonable real level of credit for the enterprise sector will be possible if, and only if, borrowing by the budgetary sector is strictly limited. Actions to further strengthen monetary discipline, such as the achievement of real positive interest rates by the end of 1992, need to be given high priority.

19. A credibly tight monetary stance should be based on accelerated progress on enterprise reform. A restrictive credit policy which is independent of policies to further enterprise adjustment is likely to encounter strong political opposition and be abandoned. It could lead, again, to a buildup of inter-enterprise credits that would be replaced by a generalized bailout of state enterprises. Stop-and-go policies are devastating to the credibility of the monetary stance and raise expectations that credit discipline will be eased, undermining the incentives for enterprise reform. Achieving an appropriate balance between these two extremes may be one of the most important, as well as the most difficult, problems facing the Russian authorities. After the sharp contraction in the first half of the year, some recovery in real credit (accompanied by a reduction in inter-enterprise arrears) is essential, but it needs to be linked to enterprise restructuring in a clear and coherent manner. Attempts to resolve the stock problem of inter-enterprise arrears without determined efforts to address the new flow of inter-enterprise

credits are bound to be counter-productive. Financial institutions are weak, and credit is often allocated in non-transparent ways without regard to creditworthiness or the capacity of businesses to repay the loans. To further reform, credit should be allocated in a way that links new resources—and especially debt write-offs—with progress in enterprise restructuring and privatization. A large number of enterprises will remain non-competitive in the foreseeable future. Attempts to produce mass closures through tight credit allocations would backfire. Rather, the Government should consider a policy of explicit subsidization of a number of money-losing enterprises—through the budget and with a clearly defined ceiling and path of diminishing subsidies.

20. The Government has established a target of reducing inflation to less than 10 percent on a monthly basis by the end of 1992. In order to accomplish this objective and provide for some increase in real credit to the enterprise sector, there must be both fiscal adjustment and an increase in confidence in the ruble as a store of value (as evidenced by an increase in the demand for real cash balances in anticipation of continued disinflation in 1993). This implies that the credibility of the monetary program, which can be established in part through a large initial drop in inflation in the near future, is essential at this stage. The program would still be successful if it takes a somewhat longer period—up to two years—to reduce inflation to low single-digit levels on a monthly basis. Indeed, a gradual reduction in inflation would facilitate the large corrections in relative prices that are still required for energy, urban rents and services and food.

Systemic reforms

21. *Enterprise reform.* While enterprise reform and macroeconomic stabilization have tended to be viewed as independent processes, it is clear that neither objective can be achieved without the other. Without reform, enterprises will resist and ultimately undermine the monetary/fiscal stance. Conversely, a credible stabilization program is necessary to provide the signals and incentives for enterprises to carry out the restructuring process. There are several stages involved in the enterprise reform process, which have been spelled out in detail in the recently announced Privatization Program for 1992. It is essential to make rapid progress on the resolution of fuzzy ownership rights, so that owners and managers begin to take responsibility for the restructuring process, rather than relying on outside factors (including government subsidies) to direct the process for them. Privatization must be the driving force for this process, but it will take time, especially in the large-scale industrial and state farm sectors. Hence the urgency of moving ahead very forcefully with small-scale privatization, where more rapid progress is possible. *Privatization of wholesale and retail trade, and of related transport services, can go a long way towards creating the structure of competitive markets that is an essential part of the reform program.* It is vital to give managers and the workers' collectives a clear and unambiguous signal that reforms are forthcoming and that they are unavoidable, even if the timing is unclear. For this, it is crucial to proceed with corporatization and the launching of a privatization drive throughout the economy.

22. The approach to privatization chosen by the Government can be described as "bottom-up", in that it relies on a clearly defined set of incentives for all participants, including workers, managers, local authorities, and the population in general, to participate in the privatization process on a voluntary basis. The choice of this approach is both pragmatic and conceptually sound. It recognizes several critical constraints on the privatization process. These include the large number of enterprises to be privatized; the strong vested interests of managers, workers and local government authorities that can block the process of privatization; and the very limited capacity of the current institutions to administer a program of privatization on a centralized basis. Moreover, it recognizes that speed is of the essence. Past reforms have allowed enterprise managers to assume *de facto*, if not *de jure*, control over state enterprises, a

process generally referred to as spontaneous privatization. Unless official privatization gets under way very soon, there may be little left to privatize in practice.

23. The Privatization Program for 1992 specifies three separate tracks for privatization, depending on the size and nature of the enterprise. Small-scale enterprises, such as those engaged in wholesale and retail trade, construction, agriculture, food and trucking, will be sold through competitive auctions. Medium-scale enterprises and many large-scale enterprises will be converted into joint stock companies ("corporatized") and their shares sold to bidders through competitive auctions or trade. Significant employee participation will be encouraged through the distribution of non-voting shares and options for employee buyouts. Because of rapidly spreading spontaneous privatization and the many conflicting ownership claims on state-owned enterprises, however, the centerpiece of this program will be a scheme for mass privatization through tradable vouchers. The mass privatization program will begin implementation before the end of 1992, and is intended to speed up the privatization of large and medium-sized firms, build political support for the program, and improve equity through the widespread distribution of shares to the general populace. Despite its ambitious objectives, the first step of the program, which involves mass corporatization, appears to be well underway.

24. Finally, the program recognizes that very large-scale enterprises and those with special characteristics will have to be treated on an individual basis. A demonstration group of 5-10 such enterprises will be selected for the initial round of restructuring proposals, with investment advisors to be appointed by the end of 1992. For enterprises that are expected to remain in the public sector for an extended period, the Government is reviewing options to improve corporate governance, including the establishment of an arms-length relationship between government agencies and the Boards of Directors appointed to oversee the enterprises on behalf of the Government.

25. Simultaneously with privatization, it will be necessary to develop the legal, regulatory and institutional framework for a competitive market economy. Enterprise reform needs to be accompanied by a suitable legal code and institutions for its implementation. The recent Presidential Decree on Bankruptcy is an important step in this direction, and it ought to be passed into law by the Supreme Soviet at the earliest possible time. In addition, the civil code is being revised to incorporate modern principles of contract law and define the nature and transferability of personal property rights. Laws on enterprises, joint stock societies, and partnerships are also being revised. It is expected that draft laws on these matters will be presented to the Supreme Soviet for approval by the end of 1992.

26. The existing structure of enterprises is characterized by a high degree of concentration and vertical integration, especially in manufacturing, domestic trade (procurement, wholesale and retail distribution) and parts of the agricultural sector. This is particularly true at the regional level, where many state enterprises are effectively monopolies. The Government has adopted an open trade regime that will provide some degree of competition through imported goods; however, the effectiveness of this strategy is likely to be rather limited for a number of years to come, given the compressed level of imports that is likely to persist in the medium term. A more active approach to pro-competition and anti-monopoly policies is therefore needed during the course of enterprise reform. Large enterprises should be corporatized (and thereafter privatized) at the level of the smallest existing legal entities. Consideration should be given to "fracturing" large enterprises along the lines of more competitive groupings, especially for different stages of production. Existing regulations that limit competition need to be eliminated, such as *ex ante* controls on prices (except where needed as part of the regulatory system for natural monopolies) and profile restrictions which limit firms to particular product lines. Investment trusts should be required to hold diversified portfolios, rather than concentrating holdings in companies

engaged in the same activity. Concerns, associations and other forms of anti-competitive organizations (many of which are based on the former branch ministries) need to be curtailed as regards the types of activities they can engage in. Finally, the Government needs to take an active role in promoting new private enterprises, which can provide a dynamic source of competition for existing firms as well as a source of new employment.

27. Foreign direct investment can make a significant contribution to economic restructuring over the medium term, especially in areas where foreign partners can contribute improved technology and management know-how to increase efficiency and product quality. The most important incentives that the Government can offer to attract foreign investment are a stable macroeconomic environment and strictly non-discriminatory treatment with respect to taxation, repatriation of dividends and profits, and access to needed inputs (including land). Foreign investors should be encouraged to participate in the privatization of medium and large scale enterprises, including providing promotional information on prospective investment opportunities.

28. *Financial sector reforms.* The reduction in state control over financial institutions in recent years has not been sufficient to create a system that is capable of supporting a thriving market economy. Banks are issuing loans to enterprises that would not be considered creditworthy in a market-based system. Since the economic environment is fraught with uncertainty and misinformation, financial institutions have difficulty in distinguishing creditworthy from uncreditworthy enterprises. Moreover, even when such distinctions are clear, there are political pressures and public policy incentives to finance uncreditworthy enterprises. The ownership structure of the financial system is exacerbating this problem. Much lending is being done to enterprises and cooperatives that own the banks. In fact, many new banks have been founded with the sole objective of raising funds for their owners. Compounding the ownership problems, the financial infrastructure is inadequate. The current legal codes and enforcement mechanisms, and the payments, accounting, auditing, and bank supervision systems are not adequately developed to support a market economy. Consequently, much present lending is neither competitive nor market-based, resulting in resource misallocation and bank insolvency.

29. Although some immediate steps can be taken to bolster the financial infrastructure, such as improving the ownership structure of banks and encouraging better credit procedures, many financial sector difficulties reflect the complex, interconnected adjustment challenges facing the real sectors of the economy. Put bluntly, the major problem facing the reform of the financial sector is that there are too many large, loss-making state enterprises. However, enterprise reform in Russia will not be instantaneous, and the coexistence of two types of firms—those that operate on market principles and those that operate under "transitional" arrangements—will be inevitable. These loss-making enterprises will have to be financed during the transition. The issue then becomes how will the economy fund the losses.

30. There are basically three mechanisms by which to finance loss-making state enterprises: direct budgetary outlays, bank credit, and inter-enterprise arrears. While direct government subsidies offer the most appropriate and transparent form of finance, political reality suggests that direct budget outlays will not be the only mechanism used to finance loss-making enterprises. To the extent that the banking system is used as a vehicle for financing loss-making firms, it should be recognized that the banking sector is simply an intermediary sector; it can facilitate economic activity, but the financial sector does not have its own pool of resources for the economy to tap when financing loss-making enterprises. Central Bank credit can be funnelled through the banking system to loss-making enterprises, which involves inflationary finance through credit creation. If the banking system allocates household savings

to loss-making firms instead of more profitable enterprises, the losses are likely to be passed on to households in the form of negative real interest rates, which in turn will discourage intermediated savings.

31. There is therefore a critical problem of sequencing and coordinating financial sector reforms with enterprise reform. Faster enterprise reform will permit faster, more fundamental financial sector reforms. The less the financial system is used to finance loss-making firms, the more opportunities there will be to establish a profitable, market-oriented financial system. A major policy challenge will be to encourage the development of stable, private-sector-oriented financial institutions, uncontaminated with bad loans to state-owned enterprises, which will be still capable of financing some loss-making enterprises during the transition.

32. The highest priority should go to establishing a strong Central Bank. The steps required are straightforward, though far from simple to implement. The Central Bank should have unambiguous objectives in terms of credit and regulatory policy, and sufficient independence, authority, and resources to pursue price stability and sound bank regulation. Meeting the reasonable credit requirements of industry, agriculture and commerce within the overall ceiling for monetary expansion will, of course, require careful management of financing budget deficits by the monetary system. The Central Bank's system for collecting, reviewing and publishing commercial bank data needs to be developed; and the Central Bank needs to improve its on- and off-site banking supervision capabilities.

33. Regarding the remaining financial institutions, the system today is in a state of too much flux to move to a comprehensive solution. Intensified bank supervision and regulation and tightening bank licensing procedures will not be able to resolve risky banking practices or correct inappropriate ownership structures. Moreover, while appropriate regulations can be written, the Central Bank has neither the staff nor the authority at present to force the banks to comply with its mandates. In this situation, it is better to focus on feasible next steps, while pushing forward rapidly with the problem of enterprise reform. Work has already begun on bolstering Russia's financial infrastructure, including drafting a new banking law, upgrading the accounting system, training accountants, auditors and financial specialists, developing prudential regulations, strengthening the Central Bank's supervisory capacity, and improving the ability of the courts to enforce contracts. Improvements in the payments system within Russia and with other countries, as well as the development of well-functioning securities markets and inter-bank and foreign exchange markets, are necessary and useful activities at this stage. Interest rate liberalization is also needed, both for the development of the financial sector and to strengthen the stabilization program. Finally, incentives should be provided to assist banks that are willing and able to meet international standards of prudential operations and provide high quality financial services, in order to separate them from other financial intermediaries that can not or do not wish to comply. These actions will help lay the groundwork for a more comprehensive approach to financial sector reform to be undertaken when the process of enterprise reform is further advanced and the prospects for a lasting solution are better.

34. *Labor and the social safety net.* So far open unemployment has remained relatively moderate in Russia, in large part because many managers have maintained their work force even while output was contracting. Thus some potential unemployment has taken the form of underemployment and declining real wages. Nonetheless, on-going enterprise reform could result in the loss of employment for as many as 3-4 million people, representing 5-6 percent of the labor force, within a year's time. This is not likely to be politically acceptable unless an effective social safety net is in place. The need for a safety net is even more pressing in Russia than in Eastern Europe. The drop in output will probably be greater, given that reform and restructuring has hardly begun. The previous economic system denied

individuals the opportunity to accumulate other income-earning assets that might have provided a source of livelihood. The value of savings accounts has been drastically reduced by the recent inflation, and the informal sector (which in most developing countries provides income-earning opportunities to those without regular employment or other resources) is only just beginning to appear. The existing system of family allowances, social assistance, and pensions is a key source of benefits for the vulnerable segments of the population. These programs can be made more efficient. The most important priority, however, is to develop an unemployment benefits system and active labor market policies.

35. The first step in the design of the social safety net is the definition of a realistic but parsimonious level of consumption—a socially guaranteed minimum—that will serve as the basis for a range of cash benefit options that the Russian state will provide. Differentiated benefits above the guaranteed minimum would be provided (for example, for the newly unemployed) to cushion the shock of a drop in income that may have been unforeseen. This would also provide an incentive to seek a new source of income before the eligibility for regular unemployment benefits run out, and only the guaranteed minimum would be given. While the guaranteed minimum unemployment benefit should be set low enough to discourage any long-term reliance on it, pension levels should be set in the knowledge that millions will have no other source of income for the rest of their lives. Having defined the socially guaranteed minimum benefit, it is necessary to protect it fully against increases in prices (which should not be equated to indexing the benefit by the index of consumer prices). This will involve a compromise between fiscal prudence and social assistance, especially in the near term. If something has to give, it should be other public expenditures of lesser priority, not the envelope for social assistance.

36. Income support cannot be a substitute for productive jobs, and training programs need to be supported by labor demand. Successful adjustment will mean that manufacturing, the military, and to a lesser extent agriculture, will all release labor over the next several years. Job creation in the service industry, such as retail trade, and other services, provides the best prospects for growth in incomes and employment in the early phases of reform. Policies to promote privatization and entry of new firms into the service industry are therefore of particular importance. The Government can also assist in improving labor force mobility by providing proactive job training and employment placement services. Such services should concentrate on geographic areas likely to be hardest hit by unemployment, such as those with a high concentration of military industries. The universal shortage of housing now greatly restricts labor mobility; consequently, improving effective labor mobility will necessarily have to be accompanied by efforts to ease the housing shortages.

37. The fiscal crisis in Government is making it difficult to maintain acceptable standards of service in the social sectors, such as health and education. Reforms need to focus both on the scope for cost savings (for example, reduction of overstaffing and redundant facilities) as well as alternative methods of funding. It may be useful to consider introducing some level of competition among providers of health care, as well as promoting private sector involvement in the education sector. In the short term, however, there is a need for immediate humanitarian assistance to the health sector to prevent any further deterioration in already very low service levels.

38. *Transitional trade and payments arrangements.* The collapse of trade as a result of the dissolution of the CMEA, the breakup of the FSU and the disintegration of existing patterns of supply, has been a major factor in the decline of output in Russia, as well as in all other former republics. Further disruptions in trading patterns would compound existing supply constraints and could undermine the reform process. However, transitional arrangements to restore and sustain interrepublican trade make sense only if they also allow the necessary adjustments in the underlying productive structure. Russia

and other republics are currently negotiating new forms of trading arrangements, including monetary coordination, and ways of placing interrepublican trade on a more competitive footing. This goes some way towards giving enterprises a clear signal about the priority of structural reforms.

39. The highest priority trade reforms are the following: first, elimination of restraints and disincentives of all kinds on exports to third countries, except for export taxes on goods (primarily oil) for which it is desired to keep domestic prices below world levels during a transitional period; second, elimination of state obligations and orders in interstate trade, retaining indicative list trade only for those items that are subject to domestic price controls, while shifting all other trade to an enterprise-to-enterprise basis; third, improvements in the payments system to reduce very substantial delays and irregularities in inter-state payments, combined with monetary coordination and restraint within the ruble area; and fourth, formation of a preferential trading area among as many of the former republics as possible.

Sectoral reforms

40. The program of systemic reforms outlined above will initiate the process of enterprise restructuring, but a great deal of work needs to be done at the detailed sectoral level in order to complete this process in an efficient and responsible fashion. Privatization will relieve the Government of the responsibility for directing the restructuring process in most sectors, relying instead on market principles to organize the pattern of production in an efficient manner. In a number of key sectors, however, the Government will retain a responsibility for direct interventions, either through the establishment of regulatory procedures or by providing inflows of public investment for activities that cannot be carried-out effectively through market principles. The Government has identified two sectors—energy and agriculture—where prompt interventions are required to generate a quick supply response in order to support the adjustment process and demonstrate tangible benefits from the reform program. In addition, sectoral priorities need to be clarified in key areas needed to support medium-term growth, including environmental protection, infrastructure, and housing and urban development.

41. *Energy.* Russia is the largest exporter of energy and the second largest producer in the world. Despite the importance of energy both to the Russian economy and the balance of payments, oil production has declined by one million barrels per day each year for the last two years and may fall even more rapidly in the near future. Gas production stabilized in 1991 following a long period of sustained growth. This situation is the result both of technical factors (especially the declining productivity of a number of large fields) and the low level of investment in exploration, development, rehabilitation and maintenance over the past several years. It is estimated that investment outlays on the order of \$25 billion may be required over the next decade to arrest the decline in oil production, with additional large amounts needed to restore production to pre-1990 levels. Investment will also be needed in the natural gas sector, including improvements in the gas transmission and distribution system.

42. In order to support this effort and generate resources needed for the rest of the economy, a radical approach to reform in the energy sector is required. It is essential to raise energy prices to world market levels within the next few years. Though price increases may shock the rest of the economy, the experience from other countries indicates that little benefit would be derived from delaying the price increases, while the reform program could be fatally compromised. Other sectoral reforms are also urgently required, including: (i) the establishment of a clear legal and regulatory framework, including clarification of ownership rights to natural resources; (ii) introduction of a taxation regime consistent with international practice in this area; and (iii) a positive approach to foreign investment in

the sector, especially for the development of new fields where domestic resources are unlikely to be sufficient to support the amount of investment that is required.

43. **Agriculture.** The agriculture sector in Russia faces major structural changes in the years ahead. The sector has been heavily subsidized, and the productivity of both labor and capital is very low. Especially after 1985, the Government pursued a policy of subsidizing consumers—in addition to the producers—resulting in high levels of consumption and excess demand that had to be rationed by non-price mechanisms. Prices of both inputs and outputs have begun to adjust, albeit unevenly, toward world levels, with the result that the terms of trade for the sector have worsened. In conjunction with the decline in the terms of trade, the availability of inputs has been restricted because of marketing and other problems. Consequently, profitability in the sector has fallen and threatens to cause a substantial decline in production. In the short term, increases in output prices and the limited management autonomy of farm enterprises may help avert a production crisis. Over the medium term, recovery in the agriculture sector will depend on attaining higher levels of productivity—which will be possible only after a profound restructuring of the sector.

44. Enterprise reform of the state and collective farms and improvements in land tenure arrangements will be required so that producers are able to respond to a dramatically different set of relative prices. Ensuring competition in marketing will be vital to ensure that proper price signals are transmitted to the farmgate. If an appropriate set of policies is adopted, agriculture can emerge from the transition period as a much more productive and dynamic, if somewhat smaller, sector of a growing economy. Comparative advantage indicates that greater emphasis is likely to be placed on grain production (although possibly with lower total acreage) accompanied by a contraction of the extremely inefficient and high cost livestock sector. Great care will need to be taken to mitigate, to the extent feasible, the deep social dislocations that could occur as a result of the restructuring of the sector.

45. **Environment.** Russia's environmental problems are deeply rooted in the structure of the economy. Soviet planning promoted the exploitation of Russia's vast natural resources and mandated the development of massive, inefficient, and heavily polluting industrial installations. Although there were some important environmental initiatives taken during the Soviet era, Russia still has some of the worst environmental problems in the world. The Government should give top priority to reducing risks from air pollution, nuclear radiation, and hazardous wastes. Preserving Russia's massive forests (the taiga) should also have priority in the medium-term. The Government's program of price and enterprise reforms, if fully implemented, will have a number of positive environmental effects, since it will force many polluting industries to adopt cleaner technologies or go out of business. However, a strong regulatory mechanism will also be needed in cases where market incentives alone do not lead to acceptable environmental practices by the emerging private sector.

46. **Infrastructure.** Support for private sector development will require selective new investments in infrastructure, particularly transportation (highways and ports), telecommunications, power generation and distribution systems and municipal infrastructure. Existing facilities have deteriorated under financial stress over the past several years, and selected parts of the infrastructure network may become obsolete under market conditions. As a result, large investments to rationalize and rehabilitate existing infrastructure will be needed. While financing for this purpose may be available through export credits and international financial institutions, increased domestic resource mobilization will have to meet the bulk of the needs on a sustained basis.

47. **Housing.** Housing in Russia has traditionally been heavily subsidized and enmeshed in the system of non-wage benefits given to workers by the enterprises. Because the heavy subsidies constrained the amount of housing that could be provided, as well as leading to inefficient use of the existing stock, the housing shortage has been extreme and chronic. Reform in the housing sector is a critical component of the overall reform effort. Because of the role that housing plays in social welfare, steps such as rationalizing rents and developing a private sector housing market must be coordinated with policies on wage reform and the development of the financial sector. There has been a tendency to confuse social safety net issues and housing reform issues. International experience shows that the long-term success of housing reforms will require a clear differentiation between poverty and unemployment problems on the one hand and housing problems on the other.

Institutional Strengthening

48. The process of democratic and economic reform requires a transformation in the responsibilities of various government agencies and the manner in which they relate to one another and with outside organizations. This process has altered traditional lines of authority and made it much more difficult to establish a consensus on policy changes and ensure that they are correctly implemented. The problem is exacerbated by a lack of trust within the civil service between reform-minded officials and those who have seen their power and prestige diminish as a result of the reforms. A further complicating factor is the lack of experience and, in many cases, technical skills (such as accounting and financial management) needed to manage a market economy effectively. These are very difficult problems that will take some time to be resolved. In the meantime, the timing and pace of reforms is likely to be determined as much by political and administrative concerns as by economic considerations.

49. While the process of enterprise reform will reduce the need for centralized control mechanisms, it places a greater premium on indirect policy interventions. The Government needs to strengthen its capacity to implement the economic reforms. Structural change is not only a change in production relations and in the patterns of supply in line with competitive forces. It is fundamentally a change in the role of Government in the economy. The overall size of the public sector should shrink as the reforms proceed. However, the core economic institutions, such as the Ministry of Finance and the Central Bank, will have to be strengthened substantially. The Government has begun to address this problem, although most of the key institutions responsible for the reform program remain thinly staffed. Part of this problem can be avoided in the short run by appropriate choices of policy instruments (for example, reliance of the bottom-up approach to mass privatization, rather than an individualized approach relying on central administration) and by extensive use of external technical assistance. However, there are certain key functions that the Government needs to internalize on an urgent basis. There is an urgent need to review and clarify the taxation authority and the expenditure responsibilities of different levels of government, as well as the system of intergovernmental transfers. In addition to the management of the reform process described above (e.g., oversight of the privatization process, strengthening of commercial bank supervision), the following areas can be identified for special attention in the near future:

- (i) *Public administration reform*, including clarification of the role and structure of the central administration, staff training, and expansion and strengthening of institutions involved in the reform process;
- (ii) *Financial management*, including training in public accounting, audit, and competitive procurement procedures; and

- (iii) *Legal and regulatory reform*, including revision of the legal system to incorporate laws relating to a market economy and establishment of an independent judiciary system for the enforcement of contracts.

External Financing Requirements

50. Russia's external financing requirements are estimated at about \$23 billion for 1992 and a comparable amount in 1993. Capital inflows are needed to meet debt service obligations and for a modest increase in the presently low levels of international reserves. They are needed, mainly to finance the non-interest current account deficit—though in the short-run, given the backlog of overdue payments, this essential component will remain a relatively small share of the total financing requirement (\$4 billion in 1992). Mobilizing the necessary gross capital inflow will require extraordinary efforts by Russia, its existing bilateral and commercial creditors, and the international financial institutions. For the near term, the bulk of the support will have to come from official sources, but with appropriate reforms, private flows could become increasingly significant in the mid-1990s onward. With concerted reform and continued access to foreign markets, Russia should regain a strong balance of payments position in the late 1990s. Although exports will be the driving force for adjustment, much will depend on the flow of foreign direct investment, which could increase to \$3-5 billion annually by the mid-1990s, primarily in the oil sector. Russia's capacity to service its debt should improve over time, allowing it to reestablish full and confident relations with the international capital markets by the end of the decade.

51. In the foreseeable future and in the absence of controls, and provided more efficient payments mechanisms develop, the Russian Federation is likely to experience a substantial trade surplus with the other states in the FSU. The surplus should be seen as an indication of continuing economic ties which will help alleviate the output drop in all countries in the FSU. For some, trade will be settled in rubles in what may later develop into a well-functioning and coordinated ruble area. In other instances, settlement may be in hard currencies (as will be, over time, all remaining structural deficits from FSU states with the Russian Federation). The magnitude of all these hard currency flows is very uncertain. Clearly, insofar as they materialize, they will help reduce Russia's own external financing requirements (while increasing those of the other states that must use hard currency to finance their trade deficits with the Russian Federation).

52. Because Russia's access to external finance will largely be limited to official or officially guaranteed sources during the short to medium term, three types of institutions will be especially important: export credit agencies, bilateral assistance agencies in the Development Assistance Committee (DAC) countries, and multilateral financial institutions such as the World Bank and the European Bank for Reconstruction and Development (EBRD). New funding from these sources is likely to meet up to two-thirds of Russia's financing needs for 1992, while deferral and rescheduling of debt service will provide the rest.

53. Given the large external financing needs of Russia and growing demands from the other former republics and Eastern European countries, competition for external financing will be keen, and the premium on efficient use of these resources is therefore very high. Failure to set clear priorities in the allocation of scarce financing may ultimately jeopardize the success of the reform program. Developing the Government's information base and institutional framework to determine priorities in investment is a high priority. This task is particularly important in Russia's current situation, as incomplete price adjustments and limited progress on enterprise and financial sector reforms constrain the use of market signals in the allocation of external resources. A clear policy framework must be

established. The establishment of a new agency on international cooperation and development this August through a consolidation of the disparate agencies assigned to issues of external finance is an encouraging first step. It may be possible to mobilize substantial inflows of foreign resources in the form of export credits (especially for the petroleum sector). It is important that such borrowing be accompanied by the necessary domestic policy and institutional reforms. Otherwise, external borrowing may become a substitute for domestic reform and restructuring, and add to rather than reduce the country's future economic problems. In this situation, the international financial institutions have a special responsibility, extending well beyond the provision of external finance, to help the Government establish relative priorities and identify needed reforms and viable investment projects to ensure that external assistance is used in a manner that supports the overall reform program.

54. Effective management of external assistance and foreign borrowing is inseparable from good economic management. The Government must be prepared to interact with external financing agencies with a clear sense of its own priorities, as well as the prospective role of each agency in meeting these needs. Three areas of institutional development are particularly important:

- (i) *Links to policy and economic management.* External assistance will be closely linked to the Government's reform program and management of the economy. It is essential that appropriate units and procedures be established to facilitate regular interaction between donors and line ministries and central agencies on key policy and economic management issues.
- (ii) *Debt management.* Given the importance of debt rescheduling in the overall financing package, an adequate debt management capacity should be put in place.
- (iii) *Logistical and procedural aspects.* External lending agencies require adequate standards of accounting, procurement management, and reporting to ensure that their funds are used for the intended purpose and to spot implementation problems. Such systems do not exist today, and they need to be developed urgently so that administrative and procedural problems do not interfere with the flow of external financing.

Such actions will facilitate the large inflows of foreign assistance which at this stage are essential to sustain the reform process in Russia. By responding to Russia's situation promptly and efficiently, donor agencies will be supporting a historic process of reform that can yield substantial benefits for the future, both for the Russian people and the global economy at large.

PART I

Nation-Building and Macroeconomic Stabilization

The political collapse of the Soviet Union in late 1991 following the August coup was an unprecedented development in recent history. The Russian Federation, as well as other republics of the former Union, must now contain those very forces which caused the collapse. These are political shifts of extraordinary magnitude, if not without parallel. Transforming simultaneously the economic and social basis of society from a planned to a market economy poses yet another major challenge.

For the reasons discussed in Chapter 2, macroeconomic stabilization cannot be postponed. The crisis of governance in the Union has left its marks on the administrative capacity of the Russian Federation, as have the output collapse and monetized deficits of the Union on the economic options left open to the Russian Government. In this context the Russian Government has little choice but to pursue tight fiscal and monetary policies, which will not, however, endure without structural reforms. Russia's dilemma is that neither macroeconomic stabilization nor structural reform are by themselves sufficient to bridge the transition; both must be attempted simultaneously. While reform is hardly costless, the alternatives to adjustment, as discussed in Chapter 3, contain risks of their own.

The Government's resolve to follow this prescription has wavered in the first half of 1992. Although commitment was quite high at the beginning of 1992, it has since been mitigated in response to obvious political and social pressures. The agreement reached with the International Monetary Fund as of July 1992 indicates a renewed commitment to reform. As the experience of the earlier months indicate, however, whether this commitment can be implemented and sustained is uncertain. The resolve of the Russian Government must be supported by the international community if it is to succeed.

CHAPTER 1

The Disintegration of the Union

1.1 In December 1990, the International Monetary Fund (IMF), the World Bank, the Organization for Economic Cooperation and Development (OECD), and the European Bank for Reconstruction and Development (EBRD) published *A Study of the Soviet Economy*. This study (known as the Joint Study of the Soviet Economy, or JSSE) made specific recommendations for economic reform in the USSR, and suggested a framework within which Western assistance could be rendered; it was the first comprehensive study of the USSR economy in which the World Bank participated. Yet the timing of the JSSE coincided with the beginning of a dual system of government authority, and, consequently, divergent tracks of economic reform. This chapter outlines the political sources of that divergence, and its ultimate impact on the economic reform process in the Soviet Union from mid-1990 to the end of 1991.

1.2 Hopes for a single reform process in the Soviet Union could not be sustained much beyond mid-1990. The first democratic competitive elections at local and republican levels of Government in the Soviet Union were held in March 1990. While the openness of the elections did not prevent communists from gaining a majority of seats in many institutions (as they had in the March 1989 elections to the Union legislature), the 12-month time lag between the Union and republican-level elections led to a situation in which most republican legislatures were significantly more reformist than the Union Supreme Soviet.¹ This in turn meant that the more committed reformers conceived their policies and programs in a republican, rather than Union, context. Thus, while it was not necessarily even the reformers' original intention to dismantle the Union, the republican structure in which these reformers were operating conflicted with the imperatives driving the Union Government to maintain its instruments of power for the very purpose of conducting reforms. The eventual emergence of multiple "tracks" of reform was inevitable.

1.3 Thus, by September 1990 two competing programs were under active discussion: the Union "Ryzhkov" Plan (named after the Union Prime Minister at the time, Nikolai Ryzhkov), and the "Shatalin" (named after its primary author, Academician Stanislav Shatalin). The Shatalin Plan was in many ways a challenge from the Russian leadership to the Union authorities' claim to be the arbiters of economic reform. Although its authors were drawn from both the Union (President's) and Russian (President's) groups of advisors, it had initially been presented to the Russian Supreme Soviet, rather than the Union Supreme Soviet. The Ryzhkov Plan, formulated shortly thereafter, was the Union's response to that challenge.

1.4 Not unexpectedly, the Shatalin Plan suggested greater freedom of decision-making to the republics, and in many ways was more radical than the Ryzhkov Plan. The Shatalin Plan was also called the "500-Day Plan" because it envisaged a very specific timetable of reforms—particularly regarding privatization and price liberalization. It also assigned primary taxing authority to the republics, with the Union budget to be funded through negotiated shares of the republic budgets. The Ryzhkov Plan, by contrast, advocated a slower pace of reforms, and did not cede significant powers to the republics.

1.5 The so-called Presidential Guidelines issued in the fall of 1990 represented the fairly narrow field of consensus between these two programs. That consensus, however, was limited to some generalized goals and failed to specify a timetable for achieving these goals. In particular, the Guidelines

granted republics considerable freedom over the pace of reform and the formation of republican fiscal policies—without political agreement as to how or if republican actions could be limited when such actions threatened the Union reform program. Meanwhile, the economic situation in 1990 had been marked by strikes, inter-ethnic strife, the collapse of the Union-wide market due to the raising of republican and even local barriers to trade, and a breakdown of the system of state orders. As the party apparatus—the core mechanism of informal coordination and management in a planned economy—began to be deliberately weaned from its central role in the economy, the inflexibility in the Soviet economy became apparent through the first decline in output in the peacetime history of the Soviet Union.

1.6 Significantly, none of the alternative recommendations for economic reform above advocated finding a "third way," or a "controlled market," as a solution to the USSR's economic ills. The Ryzhkov Plan, Shatalin Plan, and Presidential Guidelines differed not on the need to achieve financial stabilization, price reform, or privatization, but on the ways in which (and at what pace) these goals would be achieved. Although the JSSE was critical of the gradual pace of reform envisaged in the Presidential Guidelines, it recognized that the Guidelines did not seek a half-way approach to reform. As it turned out, however, the critical difference between the Shatalin and Ryzhkov programs was that the Shatalin Plan proposed to resolve the general government deficit by curtailing the Union's independent revenue-raising capacities, but the Ryzhkov Plan foresaw no such devolution of fiscal control. It was a difference that the Presidential Guidelines could not bridge, and this failure eventually manifested itself in the bankruptcy of the Union budget (see Chapter 2). Moreover, the Guidelines could not reconcile the assignment of fiscal revenues and responsibilities between the Union and the republics—not so much because such a compromise was economically infeasible, but because the center's political power and authority to resolve that contradiction and enforce an effective compromise was being continuously eroded in 1990 and 1991.

1.7 By the latter half of 1990, republican unrest had increased considerably, and President Mikhail Gorbachev was widely viewed as being susceptible to increased pressure from conservatives. The crackdown in the Baltics confirmed these suspicions and served to further fuel separatist tendencies. In tune with these political and military measures, the economic policies of the Government took a conservative turn; in October 1990 the Government decreed that all enterprise ties were to be frozen, and in January 1991 the Government authorized police and state security agencies to investigate businesses for violations of state laws and regulations.

1.8 Thus, even as some of the objectives outlined in the Presidential Guidelines of 1990 were passed as laws in 1991, general economic, political, and legal disarray precluded their implementation. Economic relations between the Union and the republics for 1991 had been agreed upon in April 1990 (and confirmed in January 1991), but the republics avoided implementation of the law by signing treaties and economic cooperation agreements with each other and by withholding tax revenues due to the Union budget. A so-called War of Laws began in which republic authorities began drafting and enacting legislation in areas which were also the subject of Union legislation. In Russia, the same Shatalin Plan that had ultimately been rejected by the Union legislature had been approved by the republican legislature. Of greater consequence was the fact that the tax laws of the Union began to be defied as the Russian republic began issuing independent republican tax regulations. For example, the Union tax law established a profit tax rate of 45 percent, but the Russian Federation offered enterprises a 38 percent rate. In the process, the Russian Federation also undertook to retain a greater share of that tax than had been agreed to with the Union in 1990. By 1991 it was clear that the republics' blatant disregard of the Union's attempts to achieve macroeconomic stability were based in political desires for independence rather than on any differences of economic thinking.

1.9 By April 1991 the Union budget had already reached the projected deficit level for the whole year, and was, in practice, bankrupt. The "Anti-Crisis" program, based on the agreement of nine republics, sought "the unconditional fulfillment [of obligations of Union bodies and republics outlined in the economic agreement of 1991] primarily as regards budgets and the formation of extra-budgetary funds."² It also sought to carry out a tough anti-inflationary monetary policy, to further liberalize prices, take various measures to halt output drop, and secure the social safety net. Although in some cases the program made expedient concessions to political pressures—such as its willingness to consider wage indexation—this program was understood to be necessary to sustain economic reform, politically as well as economically. The agreement of the nine republics could not be sustained; the "Anti-Crisis" program was almost immediately preempted by other arrangements arrived at in the course of negotiations towards a Union Treaty between April and August of 1991.

1.10 Thus, by the spring of 1991, a crisis of governance began to supersede the economic reform program in the Soviet Union. There was no clear authority left in the Union to implement any program of reform, however promising. One of the last Union plans for economic reform was drawn up in May of 1991—the "Window of Opportunity," better known as the Allison-Yavlinsky Plan, after its main authors, Graham Allison and Grigory Yavlinsky.³ This program acknowledged the crisis in governance by positing that political restabilization was a prerequisite to economic reform. To that end it recognized the impossibility of achieving economic reform without the explicit consent of republican authorities; it proposed basing economic reform on a "Nine-Plus-One" agreement, and incorporated the signing of a Union Treaty and the adoption of a new constitution as an integral part of an economic reform program. In addition, it detailed stages and scales of Western economic assistance to the Union. The drawback, of course, was that the plan proposed to delay many economic reforms until after the stabilization of a new political union.

1.11 The very process of drafting a new political basis for the Union consolidated the opposition of the conservative forces. The opposition's coup attempt of August 1991 succeeded in destroying the very thing the coup had set out to preserve—the Union. The political authority of the Union and President Gorbachev himself were seriously undermined by the coup; in turn Boris Yeltsin, who had been elected to the newly created presidency of the Russian republic only two months earlier, emerged as the defender of democracy and the Russian republic. The two-month hiatus that followed was marked by enfeebled Union Treaty negotiations and some puzzling inactivity on the part of the Russian leadership. While the Russian republic continued its policy of bankrupting the Union Government, the leadership did not appear as opposed to the Union Treaty as was the Republic of Ukraine.

1.12 In November 1991, the Russian leadership announced the appointment of a new Government, and outlined its commitment to radical economic reform. The program included: (a) price and wage liberalization by end-1991; (b) a commitment to a tight monetary policy, fiscal reform, and ruble stabilization; (c) privatization of up to 50 percent of all small- and medium-sized enterprises within three months; (d) halting the funding of defense, foreign economic aid, and 73 all-Union ministries and committees; (e) supplementing the social safety net; and (f) a qualified commitment to an inter-republic Central Bank. Of these objectives, only the fourth was implemented without delay, thus completing the process of extending Russian government control over Union government functions through their forced dependence on the Russian Government for funds.

1.13 The Soviet Union was declared dissolved on December 8th by the signatories to the Minsk Accord (Belarus, Ukraine, and Russia).⁴ The dissolution was finalized upon the resignation of Gorbachev as President of the USSR on December 25, 1991.

Notes to Chapter 1

1. In the case of Russia, the newly created Russian Congress of People's Deputies proceeded to elect Boris Yeltsin Chairman of the Russian Supreme Soviet. [At the time the Russian republic did not have a presidency.]
2. FBIS, *The Soviet Union Daily Report*, 4/24/91. The "Nine-Plus-One" agreement was reached between nine of the Soviet republics (all except the Armenia, Baltics, Georgia, and Moldova) and the Union leadership; it was the basis of the Union Treaty process.
3. Graham Allison was then Dean of the Kennedy School of Government at Harvard University; Grigory Yavlinsky had been one of the authors of the 500-Day program.
4. The Union legislature, however, has never voted itself out of existence. The debate over whether the Soviet Union was ever officially dissolved was revisited at the Congress of People's Deputies in the spring of 1992, when it was argued that references to the USSR in the draft Russian Constitution could be retained.

CHAPTER 2

Macroeconomic Developments in 1991 and in the First Half of 1992

2.1 The tensions within the Soviet system exploded in 1991. As the old political regime crumbled, inflation surged and output fell precipitously. Retail prices for goods increased 142 percent in the year and wholesale prices in industry by 236 percent. Output fell by 9 percent with a fall in real investment in excess of 25 percent (see Table 2-1 and Figure 2-1). There were two main macroeconomic events: the collapse of trade (due both to the final break in Council for Mutual Economic Assistance (CMEA) relations and the initial disintegration of the FSU) and the extraordinary growth in the fiscal deficit to 31 percent of GDP. The deficit was monetized but money financing in 1991 occurred under unique circumstances. The implications of these developments are clear. The fall in output is linked to disruptions in supply, some of which are permanent. Thus, the events of 1991 will have a lasting negative impact on output, extending well beyond 1992. Moreover, the scope for monetary financing of fiscal deficits has been vastly reduced for 1992 and beyond. Without decisive fiscal adjustment, stabilization will fail and the economy may stagger to destructively high rates of inflation. There is no room for a fiscal-led output recovery.

2.2 Ironically, the Soviet government's plans for 1991 focused on macroeconomic stabilization. A sharp reduction in the fiscal deficit was to be supported by a strong control on wages, allowing for a moderate expansion in credit.¹ Fiscal adjustment was to follow from cuts in defense and investment expenditures, and from a substantial reduction in subsidies induced by a partial liberalization of prices. In addition, the Government increased the tax burden on enterprises and on the population. These measures were aimed at halving the fiscal deficit to 5 percent of GDP in 1991.²

2.3 The effort failed, however, and the consolidated deficit of the FSU soared to 26 percent of GDP at the year's end. Russia's own deficit measured 31 percent of GDP, one of the largest government deficits on recent record.³ The fiscal outcome was hostage to the evolving political situation; the most effective weapon the republics used against the Union was the tax or revenue strike. With decentralization, the republics (and notably Russia) withheld revenues earmarked for the federal budget. The central authorities did reduce transfers to enterprises, mainly for investment. But this was offset by a fall in tax collection, as Russia offered tax incentives for enterprises to transfer from union to republican jurisdiction. Political events also destabilized public expenditures; fearing the political consequences of reforms, the Government authorized a number of large transfers to the population and to enterprises.

Disintegration, fiscal crisis, and inflation

2.4 Price reform was one of the objectives of the 1991 program—and the accompanying reduction in subsidies was a key to fiscal retrenchment. However, the attempt at partial reform was misconceived.⁴ To cushion the impact the Government raised wages and allowances roughly 60 percent of the expected loss in purchasing power, and it increased all savings balances by 40 percent.⁵ Savers had their accounts increased by 94.6 billion rubles (8.4 percent of GDP) in compensation for the price increase; 71.2 billion rubles (6.4 percent of GDP) of this amount was frozen (as it turned out) until April 1992, while the remainder could be withdrawn immediately. In choosing to compensate the population for the added burden on household expenditures, the Government over-compensated.

Table 2-1. Main Economic Indicators, 1987-91
(Annual percentage changes unless otherwise indicated)

	1987	1988	1989	1990	1991
Real growth					
GDP at factor cost				0.4	-9.0
Industrial output, gross	3.5	3.8	1.4	-0.1	-8.0
Agricultural output, gross	-1.2	3.3	1.7	-3.6	-4.7
Fixed investment	6.0	7.6	4.1	0.1	-26.2
Household purchases of goods and services	2.7	6.6	1.8	2.2	-11.0
Net material product (NMP)	0.7	4.6	1.9	-5.0	-11.0
Agriculture	-3.0	4.0	2.8	-6.2	
Industry	1.7	6.2	2.0	-2.2	
Consumption	2.7	4.0	5.4	2.0	
Accumulation	-5.4	15.0	-6.1	-21.7	
Prices and wages					
NMP deflator	0.9	1.1	5.0	6.9	114.0
Industrial wholesale prices	-0.9	2.7	1.2	3.9	138.0
Retail prices of goods	2.0	0.0	6.0	5.6	90.4
Nominal average industrial wage	3.0	8.7	9.9	13.0	86.6
Deflated average industrial wage (retail price index)	1.1	8.7	3.8	7.0	-2.0
M2 growth (end of year)	15.5	14.0	14.6	17.6	77.2
Fiscal and monetary accounts (in percentages on GDP)					
Government revenues					28.0
Government expenditures					47.9
Fiscal deficit					19.9
Fiscal deficit including quasi-fiscal operations					30.9
Current account and trade balance (excluding trade with the 14 republics, \$ billion)					
Current account balance, including gold sales				-4.5	3.4
Trade balance, excluding gold sales				-2.0	5.8
Memo items (1987=100):					
Deflated industrial wage index	100	108.7	112.8	120.6	118.2
Real fixed investment index	100	107.6	112.0	112.1	100.0

2.5 The stabilization attempt backfired, in part because the weak commitment of the previous authorities to market reforms became clear. A massive paper shuffle characterized the economy in 1991, the details of which are shown in Box 2-1. Households and enterprises were beneficiaries of low taxes and high government transfers, only to have the resultant excess income "loaned" back to the Government (a "loan" that was wiped out with the January price increases). The credit flow from the monetary system to the Russian Government amounted to 22 percent of GDP. Transfers from enterprises financed the residual gap of 9 percent of GDP. The circular flows of financing benefited no one, but imposed the costs of high inflation on all. Instead of stabilizing, *perestroika* in 1991 brought no reform and no stabilization.

Income growth and the money overhang: financing the fiscal deficit

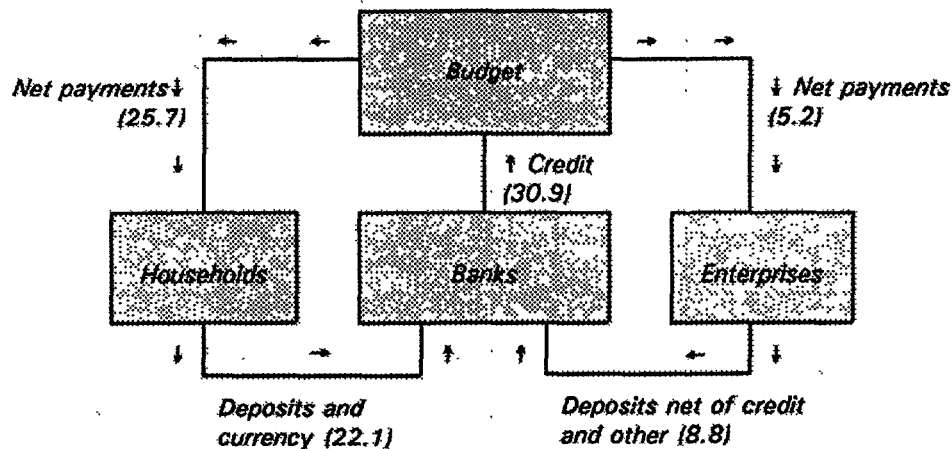
2.6 In retrospect, the interesting question in 1991 is not the increase in inflation but why it did not increase further. How could the Government obtain nearly 31 percent of GDP for monetary financing of the fiscal deficit, *without driving the economy into hyperinflation?* The answer lies in the peculiar way in which the inflation tax was levied. The tax was collected on large involuntary holdings of money—it fell largely on *the monetary overhang*.

Box 2-1. The Flow of Funds in 1991

The main macroeconomic imbalance in 1991 was the fiscal deficit of 30.9 percent of GDP, which included a large "quasi-fiscal" deficit attributable to the one time compensation of deposits after price increases in April 1991 and the cancellation of collective farm debts. The deficit was financed domestically in a distinctive manner. In a closed market economy, government deficits induce price signals which generate the required flow of funds. In particular, an increasing fiscal deficit drives up interest rates. Higher interest rates, in turn, encourage household savings and deter firms' investments, thus freeing up funds for the fiscal deficit. In Russia in 1991, these kinds of market signals and responses were not operative. Households and firms faced tight constraints on consumption and investment possibilities, and the Government had direct access to the surpluses of households and firms. Thus rather than crowding out resources from the household and enterprise sectors, the fiscal deficit was financed by appropriating surpluses that households and firms were unable to employ. Ironically, these surpluses had been largely created by budgetary transfers to enterprises (in support of investment and debt write-offs) and to households (as compensation for the April 1991 price increases). Box Figure 2-1a attempts to trace the main financing flows. Details and the necessary background information are provided in Appendix 2-1.

Box Figure 2-1a. The Flow of Funds in 1991

(all numbers as percentage of GDP, foreign transactions consolidated with enterprises)



In 1991, the share of household income in GDP shifted up sharply (see first panel in Box Figure 2-1b). Household income was 73.3 percent of GNP in 1991, as compared to 61.4 percent in 1990. Half of the 12 percentage point increase is explained by the one-time compensation of depositors after the April 1991 price increases. The other half is due to an increase in unclassified "other income." This increase may reflect increasing payments of non-wage benefits and continued growth in private sector income.

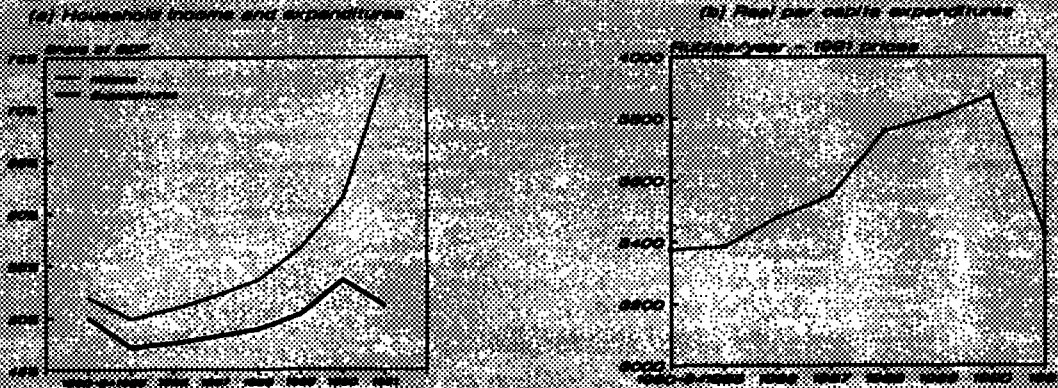
Despite the increase in income, the share of household expenditure fell. In 1991 household expenditure was only 45.2 percent of GDP, even less than the figure of 46.3 percent for 1990. This fall reduced per capita expenditure to the level of 1986 and erased the modest gains of 1987-90 (see second panel in Box Figure 2-1b). This decline in per capita consumption shows that the partial reform attempts of *perestroika* failed to raise living standards.

Households accumulated a substantial surplus of monetary resources. Because there is little investment by households (only 1.6 percent of GDP) households accumulated huge, and partially unwanted, balances of currency and deposits. The fiscal side absorbed this surplus directly, by "borrowing" the deposit stock from the Savings Bank (*Sberbank*), and indirectly, through the inflation tax. Indeed, inflation itself wiped out most of the government's debt to *Sberbank*. Because borrowing was at negligible nominal interest rates, the burst of inflation at the year's end (and, especially, the post-liberalization inflationary spike in January 1992) greatly reduced the real stock of debt. As discussed in Box 2-2, this is the counterpart of the "fizzling away" of the monetary overhang.

Continued

Box 2-1. The Flow of Funds in 1991 (Continued)

Box Figure 2-1b: Household Income & Expenditures, 1990-91

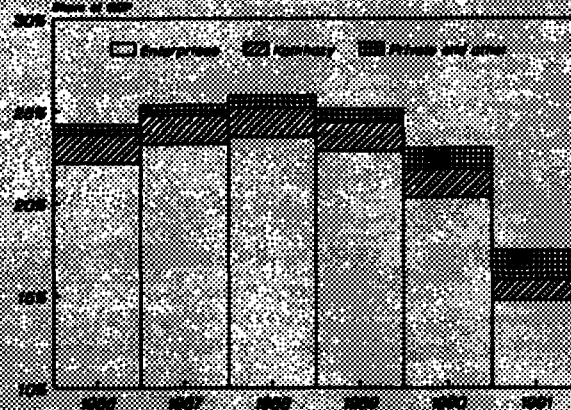


Enterprises were also flush with monetary resources. In addition to lower taxes, enterprises benefited from a writeoff of agricultural debts amounting to 2.3 percent of GDP. Enterprises also took advantage of sharply negative real interest rates and lax lending practices by borrowing the equivalent of 23 percent of GDP from the commercial banking system. This borrowing reversed the previous trend of declining credit to the enterprises and increasing credit to the Government.

The increased monetary resources available to the enterprises did not translate into higher investment. Investment fell from 21.8 percent of GDP in 1990 to 15.9 percent in 1991 (see Box Figure 2-1c). Instead, enterprises increased their inventories from 1.6 percent of GDP in 1990 to 6.1 percent in 1991. There are also clear indications (but no hard evidence) that enterprises accumulated foreign assets, mainly through capital flight.

Most importantly, enterprises accumulated domestic monetary assets. Enterprise deposits with the banking system grew to the equivalent of 14 percent of GDP—and were again transferred to finance the budget. Resources were also tied up in the “interbank flow” in the settlement system of the old Gosbank and other unclassified liabilities in the banking system, both of which constituted a forced loan to the monetary system. Thus, despite the huge volume of new borrowing, the enterprise sector did not absorb resources from the monetary system. The banking system redirected surpluses from profit-making enterprises to loss-making ones and accumulated a large portfolio of assets of debatable quality.

Box Figure 2-1c: Investment by Type of Organization



On balance, the enterprise sector contributed a surplus of 10.3 percent of GDP to the financing of the fiscal deficit. Subtracting the current account surplus of 1.5 percent of GDP (assumed to be flows of the enterprise sector), yields the net flow of 8.8 percent of GDP from enterprises through the banking system to the government shown in Box Figure 2-1a. The household sector’s surplus contributed another 22.1 percent of GDP in financing of the budget deficit, also intermediated through the banking system. The large surpluses of the household and enterprise sectors made possible the huge fiscal and quasi-fiscal deficit of 30.9 percent of GDP.

2.7 Box 2-2 discusses the concept of the monetary overhang and its development in Russia. In a controlled-price economy, such as Russia in 1991, the financial sector displays some peculiar characteristics. The real value of money holdings before reform is *not* the money stock deflated by the official price level, since goods could not be freely bought at that price level. The real value of money is given by the money stock deflated by the price *that would have existed if prices were free*. However, the Government could buy goods at the official price level through the mechanism of state orders. Thus, households (and enterprises) were forced to accept money in exchange for goods at the official price level, whereas the true value of the money was given by the hypothetical free price level.

2.8 The implicit tax on households from this unequal exchange is shown in Figure 2-2.⁶ The money overhang tax was a major source of government financing in the last years of the old system. In 1991, households paid 12 percent of GDP to the Government through excess monetary holding!⁷ The figure also shows the hypothetical revenues from money creation that would have existed if prices were free. Only this amount of revenue from money creation can be duplicated in the future.⁸ We see from this illustrative calculation that *most of the "revenues" from monetary financing in 1991 are no longer available now that prices have been freed*.

Figure 2-2. Seignorage Revenues from Households, 1981-92

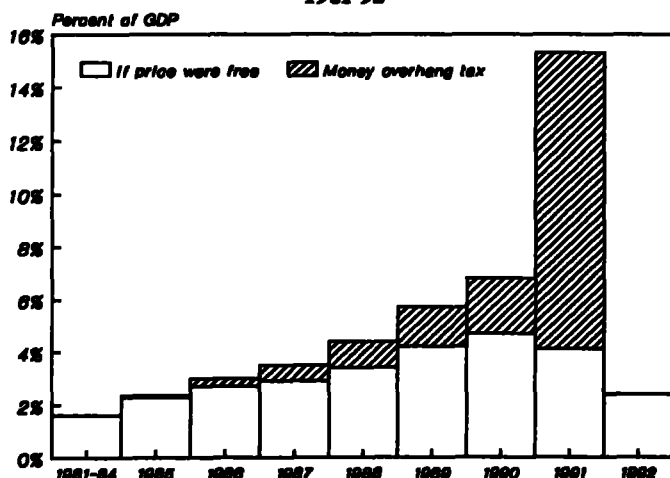
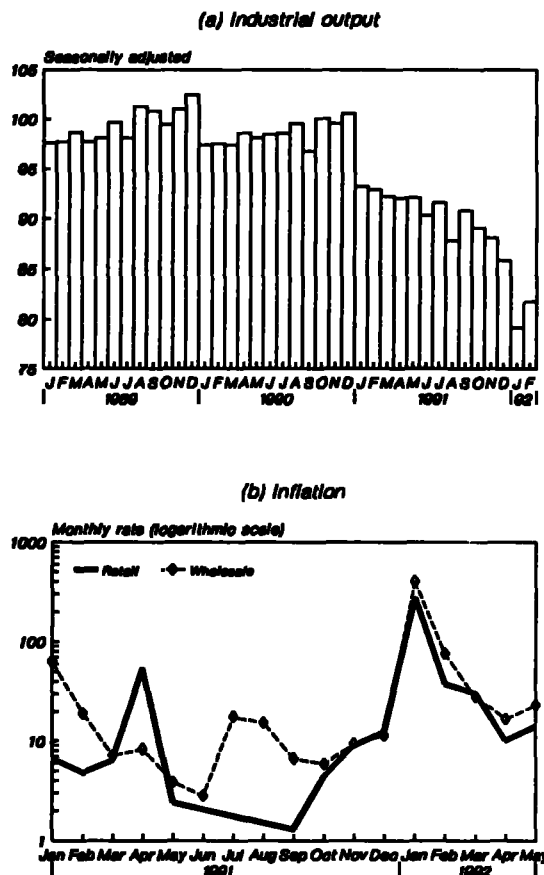


Figure 2-1. Trends in Output and Inflation, January 1989-March 1992



The output collapse

2.9 Like other formerly planned economies, Russia experienced a sharp contraction in output as the process of reform got underway.⁹ As shown in Figure 2-3, the decline in output was broad and deep. Two indicators (tractors and milk) declined by over 40 percent since 1989; shoes, petroleum, saw-timber, ferrous metals, and meat declined by over 25 percent. There have already been important shifts in the structure of industrial output. As shares of total NMP, "engineering industries," including defense and industrial machinery, declined as "light industries," (textiles, clothing, etc.) grew.

Box 2-2. The Monetary Overhang

The monetary overhang refers to the excess of actual money holdings by households and enterprises over the desired amount. An overhang can develop only when the general price level is controlled, external capital flows are controlled, and parallel goods markets (black markets) are circumscribed. If prices were free, they would rise to reduce the real stock of money to the desired amount. If capital flows were uncontrolled, then any excess money would be exchanged for foreign currency. And if black markets were extensive, then the excess money would all spill over into purchases on parallel markets, causing a rise in black market prices.

A money overhang does not always develop even in a controlled economy. There are two ways in which an overhang will develop.

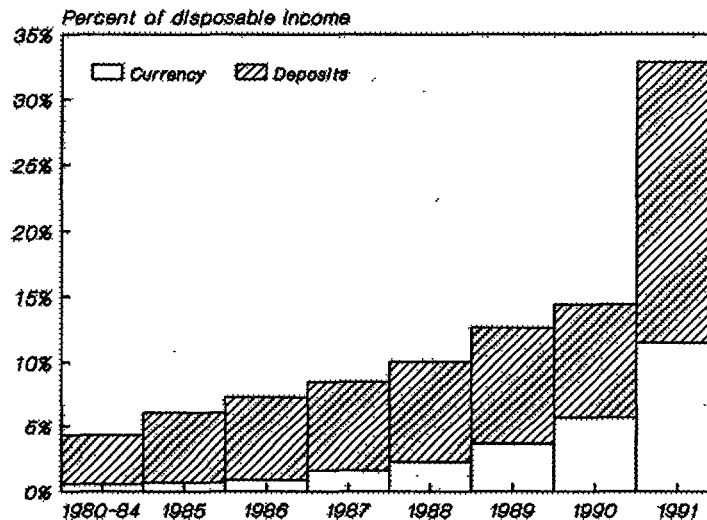
Total assets overhang. When income rises faster than the supply of consumer goods, consumers are forced to save a larger than desired share of income, accumulating more assets, and consuming fewer goods than desired.

Money overhang. Households in planned economies have few forms of wealth available to them besides money. The fewer alternative outlets for wealth that exist, the higher will be the share of wealth held as money.

When markets are freed in a formerly controlled economy, both the stock of assets and the share of assets held as money will be reduced. The first may be gradual, as savings rates are reduced from their previous artificial high. The second can be instantaneous, as the attempt to convert money into real assets such as goods inventories drives up prices. If all wealth is held as money, the two processes coincide as the rise in the price level eliminates both unwanted asset holdings and excess money.

In Russia, the monetary overhang began in 1986 with monetary financing of fiscal deficits. Rapid increases during 1988-91 in wages and wage-related incomes without an increase in the supply of goods for consumption led to excessive accumulation of household savings. Box Figure 2-2a shows the evolution of the ratio of household financial savings from below 5 percent in 1980-85 to 15 percent in 1990, followed by the remarkable leap of the savings rate to over 30 percent during 1991. Box Figure 2-2b shows the stock counterpart to the rising savings ratio. The ratio of financial assets to GDP rose steadily from 30 percent in the mid-1980s to 45 percent by 1990. It fell in 1991 as price increases outpaced the rapid monetary expansion.* However, it does not follow that the monetary overhang fell. Desired holdings of money may have fallen even faster in response to the demonetization of 50-ruble notes in early 1991, accelerated inflation, anticipated price liberalization, and increased uncertainty.

Box Figure 2-2a: Ratio of Household Financial Savings to Disposable Income

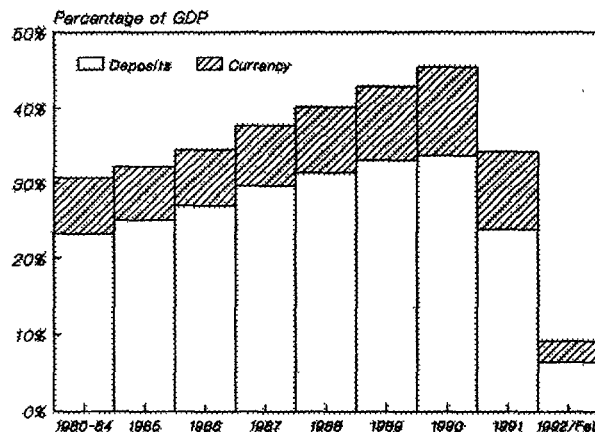


Box 2-2. The Monetary Overhang (Continuation)

The overhang made possible a much higher level of monetary financing of the Government than is feasible in a market economy. In a market economy, monetary financing is possible through the normal growth of desired monetary holdings by households and enterprises as the economy grows, plus the additional growth in money holdings required to keep up with the rising price level; that is, the inflation tax on money holding. Monetary financing is revenue to the government, *seignorage*, since it carries no future interest obligation. In a market economy, the desired real money holdings are equated to the actual stock of real money (possibly with a lag) by changes in the price level.

At the end of 1990, the overhang of unwanted asset holdings for households was estimated to imply a 50 percent price increase in the event of price liberalization. A recent update suggests that at the end of 1991, the "asset overhang" of households would have implied a price increase of 143 percent.⁹

Box Figure 2-2b: Ratio of Stock of Household Monetary Holdings to GDP

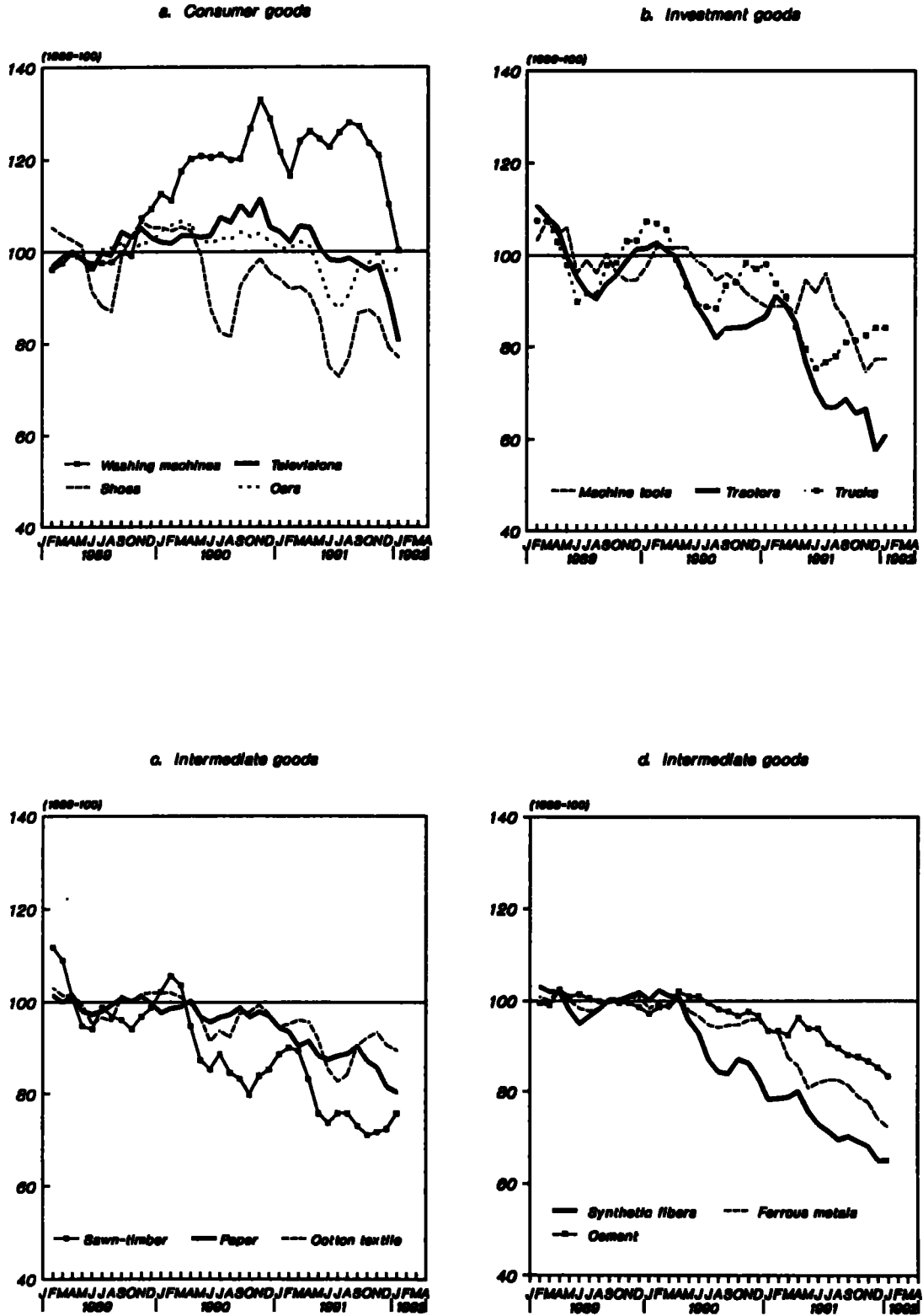


a. The ratio of household financial assets to GDP is calculated as the ratio of nominal currency and deposits in December to nominal GDP times the ratio of the average annual value of the retail price index to the December value. The latter correction is necessary to properly deflate the end-year money stock by the corresponding end-year price index.

b. For the end-1990 estimate, see Blejer and Cottarelli (1992). See this article also for a summary of the theoretical framework. The 1991 update is from Cottarelli (1992).

2.10 Russia's experience in the transition differs from that of other nations however, in that output decline came *before* price liberalization and other market reforms. *Output decline in Russia was not a consequence of market reform.* It accelerated in 1991 when the old system experienced its final demise without a substitute program of reforms—and without market incentives in place to create new patterns of supply and production. In other formerly planned economies with declines in output, there is a debate on to what extent demand and supply factors explain the contraction.¹⁰ In Russia, the 1991 contraction was a collapse of *supply*, since excess demand continued to exist in the form of the large monetary overhang fueled by massive fiscal deficits.

Figure 2-3. Output Indices of Selected Goods



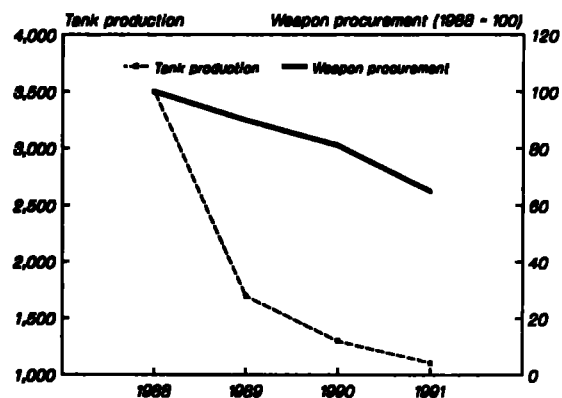
2.11 The fall in investment demand in 1991 was not a factor even for individual products. *There is no pattern in the declines.* A supply-induced contraction is very uneven. Supply difficulties or input shortages affect key sectors and cascade throughout the economy, with each sector's decline depending on its vulnerability to the key bottlenecks upstream or downstream. This is what happened in Russia in 1991.¹¹ The sole demand factor that is significant is the reduction in military purchases (see Figure 2-4).¹²

2.12 The two main factors behind the supply-induced contraction were: (a) the breakdown of supply links between enterprises and (b) the fall in foreign trade, especially trade within the FSU. On the supply side, coordination failures among enterprises in Russia contributed to the output decline. Under the old system, government officials worked to assure that firms received the inputs necessary to fulfill their output plans. Input hoarding and output bargaining occurred, but state ministries served as a coordinating mechanism. The political turmoil of 1991 indicated to firms that the state was becoming much less important as their bargaining partner.¹³ Instead bargains had to be negotiated on a bilateral basis with other enterprises. The withering away of the firms' centralized bargaining partner increased transaction costs and limited information and opportunities for exchange. The result was a worsening of shortages of intermediate inputs and a decreased incentive to produce outputs.

2.13 Driven by political developments, the FSU's external position changed in 1989—and radically so by 1991 (see Box 2-3). The change was abrupt and large, furthered by the disintegration of both CMEA and the former Union. By 1990, commercial creditors had eliminated \$10 billion in short-term credit lines, and the country had lost about \$7.4 billion in foreign reserves, notwithstanding gold sales of \$2.5 billion. The crisis deepened in 1991. Soviet trade with the CMEA collapsed; exports fell by \$32 billion equivalent and imports by about \$48 billion, a large share of which was due to price reductions. There was some shift to industrialized countries, but the marginal gains could not outweigh the massive losses in the CMEA. Moreover, beginning in 1991, nearly all trade had to be conducted in foreign currency. The shortage of foreign currency was acute, causing havoc in the exchange markets. The financing gap and arrearages widened as capital flight intensified and foreign commercial banks continued their withdrawal of credits.

2.14 Russian imports from non-FSU sources fell by 46 percent in 1991. While part of this fall is explained by the fall in prices for imports from Eastern Europe (associated with the move of ex-CMEA trade to world prices) the quantity decrease is still substantial. Critical imported inputs like cotton and machinery show volume declines of close to 50 percent. This is analogous to the output declines in Eastern Europe, where the collapse of CMEA trade was argued to be a critical factor.¹⁴ The lack of imported intermediate inputs from non-FSU sources precipitated the fall in FSU trade—though political events and the disruption of trade links within the FSU arguably explain the onset of the trend. Even trade among enterprises and regional entities within the Russian Federation was disrupted. There are no comparable data on Russia's trade with the other FSU states between 1990 and 1991. But there is little doubt that the fall in real flows was very large and disruptive. Available data from *Goskomstat* indicate a drop of 29 percent in exports and 46 percent in imports. Industries with a high inter-republican export share were able to engage in barter trade to preserve their access to FSU inputs, thus avoiding the worst

Figure 2-4: Defense Production Indicators, 1988-1991



Box 2-3. External Developments Since 1989

The Soviet Union maintained an impeccable external payments record until 1989. This was primarily due to a very limited external debt burden compared with exports and, particularly, GDP. A centralized decision-making process also allowed the Soviet Union to control foreign exchange tightly, both with regard to borrowing, official reserves, and external payments. But in April 1989, in line with a general decentralization of decision-making and responsibilities, 15,000 Soviet enterprises were allowed to engage directly in foreign-trade activities, including obtaining foreign financing. Even though external borrowing by these firms did not carry any official guarantee from the Soviet government, lenders in general appeared to assume the existence of an implicit guarantee because, *de facto*, no bankruptcy law existed and subsidies were an integrated part of the domestic financing pattern. The exact magnitudes of such unguaranteed borrowing are not known, but the first reports of arrears on this type of debt emerged by October 1989, and by the end of the year the arrears increased to around \$0.5 billion.

The partial decentralization of external trade and borrowing decisions also contributed to a significant deterioration in the convertible currency trade account; imports increased in 1989 by 23 percent in dollar terms while exports increased by only 5 percent. As a result, the convertible currency trade balance changed from a \$4.8 billion surplus in 1988 to a \$0.1 billion deficit in 1989. To help cover the deficit, as well as officially guaranteed debt service obligations, gold exports were boosted from an already high level in 1988.

The payments situation further deteriorated in the first half of 1990. Imports increased sharply, and the trade deficit reached \$4.8 billion for the first six months of that year. Enterprises with external trade authorization continued building up external arrears; by June 1990, these arrears reportedly amounted to about \$6 billion. In the second half of 1990, in order to address the soaring trade deficit, the Soviet authorities started to re-direct oil deliveries from the CMEA area to the free market where the higher volumes at increasing world market prices helped substitute for a steep decline in other exports, including coal, iron, and manufactured goods. The authorities also substantially cut back imports, and imports by the autonomous enterprises were reduced as foreign exporters grew increasingly concerned about the payments situation.

The convertible currency trade balance turned around from a large deficit in the first half of 1990 to a \$3.3 billion surplus in the second half. The Bank for External Economic Affairs of the USSR (VEB), which was the primary borrower on behalf of the U.S.S.R. Government, started in the second half of the year to pay off arrears on non-guaranteed debt, even though these were not legally their obligation. As a result, during 1990, total arrears were reduced to around \$1 billion. Commercial banks, concerned with their involvement in the Soviet Union, reduced their exposure during 1990; debt owed to commercial banks fell by almost \$12 billion, of which \$10 billion was through elimination of short-term credit arrangements.

Continued

of the output decline.¹⁵ These results, and continuing developments in 1992 (see below), reinforce the concern that further disruption of trade among the former Soviet republics will seriously damage the production structure.

2.15 With the disintegration of the common economic space, and the demise of the command economy, there is an urgent need for measures to facilitate trade within Russia and within the FSU. Supply linkages are being destroyed even before significant economic restructuring has taken place. As indicated in Chapter 8, state obligations and orders in interstate trade should be eliminated; they are disruptive and, presently, unenforceable. Much of the collapse in trade has been due to astonishing difficulties in effecting payments within Russia and especially between the FSU states—and these difficulties have increased in 1992. Improvements in the payments system is a critical priority. There is also a need for more effective monetary coordination and restraint within the ruble area, coupled with the formation of a preferential trade area among as wide a group of former Soviet states as possible.

Box 2-3. External Developments Since 1989 (Continuation)

The Soviet Union experienced unprecedented turmoil in its foreign trade relations during 1991; the CMEA trade system was abolished from the beginning of the year and world market prices and convertible currency settlements were introduced, at least in principle. In addition, barter trade was prohibited from the outset of the year, and then partially reintroduced as of July 1. Soviet trade with the CMEA area basically collapsed. Exports to CMEA countries fell from \$52 billion equivalent in 1990 to \$20 billion in 1991, as exports were increasingly re-directed to the convertible currency area. Exports to the OECD area increased slightly in dollar terms, covering higher oil sales but continued falling exports of most other goods. Imports from the CMEA area fell by over two-thirds in 1991, from \$68 billion equivalent in 1990 to some \$20 billion. With strict import constraints still in place, imports from the convertible currency area fell slightly.

External trade data cannot be reliably disaggregated for Russia alone, but indications show that similar drastic developments occurred for Russia as for the Soviet Union as a whole. The trade balance for Russia is estimated to have improved from a small deficit in 1990 to a \$12 billion surplus in 1991. The turmoil in the trade pattern was enhanced by a substantial drain on the capital account. Commercial banks continued their unprecedented withdrawal during 1991; short-term credits were reduced by an additional \$7 billion, and medium- and long-term loans were reduced by more than \$4 billion. In addition, capital flight intensified and enterprises moved dollar deposits out of the VEB and into domestic commercial banks, now authorized to receive such deposits. External official sources disbursed substantial amounts during the year. By the end of 1991, it is estimated that official creditors had increased their claims on the (now former) Soviet Union to \$36.5 billion from \$23.2 billion a year earlier.

According to preliminary statistics for the first five months of 1992, the trade account is in balance. Reportedly, however, exporters are not surrendering their receipts to the extent required, and capital flight continues to be a problem.

Reforms and Economic Developments in Early 1992

2.16 The state of the economy at end-1991 could hardly have been worse. A program of stabilization and reform had to be resolutely implemented to avoid chaos and collapse—and the authorities faced up to the challenge. Prices, the exchange rate, and trade were liberalized; the fiscal program for the first quarter imposed new taxes and slashed government spending; and the Central Bank began to effect an austere credit policy. This section discusses the basics of the program put in place early in 1992, and gives preliminary data on results in early 1992.

Price liberalization and the "big bang"

2.17 The centerpiece of the reform program was the liberalization of prices. About 80 percent of wholesale prices and 90 percent of consumer prices were freed on January 2, 1992. The exceptions to price liberalization were goods that were thought to be consumer necessities or critical inputs where rapid producer adjustment was difficult (energy and freight).¹⁶ However, these administered prices were at the same time increased three to five times. On March 7 the prices of virtually all remaining consumer goods were liberalized; and on May 18, the Government raised the wholesale price of crude oil from 350 rubles per ton to 2,200 rubles per ton (an increase that still left the price at one-sixth to one-seventh of the world price at the current exchange rate—see Table 11-2 in Chapter 11).

2.18 Liberalization of the Russian trade and exchange rate system accompanied the freeing of prices. While controlled exchange rates remained in effect for many purposes, a market-determined exchange rate (the inter-bank rate) was applicable for general imports. Foreign exchange purchased in

the inter-bank market can (and must) be used for properly documented imports. Imports are virtually free of restrictions, and even import tariffs were suspended for the first half of 1992. But the size of the inter-bank market remained very limited, accounting for less than 5 percent of total foreign exchange flows. Most inputs continued to be purchased through centralized agencies and were sold at special (subsidized) exchange rates. Exports of raw materials and military goods (70 percent of total exports) continued to be subject to quotas and licensing requirements. Chapter 8 discusses the trade regime in more detail.

2.19 The liberalization of prices led to a nearly five-fold increase in retail prices in the first three months of 1992 (compared to December 1991), and a nearly nine-fold increase in wholesale prices in the first two months. Another spike in inflation is anticipated following the energy price increase, with a sixteen-fold price increase forecast for calendar 1992 (December over December). The initial price rise following liberalization was and was expected to be far greater in Russia than in other reforming socialist economies, as shown in Table 2-2.

2.20 Price increases in industrial branches varied considerably. The price of a black and white television set of an outdated design, for example, rose by twenty times to Rb 5,000, whereas the price of a domestically manufactured XT personal computer rose only four times to Rb 100,000.¹⁷ In the textile industry, price increases ranged from 18 to 46 times; in the vehicular and agricultural machinery branch, they increased from eight to ten times. Price liberalization appears to have had a striking impact on the defense sector and some of its civilian products because it has negated the sector's historic advantage of privileged access to inputs. For example, a heavy tractor produced by a Russian enterprise within the military industrial complex sold at Rb 21,000 before liberalization and at nearly Rb 600,000 by end-March 1992.

Table 2-2. Inflation Rates in the First Year after Price Liberalization

Country	Inflation
Russia (1992)	382 ^a 1,500 ^b
Bulgaria (1991)	457
Czechoslovakia (1991)	54
Hungary (1991)	33
Poland (1990)	249
Romania (1991)	252

a. January-March, retail prices of goods.

b. Estimated. December to December.

2.21 Household money holdings increased only 24 percent while prices were increasing five to seven times. Therefore, the ratio of financial assets to GDP fell to a small fraction of its previous value—less than a quarter in terms of retail prices and less than a sixth in terms of wholesale prices. Expressed as shares in GDP, the stock of money (M2) fell from nearly 80 percent at end-1990 to about 60 percent at end-1991 and less than 20 percent at end-January 1992. *The monetary overhang was largely eliminated at the beginning of the reform program.*

2.22 As described above, the price liberalization took place in the midst of massive macroeconomic imbalances. Though many would argue against this particular sequence, the rapid disintegration of authority during and after the collapse of the former Soviet Union made continued administrative management of the economy impossible.¹⁸ The government opted for a "maximum bang" where the elimination of the past money overhang, the correction of macroeconomic flow imbalances, and the creation of a market economy with free prices were all to be done at once.

Why was the price jump so large? Why did inflation persist?

2.23 What explains the price explosion and collapse in the ratio of money to GDP at the beginning of the program in 1992? And what explains continuing inflation after the January spike? The

initial spike was expected, given the size of the monetary overhang. But it was larger than expected—for which there are two alternate sets of probable causes. The first set argues that non-monetary factors increased the price level, and that the price increase was less than fully accommodated due to the tight money policy of the authorities. The alternative view stresses that post-reform money demand was even lower than previously anticipated, so the price increase to eliminate the overhang was much greater than expected.

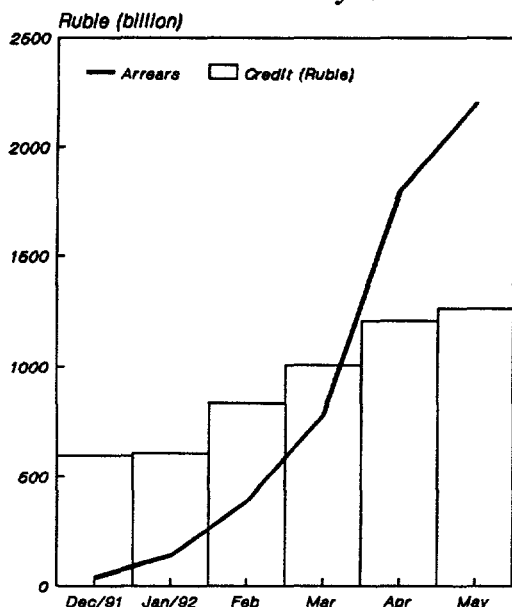
2.24 Russian industry is dominated by large, near-monopolistic enterprises. A common view, which underscores structural non-monetary causes of inflation, is that this led to excessive price increases by firms unresponsive to consumer demand. A similar hypothesis is that firms were unused to market pricing and overestimated the required price increase to equate supply and demand, with resultant inventory accumulation.¹⁹ Moreover, large increases in wages in December 1991 and in raw material prices may well have led to a price spiral as firms fully passed on the input price increases to their downstream customers, leading in turn to further increases in input prices, etc.

2.25 While non-monetary factors undoubtedly played some role, monetary factors could plausibly explain the price jump. The price increase, the sharp fall in money to income, and the inventory accumulation can all be explained as a rational response of enterprise and household money demands to the post-reform situation. The freeing of prices came at a time when one of the few alternative real or financial assets to money was the holding of goods inventories. The holding of interest-bearing monetary assets was unattractive given the low nominal interest rate (less than 10 percent for one-year deposits) in the face of rising inflationary expectations. Inflationary expectations and uncertainty were high due to the problematic credibility of tight money in the face of severe pressures for money creation. The normal desire to diversify wealth away from one asset (money), which now could be realized with free prices, was even stronger in these circumstances. The price increase was driven not just by the "monetary overhang" (that was estimated to have implied an increase in prices of 2.4 times, as discussed in Box 2-2), but also by the flight of wealth away from money.

2.26 The complement to the fall in money demand of enterprises and households was a strong demand to hold inventories of goods in early 1992. (Inventory demands were also strong in late 1991 in anticipation of price increases, but goods were not freely available under controlled prices.) With a limited supply of goods, the price of goods rose until the demand was satisfied; the share of money in total assets was reduced accordingly. Since the price increase was greater than it would have been if policy had been instantly credible and inventories were not held, in some sense prices can be said to have "overshot." The more rapid increase of producer than retail prices supports this hypothesis, as producer goods are easier to hold as inventories than consumer goods, and enterprises are more likely to be able to hold large inventories than households.²⁰

2.27 A strict (indeed excessive) limit on monetary emission in January 1992 led to a severe liquidity squeeze. This contributed to an explosion of enterprise arrears, but the link between the monetary stance and the liquidity position of enterprises is far from simple. Inter-enterprise arrears increased from 39 billion rubles in early 1992 to about 800 billion at end-March, an amount roughly equal to total banking credit to enterprises (see Figure 2-5). There is no simple explanation for inter-enterprise arrears. While tight money was undoubtedly a factor, as was the incentive to avoid the value added tax (payable on receipt), the lack of payment discipline left over from the previous system is more likely the main culprit behind the growth in arrears. Relatively large wage increases and the surge in tax collections on enterprise profits in the first quarter is not consistent with a severe liquidity squeeze. Instead, the habit of soft budget constraints (see Box 6-6 in Chapter 6) and expectations of cheap credit being made available (doubly attractive with high inflation) both contribute to arrears accumulation.

Figure 2-5. Inter-enterprise Arrears and Credit, December 1991-May 1992



end-1991, and already then increasing prices led to higher profits and sharp increases in enterprise deposits (see Box 2-1). Producers settled inter-enterprise accounts with deposit-money, *but they could not convert deposit-money into cash-money*. Over time, lack of final sales led to arrears, at first from sellers to suppliers and then quickly through the economy. Easy credit will not solve the arrears problem. It is important to overcome the cash shortage, which can only be done by raising the amount of cash relative to the amount of bank credit. Looser credit will simply lead to inflation, higher inventories, and even higher arrears because of unsold goods.²¹

2.29 The cash shortage and the temporary tightness in credit could not contain *post-liberalization* inflation after January 1992. Inflation continued, driven partly by the inertia of mark-up pricing in markets with limited competition. It was also induced by adverse expectations and supported by sources of enterprise liquidity outside the Central Bank's control. Enterprises monetized arrears with the support of enterprise-owned commercial banks which avoided regulations and escaped supervision (see Chapter 7).²² They brought back foreign exchange held abroad and traded claims on foreign exchange held abroad. They bartered, raised wages, and had privileged access to the cash supplies of the Central Bank for meeting wage payments. And, of course, same enterprises accumulated receivables in anticipation of a bail-out of money-losing enterprises. The reversal in the Central Bank's credit stance has proven them right; expectations of cheap credit have been fulfilled and inflation continues to be driven by the belief that (with a discount) arrears are money.

Fiscal and monetary policy in the first half of 1992

2.30 To satisfy the stabilization objectives of the reform program, the Russian government instituted tight monetary and fiscal policies in early 1992. *Monetary policy* was extremely tight in January, but quickly reversed. After the monetary stringency in January, there was a surge of money creation in February, then continuing expansion in March through May. Table 2-3 shows the monetary flows for the monetary system as a whole and for the Central Bank of Russia (CBR) for the first five months of 1992. Although reduced in comparison with 1991, due to the disappearance of the monetary overhang, the flows are still very large as a ratio to GDP.

Fulfilling expectations of cheap credit will only worsen the problem for the future. In Poland, tight money and expectations of hard budget constraints in 1990 were initially effective in reducing inter-enterprise credits and arrears.

2.28 Monetary policy in Russia was based on the wrong combination of instruments. Initially, in the aftermath of liberalization, tight credit was complemented by an even stricter ceiling on currency issue. Then, when credit was loosened, limits on emission continued and were further tightened. The policy was misguided. The ruble shortage caused delays in wage payments (especially in the budget sectors), limited withdrawals from savings accounts, and fueled the demand for cash-holdings. It contributed to a sharp drop in household expenditures. (In January 1992, retail activity fell to 37 percent of its real level in January 1991.) Producers escaped the cash squeeze—for a while. Credit was abundant at

2.31 Figure 2-6 shows the corresponding month-by-month flows of broad money as a ratio to estimated monthly GDP. Despite the rapid growth of money, velocity continued to rise after the initial correction in January. Since output was falling, the culprit was prices, which rose even faster than money.

2.32 Most of the credit growth from February through April was a growth in bank lending to the rest of the economy. The expansion in credit was not financed through an increase in foreign borrowing. There is in fact a large expansion in net foreign assets which is mainly due to two factors: the surplus in trade with the other FSU states (estimated at Rb 315 billion at end-June) and an increase in foreign exchange deposits (with a corresponding increase in deposits held by Russian banks abroad).

2.33 It appears that the expansion in credit was at least partly financed through a re-composition of the domestic assets of the commercial banks. Ruble deposits did not grow as fast as credit, and the ratio of ruble credit to deposits rose from 71 percent in December 1991 to 108 percent in April 1992. Commercial banks also did not finance the expansion in credits by borrowing from the CBR. Net credit from the CBR to the banking system fell as required reserves on domestic deposits rose from 2 percent (at end-1991) to 20 percent at end-March. As shown in the lower panel of Table 2-3, in the accounts of the CBR the flow of reserves exceeded the flow of credit to banks, and both flows dominate the changes in the balance sheet. Thus, the growth in credit must have come from a shift in the commercial banks' own stock of assets. This may have happened, for example, through a shift in the use of Sberbank's ample deposit inflows from financing the Government to supplying resources to the inter-bank market.

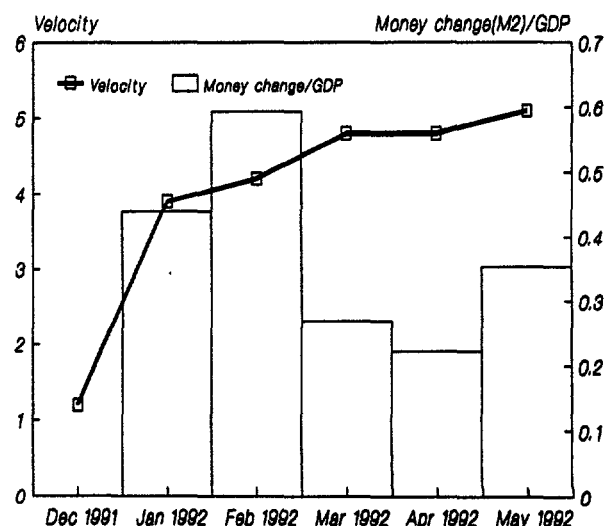
2.34 Funding new loans through a re-composition of assets is a once-and-for-all adjustment in stocks. It cannot continue indefinitely—and to this extent new flows of credit in the second half of 1992 and beyond should become more closely correlated with the growth of bank liabilities. This will strengthen the role of monetary policy and, in particular, the CBR's reserve management position.

2.35 *Fiscal policy* also targeted a very tight outcome for the first-half of 1992. The program for the first quarter of 1992 provided for a drastic cut in the size of the general Government. Overall

Table 2-3. Change in Monetary Aggregates as Percentage of GDP, January-May 1992

Monetary Survey	
Liabilities	
Money	25.9
Currency outside banks	5.6
Ruble deposits	15.2
Foreign exchange deposits	5.2
Net other items	13.0
Assets	
Domestic credit	24.1
Net claims on Government	0.9
Rest of economy	23.2
Net foreign assets	14.8
Balance sheet of Central Bank of Russia	
Money base	23.0
Currency outside banks	5.6
Reserves	17.4
Net foreign assets	6.3
Net international reserves	-0.4
Interrepublican payments	6.7
Net domestic assets	16.7
Credit to Government	1.5
Credit to economy	0.8
Credit to banks	10.1
Other items net	4.3

Figure 2-6. Velocity and Monetary Flows



expenditures were budgeted to decline from about 48 percent of GDP in 1991 to slightly below 27 percent in 1992.

2.36 The outcome was mixed and confused (see Table 2-4). Centrally financed enterprise investment was cut from 5.5 percent of GDP in 1991 to 2.3 percent in the first quarter of 1992 while producer and consumer subsidies fell from 3.9 percent to 2.3 percent. Defense expenditure also fell sharply. With the exception of consumer subsidies, these cuts affected primarily central government expenditures. Expenditures at the sub-national level may not have been reduced substantially, if at all. However, given the new pattern of revenue assignments, the revenue base of most local governments improved substantially. Local governments assume most of the social spending not funded through the centralized extra-budgetary funds. This spending included all remaining explicit subsidies to consumers (which some municipalities chose to maintain against the intention of the federal fiscal authority) and rapidly rising subsidies on housing. Housing rent was one of the few prices not liberalized. As discussed in Annex 5-1, for many municipalities tax assignments in the first quarter were insufficient to finance assigned expenditures. For most, however, the buoyancy in the first quarter of the profit tax (which was assigned to the sub-national level) made revenues at least temporarily adequate for the expenditures assigned.

Table 2-4. Fiscal Outcome (1992/first-half)

Russian Federation General Government (percentage of GDP)			
	1 Q 1992	2 Q 1992 (estimated)	First Half 1992
Revenue	21.3	28.6	24.7
Vat excluding imports	6.4	7.8	7.3
Domestic tax on oil and gas	0.0	0.4	0.2
Profit tax	6.5	10.6	9.0
Household income tax	2.0	1.5	1.7
Export tax	1.7	1.1	1.3
Other revenue	4.7	6.2	6.2
Expenditure	27.4	33.1	31.0
Wage bill	6.2	7.0	6.3
Producer subsidies	2.3	3.7	3.2
Investment	2.3	2.3	2.3
Defense	3.6	6.9	6.7
Social safety net	2.2	2.3	2.2
Other expenditure	11.8	10.9	11.3
Extrabudgetary funds balance	3.0	1.1	1.8
Fiscal Deficit	-3.1	-6.4	-4.6
Import subsidies	25.6	8.0	14.6
Enlarged Fiscal Balance	-28.8	-13.4	-16.0
Arrears	6.6	-1.4	1.1
External interest arrears	1.1	1.1	1.1
Domestic interest arrears	4.3	-2.6	0.0
Cash Government Balance	-23.1	-14.8	-17.9
Foreign financing	27.9	9.8	16.6
Domestic financing	-4.7	6.0	1.3

2.37 Local governments as a whole showed a net fiscal surplus in the first half of the year; indeed, domestic financing of the consolidated deficit was negative in the first quarter and comparatively small (1.3 percent of GDP) for the entire period. Nevertheless, *the overall fiscal balance indicates a deficit in the period of 19 percent of GDP*. There were large unbudgeted *and off-budget* expenditures and the budget accumulated arrears (mainly on foreign debt payments).

2.38 The source of the large deficit and its means of financing were one and the same: the foreign exchange corresponding to large flows of external financing (much of it from pre-existing commitments to the old Union) was sold at a highly subsidized exchange rate to importers. The severely depreciated ruble expanded the ruble counterpart flows to foreign financing, but the Government gave away much of the counterpart flows through import subsidies. Indeed, most of the flows had no immediate monetary counterpart: producers bought the goods contracted earlier, and that were financed with loans and grants received from abroad, at (implicit) exchange rates well below the prevailing market rate. The Government assumed the loss—and the future liability of repaying the loans. Without the import subsidies, the fiscal deficit would have been modest.

2.39 Fiscal policy in the first half of 1992 was mindful of the binding constraint on domestic financing in the aftermath of price liberalization. In sharp contrast to 1991, the deficit in the first half of 1992 was financed almost entirely by *external* borrowing. This position is not sustainable, however. Reducing the fiscal deficit further—substantially *and* sustainably—remains a major challenge for the second half of 1992.

Output

2.40 After the liberalization of prices on January 2, 1992, there was a further decline in industrial production of about 6 percent on a seasonally adjusted basis, as shown in Figure 2-1. Comparison of product groups for this period indicates an accelerated decline in production of some products that had already undergone a sharp reduction in 1991 (that is, tractors, 37 percent; iron and steel, 28 percent; and meat and meat products, 23 percent). Not enough data exist to evaluate the sources of the additional output decline in early 1992. Inter-republican trade is likely to have declined further with the formal demise of the Union at the end of 1991—this probably explains part of the 1992 production decline. Moreover, the continued disruption of production and inter-enterprise supply links was probably also a strong factor in the early 1992 decline. There is little reason to attribute the decline in 1992 to the reform itself.

Conclusion

2.41 The historic changes in Russia since August 1991 will only realize their full potential if the transition to a market economy can be achieved. Russia's economic transition has just begun, and recent developments obscure the gains made. The growth in entrepreneurship and the private sector is overshadowed by problems among the public enterprises. These enterprises have been slow to adjust to the downturn in activity, and even slower to restructure to the rules of a market economy. Arrears, cheap credit, and explicit subsidies sustain many public enterprises. As in Eastern Europe, privatization has been slow—and it is now clear that it will be a lengthy process.

2.42 These outcomes were anticipated; probably, they were unavoidable. Despite worrisome trends (discussed below), the reform process still offers a clear path to success. Expectations of large and instantaneous gains were grossly exaggerated, and they continue to be so. The adjustment and restructuring process will take time. Designing the optimal reform program is less important than sustaining the process of reform.

2.43 The transition in Russia is unprecedented, and the difficulties are made larger by the imbalances produced by the disintegrating Soviet regime. The new Government has taken a number of key steps during the first half of the 1992—but much more remains to be done. The next two chapters discuss the Government's stabilization program and the structural measures being adopted to begin the transformation to a market-based economy that is integrated with the rest of the world. Despite these measures, the medium term prospects remain very uncertain, and the economic situation for the second half of 1992 remains highly fragile. There is a clear possibility that inflation will persist and the economy experience further sharp declines in output. The major uncertainties facing the adjustment program are therefore briefly outlined at the end of the next chapter.

Notes to Chapter 2

1. This discussion follows Ofer (1991); see also IMF (1992). The tight credit policy was coupled with ongoing reforms in the banking system in the direction of decentralization and de-regulation. Without tight credit, deregulation accentuated the imbalances in the banking system (see Chapter 7).
2. The fiscal plan of 1991 was innovative and consistent with gradual reform: After decades of strict central control, the budget process was decentralized *to the republican level*. The pension and the social security funds were split off as self-financing extra-budgetary funds with access to a 37 percent tax on wages. Taxes on profits were unified into a single rate of 45 percent, undoing the complicated system which penalized high-profit enterprises. A sales tax of 5 percent was introduced to complement the turnover tax and was aimed at reducing further the burden of consumer subsidies. Finally, a tightly supervised "stabilization fund" was created to help enterprises in the envisaged gradual transition to a market economy.
3. In the period 1970-90 there are only two example, of deficits approaching this: Bolivia's deficit of 27 percent of GDP in 1984 (when it was going into a hyperinflation) and Zambia's deficit of 28 percent of GDP in 1986. See Easterly, Schmidt-Hebbel, and Rodriguez (manuscript, 1992). The fiscal accounts for 1991 are sketchy at best. The analysis in this chapter is based on the IMF's estimate of the *notional* deficit calculation derived from ex-Union accounts.. See IMF (1992) Table 18.
4. Producers' prices (including farm support prices) were adjusted in January *but retail prices were adjusted only in April*. In the interim, profits grew and were not taxed and the budget absorbed the phenomenal increase in subsidies. When retail prices were adjusted, in April, the profits tax was lowered to allow enterprises to increase wages.
5. At the time, total consumption (retail turnover value on a yearly basis) was estimated at R 520 billion. On average, prices were adjusted by 60 percent of which 85 percent affected consumption directly. To reestablish the real value of consumption, consumers would have to receive an additional R 265 billion to R 1,211 *per capita*, or about R 100 per month. The monthly compensation was set at R 60 for workers, R 65 for pensioners, and R 40 for children.
6. The money overhang can be estimated by calculating the deviation of actual money balances from some hypothetical desired money stock. This is equivalent to the ratio of the "free" price level (that would have existed in the absence of controls) to the actual controlled price level. The *money overhang tax* is the percentage deviation of the hypothetical free price level from the actual price level, times the stock of desired money balances to GDP. This corresponds to money holdings in excess of the desired holdings; the excessive holdings were a pure transfer from households to the Government. They had no value to households even for the future because the price increase would eliminate the excess balances once prices were liberalized.
7. Figure 2-2 is intended to be illustrative, since it involves assumptions about the path of desired money to GDP. We assume that the ratio of money demand to GDP that existed after price reform in 1992 gave the desired ratio of money to GDP at end-1991. Prior to 1991, we assume that the desired ratio of money to GDP remained constant at the actual (*pre-perestroika*) level of money to GDP in 1984.
8. Consider the following assumptions: free prices, no nominal assets other than non-interest-bearing money issued by the monetary authority, money demand a constant share of GDP, and the actual money stock equal to the desired stock. Under these assumptions, the revenue from money creation is equal to nominal output growth (inflation and real output growth) times the money stock. In steady state the inflation rate equals the growth of the money stock. Hence the revenue from money creation is equal to money growth plus real growth times the money stock at the start of the period.
9. In 1991, output dropped by 25 percent in Bulgaria, 12 percent in the CSFR, and 8 percent in Hungary; it dropped by 12 percent in Poland in 1990. See Bruno (1992).
10. For example, Berg and Blanchard (1992) argue that the Polish contraction of 1990-91 was due to a fall in aggregate demand induced by tight money and falling real wages (exacerbated by the collapse of the CMEA in 1991), while Calvo and Coricelli (1992) argue that it was restrictions on credit for working capital to enterprises that induced firm illiquidity and a supply contraction.
11. Appendix 2-3 contains data on 140 output quantity indicators by type of good for 1991. One might have expected that some industry branches producing capital goods may have experienced a demand-induced contraction because of the sharp fall in investment. This is not borne out by the data. Consumption goods quantity indicators and investment goods quantity indicators both have a median decline of 11 percent. The distribution of declines is very similar, with a strikingly wide dispersion, but concentrated between 0 and 20 percent declines. A small but significant minority of indicators registered declines of 30, 40, or even 50 percent, while other sectors still managed to expand at 5 or 10 percent. (The product that did the best was production of vodka, which expanded by 11 percent.)

12. Non-defense output from the military-industrial complex has risen, but at a very slow pace. One defense-related enterprise manager interviewed indicated that the fall in the enterprise's defense production share from 70 percent of total output in 1990 to 30 percent in early 1992 was fully accounted for by the drop in defense orders rather than by any increase in civilian demand.
13. Already at end-1990, *Gossnab* (the former Soviet agency overseeing inter-enterprise supply links) had difficulties finalizing contracts for 1991. In the year it could not enforce these contracts and *Gossnab* itself was dissolved following the events of October, (with some of its functions transferred to the Ministry of Trade and Material Resources). An "advisory" organization under the name of "League of Scientific and Industrial Associations" has inherited its political function as a powerful industrial lobby.
14. In Poland, evidence indicates that it was the collapse of exports to CMEA partners that explains a good deal of the decline – the reduction of imported intermediates did not play much role (Berg and Blanchard (1992)). However, in Russia, the collapse of exports did not contract aggregate demand as in Poland. With prevailing excess demand, reductions in exports would be absorbed by domestic demand, barring exceptional cases of products designed specifically for the export market. While collapse of export demand may have been important for individual items, it cannot explain the overall production decline.
15. Indirect evidence for this is provided by the significant negative correlation between the share of exports to the FSU by type of good and the output decline in that good. Among 39 types of goods, there is a strong and significant correlation between the 1991 share of FSU exports in production and production growth, both measured as physical quantities. There could be reverse causality – industries doing better for other reasons exporting more – but this seems less likely given that prevailing excess domestic demand that would absorb any higher supplies. Surprisingly, the share of non-FSU exports in production was not significantly related to production declines. (The FSU export data for 1991 excludes Azerbaijan, Georgia, Lithuania, and Tadjikistan.)
16. Consumer goods and services with price controls were limited to: bread, milk, baby food, salt, sugar, vegetable oil, vodka, electricity and fuels, apartment rents, public utilities, and public transportation, and communication.
17. This product was highly overpriced in 1991. Its 1992 price, although comparable with international prices in monetary terms, is considered still high because its quality and reliability are below international standards.
18. The Shatalin report had advocated stabilization before full price liberalization (see Chapter 1). Stabilization was supposed to be achieved in part through revenues from privatization of state enterprises, while the sales of these enterprises were also supposed to partially absorb the monetary overhang. Experiences in other former socialist countries in Eastern and Central Europe have since created more pessimism on the prospects for rapid privatization. Some of the participants in the Shatalin report criticized the January price liberalization on the grounds that it preceded stabilization and privatization.
19. Firms could have been influenced by the statement of the authorities in December 1991 that prices would increase 3 to 5 times upon liberalization.
20. Wholesale prices are measured as list prices rather than transaction prices. This does not invalidate the argument; firms always had the option of reducing the list price so that the good would sell, but chose not to for the reasons described.
21. Arrears were also caused by delays in the payment system, especially in payments linked to trans-border trade within the FSU (when settlement can take up to two months). The instruments for verifying sales are rudimentary; there is no system of bills of exchange, letters of credit, bank checks, and the like. And there are no bankruptcy procedures. This of course greatly complicates the collection of arrears (see the note below).
22. Enterprises also receive "factoring credits" from banks. The bank "lends" the enterprise an amount and charges a monthly rate of interest. The bank uses its power, leverage, and connections with other banks to collect money owed to the selling enterprise from the buying enterprises and retail establishments. When the money is collected, the collecting bank takes a fee (on top of the interest rate), and cancels the loan to the amount collected. The enterprise retires the loan, (and the amount receivable) from its books. If the bank cannot collect, the enterprise must pay back the "loan"; if it cannot, interest due is capitalized and the entire amount is rolled over.

CHAPTER 3

The Medium-Term Outlook

3.1 As discussed in Chapter 2, when the present Government took responsibility for economic management in the last quarter of 1991, it inherited an exceedingly difficult situation. The reform program will demand incisive government action. Success depends, at the minimum, on three key factors: first, on the effective implementation of the program and on continued determination and political support; second, on the capacity to re-design and adjust the program as it evolves—as the economy moves in unexpected ways—without losing sight of the key objectives; and third, on substantial and timely international assistance.

Stabilization, Recovery, and External Adjustment

3.2 Recent policy measures, and the Government's agreement on the International Monetary Fund's (IMF) First Credit Tranche arrangement and the World Bank's Rehabilitation Loan, are indications of a political will to move ahead with the reform program, notwithstanding recent setbacks (most noticeably, the expanding fiscal deficit and the explosion in inter-enterprise arrears). The key to reform is a change in enterprise behavior, linked to the transformation of patterns of enterprise ownership, management, and production. As discussed in Parts II and III of this report, the Government's medium-term reform program comprising a range of systemic and structural reforms will contribute to greater efficiency and elicit the necessary supply response. But none of the long-term supply-side reforms stand any chance of success if Russia slides into hyperinflation. The emphasis that must be given to macroeconomic stabilization over the next few years as an anchor to economic reforms is widely recognized as fundamental. The measures and targets agreed with the IMF are helping to create such a framework by supporting the initial steps needed to reduce the fiscal deficit, curb credit expansion, and restore external viability, while the program of systemic and structural reforms being supported by the World Bank and others should help initiate the much needed supply response.

Stabilization policies

3.3 The options for macroeconomic policy are limited. *Monetary policy is intrinsically weak.* The Russian Federation still lacks the basic monetary arrangements necessary for a market economy. Partly, this was due to the lack of a unified exchange rate. The recent move to unify the exchange rate is an important measure for a more coherent policy environment. But there are other problems due to an inadequate and inefficient banking and payments system; to the distinctions drawn between cash-money (*nalichnyi*) and deposit-money (*beznaichnyi*); and to problems of monetary coordination in what in practice remains a ruble area within the FSU. Moreover, notwithstanding significant liberalization, the economy is far from open. Export controls are also, in effect, limits to imports. With few exceptions, import competition has failed so far to exert significant pressure on prices charged by domestic producers. On the contrary the hyperdevalued exchange rate early in the year *increased* the protective advantages of domestic producers. External forces cannot alone contain internal inflationary pressures.

3.4 *Fiscal adjustment is the key to stabilization.* With price liberalization many if not most consumer subsidies were eliminated. Subsidies to producers remain, however, mainly as interest rate and import subsidies. They should be rationalized and, if appropriate, extended in a clearly transparent and

transitory basis. Though justifiable in some circumstances during the transition, import subsidies should be reduced immediately; over time, they should be eliminated. Defense expenditures could also be reduced further. Ultimately, fiscal adjustment hinges on the ability of the Government to stop financing enterprises—either directly, through hidden subsidies or through the banking system. But there are limits to the extent of expenditure cuts. Basic social programs must be protected and there is already a serious backlog in the maintenance of basic infrastructure. It is likely that in the near term public investment in infrastructure will have to increase. Thus, fiscal adjustment must rely as well on the revenue side. The tax system should be overhauled—and recent efforts by the IMF suggest the critical initial steps for reform.¹ With sustained fiscal adjustment, the inflation tax can be replaced by other more transparent and efficient forms of taxation, and the burden of taxation (including the inflation tax) on households and enterprises can be reduced.

3.5 **Fiscal policy.** The elimination of most of the previous sources of financing leaves little choice but for the government to reduce its deficit sharply in the second-half of 1992 and, decisively in 1993. In the program agreed with the IMF, the government deficit is projected to fall to 8 percent of GDP in the second half of 1992, bringing the deficit for the year as a whole to about 11 percent of GDP—a reduction of 20 percentage points of GDP from 1991.² On the expenditure side, the main gain in the program for the second part of the year is in the drastic reduction in import subsidies (from nearly 15 percent of GDP in the first half of 1992 to about 3 percent of GDP in the second half). Containing import subsidies is essential, for there will be an increase in other budgetary expenditures. The Government is going ahead with measures to subsidize credit in priority sectors, and outlays on the social safety net must rise. Excluding import subsidies, expenditures in the second half are foreseen to *increase* by more than 3 percentage points of GDP, to an estimated 34-35 percent of GDP.

3.6 The fiscal targets are ambitious and call for a major revenue effort. The program for the remainder of 1992 is based on a revenue gain in excess of 4 percentage points of GDP. Partly this is intended to be achieved by an increase in the average customs tariff rate (to 15 percent) and by a reduction in tax exemptions. But additional and bolder measures are necessary to eliminate the fiscal tension. The main revenue effort must come from other sources. Though several options may be considered, for the reasons discussed in Chapter 11, the logical choices include energy prices and taxation. This is one area where the gains can be striking, and where the added tax burden should lead to an *increase* in economic efficiency. Energy prices are now only a small fraction of world prices. Moving them to world levels will rationalize consumption and promote the growth of more efficient production. It will also strengthen the balance of payments. Once energy prices are liberalized, transitory export taxes can transfer to the budget the wedge between domestic prices (which should adjust in steps to world prices) and the export price. The level of the tax must assure the profitability of the sector. And the tax regime must evolve quickly to a long-term profit-based system which does not penalize higher-cost producers. In the interim, the windfall gains on energy exports can finance the fiscal adjustment. By 1994, however, the process must be substantially completed—the fiscal deficit narrowed to a sustainable and non-inflationary gap, and energy taxation adjusted to international patterns.

3.7 If the Government succeeds in implementing the additional revenue measures, and in containing expenditures, the domestic financing of the deficit in 1992 would be limited to approximately 5 percent of GDP. Under this scenario, monetary policy is tight enough to avoid a dangerous acceleration of inflation. The monetary authorities could target a monthly rate of inflation of 10 percent by December; credit to the rest of the economy could increase in real terms in the second half of 1992, as inflation falls. But the combination of falling inflation and expanding real credit is critically dependent on two aspects: fiscal adjustment *and* a fall in money velocity as the demand for real cash balances rises *in anticipation of continued disinflation in 1993*.

3.8 Much remains to be done in 1993, even if the targets for 1992 are achieved. The cornerstone of the agreed phased approach to stabilization, implicit in the program for the second-half of 1992, is that determined progress will be made in the following year, when monetary financing of the deficit should be reduced substantially. Only then could credit to the economy expand at a reasonable rate without re-acceleration in inflation rates.

3.9 *Monetary policy.* In the short run, the high financing demands of the government and enterprises limit the speed of sustainable disinflation. It takes time to build up a comprehensive and buoyant revenue system. Presently, taxes and subsidies, along with resources more generally, are subject to ad hoc negotiated settlements between levels of government. Given the limited information available to the administrative authorities, this arrangement leads to an inability to commit future actions, and hence to soft budget constraints and poor incentives. The process of economic restructuring will also cause a realignment in relative prices, leading to substantial increases in some cases. Relative prices in Russia will move progressively closer to those in world markets. Prices of foodstuffs (and agricultural products generally) will increase and, despite the increases already in effect, further large increases in energy prices would be necessary. As subsidies are reduced, major increases are also expected in both housing rentals and public transportation fares. These trends will extend the time period that will be needed to reduce inflation in Russia to the modest levels found in the major industrial countries.

3.10 Any attempt to eliminate inflation by substituting domestic borrowing for money creation would be misguided under continuing high fiscal deficits. The resultant public debt accumulation would merely require even greater fiscal adjustment (or even higher inflation) later on. High interest rates would cause enterprise profits to fall, which itself would deprive the Treasury of badly needed revenues. Lack of hard budget constraints on state enterprises (the absence of a credible bankruptcy threat for example) implies rapid enterprise adjustment is also unlikely. Tight credit is most likely to affect the incipient private sector most severely, which is just the opposite of what is needed to cushion the output decline during the reform process.

3.11 A fixed nominal exchange rate would also be a dangerous way to fight inflation. Russia must stimulate non-energy exports to recapture the markets lost with the collapse of the CMEA. A fixed exchange rate strategy carrying a large risk of excessive real appreciation is at odds with export promotion. It would also strain interest rate policy—demanding a far more active *and effective* policy stance than is feasible in the short-run. As argued in Box 3-1, a fixed rate should not be introduced at the beginning of Russia's stabilization program.

3.12 Though sustainable stabilization calls for a fiscal-first approach, monetary policy cannot be aimless. On the contrary, maintenance of strict controls on credit expansion is crucial to avoid hyperinflation. Exchange rate expectations are unmanageable without credit limits and positive real interest rates. Expectations of loose and cheap credit encourage inventory accumulation, currency substitution, and arrears, all of which delay the adjustment process. Given restrictions in the use of deposit versus cash-money, a tight emission policy combined with loose credit (as pursued in the first quarter of 1992) can actually worsen the arrears problem. Credit expansion (which is not convertible into cash for wage payments) leads to a rise in producer prices, and hence in retail prices. However, scarcity of cash-money limits retail activity. Without sales, enterprises build arrears as inflation rises and real household demand falls. Increased credit is dangerous. Credit might allow some production to continue, but it will not increase final demand of consumers. What is required is a judicious pace in the expansion of liquidity in the economy.

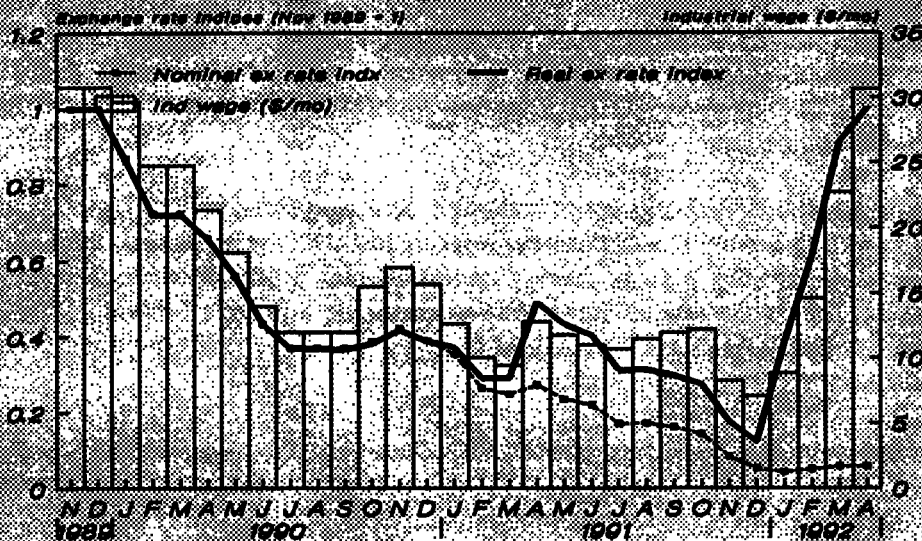
Box 3-1. Convertibility of the Ruble

Much macroeconomic discussion on Russia centers on the convertibility of the ruble for use in current account transactions, with a fixed exchange rate supported by a stabilization fund. It is clear that the macroeconomic requirements for maintaining a fixed exchange rate are even more stringent than those for more general stabilization. A stabilization effort could be called successful if inflation was significantly reduced, say to 20 percent per year.¹ A fixed exchange rate, on the other hand, requires that inflation be maintained at world levels. Without credibly tight fiscal and monetary policies, the ruble stabilization fund would be quickly exhausted.

Whether fixing the exchange rate is a desirable component of inflation stabilization has been extensively debated.² There is no clear answer, but the risks of fiscal slippage are compounded with a fixed exchange rate. For this reason, a fixed rate should not be introduced at the start of Russia's stabilization program. Instead, the burden of fighting inflation must be borne by fiscal adjustment alone. As the durability of fiscal adjustment becomes evident, which in turn would stabilize inflationary expectations and the exchange rate, introducing an exchange rate peg may be appropriate. It would help firm expectations on relative prices and this may be important for investment decisions.³

What is clear is that the "free market" exchange rate is out of line with Russian prices and wages relative to international levels. Even during 1991, before the advent of the reform program, the level of wages and the inter-bank exchange rate implied an average monthly wage of little over \$10 per month (Box Figure 3-1). A tourist "free market" exchange rate introduced at the beginning of 1991 was less depreciated than the inter-bank rate, but still implied drastic undervaluation of the ruble. The GDP per capita in 1991 converted at the average inter-bank rate was US\$120, which would put Russia on par with Ethiopia and Mozambique as one of the poorest nations on earth. This nonsensical figure shows how badly the "free market" exchange rates are out of line.⁴

Box Figure 3-1. Exchange Rate and Wages, 1989-92



Continued

Box 3-1. Convertibility of the Ruble (Continued)

The undervaluation already existed in early 1990. The average wage in the first half of 1990 was 256 rubles per month, while the auction market for foreign exchange varied between 10 and 21 rubles per U.S. dollar, giving a monthly wage between \$12 and \$25 per month.⁶ The black-market rate for foreign exchange during this period was in a similar range.

The "overhedging" of the exchange rate in the thin free market was due to the attraction of foreign exchange as an asset when few other alternative assets existed. (Although the free exchange rate was supposed to be used only for current account transactions, it is likely that the usual capital control-evading mechanisms were being used to attain foreign exchange for asset-holding purposes.)

The ruble began to depreciate at an accelerated rate when price liberalization was announced at the end of October 1991 (Box Figure 2-3a). Since prices were actually liberalized in January 1992, prices and wages have increased more rapidly than the inter-bank exchange rate. The undervaluation has diminished, not only compared to the beginning of 1992, but also compared to early 1991. But the still substantial undervaluation is another symptom of the weak credibility of the macroeconomic program in the early stages. Inducing appreciation of the ruble requires the same medicine already prescribed: credibly tight fiscal and monetary policies.⁷

Under such a set of policies, including a deepening of the foreign exchange market, a significant real appreciation of the ruble may be expected. Poland provides a useful comparison; monthly industrial wages were only US\$27 in late 1989 before reform, but had risen to US\$146 by November of 1990.⁸ Regardless of whether the authorities adopt a fixed or crawling peg, some real appreciation is inevitable and desirable under stabilizing policies. The authorities should not make the mistake of resisting the real appreciation through large nominal devaluations of the exchange rate, nor should the authorities attempt to artificially induce appreciation.

6. A recent paper by Dorafuch and Fischer (1992) documents the difficulty of getting inflation below 20 percent for countries with a history of high inflation.

7. Kignel and Liviatan (1991) point out that fixing the exchange rate is most effective in a hyperinflation such as Bolivia in the mid-1980s, when prices are implicitly linked to the exchange rate. It has been effective also in some heterodox stabilization plans (including wage controls and price freezes) such as in Israel and Mexico, but not in others, such as in Argentina or Brazil. The use of fixed exchange rates in heterodox plans imposes heavy requirements of fiscal adjustment, which is the determinant of success. The Polish reform in 1990 initially involved a fixed exchange rate, which lasted for 17 months, then moved to a crawling peg.

8. See Sarves and Solimano (1992).

9. JSEF (1991), Tables IV.6.9 and III.4.3, respectively.

10. A related issue is the maintenance of a ruble zone among some member states of the Commonwealth of Independent States (CIS). The political prospects for reaching the necessary agreements to formalize a ruble zone are problematic at best. If the ruble zone becomes a formal reality, it will require the maintenance of common fiscal and monetary policies across the ruble area. Some arrangement to divide up the sovereignty revenues among the members of the zone will also be necessary. These issues are discussed in Chapter 8.

11. Calvo and Corsetti (1992), p.76.

3.13 As envisaged in the government's program, some monetary financing of the fiscal deficit is unavoidable in 1992. It should be strictly limited, however, and even more so in 1993 than in the second half of 1992. Only then can credit flow to the rest of the economy without threatening the medium-term inflation targets and without destabilizing the exchange rate. The two principal monetary policy instruments available for the Central Bank of Russia (CBR) are the quantity of credit extended to the banking system and the interest rate charged on this credit. Ceilings on the net domestic assets of the CBR have been established in line with the program inflation objective, and the CBR's finance rate is targeted to reach positive real levels at end-1992.

3.14 Arguably, interest rate policy will not curb credit demand by non-restructured enterprises. The uncertainties regarding the speed of disinflation, and the need to maintain tight controls on credit expansion, make the development of instruments to guide credit policy critical. With non-price rationing, administrative allocations are inevitable. Of essence is to move ahead with structural reforms. If the reform scenario is to succeed, credit should be available—but *it must be linked to enterprise reform which is the key to sustainable stabilization and to the transition to a market economy*. If the experience of early 1992 is any guide, it may also be necessary to think of ways of restricting trade credit between enterprises, which has allowed enterprises to avoid (or at least postpone) bankruptcy despite a massive fall in demand. An active interest rate policy is essential for stability in the asset markets. Policies which sustain financial repression and result in systematically negative real rates of interest will delay the stabilization of the ruble with adverse effects on inflation and long-run economic restructuring.

3.15 Reducing inflation from an underlying monthly rate nearing 20 percent in March 1992 (about 800 percent annualized) to 2 percent per month (about 27 percent annualized) could take as long as 18-24 months—and the monetary program would still be successful. Given the extraordinary price increases early in the year, the end-year annual rate of inflation for 1992 is likely to exceed 1,500 percent, with annual *average* inflation exceeding 1,000 percent notwithstanding a projected fall in monthly rates to about 10 percent per month towards the end of the year. Successful stabilization would bring the rate steadily down through 1993, with monthly rates falling to low single-digits by the last quarter of the year. Progress in structural fiscal adjustment, notably on the revenue side, should lead to balanced budgets over the medium-term. By end-1994 sustainable stabilization should be firmly entrenched with the annual *average* rate of inflation falling to, or below, 20 percent.

Structural reforms

3.16 Successful stabilization by itself will not lay the foundations for reviving growth and generating employment. The success of the reform program will ultimately depend on the Government's ability to implement a comprehensive program of systemic and structural reforms. The major elements of the structural reform program discussed in Parts II and III include: (i) tapping the latent potential for growth in the energy and agriculture sectors; (ii) successful industrial restructuring through enterprise reform, privatization and conversion of the military-industrial complex; (iii) financial sector reform; (iv) rehabilitation and expansion of the infrastructure base; and (v) strengthening social protection.

3.17 Central to the success of the reform strategy is the development of Russia's vast energy resources, which offer the best prospects for restoring external viability and generating the financial surpluses needed to transform the rest of the economy. Expanding petroleum production and growing export earnings offer the potential of financing the much higher levels of imports that Russia desperately needs over the longer run. Aside from the pricing and tax reforms discussed earlier, efforts are needed to establish an appropriate incentive structure and legal framework to mobilize foreign investment. This will be essential not only to secure financing for critical imports of equipment but also to obtain access to foreign technology.

3.18 The priority in agriculture is to change the institutional structure of production, establish an appropriate incentive regime, and restore profitability. Over time, this approach can gradually eliminate Russia's need to import grain, while providing incentives to downsize the large and inefficient livestock sector. Efforts will also be needed to strengthen the delivery of inputs and services and to revamp marketing, distribution and agro-processing systems.

3.19 Industrial restructuring is likely to be the most difficult part of the reform program, given the combination of declining output and large labor force retrenchment likely to take place as a result of the reforms. There are several stages involved in the enterprise reform process, which have been spelled out in detail in the recently announced Privatization Program for 1992. What is most essential is to make rapid progress on the resolution of fuzzy ownership rights, so that owners and managers begin to take responsibility for the restructuring process, rather than relying on outside factors (including government subsidies) to direct the process for them. Privatization must be the driving force for this process, but it will take time, especially in the large-scale industrial and state farms sectors. Hence, the urgency of moving ahead very forcefully with small-scale privatization, where more rapid progress is possible. It is vital to give managers and the collectives a clear and unambiguous signal that reforms are coming and that they are unavoidable, even if the timing is unclear. For this, it is crucial to proceed with corporatization and the launching of a privatization drive throughout the economy. Imposition of a hard budget constraint on enterprises, including measures to reduce the *flow* of inter-enterprise arrears, is necessary to start the restructuring process, as well as to control the growth of credit in the economy and achieve macroeconomic stabilization.

3.20 The development of viable enterprises requires that resources should be allocated on the basis of expected profitability. The present structure of the financial system does not meet this objective, but reform in the sector is conditional on enterprise restructuring and privatization. Banks finance the loss-making state enterprises—and, if the experience in Eastern Europe is indicative, they are likely to continue to do so for several years. Thus financial reform must by necessity proceed while banks continue to accumulate worthless assets. Much is required in terms of the financial, regulatory and supervisory structure. However, for the time being, the Central Bank has neither the staff nor the authority in practice to force the banks to comply with its mandates. Instead, it is better to focus on feasible next steps, while pushing forward strongly with enterprise reform. The next steps should focus on: (a) improvements in the payments system both within Russia and with other countries; (b) development of well-functioning securities markets and inter-bank and foreign exchange markets; (c) interest rate liberalization and measures to reduce taxation of financial intermediation and stimulate the growth in the deposit base; and (d) new incentives to assist banks that are willing and able to meet a higher level of prudential standards and provide high quality financial services, in order to separate them from other financial intermediaries that can not or do not wish to comply.

3.21 Support for private sector development will require selective new investments in infrastructure, particularly transportation (highways and ports), telecommunications, power supply and distribution systems, municipal infrastructure, and environmental management and improvement. In many instances, these services have deteriorated under financial stress or may become obsolete under market conditions. Large investments to rationalize and rehabilitate infrastructure networks will be needed. While financing may be available for this purpose through export credits and international financial institutions, increased domestic resource mobilization will have to meet the bulk of the needs on a sustained basis.

3.22 Augmented social protection programs, including provision of unemployment benefits, job retraining, and targeted intervention to protect those who fall below the poverty line, can alleviate the immediate impact of economic reforms on the most affected population, but a permanent solution must come from job creation and changes in the skill mix to meet the needs of a market-oriented economy.

3.23 The Government has already taken a number of important initiatives in the area of structural reform—for example, the Privatization Program for 1992 was approved by the Supreme Soviet in June, a Presidential Decree on bankruptcy was issued on June 14, and another recent Presidential Decree requires that all large-scale enterprises (other than joint ventures and enterprises which are privatized

directly) should be corporatized by November 1 as a first step towards privatization. The Government has recently forwarded to the Supreme Soviet for discussion a medium-term program that looks beyond the immediate problems of macroeconomic stabilization toward measures required to achieve sustainable economic growth. Many of the actions contained in this plan are being supported under the World Bank's Rehabilitation Loan. The Bank is also working with the Government on a several planned operations in support of privatization, strengthening social protection and supporting reforms in the key energy and agriculture sectors.

3.24 The major elements of a successful stabilization and adjustment program over the next year or two can be summarized in the following way:

- Reduction of the fiscal deficit financed by the domestic banking system to 2 percent or less of GDP.
- Limiting credit expansion to achieve a gradual decline in the monthly rate of inflation to low single-digit levels.
- Establishment of a social safety net capable of protecting the population most affected by reform.
- Implementing a substantial program of privatization backed by enterprise restructuring, reform of the financial sector, and measures to stimulate competition in product markets.
- Initiation of sectoral reform programs, especially in oil and gas and the food sector, to boost production. These programs would be supported by selective investments in infrastructure to improve efficiency and expand capacity.
- Mobilization of external financial support of around \$20 billion annually in 1992 and 1993 in support of the reform program.

Prospects: Decline and Recovery

3.25 This section abstracts from the many steps and problems which will be faced in the transformation (discussed in subsequent chapters) and looks to a stylized path of adjustment and recovery. Many other paths are possible and there is no attempt to be conclusive. Even the short-term outlook is very uncertain. The indicative scenario developed in this section is meant to be suggestive; but it serves to underpin the arguments in each major area of reform: in the enterprise sector, in the financial system, in external trade relations, and in the social safety net for changes in the wage and employment regimes. It supports the more detailed discussions of the balance of payments—and the financing requirements—in Chapter 4.

Output trends

3.26 Table 3-1 shows the past and projected output declines in other reforming socialist economies, all of whom embarked upon reform earlier than Russia (East Germany and Poland in 1990, the other Eastern European economies in 1991). Like Russia, many of the reforming economies had already experienced output declines before reform. The output decline continued or is expected to

continue in the second year after reform in all cases. Only Poland and East Germany (the earliest reformers) show signs of (uncertain) recovery now.

Table 3-1: Output Collapse in Transition Economies

	Percentage Change in GDP			Percentage Change in Industrial Production		
	1990	1991	1992	1990	1991	1992
East Germany	-11.0	-22.0	-8	-15.0	-20.0	-18
Hungary	-4.0	-8.0	-1 to -2	-8.5	-8.0	
Poland	-11.9	-7.0	0	-23.5	-13.7	
Romania	-8.4	-13.0	-5.2	-23.5	-22.0	-5 to -10
Czechoslovakia	-3.0	-15.9	-5 to -10	-3.5	-24.7	-8 to -12
Bulgaria	-11.0	-22.9	-4		-27.5	
Albania	-10.0	-30.0	-25	-7.5	-43.0	
Russia	0.4	-9.0	-15 to -20	-2.6	-8.0	-15 to -25

Source: Russia, Statistical appendix; others from Bruno (1992).

3.27 Cross-country evidence gives limited guidance on the prospects for a quick recovery in Russia.³ The kind of broad-based decline in industrial and agricultural production presented in Chapter 2 (and also seen throughout formerly socialist Europe and Central Asia) has no precedent. The arithmetic of transition makes some continued decline *beyond 1992* inevitable. The reallocation of resources is from a mammoth state enterprise sector to a minuscule private sector. Even spectacular growth in the private sector is unlikely to compensate for the decline in the state enterprise sector.⁴

3.28 The continued disintegration of the economy and of trade relations could push output down by 15-20 percent in 1992 and down by another 5-10 percent, or possibly more, in 1993. The size of the output drop is tremendous—30-40 percent since 1989. While the Russian decline in 1991 was clearly a supply contraction, the decline in 1992-93 will likely involve both supply and demand factors. The eventual recovery requires both expansion of demand for Russian goods and removing supply bottlenecks. Figure 3-1 illustrates a possible medium-term outlook under the adjustment scenario.

3.29 The success of structural reforms will depend very much on whether a macroeconomic package can be designed which avoids continuing declines in output, and which induces growth from 1994-96 onwards without leading to a flare-up of inflation. The recovery in output (in the mid- to late 1990s) could be slow at the start, and the economy must also adjust to a higher level of net indirect taxes. Fiscal adjustment will involve both a reduction in public expenditures and a re-composition of revenues. Substitutes must be found for the inflation tax and, in the short run, it is expedient and efficient to rely on indirect taxes: the value-added tax and taxes on international trade. These adjustments should lead to a sharp fall in factor incomes in 1993 (sharper than the fall in total output) with a steady recovery from thereon.

3.30 The required increase in *demand* must come from the external side. At the present hyperdevalued exchange rate, incentives are strong for Russian exports to countries outside FSU. The ruble has appreciated significantly in the first half of 1992 (see Box Figure 2-3a), and continuing real

appreciation is likely in the remainder of 1992. For 1993 and beyond, the appreciation must not be excessive in order for this engine of demand to operate.

Table 3-2. Income, Expenditure, and Financing Flows, 1991-95

<i>(Percentage flows of GDP unless indicated otherwise)</i>	Preliminary	Estimate	Simulations		
			1991	1992	1993	1994	1995
GDP growth rate - market prices	-13.0	-15	-5 to -8	-1 to 1	1 to 3
Private consumption growth rate	-9.1	-3	-2 to -1	0 to 1	1 to 3
Consumption	75.2	79	81	81	80
Gross investment	26.3	22	21	21	22
Gross domestic savings	26.7	15	15	15	17
Gross foreign savings	-0.4	7	6	6	4
(a) Household balances ^a					
Saving	23.6	6	7	7	8
Investment	1.6	4	5	5	7
Balance	22.0	3	2	2	1
(b) Enterprise balances ^a					
Saving	34.0	20	14	11	12
Investment	24.7	19	16	16	15
Balance	9.3	1	-2	-4	-3
(c) Government balances ^a					
Balance	-30.9	-11	-6	-4	-2
Memorandum					
GDP growth rate - factor cost	-9.0	-19	-12 to -15	-1 to 1	2 to 4

a. See Box 2-1 for definitions and see Annex 2-1 for methodology.

3.31 Growth in domestic demand should come from the incipient private sector and from restructured enterprises. But these segments are as yet small components of total demand. If reform is to hold, the impetus for demand growth on the domestic side should certainly not come from public consumption, transfers or subsidies. It would also be essential to limit wage growth in enterprises and these measures would restrain demand from households. The need for continued fiscal adjustment, and the time required to build an effective revenue base, will also impose strict limits on public investment. Even if the planned reductions in government consumption (mostly military) are effected, public investment and investment by state-owned enterprises will shrink. More importantly, the pattern of future demand and relative prices is still mostly unknown. Prudent investors would shy away from making irreversible decisions, even if financial resources were available.

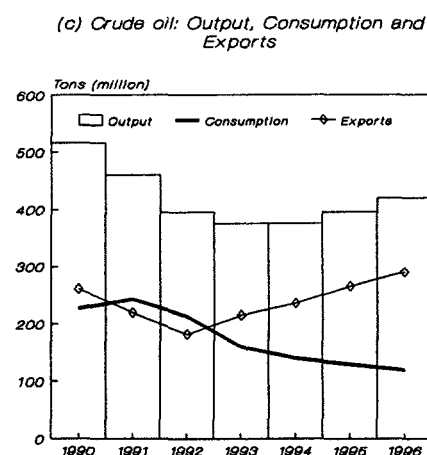
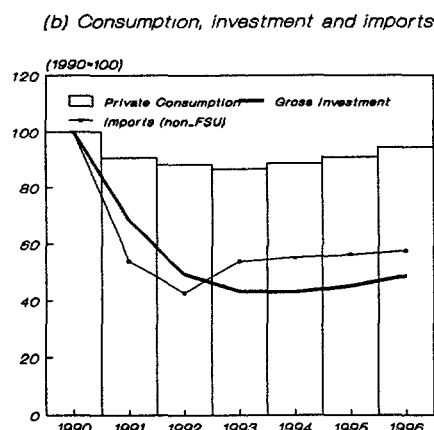
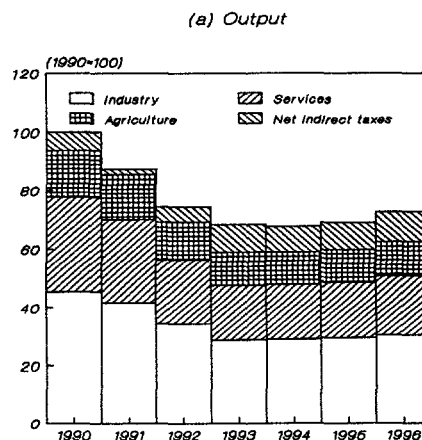
3.32 The share of investment in GDP, which fell to 26 percent in 1991 (from 33 percent in 1990), is likely to fall further, to an estimated 20-22 percent of GDP in 1992. Despite adjustment, indeed, *due to* adjustment, investment could fall to less than half its real level in 1990 (see Figure 3-1b). Although this could impact on future growth, the retrenchment is partly a by-product of the required adjustment and transformation in the enterprise sector. The transition to a market economy entails a fundamental shift in the structure of aggregate demand with far greater emphasis in consumer demand and external competitiveness. This should also lead eventually to rapid growth in household investment, mainly in housing. In the simulations, investment from households increases steadily from less than 2 percent of GDP in 1991 to around 7 percent of GDP in 1995 (see Table 3-2).

3.33 The Soviet economy over-invested. Resources were directed to the military-industrial complex and for many decades the forced public investment effort was truly enormous. Unfortunately, the productivity of this investment has been low.⁵ It fell further in more recent years due to a large build-up in excess inventories of all kinds. The investment numbers for 1990 are distorted by a large number of "unfinished projects" which were never intended to be finished; enterprises created projects to transfer the resources in the investment funds to other uses. Thus part of the initial fall in investment is an adjustment to a more realistic base.

3.34 The expectation that *with adjustment* output and consumption may grow rapidly, before a pick-up in investment, is not without precedents.⁶ There may be large short-run efficiency gains in restructuring, in the switch from a "command economy" to a market economy; and there are vast stores of under-utilized capacity in the Russian economy today. Shifts in output mix and its destination can be accomplished with a minimum of investment, and growth can accelerate while aggregate investment stagnates or even falls. The leading role of investment is not necessarily relevant to explain the cycle, though it clearly matters for the long run.

3.35 The downward trend in investment could be reverted in 1994, if the impetus to restructuring succeeds. Newly privatized firms will demand new investments to compete in international markets and to attend to new demands in the domestic economy. To support new growth and maintain the existing capacity, a program of critical public investment in infrastructure should be developed. This is an area where foreign assistance may be instrumental—and the Government should begin to focus now on the measures needed to secure adequate and timely foreign investment and financial flows (see Box 4-2 in chapter 4). After a year or two, the decline could be halted and a recovery could begin with renewed gains in real per capita consumption.

Figure 3-1. Reform: A Medium-Term Scenario, 1990-96



Source: World Bank staff estimates.

3.36 Falling enterprise investment and Government consumption will ameliorate the near-term pressures to slash private consumption. Private consumption will almost certainly fall in 1992, possibly by as much as 3-5 percent, even with resolute adjustment in the second half of the year. Measured against the 1990 base, the accumulated fall could reach 15 percent, and it would surely exceed 10 percent. With adjustment, and strong external assistance, real private consumption could stabilize in 1993, growing thereafter. Conceivably, the fall in 1992 could be recovered by the mid-1990s; and the real level of 1990 could be re-gained before the end of the decade.

3.37 Not only external flows, but also the structure of the envisaged adjustment would cushion consumption in the short-term. In addition to the rapid fall in investment, a strong fiscal program in 1993 could reduce further, and significantly, the share of Government consumption in GDP. Moreover, the fall in domestic income—and in domestic absorption—may be far less pronounced than that of GDP at factor cost.⁷ Over the next few years, Russia is likely both to experience large gains in the terms-of trade and to maintain a trade surplus with many of the states in the FSU. This would offset (partly) the positive net resource flow from the rest of the world. Maintaining trade within the FSU is crucial, nevertheless, for minimizing the disruptions in supply and for reinforcing the recovery in output.

3.38 On the *supply* side, revival of the oil sector will be the top priority (see Chapter 11). As discussed in Part II and III, for the rest of the economy, restructuring and privatization of state enterprises and farms, clearly defined property rights through legal and regulatory reforms, foreign investment, creation of adequate public infrastructure, and adequate credit to new enterprises are all essential to start the recovery and nurture the fledgling private sector. All of these reforms are oriented towards creating a stake in the long-run health of enterprises and raising expectations of future profit opportunities. Macroeconomic stability itself will help to attract new domestic and foreign investment. But the success of the macroeconomic program will depend on complementary structural reforms. *Stabilization will not be sustainable without enterprise reform and the beginnings of a supply response to rein-in political discontentment.* Failure to adjust would close off investment, leading to continuing supply-led contraction.

Employment

3.39 As discussed above, industrial restructuring will not lead to production increases in the short term. Moreover, significant declines in industrial production, restructuring of the military complex and in the farm sector are likely to release labor which must be absorbed elsewhere. Over the next year or two as many as 3 to 5 million people or 6 percent of the labor force may become unemployed. To proceed successfully, a program of restructuring will require viable social protection programs with an effective safety net. It is clear, however, that a permanent solution must be found in job creation. The reform scenario must envisage, therefore, concerted efforts to accelerate privatization of small-scale enterprises and to reduce impediments to new entry. This is especially important in the service sector which can provide substantial job opportunities over the next few years. Support for private sector development will require substantial public investments in infrastructure, principally the transport system (highways, bus system, and ports), telecommunications, and municipal services, which in many instances have deteriorated under the financial stress or become obsolescent under the new market conditions. Achieving this in the short run and without threatening the fiscal balance would call for timely external assistance.

External Trade Prospects

3.40 Strong growth in trade will be essential for a sustained recovery—and limiting the short-run fall is critical for a successful stabilization. The breakdown of previous trade relationships played a large role in the collapse of output; prospects for recovery are linked to prospects for trade. This applies to both trade within the FSU and with "third countries" (see Box 3-2). Chapter 8 discusses policies to sustain and facilitate trade within and outside the FSU. This section focuses on possible developments in trade with countries outside the FSU—if the momentum of reform is sustained.

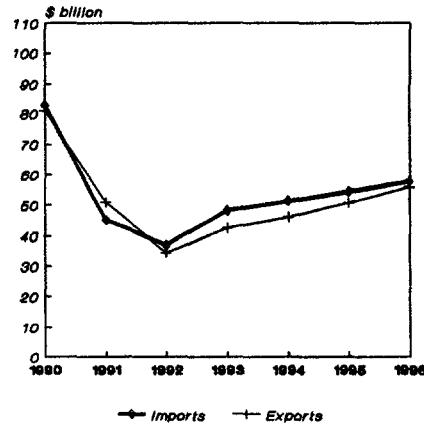
Import Collapse and Recovery

3.41 Along with the collapse in the economy, import volumes have plummeted, by almost 50 percent in 1991 (see Box 2-3). The fall in import volumes in 1991 was considerably faster than in GDP, and the pattern will probably be repeated in 1992. Current estimates indicate a fall of about 20 percent for the year. Only with a strong rebound in 1993 can the economy move out of the present state of collapse. The import bill is, however, difficult to predict. The fall in GDP further confuses the patterns of output-import relationships which are changing rapidly as a result of changes in Russia, in the other FSU states, and in former CMEA trading partners in Eastern Europe.

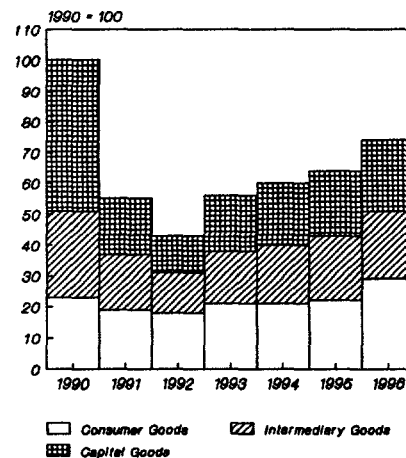
3.42 The indicative scenario is based on an increase of around 25 percent in volume terms in 1993, to support production and to sustain consumption. This assessment is partly based on the experience of other countries with a sharp drop in imports. Cross-country evidence suggests that both output and imports rapidly bounce back after catastrophic declines, but that the recovery of the latter is necessary for the former. Import compressions are almost always followed by a quick recovery to the previous level.⁸ In those cases where an import recovery does not take place, it leads to poor output performance. The necessary conditions for a Russian recovery are a containment and reversal of the decline in inter-

Figure 3-2. The Trade Balance

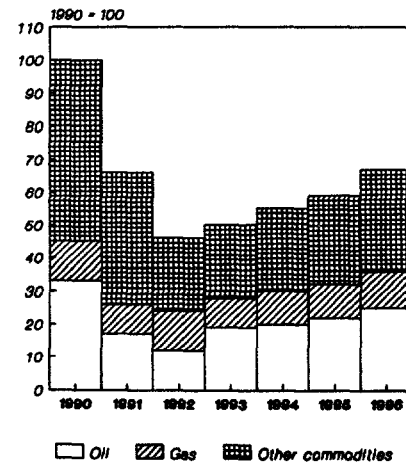
(a) Trends in Exports and Imports



(b) Imports: Composition (Volume based)



(c) Exports: Composition (Volume based)



Box 3-2. Trade relations among the FSU states: the legacy and prospects

External trade figures cannot be reliably disaggregated for Russia alone. Likewise, a clear and consistent picture still does not exist for what used to be inter-republican trade. Nevertheless some rough estimates of the importance of trade to Russia can be constructed and for 1990 these are outlined in the Table below.

Trade was an important component of the Russian economy, accounting for about 20 percent of GDP in 1990. Both GDP and trade have collapsed since then, but it is not clear how this would affect the ratios. The vast bulk of this trade is with either former republics or CMEA members and is largely the outcome of planned production and specialization and is not consistent with evolving comparative advantage. In many instances, particularly with respect to oil and other natural resources, Russia has redirected exports from former republics to convertible currency trade. And when deliveries from former republics were not made, purchases sometimes had to be made from third countries. Trade diversion from the FSU area to primarily the OECD countries will continue in the years ahead. In addition, with deepening reforms in the Russian Federation and elsewhere in the FSU, trade among the FSU states will increasingly be settled in convertible currencies (see Chapter 8), eliminating any logical separation of trade within and outside the Commonwealth of Independent States (CIS).

Box Table 3-2. Trade Flows in 1990
(Percentages of GDP)

	Russia	FSU
Total trade	20.0	7.0
Trade outside FSU	8.5	7.0
with CMEA	4.6	3.6
outside CMEA	3.9	3.4
Interrepublican	11.3	n.a.

(n.a. Not applicable.)

Note: Trade is measured as average of exports and imports.

Source: World Bank staff estimates.

Around three-quarters of Russia's exports to other republics is energy (oil, oil products, and natural gas), while Russia's imports consist of a greater variety of products, including manufactured goods. Priced in the previous system with little, or no, regard for world market prices, Russia's inter-republican exports have traditionally been running a trade deficit vis-a-vis the other FSU states. Had trade been valued at world market prices, Russia would have registered significant trade surpluses. As prices are freed, Russia is therefore experiencing unprecedented terms-of-trade gains in trade with her neighbors.

The oil price increases and restructuring in both the former republics and Russia will result in far-reaching changes in the extent and pattern of their trade. The oil price increase will lead to falling incomes in the former republics that will in turn reduce their capacity to import goods from both Russia and other countries. Also the shift in production within Russia away from the military-industrial complex will reduce opportunities for many machinery products exported from the republics. Avoiding a further collapse in trade will require policy action for the transition to an eventual system characterized by fully convertible currencies and liberalized trade (see Chapter 8).

In the short run, and until deliberations on a formal ruble zone are completed and relations with the new currencies among the FSU states are established, Russia is guiding ruble trade with two objectives in mind. The first objective is to avoid disruptions in trade which are not an outgrowth of enterprise restructuring and which, therefore, needlessly accentuate the drop in output. The second objective is to limit the monetary expansion caused by trade surpluses which are not compensated by a reduction in credit elsewhere in the ruble zone. To implement the latter, the Central Bank of Russia (CBR) has set clear limits on bilateral clearing accounts; this will limit the surpluses in the forthcoming years. The medium-term outlook is, however, for balanced trade—realistically, at a fraction of the volume observed in the 1980s. When full current account convertibility is the norm among the new states, a possibility for the late 1990s, the concern shifts to the position of the entire balance of payments. Russia could then finance a trade deficit with the OECD by running a structural surplus within the FSU area.

republican trade, revival of trade with former Eastern European partners, and rapid growth in trade with the rest of the world.

3.43 The (envisaged) trend also takes into account recent estimates of food imports (\$8 billion) and the available (limited) knowledge of the sectoral distribution of the fall in GDP. It is derived from the possible recovery in energy exports (see below). Figure 3-2b illustrates the possible trends in imports under the adjustment scenario. Import growth continues beyond 1993 in the scenario, but it slackens to a slower pace than export growth—yielding a scenario of diminishing imbalances in trade (see Figure 3-2a).

3.44 As emphasized, the composition of the recovery in imports is especially uncertain. If reform takes root, and results in a changed environment for investment, the expected (small) increase in consumer goods in 1992 should soon be outpaced by gains in imports of intermediate and capital goods. In the adjustment scenario, by the mid-1990s, the composition of imports would move back to that of 1990 (but, very likely, with a significantly different geographic distribution of suppliers).

3.45 *Intermediate goods.* Imports of intermediate goods showed a steep decline in 1991, falling further than imports of consumer goods. They are also growing less rapidly in 1992, though faster than overall output. This may be due to stock building and speculative demand by enterprises. In 1993, imports of intermediate goods should rebound strongly in anticipation of a turnaround in the economy. Ideally, they should return to approximately the 1991 levels. In the medium term, growth in intermediate imports is assumed to be in line with growth in overall GDP. There is in Russia ample opportunity for efficient import substitution, but this is unlikely to lead to a fall in intermediate imports. Much more probable is a growth in exports, in tandem with the gain in imports.

3.46 *Consumer goods.* Non-food consumer goods imports is the only import segment which is apt to show an increase in 1992. The increase could be substantial (maybe as high as 30 percent in volume terms) driven by the liberalization of the import regime, the real appreciation in the exchange rate, and falling domestic deliveries of competing items. Food and related imports needs may be \$7.5 billion in 1992, and critically needed pharmaceutical supplies could total \$150 to \$200 million. The surge could lead to a downward adjustment in 1993, with an offsetting expansion of (non-grain) food imports. The growth in consumer-goods imports should diminish as the agricultural sector responds to adjustment and as consumers find more plentiful domestic supplies. The trend should reasonably decelerate to a slower rate than that of other imports. Imports of consumer goods would expand in line with total consumption growth, and their share in total imports would fall in the late 1990s.

3.47 *Capital goods.* As anticipated, imports of capital goods show the most dramatic decline; (a drop of 75 percent in volume from 1990 to 1992). This drop reflects the decline in domestic activity and the disintegration of the CMEA arrangements. Experience from Eastern Europe suggests that a major share (maybe a third) of the drop in output could be ascribed to trade disturbances. This is not the case in the Russian Federation, especially not in 1991 (see Chapter 2). Nonetheless, a resumption in imports of capital goods is likely to accompany the recovery in output. On the expectation of considerable financing from the bilateral export credit agencies (ECAs) and from multilateral institutions, capital goods imports may indeed show very strong growth in 1993—gaining perhaps as much as 35 percent in volume terms. As much as \$8-10 billion is potentially available from ECAs once the recovery is underway in the mid-1990s. It is critical to orient these resources to projects which are economically sound. In the current distorted and uncertain environment, ECAs will need to pay particular attention to the viability of project proposals—cofinancing arrangements with multilateral institutions could provide additional resources and assurances. In the medium term, imports of capital goods should continue to

outstrip the growth rate of output, as Russia begins to absorb foreign technology and know-how on a much larger scale.

Exports

3.48 The projected overall structure of exports is depicted in Figure 3-2c which indicates the preeminent role of energy exports in the recovery. Approximately half of Russia's export earnings are generated by the oil and gas industry.

3.49 The combination of rapid restructuring in the economy with swift adjustment in energy use and production could unleash a very positive set of responses. Russia is one of the most energy-intensive economies in the world. Reducing domestic consumption and increasing energy production are the key to larger exportable surpluses—and increased energy exports could significantly reduce the current constraints on the balance of payments. But the non-energy exports must be developed quickly to maintain or regain their share of exports. Only through a very focused effort in the export sectors will sufficient foreign exchange become available for development of the overall economy. The challenge is enormous; given Russia's ample resources, however, the outlook for the long-term is very encouraging—if the momentum of adjustment is maintained.

3.50 *Oil.* Oil exports fell by more than 50 percent in 1991 and will continue to fall in 1992, though by a much smaller amount (about 11 percent in volume). There is ample room for a quick recovery. The turnaround in exports could be impressive, and it hinges on a clear indication of the course of sectoral policy. With adjustment, and the anticipated fall in domestic energy consumption (recall Figure 3-1c), oil exports could increase by as much as 50 percent in 1993, from a low of around \$10 billion in 1992 to \$16-17 billion in 1993.⁹ In the medium term, revenues from oil exports are expected to increase quite sharply and to exceed \$20 billion in 1996. A number of factors, however, can significantly affect the the projections of oil exports. As discussed in Chapter 11, assumptions about pricing and tax policies have a major impact on production and domestic consumption of oil and would lead to significantly different outcomes about the prospects of energy exports. Also important are the assumptions made about deliveries to the other states of the FSU and the significance of smuggling and barter trade.

3.51 *Gas.* Exports of gas to the convertible area may fall slightly this year to 87 billion cubic meters. Given a downward trend in prices, export revenues would decrease 11 percent from 1991, to around \$7.4 billion in 1992.¹⁰ Lower exports are partly due to constraints in pipeline capacity.¹¹ In contrast to oil, domestic gas consumption will probably *expand* in 1992, despite the fall in economic activity. (Gas is the main energy source for household consumption, and real prices fell sharply in the first half of the year). What is important is for gas consumption to fall in 1993, as the pace of reform quickens but output continues to slide. Exports to the FSU should also fall, and for the same reasons. Thus, exports to third countries could rise, possibly by as much as 25 percent if there are improvements in pipeline capacity. Export revenues would then rise to about \$8 billion in 1993—helping support the extraordinary gain in imports. As the potential for gas exports develops, primarily through new and expanded pipelines, revenues should continue to increase, and could reach \$9 billion to \$10 billion in 1996.

3.52 *Non-energy exports.* There is very little information on non-energy exports.¹² The trend is clearly negative. The undervalued ruble and the partial elimination of export quotas will give new incentives to exporters, and it is believed that more competition domestically will help stop the dumping.¹³ Overall, it is anticipated that the drop in non-energy exports will revert, and an increase

of some 6 percent in volume terms will take place in 1992 with growth picking up slightly in 1993 and beyond.

3.53 Such scenarios, however, are critically dependent on the implementation of appropriate policy measures *with significant industrial restructuring*. The current situation is chaotic. On the demand side, the traditional industrial export markets in Eastern Europe have all but collapsed. On the supply side, unreliable inputs from domestic and FSU sources have cut into export (as well as general) production. Moreover, for most of manufacturing, marginal changes in prices may not yield significantly higher export revenues. Presently, there is little scope in Russian manufacturing for flexible and timely changes in product composition and design to capture emerging markets. Marketing skills and channels, crucial for export promotion, are underdeveloped. Russia must move quickly to an environment where private ownership and appropriate incentives compel producers to adjust to foreign demand by responding with competitive products, both in terms of quality and price. *Exchange rate policy could play a crucial role*. Other categories of non-energy exports are more sensitive to price incentives. If an aggressive, sustained export drive in these areas were to take place, revenues could increase significantly. A sustainable external balance hinges on this outcome, with non-energy exports reaching upwards of \$25 billion by the late 1990s.

Import recovery and external assistance.

3.54 Though indispensable for any reasonable balance of payments position in the medium-term, the possible boom in energy exports would not alone sustain the needed growth in imports—not even in a scenario of resolute reform. Throughout the economy, the recovery in growth, with an upsurge in investment, will demand a continued strong growth in imports. The domestic supply response will take time, and external assistance will play a key role in sustaining the transition. The change to a market economy will be delayed, and possibly even derailed, if output and household consumption continue to fall precipitously and haphazardly.

3.55 Imports are essential to complement limited domestic supplies. In the very short run, imports will sustain consumption as domestic output falls. Imports are also needed for a speedy upturn in oil production which is the key to restoring external viability. Thus, a sustainable program of reforms must be based on a carefully designed and adequately funded schedule of external financial flows. Russia now lacks the creditworthiness to borrow in the international capital markets and to attract substantial foreign direct investment (FDI). A resolute initial effort at reform should lead to a reversal in this negative assessment, and commercial external flows could then be relied upon to maintain the momentum in investment and growth. Realistically, however, foreign commercial flows will lag rather than lead adjustment. As discussed in the following chapter, the combination of sluggish exports, rising imports, and rather large debt-servicing obligations, produce very substantial financing requirements over the next few years.

3.56 Over the short to medium term, the foreign exchange constraint will be binding—and the problem is made worse by the near collapse of Russia's once strong exports. Foreign assistance therefore has a major role in bridging the gap between current demands and future opportunities. It will be decisive for cushioning the cost of disinflation, and net inflows are required well beyond the initial surge needed in 1992-93 to recover from the collapse in imports in 1991. Economic change in Russia should lead to a deepening of foreign trade, and imports are likely to outstrip exports well into the late 1990s for a number of reasons. Renewed investment should lead to a rapid absorption of foreign technology; growth in real incomes will be reflected in an expansion in imported consumer goods; and both trends would lead to increased demands for imported intermediate goods.

The Major Uncertainties

3.57 The mutually reinforcing program of stabilization measures and systemic/structural reforms supported by adequate external financing outlined above, pose unusual and daunting challenges. The risks and uncertainties involved are unprecedented. These include: (a) political commitment and policy slippage; (b) implementation capacity; and (c) availability of financing.

Political and policy slippage

3.58 Russia's dilemma is that both structural reforms and stabilization must be accomplished simultaneously. Without enterprise adjustment and restructuring, stabilization cannot be maintained. And the need to do both at once is likely to increase the cost of stabilization. For several reasons, the short-term payoff of the program of reforms is likely to be disappointing. The recovery in GDP (in the mid- to late 1990s) will undoubtedly be slow. Rising unemployment together with the necessary restraints on wage increases will squeeze real consumption levels for several years.

3.59 A swift and radical transition to a market economy will require very ambitious objectives in reform policy. The social and political tolerance of the population will be tested to its extremes, as will the determination and resolve of the policy-makers. This sets up a scheme of short and long-term incentives which cannot be easily reconciled. Speed, comprehensiveness, and long-term gains demand that the reform program be conceived in such a way as to incur very high costs in the immediate short-run, while social and political pressures will induce policy-makers either to slow down the reform process, or to make particularized concessions to interest-groups. Either form of deviation will lengthen the transition, but more importantly, it will threaten its integrity and the transition may never be completed.

3.60 The dynamics of open political discourse make the less resolute path of reform overwhelmingly likely; indeed, the political events of this spring have already led to some policy slippage. *The very scope of Russia's reform program makes the future very uncertain.* There are no clear guidelines on how to move from a command economy to a competitive market economy; and the transition is made more difficult by the threat of rampant inflation. Russia's problem today is not to initiate change but to guide it. The economy stands at the threshold of a de-stabilizing path of falling output and persistent high inflation.

3.61 Though a program such as the one outlined above should contain macroeconomic imbalances within reasonable bounds, there are considerable risks of slippage:

- *Expectations of cheap credit and bailouts will create inflationary expectations and incentives for holding inventories financed by arrears. Without adjustment, investment continues to be repressed and consumption protected, leading to continued output declines or stagnant growth.* Monetary and credit policies must instill discipline in enterprises, and not only those in the newly privatized sectors. Tighter money should involve quantitative credit restrictions, and the elimination of subsidized interest rates. It is too easy to envision an alternative scenario in which misguided credit expansion to enterprises enables enterprises to avoid adjustment. Without adjustment, the output decline may be milder than with adjustment, for a short time. But output growth would then turn more negative as the lack of investment causes supply to contract, and the hope for a growth recovery would be gone.

- *Where ownership is diffused and the social implications harsh, government may lose control over the privatization process.* Even tight money and clearer ownership stakes are not enough to avoid excessive wage increases. For the large enterprises, privatization is likely to take many years, and the behavior of these enterprises during the transition will differ greatly from that of firms with clear ownership structures in well established markets. Where ownership is diffused and cannot be recaptured by the State, traditional command-and-control instruments will not operate. Government control of the enterprises will be weak and the bargained outcomes will continuously postpone adjustment and endanger macroeconomic stability.

- *Revenues continue to lag behind needs particularly as powers devolve to the local authorities. The fiscal deficit could be much worse than projected if anticipated revenues do not materialize.* Decisions on the taxation of energy have been postponed, and this has led already to a sharply higher deficit in the second quarter of 1992. Experience in Eastern Europe indicates that revenues from the profits tax are likely to be much lower as inflation is reduced. Thus, there is a real risk that revenue performance will deteriorate in the near future, when postponed expenditures may reassert themselves. The as-yet-embryonic federalist system is a threat to fiscal stability. Local governments may withhold revenues due to the Federation and they will probably by-pass centrally-imposed limits on expenditure. It may become politically advantageous to compensate tight credit with additional subsidies to enterprises. If the government does not achieve more permanent fiscal correction to compensate, then the deficit could once again become very large.

3.62 Policy slippage, inadequate implementation, and insufficient external funding are all too likely in the near term. In these circumstances wavering and haphazard reform is quite plausible. Enterprise restructuring falters, privatization moves slowly, and the ensuing pressures on the budget and monetary system makes stabilization unsustainable. Fiscal and monetary policy become erratic and the lack of creditworthiness leads to continued dependence on official sources of external financing, increasing uncertainty, and minimal foreign investment. In the worst-case scenario, unexpected shocks and misjudgments in macroeconomic policy lead the economy into hyperinflation (see Box 3-3).

Implementation capacity

3.63 Uncertainties in policy will delay adjustment and restructuring—and may push the economy into unsustainable high inflation. Policy design is critical. However, the formulation of a sound adjustment program by itself is not enough; it must be implemented. For the reasons discussed in Chapter 5, Russia is facing a crisis in governance; a major effort is needed to develop a capacity to govern and implement economic policy. The transformation of the political and institutional structures from the old Soviet system to a new regime suitable for democratic processes and supportive market-oriented activities will require a radical transformation of the institutional framework for decision-making and implementation. It will also mandate the establishment of a predictable legal framework for market-based economic activity.

Box 3-3. Avoiding hyperinflation

Hyperinflation is a greater danger in Russia than it is in market economies primarily for two reasons. First, there is a limited menu of assets for the Russian public (and enterprises) to hold at a time when the financing demands of the state remain very large. With prices liberalized but financial markets still underdeveloped, the menu of assets is pretty much limited to goods inventories, foreign exchange, and money. If the Government signals that it will be printing money at a rapid clip, there will be a massive shift toward holding goods which, given the limited supply of goods, will cause prices to explode.

Second, there is a greater risk of hyperinflation in Russia because the financial system continues (and must continue) to finance loss-making enterprises. The system is underdeveloped and uncontrolled, and is particularly prone to generating credit (see Chapter 7). The money multiplier (the ratio of M2 to base money) goes up with either a lower ratio of bank reserves to deposits or a lower ratio of currency holdings to deposits. Since enforcement of reserve requirements on banks is still lax and restrictions on withdrawing currency from banks have increased, the present system may already be generating a large volume of credit despite the attempts of the authorities to keep the money base under control.

The onset of hyperinflation is unpredictable. It is usually preceded by a period of sustained high inflation linked to monetary financing of fiscal (or quasi-fiscal) deficits. High and fluctuating inflation rates undermine the fiscal revenue base. Recourse to the inflation tax alleviates the need to curb public spending (and/or credit subsidies) and substitutes for more conventional methods of taxation. However, the revenue from the inflation tax is unstable when prices respond to changes in demand and financial assets are easily tradable. This is increasingly the case in Russia. The danger is that an unexpected shock (with an abrupt shift in expectations) will lead to a sudden and massive flight from the ruble.

Even then, hyperinflation is far from inevitable. It is a relatively rare phenomenon; historically it has been associated with the aftermaths of major wars (Central Europe after the two world wars, Russia after the Revolution and Civil War) or unusually high external transfer requirements (Bolivian debt in the mid-1980's, German reparations in the 1920's). Since Russia has not had a war and expects to have a net inflow of external financing, it is not a priori in the high-risk category for hyperinflation. With reasonable macroeconomic policies, hyperinflation can be avoided.

It could happen if the Government: (a) fails to reduce real fiscal spending (or to reduce it quickly enough); (b) fails to resist re-imposing wide-ranging price controls (or is incapable of doing so effectively); or (c) cannot finance the loss in revenue by borrowing (domestically or abroad)—and the monetary authorities must expand the supply of money rapidly. The combination sets in motion a terrifying chain of cumulative causation: excess liquidity increases the incentive to cast rubles; the resultant rise in velocity drives up the price level at a faster rate; the fall in real money balances reduces the tax base and leads to a still larger increase in the money supply. This is the essence of the hyperinflationary process. As inflation intensifies the government is locked into a disastrous reliance on money issue or the inflation tax—even measures (b) and (c) will then fail to hold off the de-stabilizing spiral. The rise in velocity or flight from money becomes the driving force in a spectacular rise in prices.

3.64 At present, decision-making is highly concentrated among a small number of reformers. As the range of decisions broadens and the complexity of issues increases, decentralization of authority will be necessary if the pace of reforms is to be sustained. Timely and effective implementation of the structural and sectoral reform program will require a substantial strengthening of institutional capacities—both at the center to establish priorities in the reform agenda and allocate resources to support these priorities, and in the line ministries and specialized institutions to undertake these programs. The extent of the new processes to be installed and skills to be acquired cannot be overstated. The conduct of the most basic economic activities consistent with market principles will require, for example, creating a capacity within Government to procure goods and services under conditions of competitive bidding and putting in place a system of financial control and audit to ensure proper use of funds.

Resource availability

3.65 The critical role that external resources will need to play to facilitate an orderly and sustainable adjustment process has been outlined above. At the outset the burden will rest on resources available from primarily the Group of Seven (G-7) together with trade or project financing flowing from export credit agencies (with guarantees from their respective governments) and the international financial institutions. The amounts involved are large and cannot be sustained over long periods of time but, if available now, they can provide important bridge financing until creditworthiness is restored, voluntary commercial lending is resumed, and FDI (particularly for energy development) materializes on the scale envisaged. Over the next several years, foreign assistance is vital to supporting a successful adjustment process. In its absence, the essential imports to cushion consumption declines, to revive production in energy and agriculture, and to support the necessary industrial restructuring will not be available. The political backlash resulting from persistent inflation, stagnant or negative growth, and rising unemployment would inevitably derail the reform process.

Notes to Chapter 3

1. See, IMF: *Russian Federation: Tax Reform Proposals — Assessment and Recommendations*. March, 1992.
2. If the quasi-fiscal activities are excluded from the 1991 deficit, the reduction of the deficit in 1992 measures 9 percentage points of GDP.
3. Gelb, Fouzouni and Schrenk (1992) found that most output contractions of 20 percent or more in the postwar era took place in small commodity exporters that experienced a collapse in prices or quantity of their primary commodity. In these cases, "the typical contraction of 20 percent or more involved a downturn of 3 years and a 5 year recovery, so that 8 years are needed for output to return to peak level."
4. An analogous precedent is trade liberalization in developing countries. Rauch (1991) argues that sharp output declines in Chile during trade reform had to do with the phenomenon of the small expanding sector being unable to compensate for the decline of the large previously protected sectors.
5. See, among others, McKinnon (1991).
6. Fouzouni, Gelb and Schrenk (1992).
7. As discussed, fiscal adjustment will demand a strong rise in tax revenues (other than from the inflation tax) and a massive fall in public subsidies and transfers. The result would be a sharp increase in net indirect taxation.
8. Unless they are simply the elimination of a previously unsustainable import boom. See: Pritchett (1992).
9. The average price for 1992 is expected to be around \$17 per barrel increasing to \$18 per barrel in 1993. Russian oil is trading at around \$1.5 per barrel below Brent. Given the average gravity of Russian oil, one ton is approximately equal to 7.33 barrels. The outcome is, of course, very sensitive to the price assumption. For example, if oil prices increase \$2 per barrel more than assumed, export revenues will be \$1.5 billion higher.
10. Changes in gas prices usually trail changes in oil prices by six to nine months. Given falling oil prices in 1991, this would lead to an expected gas price loss of 20 to 25 percent in 1992.
11. Gas is being transported by pipeline to export markets in, particularly, Eastern Europe. Export to existing markets is limited by these markets' demand as well as by pipeline capacity. New markets are not available, in the short term, because of lack of pipelines or other means of transportation.
12. The latest statistics are for 1990, the year before the collapse of CMEA. For that year, 43 percent of Russian exports to countries outside the Soviet Union in world market prices was oil and gas, 31 percent was machine building and metalworking (which went primarily to the CMEA), 6.5 percent was non-ferrous metallurgy, and some 5 percent was wood and wood products.
13. There have been allegations of raw-aluminum-ingots dumping by Russia in early 1992.

CHAPTER 4

External Financing and Debt Management

4.1 This chapter discusses the role external adjustment will play in the overall adjustment and restructuring process. It concludes that:

- Meeting short-term external financing needs will require extraordinary efforts by the Russian Federation, the existing bilateral and commercial creditors, and the international financial institutions. For the near-term the bulk of support will have to come official sources but with appropriate reforms, private flows could become increasingly significant in the mid-90s onward.
- With concerted reform, and access to foreign markets, Russia should regain a strong balance of payments position in the late 1990s. Although exports will be the driving force to adjustment, much will depend on the flow of foreign direct investment—which could increase to \$3-5 billion annually by the second half of the decade. As her capacity for debt service is strengthened, Russia will also find it easier to re-establish full and confident relations with the international capital markets.
- To assure the availability of external financing, Russia must urgently address a number of key institutional issues. The legal and regulatory frameworks for foreign direct investment have not been clearly established. The Government has yet to begin to formulate coherent sectoral policies which delineate the roles of external assistance. Procurement practices are arbitrary, and state procurement agencies dominate external trade. There is much to be gained from international experience, yet Russia still lacks the capacity to use technical assistance effectively. Effective coordination of external assistance is lacking.

Financing Requirements and Sources

4.2 The balance of payments situation for 1992 is still fluid. Aside from the lack of reliable data, there is considerable uncertainty about the impact of the reform program, particularly the unification of the exchange rate and the extent of fiscal and monetary restraint, on capital movements and import demand. Other uncertainties include Russia's trade policies vis-a-vis the other republics as well as the fragility of the political situation. Even greater uncertainty surrounds the outlook for 1993; for these reasons, ranges are used to indicate the broad orders of magnitude involved for 1993. For the mid-90s, such ranges should be viewed as simulations of possible outcomes rather than projections.

Financing Requirements

4.3 Russia's financing requirements for 1992 are in the order of \$23 billion. This total includes, as discussed in Chapter 3, a merchandise trade deficit for 1992 of \$2-3 billion; service deficit, excluding interest payments, of around \$2 billion; and debt service payments amounting to about \$12 billion, including arrears.¹ In addition, part of the financing requirements includes Russia's need to build-up

reserves which are projected to increase on a gross basis by \$1.6 billion (to reach approximately one month of import coverage) and to compensate for as much as \$5 billion in short term outflows incurred during the first half of 1992.

4.4 Financing requirements for 1993 could be of the same magnitude as for 1992, if the envisaged currency stabilization fund of \$6 billion to support the pegging of the exchange rate is not included. If Russia were held accountable for all FSU debt, the financing needs in each of 1992 and 1993 would be some \$7 billion higher. Financing requirements should begin leveling off toward the mid-1990s—on the assumption that satisfactory progress is made in the adjustment strategy.

Financing Sources: 1992 and Beyond

4.5 Covering these financing requirements for 1992 and 1993 will require extraordinary efforts. For the next year or two at least, the bulk of the support will have to come from official sources in the form of loans with guarantees from export credit agencies, grants and loans from governments, and loans from international financial institutions. Russia's primary responsibility in this regard is the implementation of an appropriate macroeconomic and structural adjustment program with the support of the IMF and the World Bank. Such a program would also facilitate agreement with official and commercial creditors on a debt rescheduling package—another important financing item. Adequate debt management administration, including monitoring mechanisms for appropriate debt and capital flow reporting, as well as a coherent debt management strategy are likely to be another precondition for rescheduling (see below). In the longer run these measures will trigger an important change in the composition of disbursements. If the reform program proceeds, the disbursements for 1994-96, while possibly remaining in the same range as those for 1993, should comprise a smaller share of official lending, and a correspondingly larger share of disbursements from private sources.

4.6 *Private financing.* For 1992-93, the possible sources of private financing would include very limited amounts of foreign direct investment and short-term trade-related credits. Loans from commercial banks are likely to occur only with official cover such as those extended by export credit agencies. Significant levels of private financing will be deferred until Russia is able to restore creditworthiness for commercial lending and foreign direct investment, particularly for the petroleum sector. If macro-stability is restored and the reform program succeeds, private lending and foreign direct investment could emerge again as a significant source in the mid-90s.

4.7 *Commercial Borrowing.* Information on the status of short-term loans including access to trade credits is sketchy. With mounting arrears, the supply of voluntary lending is likely to be insignificant in the near-term. Without a sufficient degree of creditworthiness, commercial financing is likely to be limited to flows guaranteed by creditor governments or collateralized by existing assets or by future foreign exchange income streams. One drawback of such pledging by the state sector which are typically linked to tied imports is that they can limit options to import general imports through the auction market. It may also reduce the availability of foreign exchange to the Central Bank (a major concern to existing creditors and potential future lenders who lend on an unsecured basis) and thus limits overall policy flexibility for the authorities.

4.8 *Foreign direct investment (FDI).* FDI is not likely to play any significant role in the financing pattern in the short term. The lack of transparency in rules and regulations and the uncertainties with respect to future political and economic developments will continue to make Russia a questionable venture for investors at least through most of 1993. The one exception might be in the oil sector, where perhaps up to \$1 billion in FDI could be realized in 1993. Assuming a successful

adjustment program, FDI may begin to play a larger role in the medium-term, with up to \$2-5 billion in inflows per year in the mid-1990s. Such flows could help meet not only needs in the energy sector but also the emerging needs in agriculture, the restructuring of manufacturing, and the services and transport industries. For a more comprehensive discussion of FDI issues, see Box 4-1.

Box 4-1. FDI in the Russian Federation

FDI began in the Soviet Union with the 1987 legislation for joint ventures. The legal regime for FDI was amended by a new Soviet law of July 1991, and by a Russian law also promulgated in July 1991. Flows during the period July 1991 to date are not well documented; they appear to be low and fluctuating. FDI in Russia so far is typically with very small foreign capital contributions and, in total, it is small considering Russia's ultimate potential. It is highly concentrated in services (e.g. accounting, consulting, hotels, catering) and comes mostly from Germany and the USA. At present the overwhelming focus of interest of potential foreign investors is in oil and gas, secondarily in mining, services including tourism, and the manufacture or assembling of consumer goods for the domestic market.

Policy Environment. Russia is moving rapidly and effectively to create an attractive environment for FDI. Much remains to be done, however, and there are still many serious gaps. There have also been some false steps. A very important positive step just taken was the unifying of exchange rates and the discarding of the idea of requiring FDI to come in at a special, below-market exchange rate. The legal secondary market in foreign exchange (the Moscow Interbank Foreign Currency Exchange (MIFCE)) though clearly not as good from the investor's point of view as full capital account convertibility, does go a long way towards it as far as the needs of FDI are concerned. Progress has also been made in permitting privatized enterprises to own their land, and in general for foreign investors to lease land for up to 99 years.

On the negative side, recent changes in corporate and personal income taxation penalize foreign investors. Screening and approval procedures on paper seem somewhat duplicative and interventionary; how they will work in practice remains to be seen. There is a pervasive need for (a) completing the set of laws and regulations needed to conduct private enterprise; (b) publishing such laws and regulations in a clear, prompt and accessible manner; (c) having authorities at all levels adhere to those laws and regulations; and (d) creating or strengthening institutions so that the laws and regulations can be enforced in an acceptable manner (e.g. arbitration of commercial disputes; execution of liens).

A good climate for FDI, however, will also require steps which will inherently take years: the strengthening and deepening of the financial system (which is now extremely weak), and establishing a reputation for stability in the economic situation and in the rules of the game. Russia is potentially very attractive for FDI—and could benefit greatly for foreign capital inflows and know-how.

4.9 Access to official borrowing Because Russia's access to external finance will largely be limited to official or officially guaranteed sources, three types of institutions will be especially important in the near term: the export credit agencies, official external assistance agencies in the Development Assistance Committee countries, and multilateral organizations such as the World Bank and the European Community (EC).

4.10 Export credit agencies in OECD countries are expected to be the major source of financing over the next several years. New financing in the form of loans or insurance/guarantees is dependent on the adoption of an IMF stabilization program and the existence of credible state guarantees for these new loans. In the case of the United States, the Export-Import Bank (EXIM) decided in February to support US exports to Russia under its short- and medium-term loan, insurance, and guarantee program when an official entity is the obligor or guarantor. Japanese institutions have indicated that \$2.6 billion in loans and guarantees will be available. A number of agencies in other countries have established credit and

guarantee lines for the entire former Soviet Union. In many cases, explicit sub-limits for Russia have not been identified or are not known at this stage. Hermes, the German export credit insurance agency, has opened a \$3 billion equivalent insurance line for the CIS. Nothing has been committed so far this year for Russia although DM 1.3 billion of contracts under a 1991 facility was covered this year. The UK has offered to provide new export credits up to £280 million; Italy up to \$1.2 billion for the former Soviet Union of which two-thirds are for Russia; and France has a new medium- and long-term line for FF 1.5 billion. These various commitments suggest that perhaps \$6 billion to \$8 billion is potentially available and that much of it could be used this year and next. Most of these funds would finance machinery, equipment, spare parts, and other non-food imports, especially for the energy, agriculture, and transport sectors. There are also significant opportunities for cofinancing arrangements with the multilaterals for planned operations in support of these sectors.

4.11 *Grants and loans from official sources* for 1992-93 are in the range of \$5-8 billion. Most of this is attached to humanitarian and food aid from bilateral sources, of which \$2-3 billion are grants, primarily for medical supplies and food, and \$3 to \$5 billion are medium- and long-term loans for food imports. Major sources for food assistance include the US, the Canadian Wheat Board, and the EC. Technical assistance has also been an important aspect of the support being provided by bilaterals and multilaterals in the early stages of their assistance programs both to facilitate the reforms being initiated as well as to help prepare for future lending.

4.12 *The international financial institutions* have been mobilized to help cover Russia's external needs in 1992. The recent agreement on a First Credit Tranche Agreement with the *IMF* will underpin bilateral and multilateral efforts to finance Russia's short-term funding requirements, because it provides creditors with assurances that the funds are being utilized in a way that is consistent with stabilization, reform, and renewed growth. The first tranche will provide \$1 billion for reserve build-up, and, subject to reaching an understanding on a Stand-by Arrangement, additional financing could be available later this year or in 1993. The *World Bank* Rehabilitation Loan will provide a further vehicle for supporting and monitoring the program of systemic reforms. This operation, as well as planned loans in support of energy and agriculture, are designed to address the impediments to a stronger supply response in the adjustment process, thus helping to establish the basis for sustained growth and creditworthiness. Disbursements from the World Bank from these operations and others could total as much as \$0.6 billion in 1992 and perhaps \$1.4 billion in 1993. Other international agencies such as European Bank for Reconstruction and Development (*EBRD*) are also expected to provide support. In aggregate, up to \$1.8 billion is potentially available this year from these international financial institutions if the Government is able to reach agreement fairly soon on acceptable policy programs and project design issues.

4.13 New funding from the above sources is likely to meet up to two-thirds of the financing needs for 1992. Thus, *deferral and rescheduling of debt service* will likely have to provide the rest. Rescheduling arrangements for principal falling due on debt contracted prior to the cut-off date would be required, as well as, possibly, a partial capitalization of interest due.² Creditors could also be required to agree on less than full cash payments on arrears. The exact need for debt service deferral in 1993 remains unclear, but rescheduling of principal on pre-cut-off-date debt appears to be required. Renegotiation of debt-service payments could reduce payment obligations by around \$8 billion for 1992. In March and June 1992, the Paris and London Clubs agreed to defer principal repayments, currently due at the end of September 1992, based on the expectation of a First Credit Tranche Agreement with the *IMF*. For 1993, meeting financing requirements of similar magnitude as this year will require continued special efforts by all parties involved. Few commitments have been made with regard to credits, and none have been made with regard to rescheduling of payments falling due. In view of the present payment difficulties, a resumption in medium- and long-term commercial lending is unlikely to occur

without government guarantees or collateral. Official sources, including the multilateral institutions, are thus likely to play a pivotal role again in 1993.

4.14 The longer-term reform program outlined in Chapter 3 is designed to restore Russia's access to commercial flows by the mid-90s. If properly implemented, lending from official sources will decline from about 1994/95 onwards. Commercial lending under guarantees would also stabilize or decline while voluntary trade financing and longer-term capital flows from private sources should emerge, reaching perhaps \$2-4 billion in three or four years. In turn, the need for balance of payments support from the IFIs would be reduced; lending from the World Bank would be largely in the form of more traditional investment projects. Deferral and debt rescheduling are likely to become a less significant financing item in the second half of the 1990s, especially if Russia does not assume the entire burden of the FSU debt (see below). These developments are outlined in Table 4-1 below.

Table 4-1: The balance of payments in the adjustment scenario, 1990-96
All currencies, but excluding inter-republic trade (Billions \$ current)

	Preliminary		Est.	Simulated Annual Ranges	
	1990	1991	1992	1993	1994-1996
(a) Current account					
Total merch. exports FOB	82.6	53.1	35.3	37 to 50	45 to 58
Oil and gas	36.7	19.4	17.3	20 to 28	23 to 32
Gold	1.7	2.2	0.9	1 to 2	1 to 2
Other exports	44.2	31.5	17.1	16 to 21	19 to 28
Total merch. imports CIF	82.9	45.1	37.0	41 to 55	49 to 60
Non-interest services	-1.3	-1.9	-2.2	-2 to -1	-2 to 0
Noninterest current account balance	-1.6	6.1	-3.9	-6 to -10	-2 to -6
Interest payments	-2.9	-2.7	-3.7	-4	-5 to -6
Current account balance	-4.5	3.4	-7.6	-10 to -14	-7 to -11
(b) Financing requirements					
Scheduled amortizations ^a	-4.9	-5.0	-5.3	-7	-6 to -7
Other capital flows (net) ^b	-2.5	1.1	-5.2	—	—
Changes in gross reserves	9.2	0.6	-1.6	-2 to -3	-2 to -3
Clearance of arrears	2.7	-0.1	-2.9	—	—
Total financing requirements ^{cd}	—	—	-22.6	-19 to -24	-16 to -21
(c) Financing sources					
Foreign direct investment			0.2	0.5 to 1	2 to 5
Grants			2.7	2 to 3	1 to 2
Disbursements (short and MLT loans) ^d			10.5	9 to 12	9 to 12
Other sources ^e			9.2	7 to 10	2 to 5
Memorandum items:					
Gross official reserves	1.6	1.0	2.6	4 to 8	8 to 12
Gross reserves (months of imports)	0.2	0.3	0.8	1 to 2	2 to 3

a. Scheduled amortizations for 1992 estimated by Vneshekonombank (VEB). Scheduled payments for 1993 and beyond estimated by Bank staff on the basis of information by VEB.

b. Includes "inter-republic residuals".

c. Assuming that 61 percent of FSU's debt service (including arrears) is covered by Russia.

d. From both private and official sources. For 1993, excludes possible \$6 billion Stabilization Fund.

e. Includes IMF, rescheduling and other capital items.

4.15 In the foreseeable future and in the absence of controls—and provided more efficient payments mechanisms develop—the Russian Federation is likely to experience a substantial trade surplus with the other states in the FSU (see Box 3-2 and the discussion in Chapter 8). Rather than an

imbalance, the surplus should be seen as an indication of continuing economic ties which will help alleviate the output drop in all countries in the FSU. For some, trade will be settled in rubles in what, hopefully, will develop into a well-functioning and coordinated ruble area. In other instances, settlement maybe in hard currencies—as will be, over time, all remaining structural deficits from FSU states with the Russian Federation. The magnitude of all these flows is very uncertain, even more so than other variables in the balance of payments outlook. They have not been considered in the scenario which underpins Table 4-1. Clearly, if they materialize, they would help reduce Russia's own external financing requirements—*while increasing those of the other states running trade deficits with the Russian Federation.*

Debt and Debt Management

4.16 With the impending dissolution of the USSR in the latter part of 1991, it became clear that arrangements would have to be made for the future disposition of the USSR's external liabilities. Starting October 1991, three inter-republican debt agreements have been reached among former Soviet republics that allocated the external debt of the FSU among them and laid the basis for their future relationship with their official and private creditors: (a) the Memorandum of Understanding on the Debt to Foreign Creditors of the Union of Soviet Socialist Republics and its Successors ("Memorandum of Understanding", "MoU") of October 28, 1991; (b) the Treaty of Succession on Foreign Debt and Assets of the USSR ("Debt Allocation Treaty") of December 4, 1991; and (c) the agreement among CIS countries on debt and asset management of March 13, 1992 ("Debt Management Agreement"). The details of these arrangements are discussed in Box 4-2. Russia signed all three agreements and because of the joint and several agreement, committed itself, in principle, to be liable for 100 percent of the debt.

Inter-republican debt agreements and debt-servicing arrangements

4.17 The Debt Allocation Treaty of December 1991 required that Russia repay 61 percent of the debt of the former Soviet Union at January 1, 1991. For disbursements made after this in respect of any loans extended to the FSU, Russia's repayment obligations would be based on actual amounts disbursed to Russia. It is important for Russia to establish effective mechanisms for monitoring

and managing new debt. In the absence of firm data on the share of disbursements in 1991 and 1992 to individual republics, Russia's share is assumed to be 61 percent of all outstanding liabilities. Debt owed by the FSU have risen from \$61.1 billion at end of 1990 to \$70.7 billion in May 1992, primarily as a result of the continued disbursements on loans made to the FSU before its dissolution (Table 4-2). Of this debt nearly 60 percent was owed to, or guaranteed by, official creditors, 30 percent was due to commercial banks, and 10 percent was owed to other private creditors (such as suppliers and bond holders). By far the largest single creditor of medium- and long-term debt is Germany (approximately \$14.5 billion). Arrears of principal totaled \$4.9 billion at the end of 1991. However, during the first

Table 4-2: External Debt of the Former USSR ^a, 1985 - 1992
End of Period (US\$ Billion)

	1985	1989	1990	1991	1992 (May)
Total Outstanding	28.9	54.5	61.1	65.3	70.7
Medium and Long Term	21.0	36.5	46.0	52.9	57.4
Official Creditors				29.7	
Commercial Banks				16.9	
Bonds				1.7	1.7
Suppliers' Credits				4.6	6.3
Short Term	8.0	18.0	15.0	12.4	13.3
Arrears	0.0	0.5	1.0	4.9	8.4

Source: Vneshekonombank

a. A memorandum of understanding (October 1991) commits all former republics, including Russia, to be jointly and severally liable for the debt of the former USSR. A debt allocation treaty (December 1991) allocates 61 percent of the debt of the former USSR to Russia.

five months of 1992, the arrears situation continued to deteriorate. Only Russia and Russian debtors have made debt service payments to the Vneshekonombank (VEB), which is responsible for servicing the debt of the FSU. Until mid-August, the Russian government had transferred \$800 million to VEB and commercial debtors another \$120 million. As a result, arrears increased to \$9.3 billion at the end of June, including \$3.4 billion on loans not eligible for deferral.

4.18 The external debt Russia has inherited from the previous regime constitutes a significant burden on the economy. Debt service obligations relative to GDP are not of overwhelming concern, but relative to exports in convertible currencies, the debt burden clearly commands sizable resources otherwise needed to support the reforms. In 1992, debt service obligations, including clearance of arrears, are estimated at 37 percent of exports. Foreign exchange is needed for imports, without which the immediate adjustments are at risk. However, without fulfilling payment obligations on existing debt, Russia will postpone its return to creditworthiness and thus put at risk the long-term adjustment effort. Orderly renegotiations of creditor claims in the volume generally agreed as necessary for the reform and adjustment program will help minimize the risk that insufficient amounts of foreign exchange will derail the adjustment process.

External creditor arrangements

4.19 In November 1991, the Group of Seven (G-7) signed a communique with the original eight signatories of the MoU whereby the official creditors agreed to a partial deferral of amortization payments on medium- and long-term debt due in 1992. This understanding was formalized in January 1992 when the Paris Club agreed to defer 100 percent of amortization payments due between December 5, 1991, and the end of 1992 on the "concerned debts" until January 1, 1993.³ Interest payments were not deferred, and trade arrears were to be paid off in two installments in 1992.

4.20. The January agreement has been reviewed twice by the representatives of the Paris Club. In March, with discussions with the IMF on a program still underway, and with the accumulation of arrears on interest and non-rescheduled principal, it was decided to prolong the deferral of principal due (on pre-cut-off-date credits) only until the end of June 1992. On June 22, a further deferral was agreed, until the end of September 1992. The Interstate Council (see box 4-2) has also engaged in similar discussions with its commercial bank creditors, represented by a group of major creditor institutions referred to as the Bank Advisory Committee (BAC). On December 16, 1991, March 26, 1992, and again on June 25, 1992, the BAC agreed to a rollover of principal payments due on pre-cut-off-date credits, in each case for a 90-day period. As with the case of official creditor debt, no deferral of interest payments was agreed to on those three occasions.

Prospects

4.21 Payment difficulties for Russia are likely to persist through at least the end of 1993. They will require Russia to continue to seek accommodations with its principal creditor groups (the Paris Club and the BAC) with respect to its ongoing payment obligations. While the nature and extent of such accommodations are a matter for Russia, the other former Soviet republics, and their creditor groups to determine, the Russian authorities should consider the following issues in addressing their debt obligations in the coming months.

- Under the "joint and several" nature of Russia's obligations in respect of former USSR debt, external creditors are likely to continue to view the external debt payment problems of other republics as being those of the Russian Federation. Recognizing this, the Russian

Box 4-2. Inter-republican Debt Agreements and the Current Payments Situation

Inter-republican Memorandum of Understanding (MoU), October 1991. The MoU committed the signatories to the following:

- to be jointly and severally liable for the external debt of the FSU. It is generally understood that this liability is to cover all debt obligations contracted by the Government of the USSR outstanding at the date of the MoU. So far the agreement has been signed by nine republics (including Russia and Ukraine) which, according to the Debt Allocation Treaty (see below) account for about 90 percent of the debt.
- to designate the VEB (or any successor to be determined) as the Debt Manager with full authority to be the sole interlocutor with creditors, negotiate and enter into commitments on their behalf, and service the debt as agent on behalf of the republics.
- to conclude an agreement on the procedures and mechanism for debt service and another on the participation in the settlement of the debt—on a joint and several basis—of the three Baltic states.

Inter-republican Debt Allocation Treaty, December 1991. The Treaty allocated specific shares of the FSU debt to the fifteen former republics. Russia was allocated 61 percent; Ukraine 16 percent; Belarus, Kazakhstan, and Uzbekistan, about 4 percent each; and other republics less than 2 percent each. These shares were determined mainly on the basis of the republics' shares in NMP/GDP. So far, the Treaty has been signed by eight republics (including Russia and Ukraine). The Treaty also makes some specific provisions about debt management and debt service procedures. It:

- prescribes the establishment of an Interstate Council for Foreign Debt Servicing and Utilization of Assets (IC) as a controlling body over external debts and asset management, while confirming the VEB's responsibility for external debt service as agent on behalf of the republics;
- charges the IC with reorganizing the VEB; and
- obliges the signatories to set up special accounts in the VEB for servicing the debt, to make advance payments according to an agreed schedule into these accounts, and to set up insurance funds for the special accounts with the VEB.

Inter-republican Debt Management Agreement, March 1992. On March 13, 1992, the Prime Ministers of nine republics (including Russia and Ukraine) reached agreement as follows:

- The IC, with responsibility for setting policies for and generally managing the external debts and assets of the FSU, was established with three co-chairs, two permanent ones (Russia and Ukraine), and one rotating among the other members. Voting powers are proportional to the members' shares of the debt. Policy decisions require a qualified majority of 80 percent.
- The VEB was confirmed as the sole Debt Manager, with a newly created department solely responsible for the management of existing FSU external debt.

Current Payments Situation. Between January and August 1992, the Interstate Council made approximately \$900 million in debt service payments. Arrears on all categories of debt have begun to accumulate to a significant extent. Excluding overdue import payments, arrears stood at approximately \$4.3 billion at the end of May 1992. Since the inception of the current arrangements with respect to the former USSR debt, all amounts remitted to the VEB in its capacity as Debt Manager have been by Russia. The only other source of payment in this period has been in the form of temporary drawings by the VEB on its clients' balances—in itself not a reassuring fact for Russia's external creditors. Given insufficient foreign exchange to meet all external payment obligations, the stated principle of the Debt Manager has been to direct service payments to credit lines made available for the supply of food, medicine, and "other essential imports".

authorities have initiated talks with other republics concerning their claims. So far, Russia has agreed to take over the external debt obligation of Belarus in return for Belarus' external claims. Talks on similar arrangements with other republics are ongoing.

- The accumulation of arrears on debt will continue to lessen the availability of external sources of finance. This ought to be factored into considerations both of the amounts to be made available to the VEB for debt service payments and the recipients of such payments.
- The non-commercial interests of Paris Club members could lead to exceptional treatment of debt obligations as well as in the continued availability of credit facilities. At the same time, however, given the clear, if complex, correlation between a country's external debt payment prospects and its macroeconomic environment, the extent and the permanence of debt-relief measures that the Paris Club will provide may continue to be firmly linked to the quality of the macroeconomic program pursued by Russia.
- The BAC (commercial creditors) will also pay significant attention to the macroeconomic policies of Russia. The availability of new credits, however, will depend almost exclusively on the ongoing payment practices of Russia.
- Creditor banks respond to different constituencies than do creditor governments. The susceptibility of commercial banks to non-commercial considerations should not be overestimated. Banks only agree to transform debt obligations when the net present value of the new obligations is equal to or greater than the original debt (typically achieved through the availability of collateral).

4.22 Rescheduling arrangements will need to be part of the longer-term program of reestablishing Russia's creditworthiness for commercial borrowing and to attract increasing inflows of private investment. Restoring full creditworthiness will, however, take some years. As discussed above, macroeconomic stability is essential to bring down the rate of inflation, restore positive real interest rates and establish currency convertibility. Simultaneously, reforms are needed to increase export earnings, for which policies to increase energy exports are central, as well as to establish the basis for resumed economic growth. If such policies are implemented and sustained Russia has good prospects of regaining full access to commercial borrowing by the second half of this decade.

4.23 An important adjunct to the policy environment is the need for effective debt management, both for existing debt, and for new external borrowings. Creditors will be looking for assurances that an adequate debt management capacity is in place. This would include appropriate debt and capital flows reporting and monitoring mechanisms, as well as a coherent debt strategy. Measures to address capital flight are also important in this regard. Numerous reports have recently been made to the effect that foreign creditors and potential lenders are seeking collateral arrangements. However, for Russia to provide collateral and/or pledge future income streams in convertible currencies could delay the return of policy flexibility with regard to future foreign exchange availability, and reduce the quality of other creditors' uncollateralized exposures.

Financing Needs and Priorities

4.24 Demand for official external financing is keen, and the implicit premium on efficient or effective use of these resources is therefore very high. *Failure to set clear priorities in the allocation of scarce financing may ultimately jeopardize the success of the structural reform program.* The information

base and institutional framework needed to establish these priorities is as yet limited and incomplete. These shortcomings must be addressed without delay to sustain the momentum in foreign flows as the reform program evolves to include sectoral issues and specific investment projects. As indicated in Table 4-2, Russia could be facing large financing requirements (exceeding \$15 billion) well into the 1990s. Meeting these needs will continue to demand concerted effort by all parties—but the initiative must lie with the Russian authorities.

4.25 Official financial assistance will be the key to meeting Russia's financing requirements in the forthcoming years. It can take one of four forms.

4.26 In the short term, *balance-of-payments support* provided by multilateral institutions and export credit agencies will be critical when import compression is expected to be most severe. Depending on the success of the stabilization effort and speed with which energy exports can be increased, some quick-disbursing assistance is likely to be still needed during the mid-1990s. Balance of payments support from the World Bank could average \$0.5-1.0 billion over the next several years under the economic rehabilitation loan and planned sector loans, each of which would be accompanied by an agreement upon a program of policy reforms. The combination of sound policy content and adequate financing could mitigate the short-term disincentives to structural reform.

4.27 *Project investment* needs in basic infrastructure and public services of the Russian economy are enormous. Most of this will have to be provided from domestic savings, which is why the prompt imposition of hard budget constraints on enterprises, as well as tight fiscal policy, are essential. In the absence of significant levels of FDI, project lending from multilateral organizations can play an important catalytic role by financing investment in basic infrastructure and public services, which are often bottlenecks for expanded private investment. External support needs for such investments could amount to several billion dollars annually within the next year or two. Given the overwhelming needs, Bank project assistance in FY93-95 will focus on strategic interventions with high economic returns. Some preliminary estimates of sectoral financing needs are detailed in Box 4-3.

4.28 *Technical assistance* (TA) is a critical instrument for ending Russia's relative isolation from international experience and know-how. Based on the TA needs of other economies in transition, TA financing needs in the Russian Federation could amount to several hundred million dollars annually. The Bank has been extending considerable technical assistance to the Russian Federation since 1991 under the Bank's Technical Cooperation Program (TCP); Bank TA to Russia will continue to be expanded, with privatization and social safety net operations.⁴ These operations address areas where Russian institutional capacity, being as yet not fully oriented to the needs of a market economy, is still weak. Other agencies have also provided substantial amounts of technical assistance. Overall, the allocation of TA within Russian is still somewhat arbitrary and the domestic coordination and management of TA should be strengthened. In addition, it is important that TA does not substitute for the buildup of the Government's own capacity.

4.29 Numerous private and official agencies are providing *humanitarian assistance* to Russia. Without intervention, Russian society faces the risk of both potentially serious medical crises as well as malnutrition. As much as \$5-6 billion in food is likely to be imported in 1992, of which a large proportion is being financed by aid programs. UNICEF calculates that \$160 million of pharmaceuticals (for the next 18 months) and another \$120 million of foreign assistance is required for priority health and human needs in 1993. To ensure that aid is not misdirected, local groups, both governmental and non-governmental, must be galvanized to help identify and reach the most needy. Grant food aid should either be sold, to prevent market distortions and generate revenues, or be provided directly to the poor,

such as in orphanages. Of equal importance, a longer-term effort must be initiated now to buttress the government's capacity to monitor emerging health problems and to address the underlying production and distribution problems that are the root cause of food and medicine shortages.

4.30 *Sectoral adjustment and financing requirements.* The efficiency of markets and the productivity of investment, and thus long-run growth, depends crucially on the policy and regulatory environment. Sectoral policies will be critical. Although decentralization of decision-making is a key step in the transition to the market, market economies nonetheless require supportive government policies for their smooth functioning and maintenance. This is even more the case in an economy undergoing transition, such as Russia's. During the interregnum, competitive markets must be promoted and nurtured—they will not always arise spontaneously. Key institutions—some official, some private—must be developed and the Government should provide the basic infrastructure and information for sound sectoral investments. Foreign assistance can play a role by providing technical advice on sectoral priorities, and by financing key parts of the public investment program. External support will therefore be critical in the adjustment, but it must be carefully rendered in order to advance, rather than postpone the reform process. In many sectors it should act as the precursor to, rather than a substitute for foreign commercial flows, which will tend to become available to Russia after, not during, the adjustment. The discussion in Box 4-3 is intended to initiate the process of defining sectoral investment priorities and financing requirements. (These priorities emerge from the discussion of sectoral issues in Part III of this report.)

Resource Mobilization and Coordination

4.31 Assistance must be closely matched with priority needs. While close coordination has been maintained between the IMF, the Bank, EC, EBRD, OECD, and other multilateral agencies to ensure the efficient use of technical assistance, overall coordination with the technical assistance interventions of bilateral agencies, private foundations and non-governmental organizations has yet been achieved. The Russian government's own ability to coordinate this aid has also yet to be developed. At this critical stage in Russia's economic reform process, an effective coordinating mechanism will be critical to ensure that scarce aid resources will not be misdirected, duplicated or squandered.

4.32 The two international conferences held in Washington and Lisbon to coordinate aid offer a good beginning, but these were devoted to all the former Soviet republics, focused largely on technical assistance programs and relatively little on the links between reforms, increased aid flows and appropriate vehicles for transferring resources. As aid flows become more extensive, and donor involvement more intensive, resource mobilization must increasingly be defined in terms of individual republics. Financial and technical assistance efforts must be coordinated in support of programs of investment, adjustment and institutional reform. The focus of discussion would be on assistance needs in relation to the country's program, policy priorities and domestic resource mobilization efforts. In this fashion, program planning by Russia and donors alike could proceed with more predictability and effectiveness.

4.33 For more effective coordination, the Russian Government must also be prepared to interact with donors with a clear sense of respective donors' roles in their overall assistance needs, as well as a sense of their own priorities. A particularly urgent need, therefore, is to put in place carefully designed capacity to manage external financial and technical assistance. Three issues are of particular importance: links to policy and overall economic management, financial management, and logistical and procedural arrangements.

Box 4-3: Sectoral Financing Requirements.

The discussion below is based on as-yet preliminary knowledge of the relevant institutions and the economy in general in the Russian Federation. However, the pressing nature of some of the priorities elaborated below simply underscore the need to broaden that knowledge base to arrive at a more informed understanding of the financing requirements for each sector.

Agriculture. Adjustment in agriculture must address three key issues: dramatic shifts in relative prices, reduced profitability, and an inappropriate institutional structure to cope with the new market-based economy. Until the distortions in the incentive regime and the institutional issues are resolved, any substantial program of investment would be premature. Program lending (i.e., balance of payments assistance) could be valuable, however, in supporting the adjustment process. The sector appears to be facing major shortages of critical imports that could be financed through program assistance. (For example, hybrid seeds for grain production, pesticides, specialized farm machinery, protein feed, veterinary drugs and medicines, etc.) Initial indications are that perhaps as much \$500 million could be productively utilized for such critical imports over the coming year. Assistance would also be critical in support of pilot privatization projects, and for the demonopolization and decentralization of agricultural marketing structures. These initiatives could provide the basis for larger projects addressing the broader demands of the sector, including research and extension services geared to a market-based productive structure, rural roads and new marketing infrastructure.

Energy. The most critical issues in the energy sector are to halt the decline in oil production and to increase production of natural gas (see Chapter 11). The Russian Government issued decrees on June 1, 1992 that envision raising about \$11 billion in foreign credits for this purpose over the next decade through a combination of direct foreign investment and commercial credits. This amount is probably underestimated; the amount of foreign credits required during the next decade just to maintain oil production at the current level of 7-8 million barrels per day is probably in the range of \$16-27 billion. The immediate priority is to address the large backlog of rehabilitation investment from existing wells. While the total cost for such investment (which is expected to yield economic returns in excess of 50 percent per year) has not yet been fully established, cost estimates for three major oil producing associations in western Siberia indicate costs on the order of \$900 million over a two year period. For the gas sector, immediate investment priorities focus on the rehabilitation and improvement of the transmission and distribution networks at a cost of approximately \$1.6 billion. Medium-term investments in both sectors are expected to focus on the development of new production fields, which should be carried out largely in conjunction with foreign investors. Investments are also needed in coal production and refinery modernization. They may be critical in the generation of electrical power—if the nuclear reactors of the Chernobyl variety are decommissioned (see below).

Industry. Industrial restructuring is a massive task in Russia. Experience in Eastern Europe and the limited information on the performance of Russian industries indicate that a large share of existing enterprises will not be viable in a market-based economy with their present production structures. For the reasons argued in Chapter 6, new investment should be deferred until a new ownership structure is in place and the viability of enterprises can be clearly established. In the interim, foreign assistance should focus primarily on providing the technical advice and support needed to work through the structural reform process in an expeditious manner, including legal and accounting reform, financial sector and enterprise reforms, and related equipment needs which run into hundreds of millions of dollars. Balance of payments assistance through the inter-bank market is also needed so that enterprises can have access to imports to improve productivity and to assist potentially viable enterprises in the restructuring process. FDI will also be critical for the restructuring process, but it will naturally gravitate to a few large and relatively isolated enterprises in the initial stages of the reform program. A more important priority is to develop a viable financial sector to channel funds to enterprises that have good prospects of becoming competitive in a market-oriented context (see Chapter 7). Successful financial intermediation through the establishment of efficient banking institutions operating under a prudent regulatory framework will be critical in mobilizing domestic savings and in allocating capital inflows from abroad. The Government is also understandably concerned about the restructuring of defense industries. Unfortunately, the experience in other countries indicates that the scope for successful conversion of defense industries is rather limited, as it is difficult to introduce the required expertise in marketing, cost control, and product management into large and highly integrated operations. Foreign technical assistance can play a limited (but useful) role in this process.

Transportation and Communications. The transportation network is likely to be a major constraint on Russia's economic recovery. The large territory and the low density of the road network in the FSU, its poor physical condition,

Box 4-3: Sectoral Financing Requirements (Continued)

the fragmentation of ownership and control among the new states of the FSU, and the deteriorating condition of the rolling stock have made progress difficult and uneven. The expected disruptions in the spatial pattern of production due to economic restructuring will add a new, and possibly more complex, dimension to these existing problems. Because the predominant role of the rail system in the transportation network, is likely to change substantially in the coming years, the Government should postpone major new investments (other than normal maintenance and replacement of worn equipment) until the impact of economic reforms on the rail sector becomes clearer. Attention should focus on the development of road transport, which is more suited to the horizontal relationships typical of a market economy. Due to inadequate maintenance, roughly 60 percent of roads requires rehabilitation and upgrading (at a cost of about \$22 billion over the next 5-7 years). Depending on the import content of road construction (and the willingness of external lenders to finance local costs) there is scope for substantial project investment, subject to resolving a number of fundamental institutional problems. Accessibility to ports has been significantly affected by the break-up of the FSU. The capacity of Russian ports must be upgraded. Lack of investment over the past ten years has led to bottlenecks and wastage. Technical assistance to prepare a national port development and management strategy should have high priority. Moreover, once strategy has been formulated, the sector will in turn need substantial financing. Upgrading telecommunications is an area where western technology and experience can play a major role in improving the current situation. Establishment of an appropriate environment for FDI in the sector as well as access to commercial loans are critical for the success of this effort to meet potential needs amounting to \$22 billion over the next five years.

Housing and Municipal Infrastructure. Housing shortages and the deterioration of the housing stock threaten the fiscal program. Subsidies are large and they are increasing rapidly. The current pattern of housing ownership and occupancy limits labor mobility during the restructuring process. There are no financial instruments to support the housing market, and the construction industry is inefficient and extremely concentrated into regional monopolies. A dynamic housing sector can provide a powerful impetus for economic recovery. Resolving the ownership issue and separating housing from social assistance and enterprise management are key problems in the reform process (see Chapter 14). Major changes will be required to stimulate an inflow of private investment into this sector. In the near term, foreign know-how may be critical in the design and implementation of these reforms. Foreign assistance can also help address the social problems in housing. Though poverty is low, access to housing is an issue.

Social Services. An essential part of the economic reform program is the establishment of a social safety net to provide a basic level of protection for individuals who may be adversely affected by the reform process. Foreign assistance can be valuable in establishing a nation-wide system of employment services, which are currently unable to provide the basic services of registration and benefit provision, much less proactive services such as large-scale retraining. Modern computerized systems will also be needed to improve the efficiency of benefit administration. Although the vocational education and training infrastructure is reasonably well-developed, technical assistance is needed to design curricula more suited to the skill requirements of a market economy. For example, the Ministry of Fuels and Energy oversees a post-university system with 1,200 teaching staff that concentrates exclusively on technical subjects; no management or financial training is available for the sector's 400,000 managers. More generally, the education sector needs to be reoriented towards a less specialized and more flexible curriculum for which donors may be in a position to provide advice and financial assistance. Finally, health services, chronically underfunded, are now in a critical state, with pharmaceutical and other medical requirements in short supply. Emergency imports of drugs of approximately \$150 million or more are estimated to be needed for the remainder of 1992; in the medium term, technical assistance to assist in restructuring the health system on a financially viable basis should be an important part of the reform program.

Environment. While environmental problems are serious in many locations in Russia, many of these problems are associated with antiquated industrial enterprises and/or resource extraction activities that are likely to be nonviable as a result of economic reforms. In this situation, the rationale for major investments to clean up environmental problems without first establishing whether the enterprises will continue in a market situation is doubtful. Technical assistance in environmental monitoring and enforcement will be needed, however, as well as major financial assistance to address some of the most critical environmental concerns, such as the problem of safety in nuclear power plants (see Chapter 10). Safety upgrades may cost on the order of \$500 million for existing reactors located in Russia, while decommissioning costs for older units and Chernobyl-type reactors could be in the range of \$5 billion. While action is urgently needed, the Government must devise an overall approach that the work is done in order of priority and in the most effective and efficient way possible. Foreign TA could have a major role in designing such an approach.

- *Links to policy and economic management.* External assistance is closely linked to the government's reform program and management of the national economy—and in some cases will be conditional on specific policy measures. As in most countries, it is therefore important that Russia's management of this assistance be closely linked to macroeconomic and structural policy decision-making, and to budgetary and public investment policy decisions—and that it is closely supervised at a high level. The Bank's prospective lending program, for example, will be specifically designed to support the economic reform program, and requires that the Bank has regular interaction on program issues with the agencies and individuals in charge of key policy and economic management functions. It is critical that responsibility for the overall relationship be concentrated in an agency which can effectively ensure the essential integration of foreign assistance into overall economic management.
- *Financial management.* Decisions about levels of foreign borrowing and allocation of that borrowing among different economic purposes (including allocation for public investment and for different budgetary purposes) are fundamentally an aspect of economic policy-making and management, and need to be handled as such. It is important that the agency assigned to contract foreign debt on behalf of the Russian Government understand that the broader economic decisions about levels of borrowing and allocation of foreign finance need to involve the core economic management agencies, especially the Ministry of Finance and the Central Bank.
- *Logistic and procedural aspects.* The Russian Federation will be receiving sizable sums of international and bilateral assistance. For these funds to be used effectively, the Russian Government must assemble a qualified team of professionals whose job it will be both to interact with international lenders, as well as to facilitate their access to other ministries and agencies of the Russian Government. Such access, particularly to the sectoral or line ministries, will be critical to ensure the effective design of the technical details of specific lending programs.

Without this capacity—not yet in place—the country will be unable to deploy available aid to its best use, will be unable to disburse external financing as rapidly as the reform process requires, and will face the danger of aid becoming a source of confusion. Good aid management is inseparable from good economic management, and at this stage of the transition the effective utilization of external aid may be critical to the success of reform.

Notes to Chapter 4

1. Information is insufficient to break down the services account between factor and non-factor services other than interest payments.
2. The Paris and London Clubs have established January 1, 1991 as the cut-off date. Debt contracted after that date is not subject to deferral or rescheduling by either of the two creditor groups.
3. "Concerned debts" are all MLT loans and insured or guaranteed commercial credits (with an original maturity of more than one year) contracted before the cut-off date (January 1, 1991). Short-term debt (with an original maturity up to one year) outstanding as of December 4, 1991 was to be paid back in two equal installments of 50% each on June 30, and November 30, 1992. Other debts outstanding as of December 4, 1991, (including outstanding MLT debt contracted after the cut-off date and interest arrears on MLT debt contracted before the cut-off date) were to be repaid at the latest by March 31, 1992.
4. The \$12.5 million in technical assistance provided by the Bank in FY92 under the TCP program laid the intellectual underpinnings for the Bank's other economic and sector work and lending operations. For example, the joint government-Bank *Food Policy Report*, discussed at an international conference in Moscow in April 1992, identified the priority policy changes which will be supported by the forthcoming agriculture sector operation. Several other TCP-funded reports containing policy recommendations are now being finalized for discussion with the Government. These include preliminary work on social protection, the legal framework for FDI, energy pricing, financial sector reforms, intergovernmental fiscal relations, and accounting. Finally, to address the acute lack of skills appropriate for a market economy, the Bank is developing training strategies and a possible project to support the reform program. The Bank's Economic Development Institute already has a substantial program underway both to train government officials and to train trainers in financial sector issues, privatization and macroeconomics.

PART II

The Reform Program

Russia has embarked upon a bold program of economic reform. The objective is to more effectively meet the needs of the Russian people by creating a market economy that is increasingly integrated into the world economy. Such a transition would not be easy under the best of circumstances. On the contrary, the Russian authorities have had to face substantial declines in output since 1990 (including output of petroleum, the most important foreign exchange earner). At the end of 1991 the economy was on the verge of falling into serious macroeconomic instability, while at the same time microeconomic distortions and imbalances were increasing. The economic transition has been further complicated by the simultaneous political and administrative transformation taking place in the Russian Federation.

At the beginning of 1992, the Government undertook major steps towards both economic liberalization and financial stabilization—although the inevitable impact of the liberalization process was an initially large increase in prices. The present need is to extend the progress already made in liberalizing and stabilizing the economy, while at the same time accelerating the pace of the necessary systemic and structural changes. Such changes—particularly those related to creating a competitive market economy—are essential if Russia is to realize the potential benefits of the liberalization measures already taken. Given the decline in output that has already taken place, the Government must also act to minimize further declines, and begin to restore output and labor productivity as soon as possible.

Steps still to be taken, however, include mass privatization, enterprise reform, and reform of the financial and labor markets. The magnitude of the whole task of transition is made evident when it is stressed that even those steps—each involving fundamental changes in the way the former Soviet economy operated—are not sufficient, but must be accompanied by changes in the overall incentive structure for any of these steps to become effective. Many of these changes are legal and/or institutional, and in some cases easy to initiate, but often overlooked as essential to implementing an economic reform program. One example is the passage and enforcement of a law on bankruptcy, so that enterprises, either public or private, will begin to realize that the state will no longer automatically compensate for financial losses. While a bankruptcy law is hardly sufficient to resolve the issue of enterprise reform—particularly in the absence of the legal infrastructure to enforce the law—the absence of the law conveys certain messages. Other examples include laws on contracts, the legal infrastructure necessary to enforce them, an effective payments system, and overall policy consistency. Such steps are critical for the development of what might be called the institutional infrastructure essential to a functioning market economy.

Given the enormous task ahead, the timing and pace of reform is a key question. The political and administrative capacity of the state dictates the timing and pace of reform more than do economic considerations. As discussed in Chapter 5, the political and administrative capacity of the Russian state is highly dependent on the simultaneous process of democratization and decentralization taking place. Two concerns emerge from this: the impact of the Government's lack of administrative capacity to implement reforms, and the impact of certain political interests on the course of reform irrespective of the Government's ability to implement its policies. The lack of administrative capacity will be immediately telling. Not only must a well-conceived reform program be designed with institutional limitations in mind, but it must also undertake to build up the minimum necessary level of institutional capacity if it is recognized as being absent. The problem of political constraints is less clear-

cut, although the pace and timing of economic reform is clearly influenced by what might be called "political capacity". The primary danger is that a government with limited political support may be driven by the perceived need for appeasement of various interest groups to make concessions on the pace and timing of the reform program.

The emphasis placed by the Government on short-term macroeconomic stabilization as an anchor to subsequent economic reforms is widely recognized as being *sine qua non* for successful reform; the next steps, however, should be designed towards creating the environment for the preservation of that stability. Such steps actually have less to do with a particular fiscal or monetary policy *per se*, and more to do with such steps as the establishment of a stable, transparent system of intergovernmental fiscal relations, or effective enterprise reform.

We have seen already that the absence of enterprise reform has led to a weakening of the Russian government's monetary and fiscal stance this spring. Through the intermediation of both Parliament and other interest groups, enterprises were successful in having their demands for cheaper credit and outright budget allocations met. Effective enterprise (either public or private) reform, therefore, will require such steps as reducing firms' expectations of government bailouts, raising the costs of financial irresponsibility, and providing programs that will minimize the inevitable costs of enterprises going out of business—that is, a reliable social safety net. The issues surrounding enterprise reform are discussed in Chapter 6.

Another step critical to effective enterprise reform will be reform of the banking sector, but this step is particularly problematic in terms of sequencing. For although enterprise reform requires that enterprises not be able to receive credit when they sustain losses and behave in an uncompetitive fashion, it is not sufficient for the state to harden its policy towards enterprises, but that private financial institutions do the same as well. The problem arises because many new entrants to the financial sector in formerly planned economies have already lent indiscriminately to non-viable enterprises. Thus many financial organizations are already saddled with questionable portfolios. Nor was the fault entirely their own, since it is by and large impossible to make rational decisions about credit risk without enterprise reform. Chapter 7 discusses the problem of sequencing these two steps, and ways in which it might somehow be resolved.

The liberalization of international trade will also play an important role in enterprise reform. For enterprises to begin operating on market principles, they must face a set of market incentives, that is, an appropriate set of relative prices. International competition can in many cases provide that set of relative prices. In the Russian case, of course, trade issues are complicated by the fact that the existing patterns of trade within the former Soviet Union which were not based on market principles of comparative advantage, must, in the transition, be partially supported until complete readjustment can take place. These and other issues related to international trade are discussed in Chapter 8.

Finally, effective enterprise reform must also ultimately be accompanied by full liberalization of the labor market. In the short run, the Government must concentrate on establishing an effective safety net—for all those who may fall below a certain "poverty line," either through unemployment or otherwise. This is a critical step in cushioning the consequences of enterprises shedding their labor forces as part of the reform process. Beyond that, however, it is important to take steps towards a liberalized labor market—detaching social benefits from one's place of employment, allowing for residential mobility—so as to allow for a more efficient allocation of resources. These issues are taken up on Chapter 9.

Clearly, the number and complexity of the economic steps involved in a transition to the market, let alone the political requirements, do not allow for a clean or orderly sequencing of events. Even an optimal scenario will include phases during which more than one "system" will be in place, and inevitably the notional sequencing will be disrupted by various factors. This is to be expected, and must be countered by policy consistency on the part of the Russian Government, and continued external support.

CHAPTER 5

The Governance of Reform

5.1 Russia's transition to a market economy requires a thorough-going institutional transformation in virtually all spheres of the economy and society. The effective management of reform demands strong, coherent government action, and a capacity to adapt policy and implementation rapidly to changing circumstances. Institutional reform within the public sector must transform the state, and simultaneously encourage the growth of a civil society capable of perpetuating and preserving the economic space for private enterprise. In the short run the implementation of reform, and its essential broadening and deepening, involve finding solutions to critical problems of governance which currently beset the reform effort.

- Lack of a *clear institutional framework* for decision-making and implementation. There needs to be a more effective definition of responsibilities and improved cooperation between the executive and the legislature at the central level, and between the center on the one hand and republic, regional, and local authorities on the other.
- Deficiencies in *public management*. There is a weakening of the capacity, and on occasion the willingness, of the central administration to implement government decisions effectively.
- Lack of a predictable *legal framework* for market-based economic activity. Reflecting still-unresolved constitutional issues, the embryonic status of the rule of law, and government decisions which are in some cases only tenuously effective, there exists a state of uncertainty in Russia which is not conducive to the conduct of private economic activity.

5.2 The changes in Russia since August 1991 are monumental and impressive. There has already been a profound and irreversible transformation of society. The relative coherence and peacefulness of the process of change thus far, in the face of wrenching political and economic pressures, is remarkable. Nevertheless, emerging problems of managing the reform process now pose considerable risks. Reform must now progress beyond breaking away from the old system to the institutionalization of the new on a basis within society and state which can assure its continuity.

Separation of Powers

President, legislature, and ministries

5.3 A fundamental difficulty for the conduct of government and the implementation of reform is the current uncertainty about the constitutional base and political future of the new state. Different drafts of a new constitution are under consideration, but not yet ready for ratification. The very procedures by which the Constitution will be ratified are under dispute. The recently signed Federative Treaty, destined to be part of the Constitution, sets out the relationship of autonomous republics and regions within the Russian Federation in broad terms, but is far from settling all outstanding issues of autonomy or the respective powers of different levels of government. The President and Government in the meantime derive their authority from the provisions of the old constitution, renovated *ad hoc* by parliamentary resolutions and government decrees.

5.4 Both the Congress and the Supreme Soviet of the Russian Federation are elements of the old constitution and were articulated and chosen during a different political era. Not only do they reflect the previous constellation of political forces, but they have been operating under considerable institutional uncertainty since work was begun on drafting a new Constitution. This is not to draw a simplistic dichotomy between the executive and the legislature as representing differing poles of the reform spectrum, but to suggest that the role of the Russian legislature has not remained constant. Since its election during the Soviet era its role has ranged from being the most democratic and representative institution in the land, the locus of radical opposition to the Union government, to an uncertain, divided, institution about to be restructured by a new constitutional order. This instability has blurred the lines of accountability within the Russian system of government.

5.5 The executive branch, on the other hand, derives its authority simply from the political mandate of the President. Its top members have been hand-picked by the President under special powers granted by the Congress. Under these circumstances, the executive branch is vulnerable to attacks from the legislature, which can at least claim to have a popular—if possibly outdated—mandate. While President Boris Yeltsin's personal legitimacy is not in question, it is not clear that his protection or legitimacy can be extended to every act of his Government.

5.6 In part, the blurring of institutional accountability has been exacerbated by the peculiar institution of "reform by decree." The powers of presidential and governmental decree are extraordinary. Moreover, these decrees have somewhat temporary legal standing. They were designed to fill the inevitable gap in time that would be created by the ordinary legislative process. Therefore decrees are often introduced simultaneously with an identical bill in the legislature, and last only so long as the bill does not get passed or defeated in the Parliament. Furthermore, decrees are also subject to scrutiny and reversal by the Constitutional Court. This introduces an element of uncertainty in the system which can encourage other state agencies (including local political organs) as well as individuals and corporate entities to speculate about the durability and enforceability of decrees with which they do not wish to comply.

5.7 In this constitutional interregnum, both the Government and Parliament have responded by trying to define their respective responsibilities for economic reform and the conduct of economic policy in a way which leads to overlap of claims of authority. This tends to perpetuate uncertainties on the part of economic agents about which institution will ultimately prevail. For some time, state enterprises answered to a State Committee for Anti-Monopoly Policy (GKAP) which was exclusively subordinated to the Supreme Soviet, while being guided by the State Committee for Property Management (GKI) under the Presidency on privatization.¹ Given the overlap of areas of responsibility between GKAP and GKI, this led in some cases to competitive attempts by one institution to reverse the policies of the other, as well as to the dilution of government authority in general, as economic agents grow accustomed to having to disobey the directives of one or the other agencies when such directives conflict. Some of these uncertainties also apply to the Central Bank, which plays a critical role in implementing the government's monetary policy, but is legally subordinated to the Parliament. These issues are discussed in more detail in Chapter 6.

5.8 While specific instances of conflict between the executive/legislature appear to have been resolved, a potential new source of structural tension will be the ambiguous relationship between the presidential administration and the ministries. There are some notable instances of duplication of responsibility between presidential bodies—such as the Center for Agricultural Reforms under Vice-President Rutskoi—and ministries (in this case the Ministry of Agriculture). In part this could be viewed as a short-term measure to fill the institutional gap that is created by the need to transform the structure

and personnel of the more traditional ministries. It allows reform to be pursued even while key draft legislation, such as the Law on Government, Law on the Civil Service, and the Law on State Intervention in the Economy, have not been ratified into laws. The danger, however, is that such arrangements may later complicate clear and final clarification of responsibilities within the government as a whole.

5.9 From an economic point of view, a decisive resolution of such ambiguity has a very high premium indeed. It must be emphasized, however, that in any modern democracy both executive and legislature have legitimate, if incomplete, political mandates with respect to economic policy. Constitutional efforts to separate and clarify lines of accountability for economic reform must therefore be framed so as to recognize and define areas of joint responsibility, but to provide mechanisms for clear and accountable decisions.

The center vs. the localities

5.10 Democratization, especially of the excessively centralized Soviet system, implies decentralization. Thus, the current movement towards local autonomy is as much due to design as to ineluctable centrifugal forces. Yet decentralization in a formerly centralized state as large and as diverse as the Russian Federation has had a number of important consequences for the direction of economic reform from the center. A key aspect has been the fiscal decentralization of the state. Much of this has been directed from the center, which in the past effectively subsidized the localities through a complex system of a "bottom-up" sharing of revenues. The new regime of fiscal decentralization and imposition of local fiscal autonomy has on the face of it given the center an ability to conduct macroeconomic stabilization largely at the cost of the localities, which in this process were assigned greater expenditures than revenues. (For more on the system of intergovernmental finance, see Annex 5-1.) As noted below, however, the capacity of the center to impose a hard budget constraint (whether fair or not) on local governments has in practice been subject to important political limits: bargaining over resources is critical, and some highly visible fiscal concessions to localities have been made—with potentially worrying implications for fiscal discipline.

5.11 The withdrawal of central support of local budgets has tended to foster a closer relationship between local political authorities and the enterprises located on their territory, on whom they depend for revenues. This has served to reinforce an earlier trend towards the domination of local politics by local industrial, agricultural, and trade interests—a situation accelerated by the regional semi-autarky caused by the disruption of planned trade ties. This process, which began as early as 1988, was the consequence of earlier Soviet attempts at economic reform, as dismantling and erosion of the state order system led to the breakdown of inter-republican and inter-regional economic ties. The enterprises' need to survive the break-up of many of the organizing branch ministries and their enforced self-financing led to a growing identity of interests between local authorities and enterprises. The enterprises' need to resort to barter and to establish simpler, local relationships provided a further impetus to forge links with local political authorities.

5.12 Local authorities, in turn, are very much aware of their communities' dependence on enterprises. Not only do local communities depend in some cases on large, single enterprises, but these enterprises have in the past also been responsible for social and infrastructure expenditures for the area and remain important, through the renewed barter system, for the supply of consumer necessities to substantial sections of local populations. It is therefore very much in the local authorities' interest to try to lubricate the system to keep local enterprises in being and adapting to the collapse and rupture of economic ties. This includes bringing pressure to bear on supplying enterprises and banks not to cut off

credit to enterprises in their area. Local authorities also serve as information centers on supply and demand and act as facilitators to barter trade between regions.

5.13 *This symbiotic relationship places particular pressures on the privatization process in the Russian Federation.* In many areas, the common interests of local political and economic institutions have been realized in *de facto* privatization of state assets by the managers, directors, and workers' collectives of state enterprises with either the consent or active participation of local political authorities. In addition, partly because of the scarcity of central resources, the state privatization program envisions implementation of much of the program by local privatization authorities (subordinated to the local head of the central administration, but in practice responsive to local pressures). *The likelihood that the privatization process will be open, transparent, or competitive is substantially decreased by this political fact*, though it does not necessarily mean that it will be slower. These issues are revisited in Chapter 6.

5.14 One consequence of decentralization of political authority may well be that different regions of the Russian Federation will push forward with reform at their own pace, and in response to local or regional political and economic imperatives. Here the size and variation within the Russian landmass may prove to be an advantage. While the centrifugal tendencies in the Russian Federation clearly contain many economic as well as political dangers, different local combinations of political leadership, productive capacities and natural resource endowments may also increase the chances that at least certain areas of the country will be able to cut a path towards successful economic reform. Such areas have a demonstration effect for others, not least because they will be better able to "embed" the incentives and impetus for economic reform within interest groups in society, rather than reform being a process emanating from the state alone.

Public Management Reform: Transforming the Soviet Apparatus

5.15 It will be an immense task to transform the communist state "apparatus" which the Russian Federation inherited or appropriated from the old Soviet system into a state administration geared toward the promotion and regulation of market relations. Design of a new and more appropriate structure for public administration will need to be rooted in Russian experience and the country's own constitutional and economic structure: it should also draw on broad international expertise on managing and reforming the public administration in market economies. Three important elements of reform may be highlighted here as a contribution to the government's consideration of administrative reform; though they have different time frames, they need to be addressed coherently.

5.16 First, some basic ground rules will be needed to simplify and clarify the structure, machinery, and staffing of government, beyond the constitutional allocations alluded to above. This is a task of exceptional complexity. There are not as yet laws defining the structure of the central Government, the powers and responsibilities of ministries, and the role and attributes of the civil service. This clarification is essential in order to draw a clear line between government and the enterprise sector, and between the state on the one hand and civil society and the private economy on the other.

5.17 Within the ministerial structure, a great deal of reform work has yet to be done. The old system of branch ministries directly controlling production and supplies, to take one important example, was abolished in the first wave of reform. However, within the Ministry of Industry, departments have been forming which bear strong structural and functional resemblances to the former branch ministries. At the same time, "associations" and "concerns" have emerged from former branch ministries which in effect attempt to appropriate sectoral enterprises and financial mechanisms under umbrella groupings outside the state. Dealing with these trends, both of which perpetuate elements of the old administrative

structure under very different nominal ownership but with a common opacity of legal status, accountability, and control, is a fundamental requirement of administrative rationalization. There is also a need to resolve the roles and powers of the various special commissions and agencies established by both the Government and Parliament, to perform functions which in most countries would be carried out by accountable government ministries. A notable example of this, discussed elsewhere in this report, is the complicated set-up for the management of privatization.

5.18 In the case of the sectoral ministries themselves, for the most part they have yet to equip themselves for the new responsibilities of sectoral policy-making, promotion of economic and technical services to their sectors on a market-driven basis, and economic regulation rather than direct command and intervention. It will require deep transformation of the existing ministries for them to acquire a real capacity for policy analysis and formulation, and still more for them to change the fundamental relationship between government and the private economy in their areas of responsibility—in effect to institutionalize a workable distinction between the sphere of the state and that of civil society. That distinction is fundamental to the conduct of government in market economies, and will need to be established within the Russian government in practical reform of the structure and personnel of ministries, and practical changes in basic governmental functions, such as public procurement (see Box 5-1). This re-focussing of ministries' missions, operating methods and human skills, which will be an extended process, will need to start at the top. Both political leadership and sustained high-level management of the changes will be essential to enable the ministries to play the vital, but sharply reduced and redefined, role required of them in a market setting.

Box 5-1. Public Procurement

In developed market economies, government ministries seldom are the direct implementors of most public programs or the direct suppliers of most public goods and services. Instead, autonomous—usually private—firms do the engineering design for government-financed highways, build power stations and supply and install the turbines, publish and distribute the school system's textbooks, or manufacture and supply the pharmaceuticals for the nation's hospitals and clinics. They do so, however, under carefully designed legal and administrative regimes aimed at open and fair competition for government contracts, as well as transparent and cost-effective public tendering and procurement. Moreover, the regimes are designed to ensure that the performance of private providers of public goods and services is regulated in the public interest. These arrangements are never perfect, but they work.

The Russian Federation, by contrast, has no such recent tradition. Soviet ministries and agencies executed public works themselves, and provided or secured public supplies directly and with little or no independent scrutiny. *The near-collapse of this system underlines the great urgency of instituting a transparent, market-based procurement and management system for public projects, goods and services.* This vital aspect of public sector management reform in Russia will involve two processes: (1) progressively stripping away the often moribund system of direct public supply and project execution by state ministries, and (2) simultaneously establishing open, arm's-length client/supplier relationships between the state and (foreign or domestic) providers, more and more of whom will be in the private sector. This shift to competitive provision will in different degrees be a legal requirement for most externally-financed projects and programs. The consequent setting of internationally accepted procurement practices for these projects provides an opportunity, which Russia should grasp, to bring international experience and technical assistance to the task of transforming the conduct of the public sector's domestic as well as foreign business.

5.19 Second, as the Government recognizes, it will need to undertake a very large program of civil service personnel development, including public administration training. Current government estimates suggest a near-term need to train 50,000 central civil servants and perhaps 700,000 from regional and local administrations. In March 1992 the Government established the Governmental Main

Directorate of Staff Training for Public Service ("Roskadry"), which is charged with organizing training through a network of 11 higher institutions and regional personnel centers. Roskadry will also bear some of the personnel policy and standard-setting responsibilities typical of a civil service commission, as well as the task of advising on organizational and personnel implications of economic reform proposals.

5.20 This massive agenda would tax the resources of any institution, let alone a new organization with few resources and little direct experience. If Roskadry is the government's chosen instrument to oversee administrative reform, its access to current thinking and international experience in this field will be critical. At the same time, it will be important for Roskadry to take a broad view of its task. This should include articulating a strategic view of the Russian public service: what the main functions and organizational and managerial principles of the public service should be, and where the boundaries of state action should sharply be drawn. From this it would be important to develop a strategy concerning the desired size and broad composition of the civil service itself. This is a vital issue: the civil service proper was not notably large in Russia in the communist period,² but this was partly because of the existence at most levels of the large "parallel administration" of the Communist Party. Moreover, the distinction between officialdom and the enterprises it controlled was ill-defined or non-existent in many instances, and many thousands of these intermediate roles of the command system now have no relevance to the functions of government. For its retraining to be relevant and successful—and for its ability to recruit and deploy high-quality new civil servants, more important in the long run—Roskadry will need to have a clear view of the new structure and cadre towards which it is working. This may, in turn, require that retraining and recruitment has to be accompanied by selective retrenchment.

5.21 A third critical issue for administrative reform is economic management—and this is in many respects among the most urgent tasks of institutional development. Much of the initial phase of reform has been implemented on an *ad hoc* basis by relatively small groups working for senior government figures, and either deliberately or by circumstance working outside of the normal ministerial apparatus.

5.22 This crisis-management approach was entirely understandable, given the urgency of the Russian government's reform objectives in late 1991 and the lack of a reliable structure to implement it in the immediate aftermath of the collapse of the USSR. Institutionalizing the market system, however, now requires a strong program to develop capacity in the core institutions and functions of economic management. This particularly affects the Ministries of Finance, Economy, and External Economic Relations, and the Central Bank, and will also require changes in the several other agencies, commissions, and informal structures which have been playing an important role. Russian administrative capacity is presently weak in precisely those areas vital to accountable economic governance in a market economy: these include fiscal policy; government budgeting and the control of public expenditure more broadly (including public investment, procurement, and local government expenditure); public accounting; supervision of the financial system and the control of money and credit; and management of the country's external finances, including debt. A particularly urgent need, with respect to this last task, is to put in place carefully designed capacity to manage external financial and technical assistance in a coordinated manner. Without this capacity—not yet in place—the country will be unable to deploy available aid to its best use, will be unable to disburse external financing as rapidly as the reform process requires, and will face the danger of aid becoming a source of confusion. Good aid management is inseparable from good economic management, and at this stage of the transition the effective utilization of external aid may be critical to the success of reform.

The Legal Framework for Reform

5.23 As a consequence of these ambiguities in the institutional structure and capacity of government, public policy does not yet enjoy the orderliness and predictability vital to the effective functioning of market relationships. While the urgency of economic reform has clearly led the leadership to make use of whatever legislative and executive policy instruments were available, the overlapping of laws, parliamentary and government resolutions, decrees, and so on detracts from the coherence and credibility of the government's program of economic transformation.

5.24 One aspect of this is the remaining uncertainty over fundamental issues of the legal framework establishing rights and obligations in civil society and the private economy, and defining the role of the state. Max Weber has observed that "... the modern form of capitalism, based on the rational enterprise, requires not only calculable technical means of production, but also a calculable legal system and administration in accordance with formal rules; without these, adventurist and speculative trading capitalism or any kind of politically determined capitalism may be possible, but not any kind of rational private enterprise economy with fixed capital and sure calculation." It is precisely that "administration in accordance with formal rules" that is still missing from the framework of Russian governance. Although the Government has clearly recognized the need for a new body of laws to accompany the economic and political changes it has sought to effect, the sheer enormity of the task means that for some time to come the Russian Federation will have to rely on the framework established by Soviet laws. A major problem is that the body of civil law which regulates the economic relationships necessary in a market economy *is largely missing from the corpus of Soviet law*. Its absence is beginning to cause critical bottlenecks for the progress of economic reform. New legislation on bankruptcy and liquidation, contract law and its enforcement, and in particular the creation and transfer of property rights will form the cornerstones of enterprise reform, privatization, and foreign direct investment.

5.25 An important aspect of establishing the legal framework for reform will be the creation of a judiciary with the independent expertise to arbitrate in matters of contract and economic dispute. It is particularly important for a country such as the Russian Federation, in which the habits of private economic intercourse have not been embedded in its civil society, to provide as reliable and stable a legal framework for such interaction as possible. Legal recourse and due process, and an independent judiciary capable of their enforcement, are an essential—although admittedly long-term—component of the transition to a new system.

Political Risks and Opportunities in Reform

5.26 There is a short-term risk that the strategic thrust of reform will get frittered away in a series of unproductive battles or skirmishes over the details of reform. Key elements of the reform program can tend to get diverted by short-term responses to immediate crises such as shortages, strikes and overwhelming interest-group demands—and this has already happened to a degree. This risk, however, could diminish over time as the Government acquires the administrative capacity to handle these matters, and as the constitutional and political order is clarified.

5.27 It is extremely important for sustaining the momentum of reform that the central government's economic reform commitments are credible and can be delivered. Given the range of things that the Government is trying to do and the varying nature of its effective influence over decisions by local governments and economic agents, it may be best to focus on a relatively narrow range of key responsibilities for the short and medium term. Aside from continuing efforts at macroeconomic stabilization, high priority must be attached to completing certain parts of the core institutional and legal

framework of a market economy. These include the establishment of property rights and contract law, and a framework of control over fiscal and monetary relationships that ensures the stability and predictability necessary for the conduct of private business. In particular, very strong central government and Central Bank action is required to create a credible economic space in the form of a payment system which is accurate, predictable and fast, and monetary and credit arrangements which do not provide direct incentives to economic agents to speculate or conduct arbitrage against them.

5.28 A set of longer term risks arises from the unclear accountability faced by any state in the early stages of restructuring, exacerbated in the Russian case by the Soviet heritage. The Soviet, and particularly the Communist Party, authority relied to a great extent on pervasive patron-client type relationships and bargaining, and less on legalist, impersonal patterns of authority. The particular dilemma faced by the Russian state today is that prolonged, or frequent engagement in bargaining with many counterparts may leave it with few resources for the conduct of essential state functions necessary for a market economy.

5.29 A particularly worrisome manifestation of iterative bargaining has resurfaced in the fiscal relationship between central and other levels of government, with the resumption of traditional bargaining over shares of a given tax (see Annex 5-1). While a complete transition to a new system of tax assignments will take time, continuation of such specific deals will both cut into the central government's scarce resources and short-change some localities in an arbitrary manner. Furthermore, this continued engagement between the center and the localities may inhibit the development of true local accountability, a key step in the reform of governance in a country as large as the Russian Federation. *Clear intergovernmental fiscal relations need to be institutionalized to allow for predictability, local accountability, and long-term fiscal adjustment.* The design of an effective federalist state involves many difficult technical and political issues, but it must proceed at a fast pace if macroeconomic stabilization is to be achieved and sustained, and if the spontaneous devolution of political authority is not to take on anarchic aspects.

5.30 Another, possibly more problematic aspect of the Soviet heritage is state-society relations. It is widely recognized that at its extreme, the Soviet state did not acknowledge the existence of social interests outside those of the state. In establishing itself on a new basis, the Russian state must now both set clear limits to its own activity, and develop effective patterns of interaction and cooperation with civil society. These requirements touch on aspects of Russia's social and political development which are not directly linked to the process of economic reform. However, one specific aspect of state-society relations will prove critical to the government's capacity to govern the economic reform process: the parameters of the new state's relationship with the emerging coalition of industrial/producer interests.

5.31 The emergence at the political level of economic interests, such as groupings of industrialists and entrepreneurs which have recently come to the fore, is one important basis for the separation of interests between state and society, between public and private. Such groupings are critical to a healthy private economy both by representing interests of society to the state, and by defending such interests against the encroachments of the state. The successful development of civil society will require the growth of many other such intermediary groups, but these are crucial first steps. What is important in terms of the governance of economic reform are the relationships which the Government forges with such producer groups at this critical stage in the nation's founding. These relationships will endure, and the way in which the Government chooses to interact with them now will have important consequences for the course of economic reform.

5.32 So far, there have been repeated instances, reinforced by the older habits of particularized bargaining, not only of acceding to some of the key enterprise demands but also of highly interventionist and corporatist responses to the particular problems of segments of the productive sectors—the military industries, the banks, the heavy industries. Some of these specific interventions are analyzed in subsequent chapters. This pattern, if sustained, points towards several dangers for public policy in both the near and longer term.

5.33 *First*, discretionary and bargained granting of new subsidies, whether by budget or credit mechanisms, is bad for economic stabilization to the extent that it worsens fiscal and financial deficits. It may also do longer-term damage to financial stability, as the experience of many other countries demonstrates, by undermining economic agents' belief in the firmness of government commitments.

5.34 *Second*, this mode of interaction between government and industry clearly tilts the balance of policy towards existing producers and their owners or managers. The economic interests of the *new* private sector, may be ill-served—and the country's growth potential weakened to that extent.

5.35 *Third*, such policies tend to reinforce old patterns of influence-peddling and lobbying, which in the new circumstances include the existence of a large quasi-privatized public sector and a nascent private sector, both trying to get particular bureaucratic decisions favoring them.

5.36 *Fourth*, and most important of all, it presents the Government with an acute dilemma of political economy: *how to encourage and support the recovery of production without finding itself locked into underwriting the political and economic demands of a still unreconstructed industrial elite, thereby perpetuating the dependent rather than the entrepreneurial and forward-looking elements within the industrial management class.* There is no single answer to this dilemma at the systemic level, and its resolution will in any case ultimately depend on the evolution of the entire political process rather than solely on government decision in favor of one course or the other. Successful capitalist economies in Asia, Europe, and North America are each based on very different relationships between the state and the private sector, and Russia will evolve its own model—one which no doubt will reflect the dispersion of power and economic responsibility discussed earlier.

5.37 In the short to medium term, two key areas of government policy will affect this dispersion of power and economic responsibility: policies on ownership and control of industrial assets, and policies to strengthen state capacity for administration in a market economy. There must be a very high premium on changing the underlying ownership and control relationship between government and enterprises as quickly as possible. Privatization, the main instrument in this process, is already posing issues of first-best implementation (from the viewpoint of efficiency and equity) versus speed. Speed should take precedence. *Although spontaneous privatization is as much a consequence of weakened state oversight over state-owned enterprises as its cause, its continuation is an ongoing challenge to government authority.* Given the administrative and political limitations on central Government's ability to control the process directly, accelerated resolution of industrial ownership is the best available option. Beyond privatization, the Government will also find it necessary to deal more systematically with the state enterprise sector: to draw a sharp distinction between government proper and state-owned undertakings (of which many will remain), to establish arms'-length relationships with them, and to subject them to a transparent policy and financial regime. Any reluctance to confront this necessity will result in a further costly undermining of the Government's authority.

5.38 The second requirement—ironic in view of Russian history—is that some state capacities need to be substantially strengthened. Modern, market-oriented central government for a federative country such as Russia needs to be sharply limited in scope, but strong and effective in the government's assigned fields of competence. From an economic point of view, this means in the first place strengthening the role and quality of the core economic institutions—central banks, financial and economic ministries, and the civil judicial system—without which financial stability, an orderly payments system, credible public policy, and credible contracts will not come into being. Redefining the role of the state will also entail the reform of sector ministries and of the human resource base of government, as discussed earlier. Strong, limited, and accountable structures of government, institutionally and politically autonomous from the productive structures of the economy, must be an economic reform objective in their own right.

Notes to Chapter 5

1. This particular instance of conflicting subordination has been resolved in favor of the executive. The Chairman of GKAP is now nominated by the President and confirmed by the Parliament, and GKAP is now loosely subordinated to Vice Prime Minister Chubais, Chairman of GKI.
2. Indeed, it would be possible to argue that Soviet Russia had no civil service in the sense of an independent, professional service.

CHAPTER 6

Reform of the Enterprise Sector

6.1 Despite the bold price liberalization and tight fiscal and monetary measures aimed at stabilization, no significant systemic changes have yet taken place in the state-owned enterprise (SOE) sector. Not only is the previous industrial structure still intact, but—of greater concern—enterprises so far have failed to adjust, in terms of shedding labor or closing parts of physical plants, to the changes in prices and the fall in demand. This lack of enterprise adjustment is mainly due to the SOEs being in a half-way house between a command and a market economy. The problems caused by soft budget constraints for SOEs in the traditional command economy are aggravated by the ambiguity of ownership, which resulted from earlier partial and ineffective reforms and the collapse of the command system.

6.2 Continued ambiguity in the ownership of SOEs and the lack of effective control over them will induce continued poor performance and more spontaneous privatization. This is likely to result in increased stripping of assets, which could contribute to further declines in output. Loss-making enterprises are continuing to demand subsidies or tax concessions so that the risks of ownership remain with the state. Without structural changes in the SOE sector, enterprises will hold the Government and the Central Bank hostage to output declines, accumulation of inventories, and the increasing possibility of a financial crisis provoked by non-payment of contractual obligations. The continued decline of output and the resultant pressure on the Government to loosen its monetary and fiscal stance could make macroeconomic stabilization unsustainable. *Thus, the fate of the stabilization program and reform in general depends to a large extent on whether the SOEs can be transformed into economic entities which will respond to market signals.*

6.3 *The key to this transformation is the privatization of SOEs, that is, the transfer of ownership rights into private hands.* However, given the sheer size of the SOE sector, many enterprises are likely to remain in public hands, temporarily or indefinitely. Thus, improving the performance of the remaining SOEs both during the transitional period and in the long run is vitally important. Moreover, the Russian industrial structure is highly concentrated and monopolistic (see Box 6-1 and Table 6-1); a successful transformation of the SOE sector will require not only changes in ownership rights, but also the creation of a competitive environment. A successful transformation of the SOE sector will require simultaneous progress on all three fronts.

State-Owned Enterprises in Transition

6.4 Under Soviet central planning, SOEs were assigned mandatory production targets and received most of their material inputs through administrative supply allocations. Product prices were set by pricing authorities and government agencies controlled the circulation of products from producers to users. Investment and working capital were mostly financed by grants from the government budget or loans from the banking system, according to government plans. As the incentive fund and, to a lesser extent, the wage fund, depended heavily on the fulfillment of plans, enterprise management was primarily concerned with meeting the physical targets of the plan. It had no incentives to reduce costs or to maximize profits. Indeed, enterprises remitted all profits to the state budget, and the budget, in return, covered all losses incurred by the enterprises. In other words, the budgets of SOEs were integrated with that of the Government, and there was, therefore, no effective budget constraint on enterprises. Enterprises were simply production units that responded to the directives of supervisory government ministries, with both the management and workers having little control over production, investment, and

Box 6-1. The Soviet Heritage

The large size of enterprises is a striking legacy of Soviet planning. In the Russian Federation in 1987, industrial enterprises averaged 821 employees—a figure about twice as large as in Poland and ten times as large as the figure for a sample of Western economies. The 952 enterprises with total value of production exceeding Rb 100 million (or roughly \$140 million) represented less than 4 percent of the total number of enterprises but accounted for more than 54 percent of production and almost 40 percent of total employment. These enterprises averaged 8,500 workers per enterprise. The largest employers, the *AVTOVAZ* motor vehicle plants in Nizhni Novgorod and the *KAMAZ* truck and tractor complex in Naberezhnye Chelny, each employed roughly 100,000 workers. The industries with the largest enterprises are metallurgy, engineering, petrochemicals, and fuel (see Table 6-1). The largest of these industrial enterprises are often also the only producer of the particular products they manufacture. For example, of the total of 7,664 "product groups" distributed by the former USSR *Gossnab* (Committee of Deliveries and Supplies) in 1989, 77 percent were produced by single enterprises. Monopolies are therefore a problem in both production and distribution.

The internal structure of enterprises in the Russian Federation differs significantly from that of firms in market economies. Since planning was done in terms of physical inputs and outputs, enterprises did not need financial accounting departments. Planning also eliminated the need for marketing departments and strategic product management. Such functions are crucial to the success of firms in market economies. Moreover, under state socialism research, development, and design were highly centralized, while in firms in market economies these functions are duplicated within firms. The benefit of this duplication is that firms in market economies compete to develop new products and technologies. On the other hand, enterprises in the Russian Federation tend to be much more vertically integrated than firms in market economies. Thus transforming state enterprises into the kind of firms one finds in market economies involves internal changes in functions as well as a change in ownership.

Enterprises traditionally relied on close ties to central government ministries for procurement, marketing, and technology. By 1990, about 80 percent of all state-owned industrial manufacturing and energy enterprises (estimated at more than 45,000 for the entire former Soviet Union (FSU)) were under the authority of union or republican (or sometimes both) ministries, although some smaller enterprises fell under regional or city authorities. There were about 15 all-union branch ministries, dealing with various branches of manufacturing industries. The ministries directed and managed the enterprises under their jurisdictions and made sure that the targets set in the annual plans by Gosplan were met. Another significant legacy of Soviet planning is a large military-industrial complex. Of the 45,000 enterprises included in the official statistics of the FSU, more than one in five were subordinated in some fashion to one of the military-industrial ministries. Additional enterprises doing sensitive military work were probably omitted from the official statistics. About 75 percent of the enterprises linked to the military-industrial complex are in the Russian Federation. Because of the heavy emphasis placed on the military, the military-industrial complex received first priority over resources, supplies and manpower, and is at the forefront of technology. The military industries are regionally concentrated. In some parts of the Russian Federation, entire regional economies are dominated by the military-industrial complex, with one or more "closed towns" specializing almost exclusively in military-related research and production.

employment decisions. The ministries and their officials, through the setting of plan targets and the allocation of scarce inputs and investment, exercised most of the control rights over SOEs.

6.5 In 1988, the Government introduced a range of reforms that transferred many of the decisions over output level and product mix, customer choice, and wages to enterprise managers. Mandatory planning was replaced by a system of "state orders" and enterprise managers were given greater autonomy in production and financial decisions. After fulfilling their state orders, which varied by sector, SOEs were free to sell the remaining output and to obtain inputs for that part of their output in similar fashion, but the setting of most prices remained subject to government control. Enterprises were also encouraged to seek financing and credit arrangements from outside the traditional, official funding sources. Under the principle of "full self-financing" advocated by the Law on State Enterprises,

SOEs were permitted to retain a higher share of internally generated funds (including depreciation) and to allocate these more freely among wages and other special funds, thus giving enterprises the incentives to seek profits. This expanded control over internally generated funds was accompanied by a relaxation of various restrictions on the payment of bonuses and other non-wage remuneration. In addition, workers' collectives were given a greater role in the selection of enterprise managers and in the decisions regarding the allocation of after-tax profits among various funds. The autonomy of SOEs and the workers' collectives was further extended by the Russian Federation's Law on Enterprise and Entrepreneurial Activities in 1990, including the right by workers' collectives to veto decisions to privatize or liquidate enterprises.

Table 6-1: Russian Industrial Structure, 1987

Energy and Manufacturing Sectors	Production (mill. Rb)*	Employment (millions)	No. of Firms	Average Employment	No. of Large Firms	Average Employment
Electrical Energy	18.83	0.40	982	407		
Fuel Energy	43.01	0.73	352	2,080	100	5,610
Ferrous Metallurgy	28.92	0.84	205	4,093	49	14,000
Non-ferrous Metallurgy	24.70	0.52	174	2,971	63	5,794
Chem./Petrochemicals	38.47	1.22	561	2,173	132	6,106
Engineering Industries	135.65	8.32	5,306	1,568	371	10,630
Wood Processing	25.70	1.81	3,885	465	21	6,619
Construction Materials	15.06	1.04	2,161	480	4	6,800
Glass and Ceramics	1.74	0.16	164	963	1	6,600
Light Industries	62.22	2.49	4,034	617	136	4,110
Food Industries	60.20	1.38	5,480	253	79	3,342
Other Industries	12.16	1.82	1,936	940		
Total	466.66	20.73	25,240	821	952	8,558

a. In wholesale prices of enterprises on 1/1/82.

Source: Goskomstat, 1987

Note: The criteria used by Goskomstat for listing establishments that produce substantial amounts of civilian production as separate enterprises is that they must have their own separate balance sheet with a bank; enterprises are classified according to their main product, and their secondary ("nonprofile") products generally are not listed separately.

6.6 These changes substantially weakened the ability of the center to enforce state orders and to control enterprise finance. Given the incentives to seek profits, enterprises refused to deliver their products to the state at low fixed prices, and instead began selling them at market prices. More importantly, when the center lost control over the products of some enterprises, it also lost the control and influence over firms which use these products as inputs. The control rights of government ministries over enterprises depended partly on the allocation of scarce inputs; thus these control rights have been substantially eroded by the decentralization process and they have been further reduced by the liberalization of prices.

6.7 Enterprises can now determine independently what and how much to produce and at what price; they also have almost total freedom in deciding the allocation of retained earnings among various funds. These changes have resulted in a sharp decline in the profits remitted to the state budget and rapid increases in wages and welfare expenditures by SOEs. While these changes have indeed increased the operational and financial autonomy of enterprise managers and workers' collectives, they have not helped harden the budget constraints of SOEs. Indeed, one might argue the budget constraints of SOEs have been further softened, as enterprises can not only still turn to government ministries for financing, but have had through 1991 almost unlimited access to bank credit. In short, the decentralization of

management has caused the collapse of central control over SOEs, but it has not transformed SOEs into economic entities akin to firms in market economies.

6.8 The increased operational and financial autonomy of managers and workers and the loss of control by the center have further blurred the ownership of SOEs and resulted in multiple claimants with overlapping and conflicting control rights. Today, the *workers' collectives* have influence over employment, wages, and the choice of managers, as well as the right to veto decisions to privatize or liquidate enterprises. Using their influence over the choice of managers and the threat of strikes, workers have demanded and received higher wages. In many enterprises, workers have voted to replace the managers by those who are more sympathetic to their demands. They are also expressing clear and strong claims to "own" the assets of SOEs in which they work. This increased power of the workers not only strengthens the opposition to the layoff of redundant labor but also makes the privatization of SOEs more difficult.

6.9 The reforms have also enhanced the *de facto*, if not *de jure*, rights of the *enterprise managers*. First, the existing laws extended enterprise managers' authority over output, pricing, and the choice of customers. Thus, they legally hold control over key enterprise actions. Even when government ministries have retained the legal rights they are in many cases being ignored and effective control remains with the managers. The managers also have an important say in the decisions over employment and wages, which may conflict with the interests of the workers. In addition, in an environment of shortage and high inflation, the collapse of central distribution also renders the managers valuable because of their personal relationships and network of contacts which are essential for barter arrangements and for the procurement of inputs. Like the workers, the managers are using their enhanced control rights to lay claim to the assets they manage.

6.10 Yet another result of the collapse of central control is that *local governments* claim, and have gained, many new control rights over SOEs. They have received control over some key local assets, such as electricity and water distribution systems, and can translate this control into influence over firms. Local governments have demanded a share of revenues from enterprises located in their jurisdictions, especially in the natural-resource-rich regions. They have also demanded to have a say in the running of SOEs in their localities.¹

6.11 The confusion over the rights to ownership and control has also allowed for the emergence of a form of industrial organization commonly called concerns or associations, which evolved from the former branch ministries. These organizations portray themselves as industry associations of the type common in industrialized countries. A recent document from the Expert Institute of the Russian Union of Industrialists and Entrepreneurs described their purpose as follows:

...organizations are being created (in the form of associations, joint-stock societies, etc), which seek to unite the whole "chain" of production from raw materials to final product or establish a complex of interrelated productions. Furthermore, there is a tendency of a transition from non-formal unions, based on personal relations and business ethics, to well-defined contractual structures, where those non-formal relations continue to play a considerable role. The main objectives of such associations are to prevent the disruption of economic ties and control the growth of prices on products supplied within such associations."²

Most of these associations are scaled-down replicas of the former branch ministries, and are headed by high officials of the former Soviet Union (FSU). The effect of structural changes to date thus appears to have been a shift of central planning from the government to industrial concerns, with less overt

control and coordination than existed under branch ministries. Since an important function of concerns is to channel state subsidies to weaker enterprises, reducing subsidies will weaken concerns. Some concerns have been granted monopoly rights over the allocation of state orders. Such policies inhibit competition and should be eliminated.

6.12 This regime of multiple claimants and the loss of control by the center have led to widespread spontaneous privatization of SOEs in the Russian economy.³ Initially, spontaneous privatization took the form of managers or workers simply diverting the profits from the enterprises so that the Government could not capture them. More recently, it has degenerated into the transfer of state assets to new private firms and cooperatives in the form of leasing or buying state assets at negligible prices. This type of spontaneous privatization, initiated by the managers with the consent of workers in exchange for higher wages, accelerated sharply in 1991. The other form of spontaneous privatization that is beginning to appear in Russia is worker-management buyouts at the book values of assets which are likely much less than their market values. These deals are usually accompanied by the "purchase" of approval from local governments and sometimes the central government ministries. Thus, spontaneous privatization partially recognizes the ownership rights of the ministries and the local governments, while transferring wealth from the Russian state into the hands of workers and managers.

6.13 While spontaneous privatization can achieve many of the objectives of state-mandated privatization, the process cannot confer any certainty of ownership. In the absence of this legal certainty, limited personal interest is being created in the long-run maintenance and enhancement of enterprise assets, and the risks of ownership remain with the state. Moreover, spontaneous privatization can be grossly inequitable and inefficient, as only the better enterprises are typically involved in spontaneous privatization, while the loss-making enterprises remain in state hands and are not restructured. Although the exact scope of this spontaneous privatization is not known, anecdotal evidence suggests it is widespread and has gone much further than in other countries in Eastern Europe. This creates at least three problems for the government's privatization effort. First, it is hard to privatize what the Government does not control or "own." Second, it creates the possibility of a popular backlash against privatization, particularly if there is a perception of widespread theft by the *nomenklatura*. Third, unless official privatization gets under way soon, *there may be little of value left to be privatized*.

Privatization

6.14 The Government has stated its intention to carry out a rapid and comprehensive privatization of the SOE sector. This is a monumental task and is without doubt the largest privatization program ever to be initiated. The task is made especially difficult by the almost complete lack of a supporting infrastructure. A coherent legal framework and mechanisms for enforcing contracts are not in place, financial markets are undeveloped, administrative capacity of the Government is very weak, and there is a dearth of financial and technical expertise on commercial practice and market transactions. The success of the privatization will require coordinated external assistance and internal reform in these related areas.

Privatization Legislation

6.15 The legal framework for privatization in Russia is composed of three tiers. The first tier is a law enacted by the Supreme Soviet in July 1991, "On the Privatization of State and Municipal Enterprises in the Russian Federation" (the 1991 Privatization Law). It contains the general principles of privatization and authorizes the establishment of implementing agencies. Four agencies are involved in privatization: these are the State Committee for the Management of State Property (GKI), the regional

or municipal Committees for the Management of State Property (MKI), the Property Funds, and the Privatization Commissions (see Box 6-2). However, the relationship between the GKI, the MKIs, and the Property Funds is not yet clearly defined. The Law establishes the rights of workers to obtain free and discounted shares in the process of privatization. The Privatization Program for 1992, described below, details and extends these worker benefits (see Annex 6-1).

Box 6-2. Privatization Agencies

The 1991 Privatization Law authorizes the creation of four privatization agencies and specifies their roles. The GKI is responsible for the organization of privatization. It develops the implementing legislation for privatization, including the State Privatization Program, and organizes and supervises implementation of the Program—forms Privatization Commissions, is responsible for the "corporatization" of enterprises, the production and distribution of vouchers, the promotion of investment funds and holding companies, and the delineation of initial ownership of state property among levels of government and localities.

In each locality, however, the responsibility for privatizing federal, republican, and municipal enterprises falls to the Local Committee for the Management of State Property (MKI). These Committees are operationally largely autonomous, but their programs must be approved by the local Congress of People's Deputies, and then submitted to the Russian Federation GKI. GKI coordinates the activities of the MKIs; however, it can be expected that the privatization programs will be very diverse from region to region.

Property Funds are being set up at all levels to perform the ownership function (and therefore be the sellers) of enterprises in the interim period between corporatization and privatization. The interaction between the Funds and the GKI could prove to be problematic; there are indications that the federal level Fund holds a much more traditionalist view of state ownership. The Property Funds are legally subordinated to the legislative branch at various levels. Given the large number of enterprises and the limited amount of resources currently available to the Property Funds, the role they will play in management of enterprises is uncertain. The Law requires the GKI and the Property Funds to reach agreement on how privatization will be carried out. This agreement is presently being prepared and is expected to be completed by the end of October 1992.

The Law also provides for the creation of Privatization Commissions. These bodies would be set up by the GKI and local Committees to prepare the enterprise privatization plan. According to the Law, there will be a privatization Commission for each enterprise to be sold, but in the small-scale privatization in Nizhnii Novgorod, a single privatization commission was created to handle all sales. A Commission consists of representatives of all parties with stakes in the enterprise, including the GKI and the local Committees, the local soviets, enterprise management, workers, and relevant "financial bodies". An additional body that is created in the event that the enterprise is to be sold at a commercial tender is a Competitive Tender Commission. The role of these Commissions is to determine the terms, procedure, and time frame for the tender.

6.16 The second tier of the legal framework is a Decree of December 29, 1991, establishing the principal guidelines of the privatization program. The Decree defines categories of enterprises which may be privatized in 1992, sets targets for the sales program, and further refines the privatization methodology. The third tier is an incomplete but rapidly emerging series of enabling regulations, issued after the Decree, which specify in detail operational procedures of the corporatization process, valuation techniques, a model charter for joint-stock societies to be formed by way of conversion of state enterprises, regulations governing voucher funds, the closed subscription process for manager and worker shares and the process for auctioning and tendering shares in SOEs to be privatized.

The 1992 Privatization Program

6.17 The Government's Privatization Program for 1992 was approved by the Decree of December 29, 1991. It lays out the objectives, principles, and methods to be used in privatization in Russia. It outlines the authority of the various agencies involved, the sectors to be privatized, and the distribution of proceeds from privatization. A summary of the Program is provided in Box 6-3. This document continues to be revised in light of ongoing development of the GKI's strategy and approach to privatization. A revised version was approved by the Supreme Soviet on June 11, 1992. However, three significant deficiencies remain.

6.18 First, the program is not sufficiently clear as to the ranking of its numerous objectives, thereby reducing its usefulness as a guide to privatization where tradeoffs among objectives become necessary. Second, the Program sets specific mandatory targets on the number of enterprises to be privatized in 1992 for each region and each industrial sub-sector. These targets are very ambitious when judged against the experience in Eastern Europe; failure to achieve these targets may damage the government's credibility. Third, the Program does not adequately address the monopoly problem.

Small-scale privatization and pilots

6.19 Authority to implement the privatization of small enterprises and shops has been delegated to the local level. Small enterprises are those engaged in wholesale and retail trade, construction, agriculture, food, and trucking with 200 employees or fewer and a book value of fixed capital of less than one million rubles. These will be privatized through competitive auctions carried out by local Committees for the Management of State Property (MKI). Such enterprises will generally not be converted into joint-stock companies. The Program specifies a list of small-scale enterprises that are subject to mandatory privatization in 1992.

6.20 There has been some progress on this front, though it is, so far slight when compared to the early success with small-scale privatization in Eastern Europe. As of the end of April, some 6,700 small enterprises have been sold, mainly by auction, in a number of localities scattered across Russia. The legal framework, administrative procedures, and privatization methods outlined in the government's Privatization Program are not appropriate for small-scale privatization and the lessons from some of the early pilot undertakings are being incorporated to improve this. The GKI realizes that this is an area where much progress could be made and considers development of a small-scale privatization program a top priority. The GKI is seeking to standardize procedures and documentation for use by its regional agencies, derived from the successful experience of the International Finance Corporation (IFC) and European Bank for Reconstruction and Development (EBRD) pilot privatization programs in St. Petersburg and Nizhnii Novgorod. The IFC has recently undertaken an extension of this program in three additional areas of Russia. At the same time, they are attempting to develop more flexibility in the methods for privatization of small enterprises and shops. It is likely that a separate small-scale privatization law will be enacted to support the creation of an appropriate framework. The IFC has prepared a manual describing the legal and technical steps taken in Nizhnii Novgorod to serve as a guide to other local governments wishing to launch the process.

6.21 One explanation for the relatively slow pace is that local governments, which are charged with carrying out the small-scale privatization process, are often more conservative than the central authorities, more fearful of the social dislocation they fear divestiture will provoke, and generally more reluctant than central reformers to give up their bureaucratic prerogatives. Moreover, despite the scattered successes registered, many local governments that wish to privatize do not know how to go

about it. The proposed joint World Bank/EBRD Privatization Assistance Project would provide funding to promote small-scale privatization in a number of other regions in the country.

Box 6-3. The Government's 1992 Privatization Program

The government's Privatization Program is detailed in a document called "The State Program of Privatization of State and Municipal Enterprises of the Russian Federation for 1992." Approved by decree on December 29, 1991, it specifies the objectives, principles, and methods to be used; the sectors to be privatized, and the distribution of proceeds from privatization. A revised version was approved by the Supreme Soviet on June 11, 1992.

Objectives. The fundamental objective of the Program is to create private owners that will facilitate the development of a market economy by increasing the efficiency of the former state and municipally owned enterprises. Other important objectives are to contribute to the financial stabilization of the Russian economy, to promote competition, and to ensure the development of a safety net and social infrastructure. The Program calls for the establishment of the institutions and infrastructure needed to expand the scope of privatization in later years. The Program focuses primarily on efficiency and on developing a framework for broadening privatization efforts.

Overall strategy. The Program follows three separate tracks for privatization, depending on the size and nature of the enterprise. For small enterprises, the responsibility for privatization is with the local Committees; they are to be sold through competitive auctions. Some medium-sized and most large enterprises will be converted into joint-stock companies ("corporatization") and their shares sold to bidders in competitive auctions or tender. Any remaining shares are to be sold by public offering on securities markets. The Program specifies that enterprises with more than 1,000 employees or a book value of more than 50 million rubles shall be transformed into open joint-stock companies by October 1, 1992. After agreement of the workers' collectives is obtained, the corporatization package will be submitted for approval to the appropriate Committee. Managers are responsible for selecting one of the privatization options for their enterprises. Once corporatized, the enterprises will be given from 12-18 months to prepare privatization plans and complete the privatization process. The Program states that some very large enterprises and those with special characteristics will *not* be privatized in 1992 or only upon approval of the Russian Government. In particular, the Program states that major enterprises with more than 10,000 employees and book value of assets of more than 200 million rubles may only be privatized at the decision of the GKI. Certain organizations are likely to remain in state hands indefinitely (for example, the Central Bank, roads, ports, waterways, scientific research institutes, etc.). Other types of enterprises may be privatized but will require substantial analysis and preparation and the development of a privatization plan that deals with their special characteristics (for example, air transportation, telecommunications, mining and energy, medical equipment manufacturers, and pharmaceuticals). It is unlikely that enterprises in this category will be privatized in 1992, but preparatory work for the privatization of some of these enterprises will be done in 1992. Another group of enterprises that currently requires further direct involvement of the GKI consists of those enterprises in sectors deemed monopolistic by the Anti-Monopoly Commission.

Continued

Mass privatization program

6.22 Because of rapidly spreading spontaneous privatization and the many conflicting ownership claims on SOEs, the Government has turned its attention to developing a mass privatization scheme, which will begin implementation before the end of 1992. This is a very rapid pace, given the complexities of such schemes. The intention is to construct a simple and consistent framework for quickly privatizing large numbers of firms while providing a degree of widespread ownership through the use of vouchers. This decision to proceed with mass privatization is intended to speed up the pace of privatization of large and medium-sized firms, build political support for the program, and improve

equity through the widespread distribution of shares to the general populace. Mass privatization will also contribute to a level playing field for the small number of private enterprises in Russia which currently face an inhospitable environment dominated by SOEs. It is also a means of giving liquidity to an illiquid population, thus stimulating demand and serving as a proxy for the thin capital market.

Box 6-3. The Government's 1992 Privatization Program (Continuation)

Methods. The Program specifies a number of privatization methods that can be used in 1992: a) sale of shares of open joint-stock companies; b) sale of entire enterprises that are not joint-stock companies at competitive auctions; c) sale of entire enterprises that are not joint-stock companies at auctions where conditions are placed on the operation of the enterprise after the sale (for example, requirements concerning employment, business activities, or future investment), these are referred to as "commercial competitions"; d) sale of entire enterprises in competitions where the primary criterion for selecting the winning bid is the proposed future investment in the enterprise (these are referred to as "investment tenders"); e) sale of property or assets of enterprises that are being liquidated; and f) buyout of leased assets. These are assets of a state or municipally owned enterprise that were previously leased to private individuals or enterprises with an option to buy. If an option to buy was not included in the lease, a sale agreement may be entered into with the appropriate Committee under regulations to be established by the GKI. In general, these methods provide a wide range of options for enterprises to privatize. They represent a substantial improvement in the Program, since earlier versions outlined fewer and much more restrictive paths.

Targets. The Program specifies mandatory objectives and targets for the privatization programs in each region. There are target indicators set for the relative proportion of enterprises in each industrial sub-sector in each region which are to be privatized in 1992. These targets are very ambitious when judged against the experience in Eastern Europe.

Distribution of proceeds. The Program sets down rules for the distribution of proceeds from privatization. The majority of proceeds from the sale of enterprise are allocated among the various government agencies, with the largest share going to the level of Government that held title prior to privatization (see Box Table 6-3).

Box Table 6-3. Allocation of Privatization Proceeds after Payments to Workers' Collectives (percent)

Recipient	Municipal property	Regional property	Federal property
Local budgets	45	25	10
Republican, territorial, regional budgets, budgets of autonomous districts	25	45	45
Federal budget of the Russian Federation	20	20	35
State privatization authorities*	10	10	10
Total	100	100	100

*. Including Property Funds at all levels, MKIs, the GKI, Russian Fund of Federal Property.

6.23 The Mass Privatization Program (MPP) will include virtually all large and medium-sized enterprises and thus would form a major component of the overall Privatization Program (see Box 6-3). Key elements of the MPP are: a) it would include most enterprises, excluding only those with fewer than 200 employees and enterprises in a few reserved sectors; b) it is a "bottom-up" plan, i.e, the enterprises themselves have the responsibility for designing and submitting their own privatization proposals; c) it is friendly to foreign direct investment, in that interested investors can deal directly with the enterprise and their offer will be judged against standard and uniform criteria; d) it emphasizes the need for

identifying a strategic investor (an investor who holds a controlling block of shares) in all privatizations; e) it would encourage the development of financial intermediaries; f) it includes a voucher scheme.

Box 6-4. Mass Privatization and Vouchers

Although mass privatization schemes and vouchers are not inevitably linked, they are generally associated with each other. In some Eastern European countries, vouchers have been proposed to speed up the privatization process and to assure a more fair and equitable distribution of the wealth previously held by the state. Vouchers are certificates or scrip that are distributed to the population entitling them to convert this paper into shares in SOEs through some form of auction process. For example, this is the process being undertaken in Czechoslovakia, Lithuania, and Mongolia. In the Polish and Romanian cases, on the other hand, holders of vouchers (participation certificates in Poland) will convert their shares into investment management funds, which in turn will own an interest in, and manage, a portfolio of SOEs.

Funds have also been established in Czechoslovakia to intermediate vouchers. However, these have been spontaneously created by Czech and Slovak investors, with no initial licensing, regulatory framework, or prudential limits. Over 600 such funds have been established to date and there is real concern that many of these funds will fold. The Government is currently establishing regulatory guidelines for these funds. Therefore, in Czechoslovakia citizens have the choice of using their vouchers for direct share conversion via auctions or conversion of their vouchers into funds, which in turn will bid for shares in enterprises—while in Poland, voucher conversion is limited to the investment funds. In Hungary, on the other hand, vouchers will be limited to and distributed for restitution claims. In Czechoslovakia some 8.5 million citizens have paid a nominal subscription fee to obtain vouchers; in Lithuania voucher subscription was virtually universal as vouchers can also be utilized to purchase apartments; in Mongolia vouchers were utilized primarily in a rapid and successful process of small-scale privatization.

Russia will introduce a nation-wide voucher scheme by November 1, 1992, and vouchers will be distributed to all Russian citizens. It is hoped that in Russia voucher distribution will build popular political support for enterprise privatization.

It may seem that the use of vouchers will reduce the total cash proceeds to the state from the sale of SOEs by the amount of the vouchers issued. In fact, the proceeds to the state may be reduced by much less than the amount of vouchers issued or not at all. Vouchers may stimulate the privatization process much as advertising and sales coupons stimulate purchase of consumer goods in the West. Information dissemination and educational materials related to vouchers and privatization are likely to stimulate overall interest and willingness to participate in the process. Russian citizens only have a limited amount of cash or other financial resources to bid for shares in SOEs. In the absence of vouchers, the prices received for these shares may be low, reflecting this lack of cash. Issuing vouchers could increase the financial resources available for purchasing these shares, thus increasing the sale price, and the overall proceeds to the state in the form of vouchers and cash.

Even if there is no reduction in government revenues, the use of vouchers may still be inflationary. The vouchers are an increase in the wealth of citizens and are likely to be a highly liquid form of wealth that can easily be sold for cash to finance consumption. Many citizens are likely to trade their vouchers for cash. Also, the supply of shares (firms) available for privatization and voucher conversion are likely to lag behind the demand created by the widespread distribution of vouchers, particularly since it will take some time to organize a mechanism through which vouchers can be converted via auctions or bids for shares. This may increase the propensity to trade vouchers for cash and thereby increase current consumption demand. The monetization of vouchers and the velocity of their turnover are, therefore, likely to have some impact on inflation which will need to be evaluated when the detailed system is designed.

Continued

Box 6-4. Mass Privatization and Vouchers (Continuation)

The design of a voucher system and the associated system for auctioning enterprises to voucher holders is very complex, requiring a series of decisions all of which affect the cost and complexity of the system. Some of the key considerations are noted below:

- issuance of one or a series of vouchers, tied to the auctioning of firms in a series of tranches;
- decision to value or not to value the voucher, bearer or nominative vouchers (governs controls and security printing);
- issuance at the national or regional levels;
- institution(s) used to control the physical issuance or distribution of vouchers, for example, the voter registration system, the savings banks, the social security, or pension system, etc.;
- rules, if any, governing trading of vouchers;
- role of financial intermediaries to accumulate and group vouchers—how will they be registered, regulated, and supervised—linkage to the development of capital markets and prudential regulation of financial institutions;
- conversion of vouchers into shares via an auction system for share registration and trading;
- use of vouchers as a medium of exchange for alternative purposes to buy shares, land, apartments, etc.—restrictions on vouchers;
- linkage of vouchers to the distribution of preference shares to employees. Will vouchers be additive or will vouchers be utilized as a way to distribute these preference shares to employees;
- computer and accounting control systems for the vouchers—will they be developed for alternative usage such as share registration and trading.

6.24 The government will introduce a nation-wide voucher scheme by November 1, 1992. Unitary vouchers will be issued throughout Russia with the announced intention of later tranches. Vouchers will be denominated in rubles, each with a face value of 10,000 rubles. Starting in the fourth quarter of 1992, vouchers will be distributed to Russian citizens on the basis of registers prepared by regional agencies established by GKI using *propiska* records. Vouchers will be immediately tradable. To facilitate trading, Investment Funds will be licensed by GKI and authorized to trade vouchers. The MMP will allow vouchers to be applied to privatization of up to 35 percent of the shares in each enterprise, including consideration of a preference for up to 10 percent going to individual voucher holders. Workers will also be allowed to use vouchers to buy their shares. The use of vouchers as a medium of exchange to buy land, apartments etc. is not currently anticipated in the MMP. A voucher registration and cancellation system is in preparation.

6.25 The basic characteristics of the MMP are appealing. The "bottom-up" approach would build on the energy of enterprise managers and employees and provide a means of regularizing the spontaneous privatization that has occurred. It would also reduce the administrative burden on the GKI, which could become a serious bottleneck to any "top-down" plan. It is important that the objective of achieving widespread public shareholding be balanced with the need to provide effective ownership control. The MMP envisions the emergence of investment funds for which a regulatory framework is being developed.

These investment funds would consolidate vouchers and could provide ownership control. Some Western portfolio managers appear interested in investing in Russia. This avenue for tapping the funds of portfolio investors should be explored, since it decreases the risk of investing in individual enterprises and could provide a method for accessing the funds of passive investors. Another important feature of the MMP is a planned Public Information Campaign. This Campaign consisting of public relations and mass communications components will attempt to educate the Russian public about privatization, vouchers and investment funds. Under the Joint World Bank/EBRD Program a substantial package of technical assistance has been mobilized to assist with the detailed preparation of this plan. The implementation of this program would be assisted under a proposed World Bank/EBRD *Privatization Implementation Loan*.

Issues in privatization

6.26 While there is little doubt about the particular urgency surrounding the Government's plans for privatization, there has been some discussion over the broad approach to be taken. Of particular concern, both in Russia and abroad, is the link between privatization and restructuring; the "top-down" approach, such as that adopted by Treuhandanstalt in Germany, allows the Government to combine restructuring with the privatization process. There is much debate about the merits of such an approach. If the state were to take an active role in restructuring by picking winners and losers, accurate and detailed knowledge about enterprises would be necessary. In addition, as noted above, the administrative burdens imposed by the "top-down" approach could very quickly become a bottleneck to the entire reform program (see Box 6-5). These are critical concerns, and the current Government program acknowledges them, and opts for simplicity and speed over prior restructuring.

6.27 *Administrative capacity.* The implementation of the Privatization Program relies substantially on the capacity of the central GKI and that of the local Committees. Their current extreme lack of resources is undoubtedly a major obstacle. The authority of the Property Funds during the interim between "corporatization" and privatization is stated in the Law, but at present they possess only very modest capacity. The Property Funds, however, are growing in importance. Privatization authority and responsibility need to be clearly delineated between these bodies. Significant amounts of technical assistance, equipment, and virtually all other resources are needed quickly. However, care must be taken not to construct a huge bureaucracy; rather, procedures should be developed that are simple and that can mobilize outside assistance through contracting out defined tasks. The goal should be to privatize the privatization process as much as possible.

6.28 *Legal consistency.* There are inconsistencies between the different pieces of privatization legislation. To some extent, this reflects a healthy evolution. However, it is also a consequence of the speed with which decrees and regulations are being prepared to meet the pressing need to start implementation. A more problematic aspect of the government's privatization program is that, in its efforts to co-opt the relevant groups, Privatization Commissions will consist of so many potentially conflicting interests that agreement on the privatization transactions is unlikely. In addition, there is uncertainty as to the role of the Property Funds as interim owners. Moreover, there is a contradiction between the assignment to managers of the responsibility for developing an enterprise privatization plan in the Privatization Program and the role of Privatization Commissions described in the Law. They are basically assigned the same task.

6.29 Such unresolved conflicts could be very costly. There are examples of regional governments refusing to privatize under the current guidelines ostensibly because they do not sufficiently recognize the rights of workers' collectives. This is a challenge to the authority of the GKI to implement the program under the Constitution (which is currently being rewritten). Powerful critics, both within and

Box 6-5. Lessons from Eastern Europe

Lessons on privatization can be drawn from almost all of the Central and Eastern European (CEE) countries for Russia.

Small-scale privatization must be started immediately. In all other CEE countries, small-scale privatization has been a first step in transformation. Not only can the privatization of smaller enterprises be accomplished relatively quickly, but the failure to embark upon small-scale privatization before other stages of privatization can form a bottleneck to reform. Poland's privatization of over 50,000 retail businesses in two years has been successful in relieving the bottlenecks in distribution of both retail and wholesale goods; the Russian Federation will do well to follow Poland's example and privatize transportation, distribution and retail networks as part of its small-scale privatization program.

The approach to privatization must be "bottom-up" and decentralized. One example of a "bottom-up" approach is the Czech and Slovak voucher/investment funds scheme which is primarily enterprise driven. The privatization process adopted in Hungary is also driven by the privatization proposals submitted by enterprise managers to the privatization agency. Russia's very limited administrative capacity points to the importance of adopting a similar approach. The sheer number of enterprises to be privatized in the Russian Federation, however, together with its geographic scale, means that Russia's privatization process must be decentralized in addition to being "bottom-up"—Russia cannot hope to run privatization auctions at the center, as Czechoslovakia has been doing. Privatization in Russia must instead be run at the regional or even municipal levels. Uniformity will be difficult to achieve under these circumstances. While very clear instructions must be distributed by the State Committee for the Management of State Property to local privatization agencies to insure a minimum level of transparency and uniformity, some diversity must be tolerated, and learned from.

Privatization will be a long, drawn-out process; all deadlines will be missed. As discussed in subsequent chapters, privatization cannot proceed alone. A number of obstacles will undoubtedly slow privatization—among them issues of liability (ranging from inter-enterprise arrears to environmental liability), the development of the financial sector, the development of a social safety net, labor mobility, monopoly, and institutional capacity. Of these, however, the immediate constraint on the pace of privatization is the lack of administrative capacity. Technical assistance and foreign expertise such as that provided by the World Bank can help but only marginally; the privatization process will be slow as long as supervisory agencies are understaffed and underfunded.

Large-scale privatization will be problematic. Russia has left privatization of the largest enterprises to the next stage of its privatization program; the experience with large-scale privatization in CEE so far can only point to its problematic nature. Most countries have encountered a number of difficulties in tackling large-scale privatization. The successful examples of large-scale privatizations in Czechoslovakia, Hungary, and Poland have been few, and those have been facilitated by the presence of a foreign partner. Given the progress in structural reform that is necessary to attract sufficient levels of foreign direct investment (FDI) into economies in transition, large-scale privatization in Russia will undoubtedly prove to be as difficult as in the CEE.

When comparisons are drawn between the various privatization experiences in Central and Eastern Europe, East Germany is always understood to be an exception. The reason for East Germany's exclusion from the pool of comparisons is obvious—no other country in Central or Eastern Europe had its transition to a market economy mediated by its union with the strongest economy in Western Europe. Yet even the experience in East Germany yields an important lesson—*the approach to privatization must be matched to the institutional capacity of the state.* That is to say, the operative difference between the situations in East Germany and the other CEE countries in terms of privatization has been the fact that strong and effective state capacity in Germany, embodied by Treuhandaanstalt, has allowed for the "top-down" approaches it has adopted.

outside the Government, are coming up with their own privatization plans. In fact, both Moscow and St. Petersburg appear to have diverged from the central program, fragmenting the process. These conflicts cause confusion among agencies responsible for implementation, enterprises, and potential investors.

6.30 More generally, there are inconsistencies between the privatization legislation and other business laws which impact on the privatization process. For example, the Decree "On Joint-Stock Societies" requires that the acquisition of more than 15 percent of the stock in *any* society requires the prior approval of the Ministry of Finance. If enforced, this requirement could be a major obstacle to privatization.

6.31 *Supporting commercial legislation.* Privatization is a process which depends critically for its success on the presence of a system of laws that establishes clear property rights which can be enforced and transferred. While it is feasible to sell small enterprises to workers in a relatively informal legal environment, the process becomes progressively more difficult as the size and complexity of the business unit increases. Russia is slowly developing laws which are required for the operation of a market economy. However, this process is not taking place within the context of a coherent design. Rather, a variety of laws have been enacted as needs have been identified, with the result that there are significant gaps in the legal framework.

6.32 More important, there are still substantial uncertainties with respect to the nature of ownership and property rights. While legislation has been passed which affirms the rights of individuals and legal entities to own property, the legislation is basic in nature and is designed to deal primarily with the ownership of physical objects. A wide variety of issues has not yet been resolved, including intellectual property rights and the ownership and use of natural resources. The ability to create security interests in property to support normal credit facilities is poorly developed. For example, Russian law does not yet recognize the concept of the floating charge, which forms the cornerstone of working capital financing in most Western countries.

6.33 The right to acquire and sell interests in land other than leasehold has not been adequately established, though a decree has been issued to provide a framework for the creation of a functioning system of land titles. At the present time, the ability of the buyer of an enterprise to subsequently dispose of surplus land or to borrow against the security of the land is uncertain. Even where defined property rights exist, the law of contract governing the transfer and enforcement of those rights is inadequate. Until recently, the forms of most business contracts were supplied by executive orders and ministerial and departmental regulations. These forms were geared to a centrally planned economy; following their removal, a vacuum exists.

6.34 *Decentralization of privatization.* The large number and size of enterprises to be privatized, the lack of resources of the GKI, and the substantial devolution of control over the enterprises, mean that the process should and will be decentralized. The enterprises are responsible for developing their own privatization plans. The GKI has incorporated the "bottom-up" approach into its program. Much of implementation of privatization will take place at the local level, that is, will be the responsibility of the local Committees. As well, small-scale privatization should be the direct responsibility of the local Committees.

6.35 *Interests of workers' collectives.* Benefits and incentives to participate provided under the Program for the employees of the enterprise are substantial and much more generous than those of other countries (see Annex 6.1). This is to be expected, given the substantial influence and *de facto* rights of workers in the Russian economy. But the benefits set aside for the workers can create obstacles for the development of good corporate governance. Outside investors are likely to be discouraged if there is already an entrenched minority of shareholders. If investors are unable to acquire clear control to allow them to make sensible commercial decisions, they will simply not be interested in the enterprise. In addition, given that the ultimate goal of privatization and reform in general is the restructuring and

revitalizing of Russian enterprises, then giving to the workers a large controlling stake at the outset could be very costly. As experience in Yugoslavia has shown, worker-controlled enterprises are prone to excess employment and unjustifiably high wages. If the workers were to become complete owners, there might be no problem. The difficulty has been where workers *control* assets but the Government retains responsibility for the liabilities. This is the situation to be avoided in Russia. The GKI is aware of this issue and has been fighting the growing tide of support for mechanisms for privatization that simply hand the enterprise over to its current work force, frequently with the state maintaining a minority position and an implied financing role. Instead, they have been working to establish privatization mechanisms that will have the greatest chance of bringing in investors/owners and therefore will be in the long-term interests of both the workers and the economy. However, they must work within the framework of very strong control rights by the workers and managers.

6.36 *Foreign direct investment (FDI).* Foreign investment and purchases of state-owned enterprises by both individuals and companies are encouraged and subject to few special conditions. Enterprises may be sold to foreign investors by the appropriate Committee. Foreign investment is permitted in all sectors of the economy under the same conditions as domestic investment with two exceptions: a) foreign investors are not permitted in the first auction round to purchase certain small-scale enterprises except with the permission of the local Committee; and b) foreign investors must obtain a license from the Committee of Foreign Investment to invest in enterprises in the defense, mineral, and energy industries.

6.37 Although there is some interest by foreign businessmen in investing in Russia, the highly uncertain economic environment has prevented any significant level of investment thus far. In addition, there are characteristics of Russian state-owned enterprises that encourage "greenfield" type investment: old and poor-quality capital stock, a lack of distribution networks and successful brand names, the lack of a coherent legal framework, the confusing array of parties involved in privatization transactions, and poor work-force attitudes and habits. All these factors combine to decrease the attractiveness of SOEs to buyers. Still, every effort should be made to attract foreign investors, because their capital, technology, and management are urgently needed. To attract such investment, the Government should develop coherent, transparent, "rules of the game." Foreign investors need to know whom to negotiate with, what their proposals should address, why one proposal will be selected over another, and when and how decisions will be made. Experience in Eastern Europe shows that those foreign investors who do choose to participate in circumstances where competencies are ill-defined may exploit for their own advantage differences in information and perspective among key stakeholders.

6.38 FDI will be important because, in some areas of production, access to the most competitive technology is possible only by inviting a foreigner who has developed it to produce in the local market. The state can and should play an important indirect role in promoting FDI and other foreign collaborations by providing an open and transparent legal, fiscal, and regulatory framework; treatment of investment by foreigners, profits earned, and conversion of foreign exchange should not be less attractive in Russia than in most other countries. In particular, given the important role to be played by foreign investment and foreign technology, the legislation and approval procedures need to be changed so that they do not deter the inflow of technology and capital into Russia through cumbersome bureaucratic procedures and excessively restrictive conditions. In addition, protection of intellectual property and trade secrets need to be strengthened to provide greater assurances to foreign investors and technology suppliers and to provide a greater incentive to local efforts in research and development and to stimulate greater internal diffusion of technology. Furthermore, special efforts need to be made to develop the institutional support infrastructure necessary to implement the massive program of technological upgrading and modernization that is required. That will include developing institutions and

agents specialized in technology diffusion and troubleshooting to improve productivity, as well as the supporting infrastructure and training to improve quality and management to world standards.

6.39 *Demonopolization.* Manufacturing, domestic trade (procurement, wholesale and retail distribution), and parts of agriculture in Russia are characterized by high levels of seller concentration and vertical integration as well as by lack of a competitive market infrastructure (see Box 6-1 and Table 6-1). The implementation of a privatization program must be designed carefully to ensure that existing administratively created monopolies are not merely transferred to private hands in a form that would hinder the long-term efficiency of the economy. From an efficiency point of view, it is desirable to demonopolize existing structures before they are privatized. Once they are in private ownership, monopolies will be much more difficult to break; owners of monopolies would oppose future reform. To the extent some monopolies could be readily broken up, in cases, for example, where production is undertaken in multiple plants, demonopolization should be done prior to privatization. Administrative monopolies, especially those in the procurement, wholesale, and distribution chains, should also be broken up before they are privatized. Given the large number of existing monopoly structures and the weak government control over the SOEs, however, it may not always be possible for the Government to split up the monopolies before they are privatized. Alternatively, it would take so much time that privatization would be delayed and threatened. It is, therefore, important and essential that demonopolization of the existing structures be linked to the development of specific corporatization and privatization plans.

6.40 A prime task is to prevent the former branch ministries from becoming holding companies which control voting shares in subordinate enterprises. The draft decrees on Holding Companies and Trusts prepared by GKI contain such prescription and this is to be welcomed. The Government is encouraging enterprises to break away from large concerns or associations and to put forward demonopolization proposals as part of their privatization plans. The corporatization program states that large existing enterprises will be corporatized at the level of the smallest existing legal entity. Segments of enterprises are allowed to hive themselves off and privatize as separate companies. But in many instances, sub-units either are unaware of this option, or are not being given enough time to prepare and effect a break-away. A program to inform enterprise workers and sub-unit managers of the possibility of breakaway is warranted.

6.41 An Antimonopoly Law came into force in May 1991. Under this law, the Russian State Committee for Antimonopoly Policy and Promotion of New Economic Structures (GKAP) was established, along with its local counterparts. According to the Law, the GKAP offices, in conjunction with the MKIs, must review all privatization candidates over a certain size. If the applicant is judged to be a monopoly, the agencies can require the amendment of its privatization proposal. However, the GKAP offices and the MKIs are under-staffed and under-trained. They lack the necessary information that would allow them to assess which firms are in a monopoly position and when an enterprise is in violation of the legislation. In the few instances where they can make judgements court proceedings are lengthy and even if judgements are obtained there are no effective mechanisms to ensure compliance. Enterprises have little or no idea of their obligations under the law.⁴ Some of the difficulties will be addressed in the joint World Bank/EBRD Project. Under the joint Project, the GKAP will receive technical assistance, information/communications equipment, funds to conduct needed studies and training for central and regional staff.

6.42 The one major area of intervention by the GKAP so far has been in price regulation, and this has produced grave risks for the integrity of procompetition policies in Russia. Currently, more than 2,000 enterprises (reportedly covering more than 6,000 products and accounting for almost 80 percent

of total industrial production) have been included on an official register of monopoly enterprises; all such enterprises are required to list any price increase with a committee that reviews whether the increase is "justified." No effort has been made to determine whether these enterprises actually possess any market power, and, if so, whether their market power would be durable. Although the *Memorandum of Economic Policy* issued by the government in early March determined that such price regulation (along with maximum rates of profitability) will be discontinued as of July 1, 1992, even the City of Moscow Antimonopoly Committee was not aware of this decision one month after the fact.

Recommendations

6.43 The following steps should be taken to strengthen the privatization program:

- a. revise the *1991 Law on Privatization* to
 - bring its provisions in line with the privatization guidelines and the implementing regulations;
 - reduce the variety of agencies and bodies involved in the privatization process, that is, to clarify or eliminate various roles of Privatization Commissions, Property Funds, line ministries, and local governments;
- b. revise the *Privatization Program* to
 - make the document internally consistent;
 - establish separate, simplified, and flexible guidelines on small-scale privatization to be communicated to local Committees and give them the authority to implement rapidly;
 - delineate more clearly the authority over various aspects of privatization, in particular, between the GKI and the Property Funds, and between enterprise management and the Privatization Commissions with regard to formulating privatization plans for enterprises;
 - provide a consistent framework for mass privatization;
- c. prepare and enact commercial legislation on the creation and transfer of property rights and on the formation and enforcement of contracts;
- d. design a coordinated strategic approach to handling monopolies in the context of both corporatization and privatization, and define appropriate institutional arrangements and jurisdictions; based on lessons from demonopolization of ongoing pilot privatizations, the Government should prepare operational guidelines for broad demonopolization; and
- e. determine the status of prior privatization of those enterprises which were legally transformed from state enterprises under *perestroika*.

Corporate Governance and Imposing A Hard Budget Constraint

6.44 It is essential to move ahead with privatization as rapidly as possible in any way that is feasible if fiscal stability and a supply response to new incentives are to be achieved. Experience in Eastern Europe has shown decisively that it is better to emphasize privatization schemes which produce quick if inequitable results than to muddle through the governance problem—which has no clear solution. The optimal and ultimate solution to the persistently poor performance of SOEs is to privatize them. Privatization, however, has proven to be an intricate and time-consuming process, taking far more time to conceive and implement than is usually anticipated by its proponents. And the obstacles to rapid privatization are far more numerous and intense in ex-socialist countries in general, and the Russian Federation in particular. Given the large number of SOEs, no matter how successful the process of privatization is, it is likely that many SOEs will remain in the state hands either temporarily or indefinitely. Experience in Eastern Europe indicates the vital importance of paying adequate attention to the management of the remaining SOEs. *While the Government should privatize the SOE sector as quickly as possible, it should also strengthen the governance for those enterprises that cannot be privatized immediately. It is crucial that steps be taken to stem the erosion of assets and install management structures that approximate, as closely as possible, private sector norms.* An efficient ownership and governance structure for enterprises must provide: a) a clearly defined ownership; b) accountability to an owner (or owners) who has an interest in the maintenance and growth of the capital of the enterprise; c) an enterprise supervisory body responsible for the longer-term strategic issues and oversight of management performance; d) substantial operational autonomy and incentives for the enterprise management; and e) a hard budget constraint (see Box 6-6).

6.45 *Corporatization.* At present, the ownership of enterprises is uncertain. Former branch ministries, management, workers, and regional and local authorities are all asserting claims. The lack of "real" owners has reduced substantially the effectiveness of other reforms and is the most important factor that adversely affects the adjustment and restructuring process of SOEs. The solution is for the Government to assert its ownership rights over SOEs through a mass corporatization decree; that is, an announcement that all enterprises over a certain size are henceforth joint-stock companies. A mass corporatization will force a clarification of the ownership status of the enterprises and establish a clear title, thus helping manage the spontaneous privatization process. A mass corporatization will also help sort out the relationship between enterprises, concerns and branch ministries—a necessary first step to harden the budget constraint of SOEs. Clear title opens the way for privatization as it gives owners clear power to dispose of assets, initiate privatization, and reduce the uncertainty for investors, both domestic and foreign. In the case of monopolies, demonopolization should be undertaken prior to or simultaneously with corporatization whenever this is feasible without seriously delaying the corporatization process. The Government's intention to corporatize 5,000 - 6,000 large industrial firms by October 1, 1992 is therefore welcome.

6.46 The shares of SOEs that will not be immediately privatized should be held by a government agency (or agencies) representing the owner of the enterprise. The owner's representatives should issue clear policy statements stipulating that enterprises will henceforth be run as profit-maximizing, commercial corporations. It is essential that the Government agree upon procedures for the exercise of ownership rights over SOEs and assign or establish the necessary entity to fulfil this function for Russian enterprises. At present, the legal ownership responsibility of SOEs is with the GKI and the Property Fund. However, giving portfolio management to the GKI would saddle it with an enormous task and could distract it from privatization. Thus, an agency for the management of state-owned enterprises (like the State Asset Management Company in Hungary) is desirable. In order to divide the task of privatization and asset management it will be necessary to classify SOEs into those likely to stay in state

Box 6-6. "Hardening" the Budget Constraint

Simply put, a soft budget constraint means that the expenditure of an economic actor is allowed to exceed its resources. Hardening the budget constraint means requiring the actor to spend within the limits of its resources. In this sense hardening the budget constraint means imposing financial discipline on economic actors.

But the notion of hardening the budget constraint encompasses structural issues taken for granted in more conventional ideas concerning financial discipline. A key issue in hardening the budget constraint is actually defining the resources available to the actor. Subsidies, taxation, credit policies, and administered prices contributed to soft budget constraints for enterprises in the Soviet Union because these factors to a large extent were negotiated at the enterprise level. For example, rather than having fixed tax rates, taxation depended on the enterprises' current financial situation and the over-all state of the government budget. From one period to the next enterprises did not know what resources would be available to them. Without clearly defined economic parameters, an enterprise manager could not have imposed financial discipline even if he had sought to do so.

Another aspect of the soft budget constraint is the credibility of government financial policy. In order to establish credible policies, the government needs to increase its cost of taking actions which would be otherwise warranted in the short term but which generate perverse incentives over the longer term. For example, suppose the government imposed a credit limit on a large enterprise in order to generate financial discipline. If the enterprise squanders its resources today, it will need more credit tomorrow to avoid collapse. Even if the government insists today that it will not provide more credit, once the enterprise is in trouble, the best action for the government to take is to renege on its commitment and provide new credit. The enterprise manager realizes the government's predicament, and thus needs not worry about the government's insistence today that it will not provide credit tomorrow. The only way out for the government is to take actions today which rearrange the costs and benefits of providing new credit tomorrow. The government might make an agreement with a credible external body linking future aid to the maintenance of credit limits, thus increasing the future benefits of credit limits. The government might also establish a social safety net which mitigates the costs of upholding credit limits. Only by taking actions today which rearrange its future incentives can the government change the incentives that enterprise managers currently perceive.

hands for a long time, to be dealt with by the new agency, and those to be privatized quickly, to be dealt with by the GKI. Given the government's privatization program, such a classification should be possible. Alternatively, the Property Funds could be strengthened and be assigned the responsibility for managing the assets of SOEs. In either case external assistance will be required.

6.47 Corporate governance and management responsibility. Mass corporatization alone will not force a hard budget constraint on SOEs. Enterprises will only respond to market signals and the pressure of competition if managers are held responsible for the financial results of their decisions. This calls for mechanisms by which the representatives of the owner could monitor performance, reward success, and punish failure. The government agent, as representative of the owner, should eventually appoint a Board of Directors in each corporatized enterprise. The Board should have full responsibility to appoint, reward, and dismiss enterprise managers. If managers fail to perform in areas under their control, they should be dismissed. If the Board proves incapable of eliciting good performance from managers, the Board should be dismissed by the owner. It is important to establish clearly that the Board deals with the enterprise and the owner deals with the Board. The government agency, as representative of the owner, *should have no direct dealings with enterprise management*. It should influence performance only through the control of the Board of Directors. Regulations have been created for a standard corporate charter and the appointment of a Board of Directors and management control as part of the mass privatization program. The Russian Government is assembling a team of consultants to assist them in coming up with an approach to, and a detailed set of procedures for, the exercise of ownership, the

monitoring and improving of enterprise performance, and methods to install and maintain effective corporate governance in firms under state control.

6.48 *Commercial objectives.* The performance of managers should be evaluated on the basis of transparent objectives compatible with the commercial operations of the enterprise. They should not be rewarded for improvements caused by exogenous changes (for example, a devaluation of the ruble); nor should they be punished for losses brought about by efforts to curtail and eliminate non-commercial functions. Much of the social infrastructure in the Russian economy is attached to the enterprise as a holdover from the earlier regime (see Chapter 9 for a discussion of enterprise-funded social expenditures). The social assets held and administered by the enterprise must be sold off and transferred; in some cases they should be taken over by the state. The magnitude of this transformation must not be underestimated; these measures will require considerable time and effort.

6.49 *Financing loss-making enterprises.* A very important issue in reforming SOEs is how to deal with loss-making enterprises. In the long run, persistently loss-making enterprises should be closed. But in the short run, it is likely that many loss-making enterprises will remain and that their losses will have to be financed. In such cases, losses should in principle be covered by the budget and *not* by the banking system, although banks may be used to allocate the resources among the loss-making enterprises. Banks in Russia are already under-capitalized and saddling them with financing loss-making enterprises will seriously hinder the development of a market-based banking system (see Chapter 7 for further discussion of this issue).

6.50 Given the pressure to keep afloat as many loss-making enterprises as possible and to keep the government budget out of severe deficit, however, there is a real danger that some of the losses may be pushed to the banking system. If the banking system is forced to finance part of the losses, every effort should be made to minimize the effect of such financing on the future viability of the system. One way of achieving this is to assign the task of financing loss-making enterprises during the transition to a set of specialized financial institutions—this would help contain bad loans within one part of the financial sector. Even in such cases, subsidies to the loss-making enterprises should be based on transparent criteria and at declining rates with a pre-specified cut-off point. The targets for loss reduction and eventual elimination should form part of the management's contracts.

6.51 *Liquidation and bankruptcy.* Experiences in other countries show that without the threat of liquidation and bankruptcy even the best-designed management system may fail to harden the budget constraints of SOEs. Allowing persistent loss-making enterprises to operate not only imposes severe burdens on the governments's budgetary resources and bank credit, but also affects the behavior of those SOEs who are not loss-makers. While it may not be possible to close down all loss-making enterprises immediately, the Government should target the worst ones for closure. The example posed by closing some of the worst loss-making enterprises should engender behavioral changes in the management of other enterprises. Since loss-making enterprises are not: a) being financed by the Government, b) fully and explicitly financed by banks, or c) closed down, they are not paying suppliers and inter-enterprise arrears are increasing exponentially. This is the most inefficient way of financing loss-making enterprises.

6.52 *Recommendations.* To improve the governance and performance of SOEs the Government should:

- announce plans for conversion of *all* large and medium-sized SOEs into joint-stock companies;

- define which agency (or agencies) to manage SOEs expected to remain in the public sector;
- establish procedures and guidelines for the appointment of Boards of Directors and enterprise managers and clearly specify their responsibilities, particularly for larger SOEs not subject to rapid privatization;
- consider, as a matter of urgency, other available methods of assessing and improving SOE performance, since it is unlikely that constituting Boards of Directors will rapidly solve the problem of corporate governance;
- implement the new governance structure in selected large enterprises; and
- prepare and enact legislation on bankruptcy and liquidation procedures.

New Entry and Private Sector Development

6.53 Private sector development (PSD) is a critical step in the transformation from a command to a market economy. Its impact on the SOE sector is twofold: it will provide competition for the state sector, and absorb redundant labor. This will work to limit the consequences of the undeniably monopolistic SOE sector, and to limit the social costs of restructuring SOEs. For the economy as a whole, it will increase dynamic efficiency because small and medium-sized enterprises in particular, will become the new sources of flexibility in an economy which will be changing rapidly and drastically for some time to come. Thus PSD should be an integral, active part of the process of enterprise reform. Government should adopt measures to signal its intention to respect business activities. Equally important, the Government must indicate its determination to promote competition.

Background

6.54 Private businesses in the Russian Federation have grown under an erratic and slowly developing legal and institutional environment. The first legislation on private enterprise was passed in 1988 by the Soviet Union; since then a patchwork of both Union and Russian laws have gradually been passed to create the framework for PSD. The core of the legal framework for private sector was only passed in 1991 by the Russian legislature, which superseded the original enabling legislation for private business. Unfortunately, however, the law "On Enterprise and Entrepreneurial Activities" dealt only with basic principles, and subsequent legislation and regulations have not been comprehensive and consistent enough to eliminate the uncertainty derived from an ambiguous legal framework. In fact, the halting regulatory reform process and a stream of poorly coordinated laws and decrees have created considerable confusion and anxiety in the growing private business community.

Current issues

6.55 The rate of creation and growth of private enterprises will depend on progress in a number of closely related areas: a) reform of the regulatory framework for private investment and business operations, and establishment of a legal framework for reliable contractual relationships (including the protection and transferability of private property, dispute resolution mechanisms, and the legal basis for activities such as leasing and factoring); b) development of the financial sector and, in particular, a competitive banking system; c) privatization or liquidation of state-owned enterprises and other public assets; and d) the development of commercial real estate. Government assistance and promotion will also

have an important role in the process. In addition, progress in fostering private business in the agriculture sector will affect the overall private sector development.

6.56 *Legal and regulatory framework for private business.* Numerous regulations block private activity or unduly increase the transactions costs and uncertainty associated with business. Such deficiencies in the current regulations and laws must be identified and removed. Jurisdiction must also be clarified to prevent regulatory and administrative overlap. In particular, adopting simple, automatic licensing or registration procedures to facilitate entry and encourage transparency should be an urgent priority. The present registration system based at the administratively weak level of the *raion* (municipal borough) has two main problems. It does not allow for either uniformity or continuity, as re-registration is required following every administrative reshaping. Unnecessary requirements, such as a non-residential legal address, and other procedures (such as separate registration with multiple public agencies, or rules complicating the process to obtain a stamp or open a bank account) should also be eliminated. A system of transparent, expedient, business registration and minimal regulatory mechanisms which facilitate entry, promote competition and otherwise defend the public interest must be the ultimate objective.

6.57 *Financial sector development.* A sound, competitive financial system is crucial for private sector development. While new ventures anywhere seldom rely on formal credit sources, the rate of survival and expansion of viable firms does depend greatly on credit availability and banking practices. Financial sector reform is particularly important for private businesses because under current conditions not only do they find it difficult to obtain state-owned bank credit but they are also usually charged much higher interest rates than their state-owned counterparts. Issues and recommendations for the reform of the financial sector are discussed in Chapter 7.

6.58 *Privatization and private sector development.* Both entrepreneurship and competition are closely related to privatization: the former because spinning off activities currently integrated in public enterprises would generate many entrepreneurial opportunities; the latter because privatization provides an excellent occasion to break up monopolies—creating multiple, competing units out of large enterprises. Enterprises not to be privatized should also be forced to spin off peripheral activities. This could be a major source of creation of new enterprises both in services and manufacturing and must be widely encouraged. Transport fleets are a prime example where breaking up this component of many enterprises would: a) increase efficiency in the use of resources through greater capacity utilization; b) create small and medium-scale opportunities for entrepreneurship in the service sector; and c) make possible entrepreneurial activities which depend on the availability of flexible, diverse, responsive transport services. As discussed above, mass privatization would be an important step in creating a hospitable environment for PSD. Training programs can also help the work force adapt to new private sector opportunities.

6.59 *Real estate and land policy.* Obtaining office space is a major constraint to starting up businesses. New enterprises will not have a fair chance without a policy which permits the development of an open real estate market for business purposes. In addition, as privatization reaches beyond urban areas, there will be a great need to facilitate rural non-farm entrepreneurship. Availability of land for private workshops and the like will be a key factor. But at present, some of the best office buildings in the country are empty and likely to be allocated to government or quasi-government concerns without consideration of opportunity costs. Interim measures should include the conversion of under-utilized buildings in the hands of the public sector into basic incubators and enterprise parks (or similar leased space for office and productive premises). Longer-term measures which need to be initiated immediately could include a clear policy on long-term leases, interim title registration mechanisms, and development of a cadastral system. In addition, separating communal real estate into two categories—land which will

belong to the state and land which may be privatized—is desirable. Public enterprises whose main assets consist of real estate, such as state-owned trading companies, should not be privatized but liquidated.

Recommendations

6.60 Proactive government assistance and promotion will be critical to ensure the success of PSD. The Russian Government and local authorities should adopt a coordinated, pragmatic approach to small business promotion which will minimize distortions and maximize cost-effectiveness. Key guiding principles in this pursuit should be minimizing explicit government support and ensuring that government interventions contribute to, rather than crowd out, the emergence of private providers of business services. There is at present no coherent government policy on business promotion and small enterprise development. Innumerable initiatives are emerging at all levels of government and there are no coordination or vetting mechanisms. This may not be a significant omission in reasonably well-developed market economies but could prove to be a costly one during Russia's transition. It is critical for the Government to develop assistance and promotion programs which do not rely unduly on the very limited capabilities of the public sector in this area. It would also be a costly mistake to center government action in this area on the provision of concessionary credit; while a case for such programs may be made, they should be tightly controlled and seen as a type of intervention to be reserved for later stages—after more fundamental obstacles to private sector development have been addressed.

6.61 The Government is now moving to consolidate and develop its capacity for policy development and program formulation in this area. The mandate of the Committee for Antimonopoly Policy and the Promotion of New Economic Structures is being redefined and a new Entrepreneurship Committee has been established under GKI. Both of these Committees now report to the same Deputy Prime Minister, as does the Working Center for Economic Reforms. The latter has been given the mandate to make policy recommendations and to propose an institutional structure for the formulation and implementation of business development/promotion programs. These are steps in the right direction and are coordinated with the job creation efforts of the Ministry of Labor. Further steps should lead to the development of capacity (which could be located in a small, permanent group with high-level access in the Government) to carry out private sector development functions, including the following.

- *Business advocacy*, is necessary to link government policies in all sectors with PSD and identify obstacles and omissions which hinder entrepreneurship. This will entail systematic information-gathering on the characteristics and constraints of the private sector.
- *Enterprise assistance programs* can guide and support local groups which would be mainly responsible for their implementation. This may be expanded to provide matched financing to steer local government initiatives towards cost-effective programs.
- *An ombudsman* could provide an appeal mechanism for private enterprises (particularly small ones) subject to unwarranted interference by state bodies. This will be an important signal of government commitment to PSD.

Notes to Chapter 6

1. For example, Tartarstan has tried to lay ownership claim to KAMAZ, the largest truck producer in the country.
2. Russian Union of Industrialists and Entrepreneurs. "Russian Enterprises: Functioning in the Circumstances of Crisis", Expert Institute, Moscow 1992.
3. Spontaneous privatization (SP) is the transfer of ownership outside a clearly defined legal framework. It results from fuzzy legislation or through outright deceit. *Limited SP* transfers to managers the control over enterprise assets and the residual income from operation. *Complete SP* includes, in addition, the transfer (or appropriation) of full legal title. It grants managers the unrestricted right to sale, or to the residual value after liquidation. Ownership remains ambiguous under *limited SP* but not under *complete SP*. Hence, from an economic perspective, *limited SP* is less desirable than *complete SP*. But clearly it is politically and administratively treacherous to legalize title to assets that are acquired in an illegal or extra-legal way.
4. In addition to promoting competition through enforcement of the existing antimonopoly legislation and through the elaboration of additional measures to limit monopolistic activity and halt unfair business practices, GKAP's mandate includes the support of entrepreneurship and new business development.

CHAPTER 7

Problems of the Financial Sector and Financial Reform

7.1 In the past, the Russian financial system passively allocated credit in accordance with the Government's economic plan (see Box 7-1). Hence it is not surprising that many of the old debts cannot be serviced and that many banks lack sound loan review procedures and appropriate portfolio management strategies. Similarly, there is no history of a strong central bank exercising monetary policy independent of government dictate, establishing prudential rules, and supervising banks. Moreover, in the past one bank mobilized household deposits (Sberbank) on which it paid low nominal rates of interest. There is thus a monopoly on deposit taking from the households. Since deposit interest rates have not been adjusted adequately to reflect inflation, it is extremely unattractive to hold financial assets. Indeed, inflation is rapidly eroding the size of the financial system, and holdings of ruble balances as a percentage of GDP are down from 80 percent at the beginning of 1991 to 60 percent at the end of the year to less than 20 percent at the end of May 1992.

7.2 More recently, financial organizations, along with enterprises, have gained increased autonomy from the Government. The simple reduction in state control, however, has not been sufficient to create a financial system capable of supporting a thriving market economy. Today, the financial system is issuing loans to enterprises that would not be considered creditworthy in a market-based system. Since the economic environment is fraught with uncertainty and misinformation, financial institutions have difficulty in distinguishing creditworthy from uncreditworthy enterprises. Moreover, even when distinctions are clear, there are political pressures and public policy incentives to finance uncreditworthy enterprises. The ownership structure of the financial system is exacerbating this problem. Bank lending is being done on a non-arms' length basis, much of it to enterprises and cooperatives that own the banks. In fact, many new banks have been founded with the sole objective of raising funds for their owners. The financial infrastructure is inadequate—compounding the ownership problems. The current legal codes and enforcement mechanisms, the payments, accounting, auditing, and bank supervision systems are not adequately developed to support a market economy. Consequently, much of present lending is neither competitive nor market-based, resulting in resource misallocation and bank insolvency. Much of this chapter focusses on detailing and suggesting initial steps to address these financial sector problems.

Relationship between Financial and Enterprise Reform

7.3 Although some immediate steps can be taken to bolster the financial infrastructure, improve the ownership structure of banks, and encourage better credit procedures, many financial sector difficulties directly reflect the complex, interconnected adjustment challenges facing all sectors of the economy. Consequently, successful financial sector reform is inextricably linked to the successful transformation of the economy in general. Put bluntly—albeit simplistically—the major problem facing reform of the financial sector and the reform of the entire economy is that there are many large, loss-making state-owned enterprises. Ultimately, many of these enterprises should be closed. However, enterprise reform in Russia will not be instantaneous, and the coexistence of two types of firms—those that operate on market principles and those that operate under "transitional" arrangements—will be inevitable. Thus, the real issue is how to develop a financial system that will increasingly finance profitable enterprises, but still provide funding for loss-making enterprises during the transition.

Box 7-1. The Evolution of the Banking System in Russia

Until 1987 the Soviet Union had a monobank system in which the State Bank of the USSR (Gosbank) ensured that resources were allocated in accordance with the Government's economic plan. This centralized banking system fitted the needs of the centralized economic planning system. As increased autonomy was given to enterprises and cooperatives, there was a corresponding need to change the banking system.

The restructuring of the banking system began in 1987. The first stage of the restructuring involved the creation of a two-tiered banking system. Gosbank was established as the central bank of the Soviet Union and given responsibility for the implementation of monetary policy, the maintenance of a stable currency, the supervision of commercial banks, and the facilitation of inter-bank settlements. The non-central banking functions were allocated to the second tier of the two-tier banking system, comprising five specialized banks: the Savings Bank (Sberbank), the foreign trade bank (Vneshtorgbank), the bank for construction and industry (Promstroibank), the agricultural bank (Agroprombank), and the social and small enterprise sector bank (Zhilotsbank).

In late 1988 and 1989, the second stage of banking reform saw the rapid emergence of a diverse set of sectoral and regional commercial banks that were established as joint-stock companies or cooperatives. These banks were voluntarily organized for cooperatives, social organizations, research academies, and groups of government-owned enterprises by sector. The initial authorized capital of these "private" banks ranged from 500 thousand to 300 million rubles, and by the end of 1991, there were over 1500 commercial banks licensed in the Russian Federation. The emergence of independent and private banks in 1987 created the need for operational and accounting rules and a regulatory and supervisory system. In 1989, Gosbank created a Commercial Bank Department to perform audits and conduct regulatory and supervisory functions; Gosbank also issued prudential standards, established licensing procedures, set capital and liquidity standards, and instituted monthly and annual reporting requirements.

In 1991, three large specialized banks—Promstroibank, Agroprombank, and Zhilotsbank—were reconstituted as self-supporting joint-stock banks with their headquarter banks and territorial branches established as independent banks, separate from the State. Promstroibank has become a large network of universal commercial banks throughout the Republics. In 1991, the remnants of Agroprombank were re-established within Russia in 1992 as Rosselkhozbank.

The Foreign Trade Bank, Vneshtorgbank, was renamed the Bank for Foreign Economic Affairs, Vneshekonombank, and maintained within the Soviet Union's central banking system. This bank was given responsibility for official reserves, financing foreign trade, and for managing the Union's foreign debt. By the end of 1991, Vneshekonombank's responsibilities were primarily focussed on managing the Union's foreign debt. However, Vneshekonombank was then made accountable to the Central Bank of Russia.

During 1991, the Union's Savings Bank (Sberbank) was first classified as a commercial bank, then reclassified as part of the central bank, and later constituted as a commercial bank but with special provisions because almost all household deposits are held in the Savings Bank.

7.4 There are basically three mechanisms to finance loss-making state-owned enterprises: direct budget outlays, bank credit, and inter-enterprise arrears. While direct Government subsidies offer the most appropriate and transparent form of finance, political reality suggests that direct budget outlays will not be the only mechanism used to finance loss-making enterprises. *To the extent that the banking system is used as a vehicle for financing loss-making firms, it must be recognized that the banking sector is simply an intermediary sector; it can facilitate economic activity, but the financial sector does not have its own pool of resources for the economy to tap when financing loss-making enterprises.* Central Bank credit can be funnelled through the banking system to loss-making enterprises, which involves inflationary finance through credit creation. Or, the banking system can be used to *allocate* household savings to loss-making firms instead of more profitable enterprises, which involves the taxation of household savings and discourages intermediated savings. There is, therefore, a critical problem of sequencing and

coordinating financial sector reform with enterprise reform. Faster enterprise reform will permit faster, more fundamental financial sector reforms. The less the financial system is used to finance loss-making firms, the more opportunities there will be to establish a profitable, market-oriented financial system.

7.5 Each of the former socialist countries faces the problem of loss-making enterprises. Only in the case of Germany has the problem of existing bad debt together with the need to provide subsidies on an ongoing basis been taken completely out of the banking system. Other Eastern European countries have taken partial measures, providing some relief for the non-performing debts while urging banks to exercise tougher standards and tighter scrutiny in the allocation of new credits. But, except in Germany, a final resolution of the related problems of bad enterprise debts and current loans being used to finance losses is still pending. Not until the problem of the bad debts is resolved and the banks relieved of financing ongoing losses can the financial system move to the market stage of reform. (For a discussion of the liquidity problems now faced by the Russian banks, see Box 7-2.) Until that time the system will be in transition.

7.6 While it is important during the transition to apply pressure to all enterprises to use resources efficiently, some firms will be unprofitable. Drastic measures need to be taken to stem the losses from the least productive firms. But many firms, though not profitable, are not in dire straits. It is politically impossible, and probably economically inadvisable, to move suddenly and completely to a hard budget constraint for all enterprises. To close all unprofitable firms in the short run would throw too many resources, both capital and human, out of work. Over the next three or four years, it may be necessary to provide subsidies to some of these firms, though it should be preannounced that the amount of the subsidy will decline each year.

Non-performing loans

7.7 The problem of non-performing loans is impeding the reorientation of bank management toward more market-based principles, exacerbating the problem of supervising banks, and distorting the allocation of new credits as loans flow to uncreditworthy clients to pay wages and service old debts. This problem is made more difficult by the rapid growth in interenterprise arrears since December 1991 (see Chapter 2 and Figure 2-5). The flow problem of interenterprise arrears can be solved only through successful enterprise reform, as outlined in Chapter 6. However, the net credit or debt position of an enterprise is not a precise signal of its economic viability. Enterprises have not traditionally had to monitor and control their financial position; they therefore lack the administrative system to do so. Nor has the financial system provided enterprises with effective means to check the creditworthiness of purchasers, nor the legal system provided creditors with the means for pressing for payment.

7.8 The government is developing plans to deal with the existing stock of inter-enterprise arrears. The restructuring of enterprise balance sheets will have to involve simple rules and categorical treatment of liabilities. The initiative should include not only debt restructuring and new credits but a program for dealing with insolvent companies and a method for limiting interenterprise financing. Generalized bailouts without fundamental changes in enterprise ownership, however, will have at best limited beneficial effects and potentially damaging implications. Changing enterprise behavior is the key to the transition to a market economy, and fundamentally changing enterprise behavior means privatization and establishing effective corporate governance. Any approach to the problem of non-performing loans, including interenterprise arrears, must be seen from this perspective.

Box 7-2. Liquidity Problems in Banks

It is widely accepted that many of the Russian commercial banks have serious "portfolio problems." Given the low level of stated capital and the absence of provisions, the banks with portfolio problems are almost certainly insolvent. Banks can and do continue to function when insolvent. But liquidity is now becoming a serious problem. Illiquidity brings banking to a halt. For a bank, illiquidity is the inability to meet payments, that is to honor checks, withdrawals or wage payments.

From the first of the year reserve requirements for banks were raised in steps from 5 percent to 20 percent by April 1. To meet the heavy reserve requirements the banks have had to call loans and new lending in the inter-bank market has practically ceased. At the same time the interest rate on advances from the Central Bank has been raised to 50 percent. Even though negative in real terms, for banks unable to meet the reserve requirements, this will significantly increase the cost of funding. A few banks have already become illiquid, and the problem is spreading as the decline in economic activity reduces the ability of firms to service debt obligations.

Illiquidity of a few small banks will raise issues that will have to be settled, but should not cause a serious problem for the economy. Serious problems will arise if more than a few small banks are involved. The inability of banks to make payments would spill over to the enterprises and would further deepen the recession.

What curative measures could the government take if some banks become illiquid? They could do nothing; they could provide relief to just those banks affected; or they could run a more expansionary monetary policy to lift the liquidity strains in the system. The first is probably the preferred choice if the problem involves only a few banks of limited size. But if depositors in some banks lose their money, there is the danger that others sensing trouble will attempt to remove funds from other banks causing a bank run. Hence the government will almost certainly have to do "something" in the way of providing relief. Depending on depositors' expectations, relief to specific banks may or may not stem the danger of a run. In any case it creates a "moral hazard" problem, with other banks expecting to be bailed out should they get into trouble. Given that many banks are lending to their owners, moral hazard is a serious problem in Russia. Making clear that depositors have nothing to lose will remove perhaps the most important pressure in Russia today for prudent bank lending.

7.9 In confronting financial and enterprise reform, the government must make a number of difficult decisions: how to treat existing bad debts, how to set up a system for handling the remaining enterprises that are losing money, how to close some banks while recapitalizing others, how to privatize or otherwise develop a system that holds bank management accountable for bank profitability and how to develop a system for regulating and supervising banks and enforcing prudent behavior. Clearly this is going to take several years and will require massive changes in the structure and ownership of the banking system, in the legal and accounting systems, and in the behavior of the commercial and central banks.

Financial Reform

7.10 The financial system must be designed to serve the productive sectors. Its organization depends upon the organization of the remainder of the economy. The highly centralized monobank system of the USSR was designed to serve a command economy. A completely different financial system is needed to serve the market economy now being established in Russia. Were it simply a question of reforming the existing financial system to serve a market economy, the problem would be difficult enough, but it is made more difficult by the need to put in place at the same time a financial system which will serve the Russian economy while in transition. The financial system is being called upon

today—and is likely to be called upon over the next several years—to provide funding to loss-making, uncreditworthy enterprises. This undermines the very principle needed to establish a market-based financial system that imposes a hard budget constraint.

7.11 The entire economic system is too much in flux today to move to a comprehensive solution. There are many alternative ways to organize the financial system during the transitional stage. In most of the Eastern European countries, banks themselves continue to operate under a soft budget constraint. In Germany the problems were transferred to a special agency and the banks themselves began to operate market principles. Alternatively, the bad loans could be taken off the balance sheets of banks, but the banks would continue to manage the loans, again using government funds when lending to loss-makers. With either of these approaches, fundamental changes in the incentives facing managers of still-operating banks must take place, or the problems will quickly reemerge. In most countries where financial reform has been done, governments have recapitalized the banks by exchanging government bonds for non-performing enterprise loans. Once recapitalized, the banks should be privatized or, if still in public hands, corporatized and the management held accountable for bank profitability. At that stage the ability of the central bank to regulate and supervise banks becomes crucial to the success of the reform program. Given that it will take time to build up such capacity, a comprehensive solution to financial and enterprise reform would be premature. The remainder of this chapter therefore discusses the current state of the Russian financial system and offers some feasible next steps designed to improve the operation of the financial sector and set the foundation for healthy financial sector development.

Financial structure: ownership and capital

7.12 The current structure of the financial system discourages market-based credit decisions and perpetuates the existence of fragile financial institutions with concentrated loan portfolios and substantial outstanding credits to unprofitable firms. There has been an explosion of new banks; there are now over 1,600 banks in Russia (see Box 7-3). That does not mean that excessive resources are devoted to banking; in fact Russia is under-banked. But it has too many small under-capitalized banks. Most of the new banks are owned by groups of enterprises which get loans from their house bank—often at favorable interest rates. Many of these small banks exist only to borrow in the interbank market to finance the enterprises that own them. Consequently, the financial sector is not funding the most efficient enterprises, and the channelling of resources to loss-making endeavors increases the fragility of financial institutions. Financial reform hinges on cleaning up the relationship between the banks and enterprises, which ultimately means privatizing both enterprises and banks. Thus, there must be strong and carefully enforced limits on loan exposure to owners, and, to reduce risk, banks must be required to diversify their loan portfolios among sectors and firms.

7.13 Furthermore, many banks do not have adequate capital. The lack of adequate capital creates an unstable situation where banks have an incentive to engage in very risky practices. Good banking procedures will be difficult to encourage unless appropriate capital standards are established and enforced. International experience suggests that serious financial sector reform and the creation of a stable financial system will be virtually impossible if the banking system is characterized by enterprises owning under-capitalized banks that lend predominantly to those enterprises that own them.

7.14 **Sberbank.** Sberbank has a virtual monopoly on household deposits although Rosselkhozbank (a bank specializing in the agricultural sector and with many "rural" branches) is trying to compete for deposits in a few isolated rural areas. Sberbank offers depositors severely negative real returns on their deposits, and depositors have difficulties in withdrawing their savings deposits from Sberbank. This difficulty in withdrawing deposits both: (1) involuntarily increases the amount of bank deposits which,

Box 7-3. Banking in the Russian Federation Today

The Central Bank of Russia assumed all functions of Gosbank within the Russian Federation in November 1991, and Gosbank was formally liquidated on December 21, 1991. The assets and liabilities of Gosbank as well as the other Union banks are to be divided among the former republics.

After the Union Savings Bank was formally dissolved on January 2, 1992, the Russian Government guaranteed the deposits of its citizens within the Russian branches of the Union Savings Bank, which were reconstituted as the Savings Bank of Russia (Sberbank). Almost all household deposits are kept with Sberbank which has over 2,100 large branches and 41,000 small branches. The main controlling owner of Sberbank is the Central Bank of Russia, and Sberbank keeps substantial deposits at the Central Bank. At this time Sberbank has virtual monopoly on household deposits.

The ex-specialized banks are the largest commercial banks in Russia (see Box 7-1). Promstroibank, the largest universal commercial bank, is really a group of closely associated banks which specialize in lending to industrial and construction enterprises. Within Russia, Promstroibank consists of 39 large branch banks and 12 smaller affiliated bodies. Most of Promstroibank's business is with very large state-owned enterprises; much of its capital base and investment fund was provided by the State, and Promstroibank relies heavily on borrowing from the Central Bank of Russia at cheap interest rates to finance its lending activities. Rosselkhozbank primarily finances agricultural enterprises at subsidized interest rates. Rosselkhozbank borrows from the Central Bank of Russia and part of the interest rate subsidy is assumed by the Government. Rosselkhozbank is attempting to reduce its dependency for funds from the Central Bank by competing with Sberbank for deposits.

There are several joint venture banks with foreign partnerships (International Moscow Bank, Eurasco, Dialogue Bank, etc.) that focus on international financial transactions and various types of financial services. In addition, there are several large domestic commercial banks (Mosbusiness Bank, Menatep, Tokobank, Inkobank, etc.) that are attempting to function as universal banks within Russia. Among the new banks are many branches of the state banks which have declared themselves independent. Others of the new banks have been organized by groups of enterprises, regional organizations, cooperatives, or other types of institutes and organizations. Many of these institutions simply act as the treasuries of the enterprises funding themselves by accepting deposits from owners and borrowing on the inter-bank market.

along with severely negative real interest rates, increases the inflation tax base and (2) discourages voluntary deposits by households which ultimately reduces intermediated savings. Enterprise reform is the key to improving this situation; as loss-making firms are closed, successfully restructured, or privatized, the authorities will rely less on inflation and household savings deposits to finance loss-making enterprises and the pressure inhibiting individuals from withdrawing their bank deposits will correspondingly decrease. Ultimately privatization of Sberbank within the context of a broader financial sector reform strategy offers the most effective means of stimulating competition and improvements in the financial services available to households.

A strategic step: International Standard Banks

7.15 The emerging private sector together with the more productive state-owned enterprises will require enhanced financial services ranging from the provision of a payments system that facilitates trading to the screening of loan applications and the monitoring of firms' performance. Thus, fostering the development of some financial institutions providing high quality financial services and behaving in a prudent manner should be a major objective. One approach would be to set up an incentive structure for banks that are willing and able to meet prudential standards to separate themselves from financial intermediaries that cannot or do not wish to comply. The new banking act might stipulate different categories of licenses for financial intermediaries. The banks that choose to conform to international

banking standards could be compensated by being granted special banking privileges. These banks would eventually form the core of the new financial system.

7.16 A program for encouraging the development of stable, private-sector-oriented financial institutions, unburdened with bad loans and commitments to state-owned enterprises is under discussion with the Russian authorities. The *International Standard Banks (ISB)* program contains two major parts: first, a series of requirements (or standards) that individual banks would have to meet to qualify as an ISB, and second, a set of benefits for those banks meeting international banking standards. Among others, the requirements for becoming an ISB would include meeting capital adequacy standards, complying with strict single exposure and insider transactions provisions, employing international accounting standards, submitting to an annual external audit based on international standards, and having owners and managers meet a reasonable "fitness and suitability" test. These requirements would help insure the creation of a core of stable financial institutions that would allocate credit on market principles. If only ISBs had direct access to the payments system, this would help insure the stability of the payments system as well. Furthermore, it would be advantageous if most of these banks could arrange to have a foreign bank as a technical partner, if not directly a joint venture partner or a management contract. This would promote the rapid adoption of modern financial techniques and expedite training and modernization. In order to speed up the introduction of modern financial services, a liberal approach might be taken to granting licenses to international banks of repute from countries with effective bank supervision.

7.17 In return for meeting these various international standards, a qualifying bank would be given certain benefits. First, and possibly most important, it would be given the designation of an ISB—a designation that the bank could display and use in its advertising. This designation not only should benefit the banks, but would also help the public to distinguish "safe" banks from "riskier" financial institutions, something that the public is almost powerless to do at present. In addition, qualifying banks, because of this greater safety, might be given a number of other benefits, such as a lower discount rate when borrowing from the central bank, interest on reserves held with the central bank, a lower reserve requirement, direct access to the payments system, lower premium (and perhaps higher limits) for deposit insurance, and so forth. In principle, it would be desirable to balance the extra privileges with the added cost of meeting the higher standards.

7.18 The creation of ISBs could be usefully linked with the demonopolization of Sberbank's hold on household deposits. While parts of Sberbank might be organized into an ISB, over the next several years some of its branches could be sold to other ISBs to encourage competition. This strategy would stimulate the creation of a number of national banks with broad geographical bases, more diversified portfolios, stronger deposit bases, and better customer relationships. These attributes would foster the success of ISBs and the development of a healthy, competitive financial system. While these ISBs would form an initial foundation for the building of a modern private financial system, the ISB program must be linked with an explicit approach to reforming state-owned enterprises and banks that will continue to dominate the economy for some time.

Existing and future financial institutions

7.19 Special financial institutions might be desirable during the transition to assist the Government in financing large loss-making state-owned enterprises prior to their privatization, closure or restructuring. These institutions would lend on conditions less stringent than market criteria and would work closely with Government, being funded in part through the budget. These institutions might be new institutions or based on existing state banks. An important advantage of having specialized financial institutions is

that they would help contain bad loans within one part of the financial sector so that healthy institutions could emerge and focus on market-based credit decisions. Because so much of their portfolios would be made up of non-performing loans, these specialized financial institutions would ultimately have to be restructured and recapitalized or go out of business at the end of the transition period. The transparency of isolating the financing of loss-making firms in special institutions—as opposed to not distinguishing among types of financial institutions—may limit the financing of loss-making enterprises and accelerate enterprise reform by clearly identifying the magnitude of the problem.

7.20 Most of the existing financial intermediaries would not be able or willing to meet the stringent requirements necessary to become an ISB. These intermediaries could be registered under a different type of license. In practice there might be several types of licenses (not all banking licenses) each with its own requirements and privileges. These intermediaries would be subject to financial laws and regulations, but the constraints would be less stringent than for ISBs. Significant innovation in finance, both in terms of the introduction of new services and extending financial services to new groups, may come from these other intermediaries. On the other hand, they are likely to engage in riskier activities—as well as more fraud and mismanagement—leading to more failures. Since the public would be able to easily distinguish these institutions from ISBs, it would be both reasonable and credible to “let the user beware”; depositors would fully bear the risk of placing their savings in non-ISB financial institutions. Over time as their situation changes and these intermediaries become able to meet the requirements, some might apply for an ISB license.

Entry and branching

7.21 In Russia there are already a large number of financial intermediaries. Until the Central Bank has enhanced its ability to supervise their activities, the Government should move to discourage the growth in the number of small, poorly-managed banks—particularly in urban areas well serviced by other financial institutions. The initial capital requirement for a banking license should be set at a rate high enough to discourage the proliferation of new banks. Existing banks, which do not meet that requirement, should be required to raise capital to that level over a period of three years. Coping effectively with the existing situation, however, requires balance and dexterity.

7.22 Adding to the problem of financial structure, regulatory (not legal) prohibitions prevent banks from opening branches. This greatly reduces the efficiency of the banking market and prevents banks from growing to optimal scale. Some of these problems might be overcome through close correspondent relationships, but at present the Central Bank prohibits banks from opening corresponding accounts in any but the Central Bank. Both branching and correspondent banking should be encouraged, not discouraged.

Financial Infrastructure

7.23 Today, the financial information on enterprises and banks is poor. Adequate systems of accounting, auditing, and financial disclosure are lacking. Furthermore, there are not enough trained accountants, auditors, and financial specialists to produce and disseminate reliable and transparent information on enterprises and financial institutions. This lack of information makes it difficult to evaluate the quality of banks and enterprises, thereby exacerbating the already high level of risks facing potential investors and depositors. The high level of uncertainty in the economy deters productive investment and complicates the efficient allocation of resources. To improve the operation of the financial system, a new system of accounting needs to be developed, accountants and auditors trained, the system applied at the bank and enterprise level, and the information made available to those who are making

financial decisions. Furthermore, the legal infrastructure covering financial contracts, property rights, bankruptcy, the organization and powers of banks and other financial intermediaries, and other financial regulations need to be redrafted and with more difficulty, enforced.

Bank practices and bank supervision

7.24 Banking in Russia is unusually risky. The primary risk is credit risk. As mentioned above, banks allocate credit on non-market-based terms to unsound enterprises, and bank loan portfolios are concentrated by sector and by firm, exposing banks to excessive credit and sector risk. In addition, banks lack sound portfolio management procedures; banks borrow funds to make equity investments in risky enterprises, and banks allow borrowers to use short-term loans to finance long-term investments, creating a maturity mismatch. Furthermore, many banks have only a limited deposit base, making them heavily dependent on the inter-bank market for funding. This puts banks in a precarious situation since inter-bank credits are of short duration and can easily be called, as is now happening in Russia as banks seek funds to meet the higher reserve requirements. Also, banks do not take provisions against bad debts. In fact, provisioning is discouraged since provisions are not a deductible item for tax purposes.

7.25 Steps will have to be taken to improve credit review and control procedures, build adequate systems of portfolio management and enhance the transparency of credit decisions. Similarly, substantial training is needed to train bank staff that currently lack sufficient skills to provide modern banking services. Nonetheless, many improvements in banking procedures will require changes in the fundamental incentives facing bank managers. This means building bank capital, breaking the incestuous links between enterprises and banks, and reducing the pressures on the financial system to finance loss-making enterprises and privatizing banks. Enhanced banking supervision and regulation will also help stimulate improvements in bank operating procedures.

7.26 The Central Bank of Russia has only limited ability to collect data from banks and does not have the staff to carry out supervision of a significant fraction of the 1,600 Russian banks; nor does it appear to have the needed authority and control over the banks to force them to comply with its mandates. Insufficient supervisory capabilities in conjunction with banks that are primarily owned and controlled by a few enterprises lead to incestuous and often fraudulent lending practices. While having insufficient supervisory resources, the Central Bank sometimes attempts to over-control bank activity. Bankers complain about the pervasiveness of Central Bank regulation, the frequency with which new regulations are introduced (200 in 1991), the lack of consultation with the industry, arbitrary regulatory enforcement, and the failure to allow banks adequate time to adjust to new requirements. For example, the banks were given only three months to increase their reserves from 5 percent to 20 percent on the stock of deposits. Furthermore, taxation of banking is heavy, which causes large distortions in the pricing of credit. Banks pay three percent of gross revenues to the Central Bank for deposit and other insurance, and 30 percent of net revenues in taxes. Heavy taxation coupled with substantial reserve requirements on which no interest is paid force banks to charge high spreads between borrowing and lending rates. Under present conditions, the interest rate charged on loans needs to be nearly twice of that paid on deposits for banks to earn reasonable profits.

7.27 The steps to address these problems are straightforward, though far from simple to implement. The Central Bank should have unambiguous objectives in terms of credit and regulatory policy and sufficient independence, authority, and resources to pursue price stability and sound bank regulation. The system of collecting bank data, review by the Central Bank and publication all need to be developed; the Central Bank needs to improve its on- and off-site banking supervision capabilities; and the taxation of financial intermediaries needs to be rationalized. In the short run, intensified bank

supervision and regulation and the tightening of bank licensing procedures alone will not be able to improve risky banking practices or correct inappropriate ownership structures. While appropriate regulations can be written, they cannot yet be enforced. Thus, while the authorities should continue, and indeed intensify, efforts to introduce the necessary laws and regulations and build supervisory capacity, the government will need to pursue additional strategies if it is to encourage effective market-based financial sector development.

Payments system and other financial markets

7.28 The existing payments system is too cumbersome and unreliable (see Box 7-4). With the shift to a market economy the number of transactions requiring financial settlements will rise exponentially. Large firms will break up, shifting settlement from internal bookkeeping to external payments. Furthermore, the public will begin to pay for items with checks. Trading in financial instruments (equities, stocks, mortgages, etc.) will begin. In terms of payments, the value of these instruments is many times that for goods and services. A poor payments system discourages trade and is open to abuse, thereby inhibiting productive economic activities. Improving the payments system is thus an urgent priority, and the Russian authorities, with technical assistance from the International Monetary Fund, have begun to study ways to improve the system of payments both within Russia and with other countries.

7.29 Similarly, the inter-bank and foreign exchange markets need further development, and Russia will need a well-functioning securities market to trade shares following the privatization of enterprises. The authorities are also studying ways to develop a short-term Treasury paper market. Furthermore, the Government is looking to initiate the process of interest rate liberalization and is planning to raise the interest rate paid on Sberbank loans to the Government, to raise interest rates on household deposits offered by Sberbank, and to increase the Central Bank's finance rate to a real positive rate. However, until the rate of inflation declines, interest rates on many instruments are likely to remain negative in real terms.

Conclusion

7.30 What are the principles that should guide reform in the financial area? As indicated in Chapter 6, enterprise behavior must change and that can be encouraged by establishing clear property rights through the privatization of both enterprises and banks. Privatization has begun. But privatization in Russia will take years to complete. Meanwhile pressure must be put on enterprises to use resources efficiently—and the financial sector must not become the means by which that pressure is relieved. Finance to enterprises in the form of budget grants, loans from banks or interenterprise arrears must be in line with making enterprises face hard budget constraints. That does not mean simply closing loss-making enterprises. But it does mean limiting losses, possibly by determining in advance the losses that will be financed and reducing the subsidy over time.

7.31 Banks with significant bad debt and banks that continue to finance enterprise losses cannot be privatized. Hence financial reform must be married to enterprise reform in terms of timing. While total reform of the financial system will take years, Russia should now be putting in place the necessary infrastructure for a private banking system, ranging from the legal, accounting and payments systems, the procedures for financial market regulation and supervision, training personnel, to a system of licensing new intermediaries. Work in these areas has started, but much remains to be done.

Box 7-4. The Payments System

Many payments require between 14 to 17 days, and there are indications that some payments, even between banks in Moscow, take over three weeks for the Central Bank of Russia (CBR) to settle. A cumbersome payments system hinders effective market activities. In addition, the "payments float," the value of transactions in transition through the payments process, is large, variable, and growing. As checks become more popular (they currently account for less than five percent of transactions) and business relationships evolve the demands on the system will increase.

An efficient payments system will promote the economic transformation, while a poorly-functioning system is likely to retard successful movements toward a market-based economy. In a market economy, participants must be able to write enforceable contracts and settle financial agreements quickly and confidently, or else transactions costs and uncertainty will discourage mutually beneficial trades. In addition to facilitating economic activity by increasing financial market efficiency, a sound payments system can improve monetary control by (1) facilitating active liquidity management by banks, which would reduce the size and variability of bank reserves held to settle payments, and (2) reducing the size and variability of the net payment float, which would simplify monetary programming. Furthermore, if the payments system does not allow banks to obtain reserves from other banks quickly, then monetary tightening could make some banks illiquid or lead to an offsetting monetary expansion through central bank refinancing. Moreover, a well-functioning payments system is necessary for the development of a domestic money market. Banks and security dealers will be less likely to invest excess funds in a money market if there are long and variable lags involved in retrieving these funds.

The CBR is taking steps to improve the payments system. A standard check instrument is being developed. Plans also include automating the processing of payment orders and checks through the CBR, electronically connecting cash settlement and computer centers to reduce reliance on the postal service, and providing direct connections with commercial banks for automated entry and receipt of payments. Critical measures for the near term include: reducing the size and variability of the float and speeding up clearing and settlement, simplifying interbank and interstate settlements of large transactions. Steps should be taken to prepare a Payments System Law and develop payments regulations. Measures should also be taken to improve inter-republic payments mechanisms to facilitate financial transactions and thereby minimize disruptions to inter-republican trade. The long-run objectives (to be completed by mid-1994) would be to enhance the software and hardware of the settlements system, upgrade communications, improve large- and small-value payments, and reduce clearing and settlement to one day.

7.32 The complexity of Russia's financial/industrial situation today is likely to defeat most attempts at immediate, comprehensive reform. The recommendation to establish international standard banks provides a feasible approach to creating banks that will mobilize deposits at realistic interest rates, lend prudently to private firms and profitable state-owned enterprises. The success of even a small number of ISBs in contrast to the manifest failings of the rest of the system can serve as an impetus to change.

CHAPTER 8

Trade and Payments Arrangements

8.1 The transition to a market economy requires functioning markets where relative prices provide meaningful signals for restructuring. But prices today remain seriously distorted—and the pattern of production is not consistent with comparative advantage.¹ Open international competition establishes an appropriate set of relative prices. It induces efficient resource allocation and contributes to growth. Trade in its broadest sense also would be facilitated by restructuring and opening up the distribution system within Russia. This would help develop supply linkages between enterprises within Russia and between the former republics. What happens to trade is crucial for Russia given the high degree of economic interdependence in the former Soviet Union (FSU), Russia's potential gain from exports and from a closer integration to Western markets, and the prevalence of domestic monopolies.

8.2 The present trading system continues to be hampered by significant impediments to trade, especially various restrictions of exports for convertible currency and excessive regulation of inter-state trade relations. Lifting these restrictions will help Russia generate foreign exchange to pay for needed imports and service debt. But any reform in the trade regime will need to be linked to restructuring in the industrial sector as export restrictions, for example, in some cases substitute for an explicit subsidy for domestic producers. While levels and patterns of trade among states are already changing, too abrupt a disruption in these patterns will compound existing supply constraints. At the same time, it would be difficult to move immediately from the present system to one characterized by fully convertible currencies and liberalized trade. Hence there is a need for policies of transition.

Reform of the Trade Regime

8.3 Steps are being taken to introduce a competitive trade regime. It is clear that measures to facilitate trade within the former Soviet Union (FSU) are required as disruption in this trade has already had a negative impact on output. Trade with third countries continues to be hampered, especially by various restrictions of exports for convertible currency. Liberalization and deregulation must continue in both inter-state and third country trade. Common to both is the need to link changes in the trade regime with reform and restructuring in the enterprise sector, especially privatization and the removal of barriers to entry. Reform in the trade system cannot be separated from the introduction of hard budget constraints to enterprises, the elimination of subsidies and privileged access to credit, and privatization. This argues for strong up-front measures which give clear signals about the ultimate priority of structural transformation over cushioning of change, to induce enterprise adjustment to the new economic environment.

8.4 Change must come in four areas: (a) in the regime towards third countries; (b) in the use of state orders in trade among the FSU states; (c) in the payments arrangements, and; (d) in the coordination of trade policies among the states of the FSU.

Trade with third countries

8.5 Even in a large economy such as Russia's, exports are a key to rapid growth—and this is especially the case in the short run when domestic demand is and will remain depressed. Quantitative restrictions or licensing should not be used to restrain exports. Export taxes are the appropriate

instruments to use where exports need to be regulated, because domestic prices are controlled (and are below international prices at prevailing exchange rates). Export taxes should decline to zero as the domestic price moves toward the world price.² Up to July 1992 exporters were also penalized by having to surrender foreign exchange at below market exchange rates. Since then they have been required to surrender half their export earnings to the Central Bank, but at the market rate. Exporters are resorting to barter and other means to circumvent this requirement not because of the exchange rate they receive, but because they do not wish to hold rubles under the current inflationary environment.

8.6 Recently a relatively uniform tariff of 15 percent was introduced, largely for fiscal reasons. This is an effective but distortionary means of taxation, and it could be phased out of the domestic tax system, once it becomes better developed. Tariffs can be used as a useful transitional device to provide a modest degree of protection to low but positive value added industries. But to encourage restructuring they should be phased out within a few years. High tariffs (above 25 percent) are counterproductive even on a transition basis; they tax exports, may protect negative value added industries and will induce trade diversion.

State trading

8.7 State orders used to meet bilateral trade protocols with neighboring states are today commonplace. When domestic prices are adjusted to world prices, there will be no reason to maintain this practice. In the interim, bilateral agreements are a pragmatic response to sustain trade. Even so, such agreements should reduce the portion subject to state obligations to those few products that are adjusting to world prices on a gradual basis, and utilize procurement agents rather than state orders and planning to implement trade in these products. Compared with monetary and payments arrangements summarized below, export licenses on all other products are an inefficient method of dealing with the problem of controlling excessive ruble-trade surpluses. In the absence of such arrangements, the use of indicative lists may serve as a second best transition device instead of obligatory lists. For products on the indicative lists, there would be no state obligation for the trade, and enterprises in the respective countries would negotiate their best terms on price, credit, and other aspects of the contract. The indicative lists commit governments to issue export licenses for the products in the agreements up to the amounts specified, permit the removal of the product from intergovernmental price controls, and reduce state planning in economic decision-making relative to obligatory lists.

8.8 Entry of new firms in trade operations should be encouraged. This would effectively eliminate the monopoly position of state trading organizations (STOs). STOs should be restructured into competing multipurpose and multiproduct traders. They could diversify, for example, into procurement agents for the Government. Improvement in government procurement is critical for efficient use of Western import assistance. Competition is, however, essential for efficient procurement; the new agencies must have to compete with private companies and may be encouraged to privatize themselves. Similarly, the "concerns" should not be given the monopoly right to allocate state procurement. The allocation of state procurement provides the concerns with power over producer members in enforcing collusive arrangements.³ Such restrictions to free trade would be difficult to sustain in more competitive markets. To ensure adequate trade flows of bulk commodities (grains, for example) state agencies may be needed. But in all such cases, state trading should stop once private firms and distribution channels develop. Governments must encourage the growth of private trading and should take steps, such as making trade credits available, to ensure that private traders are given equal opportunity to participate in trading activities.

Payment arrangements

8.9 Currently, settlement of balances due between commercial banks across state borders may take three months—and the Central Bank of Russia clears nearly every transaction. Within the ruble zone, there is a need to strengthen the system of payments.⁴ Bilateral settlements through the Central Bank favor the control of trade by limiting the outstanding balances that each state may maintain. As a first step, a multilateral rather than bilateral system of balancing should be introduced.

8.10 A problem with the present system, either with bilateral or multilateral clearing, is that there may be persistent creditors or debtors within the system. One or another state may find itself in a position of providing or receiving real transfers of goods and services in exchange for monetary assets. Russia in particular may be expected to run surpluses in the near term. The adjustment of trade to world prices will shift the terms of trade in her favor, and Russia may find it difficult to sustain large trade surpluses within the FSU. The answer to this problem should not be sought in curtailing trade. Rather, the efficient solution is to establish monetary coordination in a properly functioning ruble zone. Monetary coordination would involve, at a minimum, aggregate ceilings on money and credit expansion with shares allocated to individual states.

8.11 Efforts are urgently needed to reach agreement among those Central Banks that are interested in participating in a ruble zone on the rules regarding fair distribution of the seignorage, currency emission, and monetary policy, as well as rules regarding the levels of outstanding balances that each may be able to maintain. The free-rider problem that significantly contributes to the imbalances would be controlled; stabilization and convertibility of the ruble would be facilitated. Within a coordinated ruble zone a recalcitrant debtor (on a *regional*, not bilateral, basis) could be penalized. A penalty rate of interest would be levied on balances outstanding between central banks beyond a reasonable clearance period. The higher cost of borrowing would induce monetary restraint on the part of the deficit country and would act to correct the imbalance. Monetary coordination and a movement toward convertibility of the ruble is the desirable way of dealing with imbalances, not restraints on trade.⁵

Preferential trade areas

8.12 Inter-state trade relations should avoid beggar-thy-neighbor policies which result in diminution of total trade. Unfortunately, these practices have increased in recent months in the FSU. Oil importers, though they will suffer with price liberalization and movement to world prices, must not attempt to compensate by exploiting monopolistic positions in other areas, as for example in transshipment services and territorial transit. An effort must be made to reach agreement for a phasing-in of major price increases, as is being pursued in energy pricing. Russia should lead in establishing a customs union or free trade arrangement in the FSU.⁶ This would bias trade towards inter-state trade—and for this reason the arrangement should be limited in time. A free trade arrangement, like temporary protective tariffs, will ease the speed of transition. Ultimately, however, the economies must adjust—and benefit from—their long-run comparative advantage in international trade. This certainly will involve less trade dependence on each other.

8.13 In summary, the highest priority trade reforms are: first, elimination of restraints and disincentives of all kinds against export to third countries, except for export taxes for those limited number of goods adjusting to world prices on a gradual basis. Second, elimination of state obligations and orders in inter-state trade, retaining indicative-list trade for only those items subject to domestic price controls, while shifting all other trade to enterprise-to-enterprise trade. Third, monetary coordination and

restraint within the ruble zone, coupled with the formation of a clearing (not payments) union for facilitating trade among the emerging countries with new but inconvertible currencies. Fourth, formation of a preferential trade area among as wide a group of former Soviet states as possible.

8.14 Appropriate sequencing of the reforms is critical. The elimination of export restraints of all kinds should be done immediately. Monetary coordination within a ruble zone is also a step that is essential to achieve rapidly. Reform of inter-state trade based on lists may be accomplished with the negotiation of the new agreements, if any, for 1993. The formation of a clearing union is a step that should await the adoption of new currencies by independent states. Finally, the tariffs that have been adopted for third countries should not be applied to independent states even if they have adopted new currencies, provided reciprocal treatment is offered.⁷

The Current Situation

The existing web of interdependence

8.15 In 1991 total exports of the 15 states of the former USSR territory to the rest of the world amounted to \$70.2 billion, a decline of 32 percent from 1990. Declines in exports to other former Eastern European members of the Council for Mutual Economic Assistance (CMEA) were especially large, with the largest drop in machinery and related products.

8.16 Trade *among* the 15 states accounted for up to 90 percent of their total trade. Russia was the least dependent on inter-state trade (with such trade accounting for 61 percent of the total), while for all other states, inter-state trade accounted for over 80 percent of total trade (see Table 8-1.) No firm estimates on the evolution of inter-state trade in the last year are available. But some preliminary estimates indicate that inter-state trade has declined by more than 20 percent, and it is widely reported that such trade has declined even more than trade with third countries.

8.17 The Eastern European experience of the demise of the CMEA is instructive for the future evolution of trade among states of the FSU. A number of studies have estimated that, although the total external trade of the CMEA countries was not out of line, intra-regional trade within the countries of the former CMEA was excessive, and that such trade will decline when it is placed on an equal market-based footing with other trade, by as much as 60 percent.

8.18 It has been argued that for the purpose of analyzing trade flows, the FSU can be viewed as an intra-national CMEA among its states, except that unlike the real CMEA, there was a supra-national power planning both trade flows and the pattern of investment and specialization. The central planners' investment preferences, however, only peripherally reflected comparative advantage. In particular, based on the collapse of sales of the machinery and related sectors in Eastern Europe in 1991, these sectors appear to lack comparative advantage. Thus, it is likely that a very significant portion of the inter-industry trade among the states of the former Soviet Union in manufactures is based on trade diversion which will vanish in the long run without preferential treatment.⁸

8.19 However, the recessions of Eastern Europe during 1991 have been attributed in significant part to the rapid decline of trade among the countries of the former CMEA and these adjustment costs have been greater for the countries that were most heavily dependent on the Soviet market (that is, Bulgaria has had a more difficult adjustment than Hungary).⁹ But the states of the FSU are even more dependent on inter-state trade than are the countries of Eastern Europe on CMEA trade (see Table 8-1).

**Table 8-1. Total and Intra-regional Foreign Trade as a Percentage of GNP
Former Soviet States, Eastern Europe CMEA, and European Community Members
1989 or 1990**

	Foreign Trade		Intra-regional Share of Total
	Total ^a	Intra-regional ^b	
Former USSR^c			
Armenia	28.4	25.6	90.1
Azerbaijan	33.9	29.8	87.7
Belarus	47.3	41.0	86.8
Estonia	32.9	30.2	91.6
Georgia	28.9	24.8	85.9
Kazakhstan	23.5	20.8	88.7
Kirgizstan	32.3	27.7	85.7
Latvia	41.4	36.7	88.6
Lithuania	45.5	40.9	89.7
Moldova	33.0	28.9	87.7
Russian Federation	18.3	11.1	60.6
Tajikistan	35.9	31.0	86.5
Turkmenistan	35.6	33.0	92.5
Ukraine	29.0	23.8	82.1
Uzbekistan	28.5	25.5	89.4
Eastern Europe (CMEA)			
Bulgaria	30.1	16.1	53.4
Czechoslovakia	23.0	10.9	47.2
Hungary	34.1	13.7	40.3
Poland	19.6	8.4	43.1
Romania	17.6	3.7	21.0
EC			
Belgium	74.2	44.5	60.0
Denmark	32.7	13.7	41.7
France	23.3	13.0	55.6
Germany	29.8	14.4	48.2
Greece	26.8	13.3	49.4
Ireland	59.9	38.9	64.9
Italy	20.4	9.7	47.5
Netherlands	54.4	34.2	62.9
Portugal	42.1	24.6	58.4
Spain	19.8	9.0	45.3
United Kingdom	26.0	10.7	41.2

Note: Data for 1990 are used for the former USSR and the EC, 1989 data for Eastern Europe.

- Trade is measured by the average of exports and imports as a percentage of GNP.
- Intra-regional trade refers to trade within the former USSR, the CMEA or the European Community (EC), respectively.
- Statistical reporting by Goskomstat of the convertible currency trade of the former USSR is significantly biased downward by the use of a highly overvalued exchange rate. Thus, when the convertible currency trade is properly valued the total foreign trade dependence of the former Soviet states would increase, and the share of intra-regional trade would be lower than indicated in the table.

Source: Former USSR: Goskomstat for trade data in foreign trade prices, and unpublished World Bank estimates for GNP; Eastern Europe: UNECE (1990) for trade data, and World Bank Atlas for GNP; Pisani-Ferry and Sapir for the EC.

Thus, the potential for output decline induced by a trade decline in the former Soviet Union is quite substantial.

8.20 To the extent that inefficient, trade diverting trade is a significant component of inter-state trade, a "Prisoner's Dilemma" faces each of the 15 states during the transition.¹⁰ For any individual country, the optimal strategy would be to export its inefficiently produced manufactured commodities to its traditional markets within the former USSR (especially if it can get convertible currency for them), and maximize imports from least-cost suppliers which are likely to be developed market economies. However, if all countries adopt this strategy, their income would collectively decline because they would have no market for a significant part of their exports during the transition. The key question then is not so much whether inter-state trade will decline in relative terms in the longer run, but the pace at which it will do so.

The main causes for concern

8.21 By early 1992, trade among the countries of the former Soviet Union verged on the chaotic. Governments have attempted to "protect republic resources" by establishing export controls through quotas and licenses on the bulk of their exports both to third countries and for inter-state trade. There has been a significant deterioration in the payments system and continued uncertainty as to how much the ruble is worth. Moreover, although in 1991 it was envisaged that inter-state trade would be conducted primarily on the basis of bilateral agreements and protocols which specified in detail specific goods to be exchanged up to fixed volume limits during the 1992, implementation of the detailed protocols was delayed until March 1992 and contained many problems as discussed below.

8.22 As a result, trade flows have been reduced to levels significantly lower than previously envisaged. Three developments have emerged from this chaos: (a) the widespread use of export licenses, (b) increased emphasis on bilateral trade agreements between states, and (c) the increase in barter trade.

8.23 *Quantitative restraints on exports.* Perhaps the most significant barrier to trade during early 1992 is the widespread use of export licenses. The states of the former Soviet Union are making widespread use of this device, and generally license exports both for inter-state and convertible-currency area trade.

8.24 The motivation for export licenses derives from a number of considerations. Because of the variance in the extent of price liberalization adopted in different republics, there are significant price differentials in a number of products across republics. In the presence of a common currency and basically open borders, governments have intervened to maintain these differentials by establishing quantitative export restraints for many products. Furthermore, there are a number of products, notably energy, whose prices are kept below the world level. In Russia, export licenses have been established to allow it to reduce the export surplus in world prices that it appears to have accumulated on inter-state trade in 1991, essentially because it wishes to reduce the implied transfers to other republics, and because it fears that without controls even larger transfers may occur as energy prices are liberalized. As there are no rules of origin in inter-state trade, Russia is concerned about re-export of energy and various metal products by other republics.

8.25 Export licensing has also been prompted by most states' desire to try to keep "goods at home." Even today, many states are reluctant to accept rubles for goods because they fear that currency reform in other states will render any accumulated ruble balances worthless. Finally, bureaucratic interests rule that export licensing be maintained as a tool for continued state control of economic activity.

8.26 **Bilateral state trading arrangements.** Most governments appear to believe that the best way to maintain inter-state trade is to focus on attempts to enforce the bilateral arrangements that they have concluded, rather than to free trade and create an environment for decentralized, enterprise-based transactions. By March 1992 an extensive network of bilateral trade agreements among the independent states of the FSU had been signed.¹¹ These protocols followed the pattern of dividing trade into three categories: (a) obligatory-list trade, (b) "indicative-list" trade, and (c) enterprise-to-enterprise trade. These categories are discussed in Box 8-1.

Box 8-1. Different Types of State Trade

Obligatory-list trade. In the first category, trade is conducted on the basis of a large intergovernmental barter of 100 to 150 of the most important products in interstate trade. This type of trade resembles (but is not identical to) the old-style state obligatory trade of the Council for Mutual Economic Assistance (CMEA). For example, Russian fuel and energy products are in this category. Commitments made under this category carry with them the obligation of the state to fulfill the contract. All exports under this category are licensed by the state and generally must be sold to designated specific enterprises in the importing state. An effort is made in the negotiations to roughly balance this portion of the trade, by assigning prices and adjusting volume.^a In principle prices are set at world market prices; but, in fact, for the purpose of settlement, trade values are revalued from dollars into rubles on a commodity-by-commodity basis in a negotiation that takes the domestic price in rubles into consideration. Thus, notional relative prices in rubles are closer to domestic prices than relative prices in dollars.^b Finally, many products under the obligatory lists specify maximum permitted prices.

Indicative-list trade. With some important differences, the indicative-list trade is similar to the indicative-list trade that characterized Eastern European trade in 1991 after the demise of the CMEA. Enterprises in the different states may engage in contracts with each other where they define all the terms of the sales, including price and credit conditions. Depending on the specific country there are 1,000 to 1,500 products that are on the indicative lists. The state has no obligation for this part of the trade, but these products are subject to export licensing. Both states in the bilateral protocol agree to automatically provide export licenses for all enterprise-to-enterprise negotiated contracts up to the quota amounts that are specified in the protocols. Given the uncertainties sometimes induced by export licensing, the guarantee of an export license is important.

Enterprise-to-enterprise trade. All products that are neither on the obligatory nor indicative lists may be freely traded at the enterprise-to-enterprise level. This leaves thousands of products to be freely traded between independent states without either import or export restraints but the most important products are in the first two categories.

a. Nonetheless, Russia estimates that it will run a significant inter-state trade surplus during 1992 on the trade under the protocols.

b. It is impossible for governments to negotiate world market prices of goods that are subject to significant quality variation. The market price of such goods can only be determined by supply and demand, that is, through the process of seeking the best offer from alternative buyers and sellers at the level of the enterprise and consumer.

8.27 There are two additional institutional features of inter-state trade that are important: (a) this trade is not subject to export taxes that apply to third countries (even export taxes to the Baltics have been waived), and (b) many of the products under the lists are subject to maximum price controls.

8.28 The absence of export taxes provides an incentive to enterprises to divert exports to inter-state trade. Nonetheless, significant problems have been observed regarding lack of fulfillment of the obligatory trade in the agreements; this is primarily due to price controls, which reduce the incentive to export. At the same time, however, the previous system of state orders has either broken down or become less effective. As a consequence, enterprises, which either do not find it profitable or do not have the needed inputs, often do not supply the agreed-upon quantities.

8.29 For a number of reasons the obligatory lists are clearly incompatible with a market economy. First, the governments ultimately are responsible for choosing, in a bilateral negotiation, which products are on the lists. Since inter-state trade is likely to be a significant portion of trade for the medium term, the governments would define and control a significant portion of the industrial trade through the obligatory lists. Second, experience with obligatory lists in the CMEA has shown that the process leads to losses of dynamic efficiency. It is extremely difficult to obtain the value of an improved product through the government negotiation process, resulting in little or no product innovation.

8.30 On the other hand, since the indicative lists do not convey a government obligation to export or import, and prices on the lists would only be suggestive (they are included primarily for the purpose of roughly estimating bilateral balance in the trade while actual prices would have to be agreed at the enterprise-to-enterprise level), indicative lists are a useful transition device. The guarantee of export licenses up to the quantities on the lists is the only really binding aspect of indicative lists, and this guarantee is a useful feature to help overcome the licensing problems discussed above.

8.31 With respect to either kind of list, major questions remained as of early 1992. At that time, the former republics began negotiating new trade arrangements for 1993. On July 1, 1992 Russia introduced new mechanisms (single correspondent accounts) in order to monitor and control trade flows, against the backdrop of concerns about easy credit policies in other republics. However, the control mechanisms have added to delays in settling payments. More fundamentally, as long as trade is conducted on the basis of bilateral government agreements, there is a tendency for governments rather than markets to impose choices; the result is inefficiency and the negation of the very objectives of establishing a market system.

8.32 *Barter.* During 1991, the fiscal deficit in the territory of the former Soviet Union was reported to be at 20 percent of GDP and, as the deficit was monetized, inflation accelerated rapidly. To make matters worse, price controls were in place on most products, so that the hyperinflation was repressed (that is, not measured in price increases but in increased quantity shortages). This resulted in extensive queuing and massive resource loss (time and other resources) by consumers in an effort to obtain the goods under severe shortage. When price controls result in shortage, enterprises will turn to barter to obtain both their needed inputs and consumer goods for their workers.¹² In effect, price controls combined with the extensive monetization led to a situation where the ruble was not a viable money. Were it not for enterprise-to-enterprise barter, the output decline of 1991 is likely to have been much greater.

8.33 Barter has remained an important means of trade within Russia during 1992. The liberalization of prices in early 1992 helped reduce some of the pressure for barter. However, considerable incentive for barter still remains within the system. It is, for example, a means for circumventing the payment of VAT, as low transferable prices are used under barter. Also local authorities have increased their "take" of output from enterprises for the purposes of barter. This type of activity has increased with loss of control from the center. Moreover, some prices were still not at a market clearing level.¹³

8.34 Barter in inter-state trade has not diminished. This is for a number of reasons. First and foremost, due to constraints in the intergovernmental protocols, price controls are much more prevalent in inter-state trade than in domestic trade. Second, with the dissolution of the Union and Gosbank in particular, there has been a decline in the efficiency of the inter-state banking system, at the same time that the Gosbank guarantee for these transactions has been removed and that credit has been tightened.¹⁴ The increased delays in an environment of high inflation implies greater risks and costs of using the banking system. Third, inter-enterprise arrears is a large and growing problem throughout the FSU. Enterprises ship goods and discover that there are no funds in the bank account of the buyer. Often less information and additional risks are involved in trading with enterprises farther away. Courts to resolve commercial disputes are national and are biased towards the home-country enterprise, so that often two national tribunals reach opposite conclusions.

Some additional complications in the near future

8.35 In addition to these issues, two developments loom in the very near term which are likely to cause further difficulties in inter-state trade: (a) the introduction of international prices in the valuation of tradables; and (b) the introduction of separate inconvertible currencies by various states.

8.36 *International pricing.* There is no doubt that the introduction of international prices in the valuation of products that enter inter-state trade is an essential step towards improving resource allocation and the integration of these economies into world trade. The problem arises because the wide divergence between present domestic and international prices means that basing trade transactions on the latter would result in significant terms-of-trade gains and losses among different states.¹⁵ Furthermore, to the extent that international prices are passed on to the final user, this could require considerable economic restructuring in activities which were dependent on underpriced inputs (both in domestic and inter-state trade). The terms-of-trade adjustment is ultimately unavoidable. The only question is the pace at which it occurs.

8.37 The case of oil pricing by Russia is an important example. Russia has declared its intention to raise energy prices in three steps ending in 1993 and to introduce international prices in its inter-state trade. If it were to do so in its exports of oil to other states of the Commonwealth of Independent States (CIS) (it has apparently already done so in trade with the Baltics), it would result in the price of crude oil moving from 1,800 rubles per ton plus a 28 percent value added tax to about \$130 per ton. At the market exchange rate of about 210 rubles to the dollar, this amounts to over a hundred-fold increase. Such an increase could have severe adverse consequences for energy-intensive enterprises in other states. Their governments could attempt to cushion this impact in the short run using the provision of temporary subsidies; but their capacity to do so would be obviously constrained by the need to contain public sector spending and fiscal deficits. As a consequence the Russian Government has indicated that it would be prepared to provide energy to the CIS states at the internal price during the transition period.

8.38 While the notion of cushioning the drastic shift in terms of trade for the former Soviet republics has some clear benefits, it is not clear that cushioning can actually be accomplished in practice. On purely economic grounds, the provision of subsidies on inter-republican oil and gas exports remains a very poor way of maintaining trade with and making transfers to the other republics. This is true even if the mechanics of equalizing domestic and inter-republican export prices can be solved. Basic economics demonstrates that subsidies in kind—via subsidized energy prices—have a much lower real value than monetary transfer or income subsidies. Russia's decision to continue subsidizing inter-republican energy prices also raises other questions about arrangements that need to be made to prevent re-export of oil at international prices by the other CIS states.

Box 8-2. Inter-republic Oil Subsidies Compared With Transfers

The excess cost of providing a given real transfer via a price subsidy rather than an income subsidy depends upon the importance of the subsidized item in total expenditure and the (uncompensated) price elasticity of demand for the item. Though the price elasticity of oil and gas demand may be low in the short run, the longer-run elasticity is much larger so that total consumption in each republic is much higher than it would be under an efficient pricing regime. Thus, the real value of energy subsidies to the importing republics is considerably lower than their nominal value even in 1992 while the long-term cost of sustaining an inefficient pricing regime should not be underestimated.

There is a further consideration which is highlighted by the situation of Turkmenistan under the current arrangements. Russia's policy forces all producers of oil and gas to subsidize consumers. Both the direction and relative burden of transfers in kind from Russia to, say, Belarus, Moldova, and Tajikistan can be defended on distributional as well as other grounds, but transfers from Turkmenistan to Ukraine impose a much larger burden on the lower-income economy. Oil-producing republics such as Kazakhstan also find themselves in the anomalous position of producing a net exportable surplus in physical terms but losing heavily on the exchange of crude oil for petroleum products because of distortions in relative prices created by the regulatory arrangements governing inter-republican trade. This provides an incentive to eliminate such trade rather than promoting a rationalization of energy production and transformation over the former Soviet Union as a whole.

What this means is that charging dollar prices for inter-republican exports of oil and gas combined with an explicit transfer of foreign exchange to the energy-importing republics would be a more efficient method of assisting them than would subsidized oil and gas prices. Unfortunately, such an approach would not appear to be politically acceptable.

8.39 **New currencies.** For a variety of reasons—to allow conduct of an independent monetary policy, exert claims over seignorage, and assert national identity—various states, in particular, Ukraine and the Baltics, appear determined to introduce their own currencies. Others might do so in the future. The introduction of new currencies poses no problems to international trade if these currencies are convertible for trade transactions. If, however, they are not, a further impediment to trade may be created; in the absence of convertibility, trade transactions will not occur among enterprises—except through continued barter. Alternatively, trade may have to continue to be channeled, as in the past, through bilateral state-to-state agreements.

8.40 In sum, the dissolution of the USSR poses a variety of linked problems. Licensing and quantitative controls are linked in part to the conduct of trade through bilateral state-to-state agreements; the reduction of barter is linked to the establishment of a suitable payments mechanism and the stabilization of the ruble; and the establishment of new, possibly inconvertible, currencies raises additional payments questions for the conduct of interenterprise trade.

Transitional Trade and Payment Arrangements

8.41 In the longer term, it is clear that trade would be facilitated by the establishment of convertible currencies—including perhaps a convertible ruble zone and possibly other currencies—and the adoption of a trade regime with low and uniform tariffs, as free as possible of non-tariff barriers and quantitative restraints. In such an environment, enterprise-to-enterprise trade would flourish uninhibited by governmental regulations. Of course, whether in such a setting tariff preferences should be extended to commodities produced in other states of the former Soviet Union and what form such preferences should take would have to be determined. The optimal solutions are clear in theory. But the current situation is so far removed from this longer-term scenario that the key questions relate primarily to the

transition and to second-best arrangements which nonetheless would represent an improvement, and, it is hoped, move policies in the direction of the longer-term optimal environment. First, overall trade policies are discussed and then questions of policies regarding inter-state trade and payments are addressed.

Policies regarding export controls

8.42 Export restraints of all kinds (most notably licenses and taxes) to the convertible-currency area hurt Russia because they reduce foreign exchange earnings. Given prevailing market exchange rates of over 200 rubles to the US dollar in mid-1992, workers were earning only about \$20 per month, demonstrating the very high value of convertible currency. Without the convertible currency to import key inputs, some industries may be forced to close.

8.43 By restraining exports to the convertible-currency area, Russia loses the convertible-currency earnings which, if available, would appreciate the real exchange rate and make imports less expensive for its residents. In effect, the restraints on exports impose a significant *implicit* tax on imports. The policy of export restraints has the effect of restricting imports and providing protection for import competing industries. Moreover, export restraints, by reducing export earnings, raise the amount of financing countries need to obtain from abroad to maintain imports at levels required to sustain domestic production.

8.44 For certain commodities, notably oil, Russia would need to continue to maintain export restrictions to keep the domestic prices below world price levels for the time being. The principal tool for export restraint preferred by most of the governments is export licensing. However, for such commodities, export taxes rather than export licenses, are a preferable instrument of export restraint for a number of reasons (see Box 8-3).¹⁶

8.45 The principle of rapidly converting quantitative restraints on exports to export taxes and then gradually reducing export taxes to the convertible currency area has gained acceptance in Russia. Reservations, however, have been expressed regarding applying these principles in inter-state trade in the near term. There are several problems in this regard.

8.46 First, price liberalization has not been pursued in a coordinated fashion among the states which continue to be in the ruble area. Without export restraints, it is feared that goods would flow to other states where prices are not controlled, especially since there are no customs or other barriers among the states. Imposing a differential export tax structure in such a setting for a large number of commodities appears administratively far more cumbersome than simply continuing the previous export-control mechanism. Yet a far superior approach would be to extend price liberalization to virtually all commodities. Such an approach is inherently desirable in any case. By avoiding price controls except in very few commodities on which export taxes could be levied, a more efficient overall outcome is reached. An inferior arrangement, which is also cumbersome, is to try to negotiate a coordinated approach to the existing large number of commodities whose prices are controlled by various states.

8.47 For those few commodities that are supposed to adjust to world prices during a transition period, it may be necessary to apply export restraints in inter-state trade, for example, through quotas or licenses. This is to prevent re-exporting by other states of products underpriced domestically in relation to world markets as well as hoarding of these products because their price will increase according to an announced timetable. However, with export taxes to third countries and export controls in inter-state trade (two instruments already in use for these commodities), governments should then be in a

position to remove two additional instruments of control which are redundant: quantitative restraints on exports to third countries and price controls in domestic and inter-state markets.

Box 8-3. Reasons for Preferring Export Taxes Over Licences

First, a tax on exports is transparent. The government and the public know how much the export tax is costing in forgone foreign exchange per unit sold. In some cases, restraining exports to the required level may call for an export tax over 100 percent. Such high and uneven incentives in the trade regime are well-known to cause great distortions relative to a more neutral trade tax regime and should be avoided. The transparency of such high and uneven taxes will likely induce a reduction in the very high export taxes; producers who are especially disadvantaged will justifiably complain, and the obvious unfairness of such a disparate tax structure will be difficult to justify.

Second, an export tax allows exporters to engage in contracts with certainty of the ability to deliver, subject to the tax. Generally contracts are offered with a specific time deadline. If an exporter cannot deliver the product within the specified time period, either the offer is not valid or penalty clauses begin to take effect. The uncertainty of whether an export license will be received has an extremely debilitating effect on the ability of exporters to engage in contracts.

Third, a licensing system leads to wasted resources through lobbying for the licenses and other forms of "rent seeking." Exporters must expend resources attempting to obtain the license. If the license carries with it considerable value ("rents") the potential exporter will devote considerable resources to obtaining the license, especially if he is in competition with other potential exporters for the license. This competition to obtain the license results in a considerable waste of society's resources. Finally, an export tax during the transition generates government revenue, thereby helping to meet the significant fiscal problems of most of the states.

Maintenance of quantitative export controls for commodities is necessary only where Russia faces international agreements requiring it to limit exports to other countries such as for example in the Multifiber Agreement (MFA) or for specific markets in the EC. In such circumstances it is best to establish a system of auctioning of export licenses. Such a system would ensure that only the precise quantities agreed are exported, but the rents generated by the licenses accrue to the state, generating revenue while at the same time reducing the amount of wasteful rent-seeking activity of enterprises. Moreover, competition among suppliers at the auction would result in the licenses being allocated to the most efficient domestic suppliers, thereby maximizing the amount of rents retained in the exporting country. Such an auction system is in fact envisaged by the Ministry and Foreign Economic Relations and authorized by Directive Number 90 of the Russian Federation.

8.48 Second, and perhaps the most fundamental reason for quantitative controls in inter-state trade, is governments' desire to avoid surpluses or at least maintain balance in inter-state ruble payments. This is being accomplished through licensing and quantitative export controls at the bilateral level and possibly in the near future through the banking system.¹⁷ The motives for seeking to maintain balance vary depending on the situation of various states. Russia, which expects to be running a significant surplus on inter-state trade (valued at international prices at the latest by 1993) basically does not wish to provide extensive transfers to other states in the ruble zone. Other states are afraid that any accumulated ruble balances may become worthless when they adopt new currencies.¹⁸ The strategy of quantitative restraints by the non-Russian states seems shortsighted, however, because free trade in a ruble zone with Russia will likely result in deficits for non-Russian states when trade is valued in world prices (see Table 8-2).

Table 8-2. States' Commodity Trade Balance in Domestic and Foreign Trade Prices in 1990
(millions of current rubles)

	Trade Balance					
	Inter-state		External		Total	
	Domestic prices	Foreign prices	Domestic prices	Foreign prices	Domestic prices	Foreign prices
Armenia	-287	-1,166	-1,058	-436	-1,345	-1,602
Azerbaijan	1,858	268	-1,180	-403	678	-135
Belarus	2,384	-1,216	-3,155	-1,063	-771	-2,279
Estonia	-258	-1,165	-543	-230	-801	-1,395
Georgia	776	-1,612	-1,632	-601	-856	-2,213
Kazakhstan	-5,871	-6,120	-2,610	-861	-8,481	-6,981
Kirgizstan	-733	-956	-1,010	-707	-1,743	-1,663
Latvia	317	-934	-1,361	-782	-1,044	-1,716
Lithuania	-673	-3,014	-1,202	-505	-1,875	-3,519
Moldova	861	-2,243	-1,147	-600	-286	-2,843
Russia	7,427	29,866	-43,195	-38	35,768	29,828
Tadjikistan	-982	-1,439	-459	-27	-1,441	-1,466
Turkmenistan	-454	335	-513	-192	-967	143
Ukraine	-670	-6,500	-7,784	-1,472	-8,454	-7,972
Uzbekistan	-3,695	-4,104	-1,615	-483	-5,310	-4,587

Source: Goskomstat.

8.49 Any attempt to balance trade bilaterally puts trading relations in a straitjacket and is inimical to the development of markets and the allocation of resources according to comparative advantage. Bilateral balancing in ruble trade is a short-term expedient during the current instability. It is due to the uncertainties regarding the functioning of the ruble zone and its relations with the potentially emerging new currencies, and to the fact that the central banks of all 15 states independently issue non-cash rubles. The lack of a coordinated monetary policy in the ruble zone causes two serious problems; for Russia, which expects to be the principal creditor in the system, this implies the continuation of transfers to other states which Russia would wish to limit. More generally, each separate central bank can independently issue non-cash ruble credits, creating a free-rider problem whereby the expansionary policies result in obtaining goods from the other countries. These concerns may have been behind Russia's repudiation of the agreement on monetary coordination in the ruble area concluded May 21, 1992, in Tashkent between the former Soviet republics.

8.50 Unless the uncertainties regarding monetary policy coordination for the ruble zone are addressed, imposing limits on the amount of aggregate credit offered the other states through the correspondence accounts of the central banks may be the least inefficient method of avoiding large ruble-trade surpluses, with the resulting loss of income and control of its money supply.¹⁹ For this reason, it is essential for Russia to take the lead in monetary policy coordination with other states expecting to remain in the zone.

8.51 Monetary coordination and restraint would directly address the free-rider problem which contributes significantly to the imbalances. Once a coordinated ruble zone starts functioning (which involves at a minimum coordinated monetary targets and credit ceilings), any country that remained a significant debtor within the zone (on a regional, not bilateral, basis) could be addressed by penalty

interest rates between central banks, which should induce monetary restraint on the part of the deficit country that would correct the imbalance. Monetary coordination would also facilitate stabilization and the move toward ruble convertibility. If the ruble were convertible, bilateral imbalances would not be a concern for surplus countries. Thus, appropriate monetary coordination and restraint should allow trade among the members of the ruble zone to be unconstrained by the need to maintain bilateral balance.

8.52 As to maintaining balance with the countries that would potentially leave the ruble zone, again this is a temporary problem until these countries leave the zone, which could well occur during late 1992. The issue of maintaining balance with these countries *after* they leave the zone is discussed below in the section on clearing and payments arrangements among countries with inconvertible currencies. The proposed framework would allow inter-state trade to be conducted without quantitative restraints.

The reduction of state trading and promotion of enterprise-to-enterprise trade

8.53 The principal problem with moving away from obligatory lists is that some goods important in inter-state trade remain under price controls, and are adjusting to world prices on a gradual basis. If these products are to be supplied at less than market-clearing prices in inter-state trade (as Russia has agreed with energy products on an interim basis for some states) some state obligation may be required; otherwise exporting firms who may price freely will raise the price to the market-clearing level. This again emphasizes the importance of reducing the number of goods subject to price controls.

8.54 Contrary to practice, however, state obligation to export does not imply the need to impose a system of state orders and quantity regulation of the producing enterprise, involving a planning mechanism. Rather, the state could utilize procurement agents for the purchase of goods for inter-state trade that are subject to price controls; the agents would be authorized to pay a price slightly above the controlled domestic price, which should induce sales to the procurement agents. Other than for these products, and possibly also for a basket of goods in return by the oil-importing countries if demanded by the oil exporters, there is no justification for export controls or list trading of any kind.

8.55 As mentioned above, extensive export controls exist for many products that are not subject to price controls for the purpose of avoiding excessive inconvertible trade surpluses. Within the ruble zone, it would be best to develop monetary and fiscal coordination to control excessive imbalances. This would allow inter-state trade within a framework of enterprise-to-enterprise trade without export constraints. In the absence of such coordinating mechanisms during the transition, and given the presence of export licenses, the use of indicative lists is superior to obligatory list trade. For products on the indicative lists, there would be no state obligation for the trade, and enterprises in the respective countries would negotiate their best terms on price, credit, and other aspects of the contract. The indicative lists would play a useful role because they commit governments to issue export licenses for the products in the agreements up to the amounts specified, permit the removal of the product from intergovernmental price controls, and reduce the role of planning in economic decision-making.²⁰

8.56 As long as export licensing and quantitative restraints are employed by governments, the first option, as a transition device, is to move products from the obligatory lists to the indicative lists in intergovernmental protocols. This would be the appropriate way to trade products such as oil, which are adjusting to world prices on a gradual basis, and possibly for a basket of goods in return by the oil-importing countries. (Other than for these products, there is little justification for export controls or list trading of any kind.) There would be no state obligation for the trade under the indicative lists, and enterprises in the respective countries would negotiate their best terms on price, credit, and other aspects of the deal. The indicative lists would nonetheless play a useful role as a transition device because they

commit governments to provide export licenses for the products in the agreements up to the amounts specified while providing a check against re-exporting and hoarding. It would also remove the product from intergovernmental price controls. This helps to overcome two of the principal problems inhibiting inter-state trade: export licenses and price controls.²¹

8.57 Over time, as domestic prices are permitted to rise to international levels, export taxes to third countries and inter-state export licensing would no longer be necessary. As this is done, they may be removed from either the obligatory or indicative lists and shifted into the category of enterprise-to-enterprise trade without government regulation. This would also eliminate the need for "lists." The problem of aggregate balances within the ruble zone would, however, remain and would need to be addressed through monetary policy coordination. Also, arrangements outside the ruble zone would be needed to cope with payments among countries with inconvertible currencies (see below).

Import controls

8.58 As mentioned earlier, Russia recently introduced an important tariff at a relatively uniform rate of 15 percent, largely for fiscal purposes. Russia makes little resort to formal import licensing. This policy should be maintained, even as the ruble strengthens over time.

8.59 *Tariffs for revenue purposes.* A fundamental principle of commodity taxation is that taxes which do not discriminate between imports and domestic sources of production are the most efficient at generating revenue.²² Thus, subject to qualifications mentioned below, a tariff (in the pure sense of the word as a tax that discriminates against imports) should not be used for revenue purposes alone. In some cases, however, to implement neutral taxation, it may be more advantageous in practice for a tax on the imported variety of a given good to be collected by the customs authority. On the other hand, if the domestic tax is a tax on consumption (such as a sales tax), it violates the neutrality principle to also collect a customs duty for revenue purposes.

8.60 A qualification to this argument is where the country's domestic tax system is inefficient in general, but it is able to collect import taxes efficiently. In this case, the relative efficiency of tax collection may dominate the neutrality principle and import taxes could be used for revenue purposes. This is, in fact, the rationale for the introduction of the import tariff in Russia. The tariff could be reassessed over time as the tax system improves.

8.61 *Tariffs for protection.* Although explicit tariffs are virtually nonexistent, *de facto* there are powerful restraints on imports due to the extensive restraints on exports. As discussed above, export restraints impose a high *implicit* tariff on all imports from the convertible currency area. Where access to foreign exchange is through market methods, the exchange rate for the ruble is so high that it provides powerful protection for most sectors of the economy. In addition, access to foreign exchange is limited in some states, and various retention schemes for convertible currency exporters remain in place, so that central allocation of foreign exchange exists for at least part of the foreign exchange in virtually all the states. Central allocation of foreign exchange results in non-tariff barrier protection.²³ The mirror image of this high protection from convertible currency imports is the excessive incentive to import from within the ruble zone rather than for convertible currency, which has led to the proliferation of export restraints within the ruble zone. Thus, as long as enterprises are trading with each other within a ruble zone in an environment of export restraints outside the zone, a further twisting of incentives toward internal purchases by applying tariffs to convertible currency imports is not necessary. Moreover, since tariffs are an additional implicit tax on exports which reduce foreign exchange earnings, they would be counterproductive.

8.62 The incentive structure for trade between them will change markedly once the countries of the FSU create new currencies, so that settlements between them may be balanced on the basis of hard currency. These circumstances make the use of *moderate*, relatively uniform tariffs on imports from third countries desirable for protection of inter-state trade on a *preferential* and interim basis; the case is elaborated below.²⁴ The preferential trade area need not overlap with the ruble zone; on the contrary, it is precisely to facilitate trade among states with different currencies that the preferential trade area is recommended.

8.63 The experience of trade policy reform, suggests that any transitional tariff protection (in this case interim tariff protection on a preferential basis) should be moderate, not to exceed tariffs in the 15 to 30 percent range (see Box 8-4). Both tariffs and devaluation of the exchange rate protect the import competing industries, but the difference between the two is that an exchange rate that is not overvalued also encourages exports. Thus, from a trade policy perspective, the exchange rate is preferred to a tariff as a means of achieving external balance.

Box 8-4. The Case for Moderate Transitional Tariffs

Tariffs during the transition should be set at moderate levels because:

- *First*, those who obtain rents from high tariffs will resist trade liberalization. Temporary protection may become permanent, and once the government slips in its liberalization schedule, expectations are altered and the advantages of a transition period of protection are significantly reduced.
- *Second*, if protection is intended to improve welfare, a production subsidy or a tariff, combined with a subsidy on consumption, will improve welfare more.
- *Third*, the transition must be encouraged; not just eased; imposing either "made-to-measure" tariffs on an industry-by-industry basis or simply high across-the-board tariffs will preserve the inefficient industrial structure with little or no adjustment. Then the economy will not adjust and produce according to comparative advantage, and the higher growth rates associated with outward-oriented economies will be lost.
- *Finally*, tariffs impose implicit taxes on exports, and it is important to avoid the use of policy instruments that discourage the development of export industries. Exporting industries are taxed by tariffs in a variety of ways. First, the tariff appreciates the real exchange rate, and therefore reduces the return to exporting in domestic currency. Second, exporters must pay the import tariff on their imported intermediate inputs. Rebating this tax, through "duty drawback" mechanisms, is often attempted; but these rebate mechanisms are often cumbersome and unsuccessful. In addition, the tariff induces import-competing industries to drive up the price of primary factors in competition with exporting industries.

8.64 Despite the above considerations some would propose very high tariff protection on an interim basis for socialist economies in transition—ironically for the purpose of protecting industries with negative value-added. If an industry has negative value added at world prices,²⁵ the economy would earn foreign exchange by selling the inputs on world markets and importing the output; it costs less to pay workers to do nothing than to employ them in negative value-added industries, and the primary factors of production used in the industry would be available for other uses. Thus, the argument only makes sense if the negative value-added industries will become efficient competitors on world markets in the future, and without government intervention this would not occur because of externality considerations. Then, the argument is a special case of the infant industry argument, which would also apply to positive but low value-added industries.

8.65 The industries of Russia, however, have received protection for decades, and as we have argued above, the evidence indicates that there is a need for very significant realignment of the industrial structure, with more trade with third countries. It is hard to visualize these old negative value-added industries as ones which should be classified as infant, that is, ones in which externalities to investment exist that cannot be captured by the firms.

8.66 On more general grounds, protection will generally not address the externality problem and is therefore the wrong instrument when there is an infant industry.²⁶ Moreover, as mentioned above, if protection improves welfare, there are alternative policy interventions that are superior. Finally, a review of experience with infant-industry protection indicates that protection is usually not associated with increasing efficiency over time and frequently has the opposite effect; thus, on pragmatic grounds protection should not be given to support infant industries.

Payments arrangements

8.67 *Within the ruble zone.* In order to reduce the role of barter it will be necessary to reduce and eliminate price controls in inter-state trade, establish monetary stability, reduce inflation, and improve the system of payments among republics in the ruble zone. Major institutional improvements are needed in strengthening the systems of inter-bank settlements both within and among republics (see Box 8-5). In order to facilitate inter-enterprise trade, settlement centers should be permitted to clear inter-state payment orders without going through central banks, and banks in each state should establish correspondent bank accounts in other states. If monetary coordination is achieved, then the correspondent accounts of the central banks would not be used as a means of restraining trade.

8.68 *With states with new currencies.* If new currencies are convertible for current account transactions, and assuming that the ruble is convertible as well, then inter-state payments arrangements would be no problem. Enterprises engaging in foreign trade could obtain and convert to foreign funds from national currency without going through an inter-central bank-clearing arrangement. Clearly, moving rapidly towards current account convertibility of the ruble and any new currencies introduced is the best guarantee against a payments-induced collapse of trade.

8.69 If convertibility is not possible, however, it is not necessary to retain the cumbersome system of bilateral agreements and state trading. It would be possible, and perhaps advisable, to devise a simple multilateral clearing mechanism with limited short-term credit and short settlement periods which would still permit enterprise-to-enterprise trade. Such a mechanism could be based on a *clearing union* that would permit simultaneous settlement of claims between participating central banks that arise from enterprise-to-enterprise trade among the various states.

The scope for cooperation on inter-state trade

8.70 Cooperation on inter-state trade could ease economic adjustment and enhance prospects for future trade between the former Soviet republics. A key question that remains to be addressed is whether adequate measures are being taken to strengthen collaboration among the republics. Critical in this regard is how states would react to the expected terms-of-trade adjustment accompanied by the movement of trade, notably of energy, to international prices. It was noted above that Russia has indicated a willingness to phase the adjustment of energy prices to other CIS states to parallel the pace of adjustment in its own industries. Such an approach would indeed be quite helpful in easing the adjustment in oil-importing states such as the Baltics and Ukraine. Before agreement on this issue had been reached, these states had apparently considered countervailing action that would have permitted them to offset the terms

Box 8-5. Clearing Unions Compared With Payments Unions

In a *clearing union*, it is the multilateral balance within the union that is settled, not all the bilateral balances. Settlements among the central banks would be made in hard currency after short time intervals. The short time intervals are needed so that the volume of credit outstanding is limited. Such a system would also economize on the use of scarce hard currency reserves since less would be needed to settle multilateral balances through the clearing mechanism than if all the transactions had to be denominated in hard currency and conducted through international banks. Moreover, and importantly, since it is only the multilateral balance that is important among members of a clearing union, the incentive to balance trade bilaterally is removed. As mentioned above, convertible currency settlement, even within a clearing union, will reduce the demand for goods from other parts of the FSU because it will transform incentives among enterprises in different states which will no longer find it "cheaper" to import from another state in the FSU.

In addition to relatively simple clearing union arrangements outlined above, there have been a number of proposals for the establishment of more elaborate *payments union* arrangements. The main difference these arrangements would make is that while settlements would be made periodically in hard currencies, large debit positions for trade within the union would be permitted. There are several problems with such arrangements. The first obstacle is that if there are persistent debtors and creditors within the union, it is necessary to find a country willing to provide continued credit to members of the union although it may be facing significant overall scarcity of foreign exchange itself. In the present situation, Russia is likely to be the persistent creditor and is fearful of extending large amounts of such credit. In fact, all states including Russia have taken steps to restrain trade, even within the ruble zone, in order to avoid extending credit. It is highly unlikely that Russia would wish to extend credit to states that are leaving the ruble zone.

This problem could be solved by providing external credit to finance the debtor countries. But then the question is whether the external credit is optimally allocated. Are these countries having continued deficits because of ineffective overall macroeconomic policies? Is it not more appropriate that what amounts essentially to balance-of-payments assistance be extended on condition that an appropriate adjustment program is in place and their overall balance of payments is sustainable?

Finally, a payments union of the type discussed above runs the risk that deficit countries will choose to utilize their payments-union credit rather than take steps to introduce convertibility and integrate with the international trade system. In order for a country to induce its agents to internalize the softness of payments within the union, it is necessary for the country to interfere in the trading system through tariffs, non-tariff barriers, or subsidies. For some countries this may represent a retreat from the desired, more liberal trading environment. There is, thus, a danger that, while credit is available, a payments union and the associated credit would induce countries to focus trade within the payments area rather than diversify and compete internationally. On the other hand, deficit countries may quickly exhaust their union credit at which time the payments union offers no assistance in easing the transition. These arguments suggest that we must search for tools other than a payments union to help with the transition.

of trade deterioration. Such action, usually focused on Russia, may entail raising transit fees for Russian trade through these states. It is unclear at this juncture whether the existing structure of transit fees, port charges, and the like is compatible with international charges for similar services in international trade. However, it would be unfortunate if the move to international prices precipitated monopoly pricing or controls in the provision of these services by the transit states. Such an approach is likely to lead to confrontation and reduction in trade which would hurt all. Instead, it is clear that cooperative solutions such as the one entailed in Russia's phasing the oil price adjustment should form the basis for cooperative approaches in other areas, such as transit fees that have a bearing on inter-state trade.

8.71 **Trade preferences.** Some have also suggested that the region which encompasses the former Soviet Union is a good candidate for a preferential trade area, such as a customs union or free trade area. Given the extensive network of export controls that were in place within the ruble zone during early 1992, however, there is no need in the immediate future for a preferential trade agreement based on tariff

preference. PTAs which are traditionally based on tariff preferences are intended to provide an incentive to the importer to purchase the product within the region of preference. As elaborated above, however, the export controls to third countries impose a very high *implicit* tariff on all imports for convertible currency; the export controls combined with the relative softness of settlement within the ruble zone, have resulted in importers having a very strong, if not excessive, incentive to import from within the ruble zone. It is to counteract these incentives that the export controls have been established, and these export controls themselves pose a problem to trade. Thus, additional incentives to import within the ruble zone are not required and may be counterproductive at present. The more serious problems for limiting trade in the ruble zone derive from the export control, monetary, and payments questions that have been discussed above (see Box 8-6).

Box 8-6. Customs Union Compared With Preferential Trade Area

If a Preferential Trade Area (PTA) were to be encouraged on a temporary basis, it could be based on a common external tariff (a customs union) or on different tariff structures with respect to third countries in each participating state with no internal tariffs (a free trade area). Implementation is a problem, however, for either a customs union or a free trade area in the FSU. A customs union requires a common external tariff and an interstate tariff commission, and may be very difficult to negotiate at this juncture. Given coordination problems among the independent states, the lack of required agreement on the external tariff may appear to be a large advantage of a free trade area. If tariffs to third countries in a free trade area differ significantly among the states, however, transshipment is likely to occur from low-tariff countries to high-tariff countries, allowing the low-tariff countries to capture the tariff revenues.

To counteract transshipment in a free trade area, a system of rules of origin would need to be introduced. But a certificate-of-origin system imposes bureaucratic costs that are best avoided, and given the vastness of the frontiers involved that previously had no customs facilities, it is likely that if tariff differences among the states are large, significant transshipment (smuggling) would occur even with a system of certificates of origin. Another problem with a free trade area among countries with large divergences in tariffs is that the high-tariff countries bear a disproportionate share of the trade diversion costs, because the high tariffs induce more trade-diverting imports from the partner countries. These problems suggest that moderate tariff levels should be chosen in a free trade area.

8.72 In order to address the problem of export controls, some Russian trade officials have suggested an unusual kind of PTA in which countries renounce export restraints against each other (especially quantitative), and treat sales within the PTA as equivalent to domestic sales.²⁷ Since export restraints against the external world will exist for certain products (such as oil) during a transition period to world market prices, arbitrage within a ruble zone that is a PTA with no export restraints would encourage considerable inter-state exports (which are a form of trade diversion).²⁸ For those products subject to price adjustment towards world prices over time and the use of export taxes during the transition, having no export restraints within the PTA implies a terms-of-trade gain for importing countries within the PTA. This terms-of-trade gain will be reduced and eliminated as the exporting country allows its domestic price to rise to world levels. The terms-of-trade for the exporting country provides an additional incentive for it to adjust domestic prices to world prices.²⁹ Such an arrangement would amount to the creation of a common economic space among the participating states. However desirable such an arrangement would be, it does not appear feasible at present.

8.73 The question remains, nevertheless, as to whether it will be appropriate to establish a more traditional, tariff-based PTA, among states of the FSU to encourage inter-state trade, either on a permanent or temporary basis, *after* new currencies are introduced and balances between states are settled on the basis of hard currency, or export controls towards third countries are eliminated and ruble

convertibility is established. Once states are paying in convertible currency, they will choose to buy from the least-cost supplier on world markets.

8.74 A permanent PTA could only be justified if the scope for trade creation is considerably greater than the scope for trade diversion. As mentioned above, however, the evidence strongly indicates that there is a need in the long run for a major reorientation of inter-industry trade, with much more trade with the rest of the world and less with the other states of the former Soviet Union. That is, much of the inter-state trade of the past was trade-diverting, especially in the machinery sector. A preferential trade area for the former Soviet Union that offers significant intra-union trade preferences into the indefinite future will tend to retard adjustment from the inefficient pattern of trade that is the legacy of the former Soviet Union and will encourage other trade-diverting investment. Thus, based on traditional trade creation compared with trade diversion considerations, it appears ill-advised to suggest a permanent preferential trade area for the former Soviet Union.

8.75 During the transition period, however, since many industries are not competitive on world markets, they would be expected to contract significantly under open world competition. Most states are likely to be worse off if all try to buy their goods from the least-cost supplier, because they will then collectively suffer a decline in export demand for their uncompetitive industries before they can be expected to adjust and reorient output. On the other hand, under preferential trade agreements there would be scope for continued intra-union trade in these less-than-fully-competitive products.

8.76 The problem is how to accommodate the long-run reorientation while at the same time easing the transition. A temporary preferential trade area appears to accommodate both concerns. If preferences are based on tariffs, intra-union trade would initially not be subject to external tariffs. Extra-union trade, however, could be subject to tariffs of about 15 to 20 percent initially, declining by a certain percent per year to a long-run lower level. When the long-run lower level is reached, intra-union trade would also be subject to the tariff, that is, the preferential trade area would be terminated. Thus, production of uncompetitive products would be phased out, but would generate intra-union export earnings and trade during the transition period.

8.77 In setting up such an arrangement, high tariff rates should be avoided even on a temporary basis for the reasons elaborated above.³⁰ The argument for temporary preferential protection is based on reducing adjustment costs within the FSU; it is not based on infant-industry protection. High tariff rates may protect industries with negative value added; but even the adjustment costs will be higher if negative value-added industries were protected. The best way to provide protection for only positive value-added industries is to utilize moderate protection.

8.78 It must be emphasized that the ruble zone need not coincide with the preferential trade area; on the contrary, it is the introduction of new currencies that motivates the need for a preferential trade area.

Conclusion

8.79 In summary, the highest-priority trade reforms are the following. First, restraints and disincentives of all kinds against exports to third countries should be eliminated, except for export taxes for these limited number of goods adjusting to world prices on a gradual basis. Second, state obligations and orders in inter-state trade, retaining indicative-list trade for only those items subject to domestic price controls should also be eliminated, retaining indicative-list trade only for those items subject to domestic price controls, while shifting all other trade to enterprise-to-enterprise trade. Third, monetary

coordination and restraint should be exercised within the ruble zone, coupled with the formation of a clearing (not payments) union for facilitating trade among the emerging countries with new but inconvertible currencies. Finally, the formation of a preferential trade area among as wide a group of former Soviet states want to add as—possible is desirable.

8.80 In terms of sequencing, the first reform above can and should be done as soon as possible. Monetary coordination within a ruble zone should also be achieved rapidly. Inter-state trade based on lists may be accomplished with the negotiation of the new agreements, if any, for 1993. The formation of a clearing union is a step that should await the adoption of new currencies by the former Soviet republics. Any tariffs that are adopted for third countries should not be applied to independent states even if they have adopted new currencies, provided reciprocal treatment is offered.

Notes to Chapter 8

1. See Chapters 11-13 for specific discussions on industry, agriculture, and energy, respectively.
2. In cases where it is necessary to adhere to some specific quantitative export target because of the existence of an *externally imposed trade restraint*, such as the MFA or another voluntary export restraint, licenses or quotas will need to be used. But in such cases the licenses or quotas should be auctioned.
3. See Chapter 12 for a fuller discussion of the role of concerns.
4. *There is also an urgent need to improve and streamline the payments system within Russia. As discussed in Chapter 7, inter-bank clearing takes an average of 40 days – even between branches of the same bank!*
5. Once convertibility is achieved, imbalances within the ruble zone would not be a concern for surplus countries in the ruble zone.
6. The free trade arrangement should be open to all 15 states irrespective of whether they desire to remain in the ruble zone. If this cannot be arranged, more narrow arrangements (for example among Belarus, Kazakhstan, and Russia) would be worth exploring.
7. Energy exports, however, may be an exception.
8. On the other hand, given the high degree of specialization in products among the states of the former Soviet Union, we would expect to see an increase in intra-industry trade. This is all the more true given the considerable human capital expertise resident in the former Soviet Union in certain technological areas. See the tables in Appendix 8-1 for commodity decomposition of trade by state in 1990. These data, however, are in domestic prices which are not reflective of world prices. In particular, raw materials tend to be undervalued relative to final products, especially machinery.
9. There are, however, multiple explanations for the output decline in Eastern Europe, and it is difficult to allocate the relative importance of the various factors.
10. The Prisoner's Dilemma problem in game theory refers to the situation in which cooperative action by both players results in an improvement in the welfare of both; but given a strategy of an opponent, the optimal strategy for the other player is to play non-cooperatively.
11. The Ministers of Trade and Material Resources of the 15 former Soviet republics agreed in May of 1991 to maintain trade in 1992 at 70 percent of the level of 1991. After the demise of the Union, however, the implementation of any trade agreements became primarily a matter of bilateral negotiation among the independent states. Although in some cases, Georgia is reported to not have actually signed agreements, trade with Georgia is being conducted on an analogous basis.
12. Under price controls, the goods have a value considerably in excess of the price in rubles. The sale of a good at the official price in rubles conveys a rent to the buyer. Thus, when enterprises sell goods, conveying rents to a buyer, they attempt to capture some of that rent by acquiring price-controlled goods in return at the official price in rubles. If an enterprise were to simply sell all its output for the controlled price in rubles under the state order system, it would have little to bargain with when it attempted to acquire its productive inputs. Moreover, if the enterprise did not provide some consumer goods to its employees, it would have difficulty attracting them to the workplace.
13. First, a number of products were excluded from the price-decontrol program. Second, in Russia for example, prior notification and approval of price increases was employed in the name of anti-monopoly policy for many products whose prices were ostensibly decontrolled. Third, given the extremely devalued ruble of early 1992, the domestic prices of tradable goods appeared considerably lower than prices for imports. This suggests certain price rigidities regarding price increases, so that prices did not very rapidly increase to their market-clearing levels. Similar puzzling pricing behavior has been observed in Poland after the "Big Bang" Stabilization of January 1990. Given the possibly excessive Polish devaluation of January 1990, it was not until about October 1990 that Polish domestic prices increased to levels comparable to imports.

14. Prior to the dissolution of the Union, Gosbank operated a fully integrated, albeit inefficient, payments system. There was a network of settlement centers which cleared payments between the republics. Trade-related payments were ultimately guaranteed by Gosbank. After the dissolution of the Union institutions, including Gosbank, the payments mechanism became increasingly segmented. Payments could no longer be cleared directly through the settlement centers. It became necessary for all non-cash interstate payments to be cleared through the central banks of the states, which increased the number of communications necessary for clearing and congestion at the upper levels of the system. The result has been a lengthening of delays in receiving payment in interstate trade at the same time that the Gosbank guarantee for these transactions has been removed and that credit has been tightened.
15. A preliminary indication of the shift in the terms of trade is given in Table 8-2, where Russia shifts from a large internal inter-state deficit in domestic prices to a surplus in foreign prices.
16. The export tax would be equal to the difference between the domestic price and the world price and would therefore decline over time as the domestic price is liberalized over time toward the world price.
17. The Central Bank of Russia and the central banks of the other independent states have recently instituted a system of monitoring ruble credits provided to each other through their reciprocal central bank correspondent accounts. All inter-state commercial transactions have to be cleared through these central bank correspondent accounts. This would allow a central bank at some point in the future to regulate the amount of non-cash ruble credit provided to other states.
18. For the latter states this problem may be aggravated by a possible "moral hazard" problem. Exporting enterprises may be willing to accept rubles, because they anticipate that their governments will convert these rubles to their domestic currency at the time of new money creation, but the accumulated rubles will be worthless to the state. Then the value of exporting to the ruble zone for the enterprise is greater than the value to the economy as a whole. This problem is very similar to that faced by Hungary and Poland during the latter stages of the demise of the CMEA, when their exporting enterprises were willing to accept transferrable rubles of doubtful value because the governments paid their domestic enterprises in their domestic currency.
19. The alternative, which is less desirable, is controls on exports at the micro level.
20. Of course, the countries of Central and Eastern Europe employed a system of indicative lists after the demise of the CMEA and these lists, by themselves, were inadequate to prevent a significant collapse of trade between themselves and the FSU.
21. Of course, the countries of Central and Eastern Europe employed a system of indicative lists after the demise of the CMEA and these lists, by themselves, were inadequate to prevent a significant collapse of trade between themselves and the FSU.
22. To provide an example, suppose that domestic production of apparel products is taxed at 10 percent. Then for efficient revenue purposes, imports of apparel products should also be taxed at 10 percent. To tax imported apparel products are either above or below 10 percent in this case would result in a distortion of the consumption decision toward the lower-taxed variety of apparel, increasing distortion costs while generating less revenue.
23. Experience has shown that the foreign exchange rationing authorities protect the domestic import-competing industries through their allocation decisions. Thus, import-competing industries receive powerful protection from convertible currency imports by both the high price and the central allocation of foreign exchange.
24. If tariffs are not uniform, at most two or three categories should be employed with little dispersion. Experience with non-uniform tariff structures shows that departures from uniformity do not follow "optimum" rules, but, rather, political economy considerations that increase the costs of the tariffs. Even after new currencies are introduced by independent states, protection will not be needed for *domestic* industries, who will remain protected due to the scarce foreign exchange.
25. Preliminary estimates suggest that there are a significant number of industries in the FSU with negative value added.
26. Protection raises the domestic price of the firm's product. But the individual firm still faces the problem that competitors may copy any new technology at no cost, so that the firm may still be unable to recover the costs of investing in new technology. Baldwin shows that similar considerations apply to other types of externalities.

27. Importing countries within the PTA would be prohibited from re-exporting or required to impose an export tax equal to the export tax of the exporting country. If re-exporting proves to be a problem, countries would be permitted to impose tariff quotas (that is, an export tax for quantities of exports above a given quota).

28. In an import-tariff-based PTA, the importing country may lose from trade diversion, while the exporting country may gain. The opposite is true in an export-tariff-based PTA.

29. With no export controls within a PTA, hoarding may be a problem. In general, the export tariff preferences are set to decline on a pre-announced schedule. That is, there is a schedule during which domestic prices are to rise to world prices, at which time the export taxes would be eliminated. Importing countries within the PTA would then have an incentive to hoard those products whose price will rise in the future.

30. The experience of the Central American Common Market shows that average external tariff rates of 25 percent or more can lead to significant problems.

CHAPTER 9

Labor and the Social Safety Net

9.1 State socialism in the Soviet Union provided an employment guarantee as a primary form of social insurance. Workers could count on the wage and non-wage benefits of employment irrespective of the demand for their labor or their productivity. The transition to a market economy involves the separation of social benefits from employment earnings. A market economy provides no employment guarantee; instead, there is a labor market in which individuals must seek productive work, and a social safety net to aid those who are unable to earn income. Thus a key challenge in the transition to a market economy is to develop labor markets and to construct a social safety net.

9.2 For the reasons discussed in Chapter 6, *enterprise restructuring must begin immediately*. The resulting release of labor will stimulate the development of labor markets. It will also strain the social system. It is, therefore, urgent to establish an effective safety net. The goal is to provide the means by which individuals can endure the transition while encouraging them to rejoin the evolving labor market. If there is no mechanism in place to provide unemployment benefits, then it is much more difficult for the Government to stop covering the losses of unprofitable enterprises. Some loss of the sense of security is an inevitable price of the transition to a market economy, but if this occurs to an excessive degree, the political viability of the reform program will be destroyed.

9.3 The need for a safety net is even more pressing in the Russian Federation than in Eastern Europe. The drop in output will probably be greater, given that reform and restructuring has hardly begun. The previous economic system denied individuals the opportunity to accumulate other income-earning assets that might have provided a source of livelihood. The value of savings accounts has been drastically reduced by the recent inflation (see Chapter 2), and the informal sector (which in most developing countries provides income-earning opportunities to those without regular employment or other resources) is only just beginning to appear. The existing system of family allowances, social assistance, and pensions is a key source of benefits for vulnerable segments of the population. These programs can be made more efficient.¹ The most important priority, however, is to develop an unemployment benefits system and active labor market policies.

9.4 One must recognize that income support cannot be a substitute for productive jobs, and that training programs need to be supported by labor demand. It is clear that many jobs will be lost; many enterprises will shut down and the ones that continue operating will shed a large share of their labor force. A key issue is the creation of new jobs. The primary mechanism of job creation in a market economy is entrepreneurship and individual initiative. Job creation in the retail trades, cafes and restaurants, and other services is already starting to pick up, and one can expect this trend to continue. One should also expect to see job creation in natural-resource-based industries and industries making use of technological advantages. In the long run, the financial viability of the social safety net depends on job creation.

The Development of a Social Safety Net

9.5 The "safety net" is usually conceived as a series of measures designed to reduce the pain of unemployment for the individuals concerned, and to protect minimum living standards of consumption and access to social services for everyone in society, independent of their earning capacity or ownership

Box 9-1. The Cash Benefit System in 1991

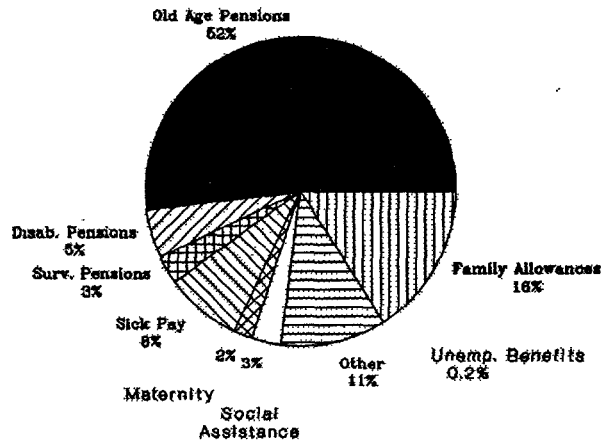
Cash transfers from budgetary and extra-budgetary sources absorbed about 10 percent of GDP in 1991. The figure below shows the types of benefits and their importance. Old age, disability, and survivor pensions amounted to about 60 percent of cash benefits, and sick pay another 8 percent. Family allowances and social assistance encompassed less than one-fifth of cash benefits, and unemployment benefits were negligible.

The cost of the Russian cash benefit system is well within the considerable range of expenditure in industrial market economies. Spending on cash benefits in countries of the Organization for Economic Cooperation and Development (OECD) in 1983 ranged from 6.1 percent of GDP in Japan and 9.4 percent in the US to 21.0 percent in France and 24.8 percent in the Netherlands. The OECD average figure was about 14 percent of GDP. The Russian figure of 10 percent is about the same as the figure for Poland and about twice as large as that for Argentina and Brazil.

The eligibility conditions for pensions in the Russian Federation are rather loose. Workers are allowed to continue working while collecting a pension. The pensionable age is 60 for men and 55 for women. Men need 25 years of work, and women 20, in order to qualify for a full pension. For invalidism and survivors' pensions, there is no contribution or years-of-service qualification.

Pensions are financed out of a Pension Fund. The Ministry of Social Protection, the Ministry of Labor, and the Committee on Social Protection of the Supreme Soviet play a role in governing the Pension Fund in addition to its nominal administrators. The Fund's revenue sources are a 31.6 percent payroll tax, an additional worker contribution of 1 percent, and budgetary transfers. In 1991 payroll contributions exceeded pension expenditures by 23 percent.

Continued

Box Figure 9-1. Russian Cash Benefits, 1991

of assets. It should be noted that this implies not only a safety net for individuals but also for the institutions on which living standards crucially depend, of which health and educational services are most important.² The safety net is composed mainly of "entitlements." Individuals may be entitled to certain benefits by virtue of a particular demographic characteristic, being a child or a pensioner, for example. They may also have claims on a social insurance scheme, such as the Employment Fund, given actual or notional prior contributions. In most industrial societies the safety net also includes state assistance for a "socially guaranteed minimum." Russia is inclined to move in this direction. Individuals who fall through the cracks in the entitlement programs, and who would otherwise demonstrably fall into abject poverty, would receive public assistance through their local communities.³

Box 9-1. The Cash Benefit System in 1991 (Continuation)

Payroll revenues beyond pension expenditures contribute to financing family allowances. In 1991, 18 percent of pension fund expenditures went toward allowances for children aged 1.5 to 6 years old. An additional 1.4 percent of pension fund expenditure went toward a single-parent allowance. As suggested in the main text, separating family allowances from the pensions fund is a desirable move.

Sick pay and maternity benefits together make up about 10 percent of cash benefits. Maternity benefits include maternity grants and maternity allowances. Maternity grants are lump-sum payments to any woman who bears a child. The amount of the grant is three times the minimum monthly wage. Maternity allowances are payments to wage-earning women on leave for pregnancy. The allowances are 100 percent of the pregnant woman's wages, irrespective of length of service, and are payable for 126 days after 30 weeks of pregnancy. Sick pay is 100 percent of the individual's wage for work-related illness and 60 percent for non-work-related illness. There is no duration limit for collecting sick pay.

Both sick pay and maternity benefits are funded through the Social Insurance Fund. The Federation of Independent Trade Unions of Russia manages the Social Insurance Fund. Revenues for the Fund come from an earmarked 5.4 percent payroll tax. In 1991 the Fund ran a surplus equal to about one-third of expenditure.

While unemployment benefits are currently a negligible share of cash benefits, they are certain to grow in importance in the future. Unemployment benefits presently average 1.4 percent of GDP in the OECD, and they were 6 percent of GDP in Poland in 1990. Given the current structure of unemployment benefits in the Russian Federation, projections presented in Box 9-2 indicate that a 10 percent unemployment rate would generate unemployment expenditures of 2.4 percent of GDP.

Social and economic dislocation associated with the transition to a market economy will increase the need for social assistance. Under the best of conditions the discretion of local administrators and the uncertainty about take-up rates among the eligible population make projecting the cost of a welfare program difficult. The relatively small dispersion in income in the Russian Federation and political struggles among different levels of government accentuate problems of targeting and cost control for welfare programs. Nonetheless, the needs are likely to be pressing. One must expect the share of cash benefits for social assistance to rise in the future. Projecting, or even controlling, the path of such a change is extremely difficult.

9.6 Because the maintenance of full employment effectively provided a social insurance system which covered most of the population, the Soviet system had few provisions for social assistance of the last resort. However, the entitlement systems such as pensions were relatively well-developed. Within the context of entitlements the imbalance lay in an underdeveloped system for dealing with unemployment. In addition, because the enterprises were an implicit part of the Soviet social welfare infrastructure, Russia has inherited a system of social benefits in which the enterprises, Government, legislature, and local governments all have overlapping and ambiguous responsibilities. The task in providing an effective social safety net for the transition is to undo these imbalances by strengthening the system's ability to deal with unemployment, and by setting some limits to the coverage extended by certain entitlements. Finally, there is also an urgent need to rationalize administration.

The current situation

9.7 Compared to OECD countries, the Russian Federation provides cash benefits that are a relatively low fraction of GDP (see Box 9-1). So far, price liberalization has been met by *ad hoc* adjustments to the cash benefit system at the local level, rather than continued price subsidies or targeted coupon systems. Unemployment remains very low. Thus far, fiscal expenditures on the cash benefits system have not threatened the central budget.

9.8 What happens in the near future depends crucially on the path of unemployment. Experience from Eastern Europe indicates that when unemployment does develop it could explode very rapidly. It could reach several million by the autumn—if the pace of privatization and enterprise reform accelerates in the second half of 1992, as envisaged in the (admittedly optimistic) current plan. As a contingency, assume that unemployment starts in July 1992 and increases rapidly. The fastest rate of increase so far experienced has been in Bulgaria; a year after the transition unemployment had reached 8 percent of the labor force. In the Russian Federation the increase in unemployment could be even faster. There is a much larger number of military discharges to take place (expected to be 700,000, or about 1 percent of the labor force) and there will be some migration from other Republics. Conceivably, the rate of increase of unemployment could be 10 percent higher than the rate of increase in Bulgaria. Thus unemployment early in 1993 could be 4 or 5 percent of the labor force, that is, between 3 million and 4 million workers.

The basic cash benefit: a "socially guaranteed" minimum

9.9 The cost of the safety net depends not only on the number of individuals falling into the net but also on the composition, duration, and level of the benefits. For reasons of both political and fiscal economy, it would be appropriate for the state to define an austere level of consumption—a "socially guaranteed" minimum—that could be used as a basis of the range of cash-benefit options that the Russian state will provide. A *Basic Cash Benefit* (BCB) should be established. It should be parsimoniously defined in terms of a basket of goods that is nutritionally adequate and consistent with the observed consumption patterns of relatively poorer Russians. This standard has been recently defined and could be made operational with available data.⁴ The value of the basket for an adult was R 515 at February 1992 prices (about 20 percent of the average industrial wage).

9.10 The concept of a "poverty line" existed under the Soviet system—and it continues in usage today. However, the Soviet concept bears little resemblance to the idea of a minimum cash benefit. The caloric content of any adequately defined minimum consumption basket would involve amounts substantially less than half of what has been called the "poverty line." The "poverty line" had been calculated with reference to a diet that was unhealthily rich in animal products and which was to represent 50 percent of consumption. Currently it would leave more than 90 percent of the population below it. Nevertheless, its advocates have challenged calculations such as those cited above, on the grounds that such calculations imply a consumption level that is nutritionally inadequate, and allows for too little non-food expenditure. Given the high political visibility of these issues, and their importance to the welfare of millions of people, it would be valuable to convene an expert group to address minimal consumption standards and nutritional requirements.

9.11 Having defined the amounts in the BCB, it is then, by definition, necessary to protect it fully against rises in price. This does not mean indexing to the consumer price index. The relevant price change is the weighted change *for those goods included in the consumption basket upon which the BCB is based*. One possibility to reduce the temptation of political or bureaucratic interference is to have Goskomstat estimate the cost of the BCB consumption basket every month. This calculation would provide a real measure of the cash benefit required to assure a minimal consumption standard. It will probably take 18 months or longer to design and implement a system of means testing, and work on this should begin as soon as possible. Need-based standards should be based on a concept of family needs, in contrast to other cash benefit programs which are provided to individuals.

9.12 Though the BCB should be protected against inflation, decisions on the level of the basic benefit will involve a compromise between fiscal prudence and social assistance, especially in the near term. Benefits with variable levels are a dangerous threat to fiscal targets. To the extent that inflation is apt to hurt most those with lower incomes, the budgetary decision on the level of the BCB each quarter must be made consistent with the overall public expenditure targets. If something has to give, it should be other public expenditures of lesser priority, not the expenditure envelope.

Entitlements

9.13 In principle, an entitlement should provide a higher benefit than the "social guarantee," since otherwise the very concepts of insurance and entitlement become meaningless. Benefits for the newly unemployed should be above the guaranteed minimum—even though for nearly all workers the value of benefits would soon exceed their past notional contributions to the Employment Fund. Differentiated benefits would cushion the shock of a drop in income that may have been completely unforeseen; it would also provide an incentive to seek a new source of income before eligibility for regular unemployment benefits run out, and only the "social guarantee" will be given. Moreover while the social guarantee level should be set low enough to discourage any long-term reliance on it, pension levels are set in the knowledge that millions will have no other source of income for the rest of their lives.

9.14 *Unemployment compensation.* The current system of unemployment compensation is inadequate to cope with expected levels of unemployment, both financially and administratively. There are three *short-run* problems, all of them critical in a scenario of high unemployment: the system is administratively unfeasible; it is underfunded; it is unbalanced across regions.

9.15 *Administration.* Unemployment compensation is now based on a complicated earnings-related scheme (see below). It is recognized that it makes no sense to persist with this arrangement in present circumstances. Rapid inflation makes past nominal earnings relatively low compared with the minimum benefit. It is now important to focus on the ability to provide flat-rate benefits. A draft law envisages benefits at two levels for a transitional period, until earnings-related benefits can be restored. Unemployment benefits for those qualifying might appropriately be set at about 35 percent above the BCB for the first six months (though like other entitlement programs it should not be formally indexed). It would then fall to the BCB level for a further six months. Others who are seeking work, but have not been contributing to the Employment Fund would receive only the BCB as a social guarantee. Continued receipt of the social guarantee should be contingent on participation in approved retraining or public works programs.

9.16 *Funding.* Presently, unemployment compensation is financed from an Employment Fund, whose main revenues derive from a 1 percent payroll tax. The Fund is now in surplus but would very quickly prove inadequate, if anything like the scenario discussed above occurred, even if the whole Fund were devoted to compensation (see Box 9-2). The Fund, however, is also expected to finance retraining and other proactive policies in addition to unemployment compensation. A high policy priority is to separate these two responsibilities of the Fund. Otherwise the need to pay unemployment benefits will deprive proactive policies of finance just at the time when they are most needed.

9.17 In the short run, it is impractical to finance unemployment compensation out of an earmarked payroll tax, whose revenues will inevitably decline just as expenditures need to rise. If the tax rate is then increased, this implies a rise in the cost of hiring additional labor, just at the time such hiring is most needed. For the immediate future there is no alternative but to finance unemployment compensation from general revenues. This involves budgetary transfers to the Employment Fund.

Box 9-2. Financing Unemployment Compensation

The share of wages in GDP was 40.7 percent in 1991. Given the rapid rate of inflation, the real value of ruble accumulation by the Employment Fund in 1991 and the early part of 1992 will be almost insignificant by the later part of the year, so that the relevant indicator of the Fund's adequacy has to be the relation between its revenues and its expenditure in any one month. On these calculations, assuming a linear increase in the rate of unemployment, and unemployment benefits equal to 60 percent of the average wage, then under the scenario discussed in paragraph 7.10, aggregate expenditure on unemployment benefits would start to exceed the gross revenue of the Employment Fund three months after a concerted move to enterprise adjustment begins. (That is, by the end of the third quarter, if by July a new and credible economic policy package is introduced.) A further six months down the line, aggregate expenditure would be running at about 3 times the revenue of the Employment Fund (expenditure would be about 4 percent of the (full employment) wage bill, or approximately 1.5 percent GDP, and revenue would sum to roughly 1 percent of the wage bill or a 0.5 of GDP, see Box Table 9-2.)

The actual situation could be worse. For one thing, the Employment Fund currently receives only 70 percent of the amount due and contributions will drop off as the financial difficulties of enterprises increase. Moreover, as discussed above, the Fund is expected to finance not only the administrative costs of the Employment Service, but also retraining and other proactive policies. Thus either contributions from wages must rise, or unemployment benefits must receive additional funding from general revenues.

Box Table 9-2. Rate of Unemployment, Expenditures and Revenues of the Employment Fund

Unemployment (% labor force)	Expenditures (% GDP)	Revenues (% GDP)	Gap (% GDP)
1	0.2442	0.403	0.159
2	0.4884	0.399	-0.090
3	0.7326	0.395	-0.338
4	0.9768	0.391	-0.586
5	1.2210	0.387	-0.834
6	1.4652	0.383	-1.083
7	1.7094	0.379	-1.331
8	1.9536	0.374	-1.579
9	2.1978	0.370	-1.827
10	2.4420	0.366	-2.076

Note: Assume that unemployment compensation is set at 60 percent of the average wage bill and that contributions to the Employment Fund are 1 percent of the wage bill percentage.

9.18 *Allocation.* Another short-run problem concerns the allocation of the Fund. Only 10 percent of the proceeds are allocated to the central Government; the remainder is evenly divided between the oblast and raion authorities. This means that those territories with the greatest unemployment are going to be those with the least resources to deal with it, because they will be the areas where the payroll has fallen most. It is important that the Government recognize its general budgetary obligations where local funding may prove inadequate.

9.19 Over the *medium-term*, the system of unemployment compensation should change in three directions. First, the upper tier compensation should become earnings related as soon as fiscal and administrative capacity allows. For fiscal and incentive reasons, however, the replacement rate should not be set at too high a level. Second, as soon as administratively feasible, there should be a move to individualized contributions and benefits, based on individual identification numbers and an automated

system of administration. Third, there should be a move towards self-financing of unemployment benefits as economic conditions allow.

9.20 *Pensions.* The level of pensions and other entitlements and the principles that should govern their adjustment have been much discussed recently in Russia, but there is far from a national consensus on the issue. The *short-run* problems include questions of eligibility, funding, and administration. The key concern, however, is with the benefits level.

9.21 *Benefit levels.* With high inflation, there is a fear of introducing indexing procedures that will make it much more difficult to avoid persistent inflation. Yet a great many people, especially pensioners, are entirely dependent on state transfers. In February and March the minimum pension remained formally at R 342, but it was supplemented by R 200, and by R 300 in April. In view of continued inflation these amounts meant that the minimum (and nearly universal) old-age pension was very little above the "subsistence minimum." In these circumstances, it is not surprising that a Government proposal to increase pensions to only R 650 in May led to vociferous objections in the Supreme Soviet and new legislation raising the minimum to R 900 and restoring earlier indexed differentials.

9.22 The controversy that has arisen has underlined the lack of a consensus on the principles that should govern the level and adjustment of entitlements. Although these will normally exceed the BCB and can by definition be no lower, they should not be automatically increased as the BCB is increased, since this will tend to build indexing into the system.⁵ It might be appropriate to set initial pensions at 10 to 15 percent above the BCB, and then to vary them roughly in line with real wages in the budgetary sector. At least during the transition, there should be no commitment to indexation of pensions. The frequency of uprating, the choice of index (price change or earnings change), and whether pensions should be fully or partially tied to the chosen index should all be left to policy discretion in the light of prevailing conditions. Entitlement to more than the minimum level of benefits may well be justified where there has been an implicitly greater contribution to a "fund" which finances it. Such differentiation will depend on the fiscal situation, social priorities, and the ease with which it can be administered.

9.23 *Eligibility.* Given the very substantial cost of awarding the old age pension to individuals below normal pensionable age, such privileges should be removed as a matter of urgency. However, this will be very difficult politically. The Constitutional Court has ruled that individual workers cannot be compelled to retire. It is unlikely that the right to an early old age pension can be withdrawn absolutely in the short run. In descending order of political controversy, one of the following policies should be adopted: the introduction of a retirement test, that is, a pension is paid only if the individual retires; the introduction of a change-of-job test, that is, a pension is paid only if the individual leaves his/her old job (this is an aid to restructuring); or the payment only of the minimum pension until the individual retires. None of these policies withdraws the right to early receipt of pension, but reduce the incentive to exercise that right. All three policies reduce expenditures; and all yield administrative savings.⁶

9.24 *Funding and administration.* Currently, the Pension Fund is responsible for payments of family allowances (see below). This practice should be discontinued and allowances should be paid out of the budget. Pension expenditure by the Fund should be self-financing out of contributions. This is feasible even in the short run, but it would require the build-up of a small reserve. Similarly, the Fund should be responsible only for the administration and payment of pensions. Assistance should be given for the development of individual identification numbers (which should be linked to the establishment of taxpayer numbers).

9.25 Over the *medium-term*, the basic state pension should continue to be organized on a pay-as-you-go basis. The normal pensionable age should rise over time towards a higher common retirement age. Options for a system of complementary private pensions should be explored and the necessary regulatory framework established. Properly organized private pensions foster individual choice, assist the development of capital markets, and *may* (though the evidence is far from clear) encourage private saving. However, policy should take account of three sets of facts which will inevitably delay the introduction of private pensions in Russia:

- Private pensions require functioning capital markets, relevant financial assets and, at least in the long-run, sufficient private wealth to buy those assets.
- Inflation is a major problem for well-functioning insurance markets, especially post-retirement inflation. This problem is not easily solved and the solution, if available, hinges on the availability of sophisticated financial instruments.
- If current contributions pay for pay-as-you-go benefits, they cannot simultaneously be used as the basis for a funded scheme. Since it is not realistic to levy a double contribution, funded schemes can be introduced only gradually.

9.26 All these reasons suggest caution in the speed of introduction and extent of coverage of private pensions. A problem with private pension schemes is that they are easily subject to fraud and difficult to supervise. A burgeoning pension and insurance market would compound the problem of inadequate supervisory capacity of the monetary authorities (see Chapter 7). Private schemes should be phased in; and enterprise-based schemes should not be encouraged at this stage, not least because they can easily impede labor mobility.

9.27 *Family allowances.* Under the Soviet system, some types of family allowances were means-tested. Presently, family allowances should be considered part of the entitlement system—not only is the capacity for means-testing lacking, earlier studies of living standards have shown that the presence of children in the family is a good indicator of need. For both incentive and fiscal reasons, this family allowance should be set at a flat rate per child in the family, and probably should not exceed 50 percent of the BCB. In addition, as discussed above, family allowances should be removed from the Pension Fund and paid out of the budget.

Social assistance

9.28 Entitlements alone, however, will not address all sources of poverty in the Russian Federation. Discussion of the safety net has tended to focus on pensioners and the newly unemployed. This does not mean, however, that only pensioners are poor. Earlier studies of living standards in Russia have shown that even under the previous system, there were many other sources of poverty, including families with several children, single-parent households, and households suffering from temporary unemployment. In a market economy, the numbers of able-bodied, working age poor are likely to increase, if only because unemployment levels will be higher, and some people may exhaust or never acquire eligibility for regular unemployment benefits. The ultimate safety net is the responsibility felt by most industrialized societies to guarantee their citizens a minimum level on consumption, if they have no other source of economic support. It can reasonably be assumed that if the transition to a market economy entailed a conspicuous increase in homelessness and malnutrition, the economic reform might become politically unacceptable.

9.29 The concept of a "socially guaranteed minimum" discussed above should be the foundation of this basic benefit, which ideally would provide social assistance of the last resort. Eligibility should depend only on outcome (that is, poverty), not on cause. Access should be open to any individual or family, dependent only on a test of income and wealth. It is therefore urgent to begin work on appropriate instruments for means-testing social assistance. At the present time, the main responsibility for providing social assistance of the last resort rests with local authorities. It is certainly appropriate that this should be the normal situation. Local personnel can best gauge and monitor assistance. However the geographic impact of the stabilization program will be very uneven, and it is important that the reform of the system includes a mechanism whereby central assistance is triggered if local authority revenues fall below an agreed level.

Governance and administration of the safety net

9.30 There are a number of general problems which affect administration of both assistance and entitlement programs.

9.31 *Governance.* Responsibilities are not allocated in a way which makes coordination possible either within the executive, or between the executive and the legislature. At least four parts of government/para-government are involved in pensions policy, with no clear demarcation about who has control over what. A similar problem arises with the Fund for the Social Support of the Population, where some of the local funds are an arm of the Ministry of Social Protection and others are controlled by the President's office. Coordination between the executive and the legislature is also unclear, as manifested by the multiplicity of funds for social protection. As a result, there is little if any financial control over the behavior of the extra-budgetary funds. The responsibilities of different bodies for the different Funds should be clarified, especially in the case of the Pension Fund and the Fund for the Social Support of the Population. It is important to ensure that one body has the explicit and acknowledged final authority for each Fund.

9.32 *Administration.* There are two sorts of problems in administering the cash benefits system. In the first place, contributions are paid *en bloc* by enterprises on behalf of their employees; and short-term benefits and family benefits are generally paid by the enterprise. The authorities therefore have little knowledge of individual contributions or short-term benefits. The absence of such information makes it impossible to bring about a closer relation between individual contributions and benefits. A closer relation is desirable for several reasons. In areas such as old age pensions, it allows individuals to calculate on the basis of a more efficient relation between earlier retirement on a lower pension and later retirement with a higher pension; it facilitates coordination between the state pension and occupational schemes; and a more systematic relation contributes to horizontal equity between individuals retiring earlier and later.

9.33 Second, the structure of benefits can create unnecessary administrative burdens. The maximum duration of unemployment benefit is extended by one week for each year of service over 25, necessitating the calculation of duration of service (to the last day) for everyone who applies for benefits. Pensioners who continue to work may apply to have their pension recalculated as their length of service increases, similarly requiring laborious administrative procedures. In both cases, all calculations are done manually. A number of legal changes would simplify administration: entitlement to unemployment benefits should not be related to length of service; and pension calculations should include length of service only at the time the individual retires. As noted, in present circumstances, it seems appropriate to use flat-rate amounts, until it becomes administratively feasible to move to individualized contributions and benefits, based on individual identification numbers and an automated system of administration.

Development of the Labor Market

9.34 Although labor turnover rates in the Soviet economy were very similar to those in OECD countries, labor markets in the Soviet Union did not function to allocate labor for efficient production of goods. Enterprises competed to hire workers because a larger workforce enhanced an enterprise's bargaining position with ministries and allowed output targets to be achieved with less effort per worker. Easy credit and cost-based pricing schemes meant that labor costs were not an important consideration. Such an incentive structure induced rational managers to hire as much labor as was available. Estimates have suggested that enterprise over-staffing accounts for 20 to 25 percent of the work force.⁷

9.35 Not much institutional change has occurred thus far in Russia's reform program. Enterprises that do not produce efficiently are not liquidated. The provision of jobs is recognized as a social responsibility and a central function of enterprises. Since industrial production is concentrated in large enterprises, shutting down an enterprise typically implies destroying a large number of jobs. Moreover, given the current economic context, the benefits would be minimal, since a new firm is not likely to be any more efficient than the old one. Not surprisingly, liquidation of enterprises does not occur, and guaranteed employment is maintained as a credible social benefit. In short, the labor market is still very underdeveloped.

9.36 Labor markets take time to develop because they are particularly complex markets. A model of a spot market for a commodity such as grain is inappropriate for thinking about a labor market. While information about specific buyers and sellers is unimportant in markets for standardized commodities, such information is crucially important in labor markets. A labor market generates information about the characteristics of specific workers and jobs using job search, hiring, and firing, and promotes efficient matching of skills, preferences, and attributes. Such processes require institutional support and shared understandings so that workers and firms can signal their attributes, credentials, and intentions.

9.37 Workers seeking jobs and enterprises seeking workers need means for informing each other about the opportunities that they represent. At the simplest level this is an issue of establishing effective labor exchanges that pool and disseminate information. The existing network consists of about 2,000 labor placement offices which serve as the channel for hiring about 20 percent of new workers. Most of these matches involve unskilled labor. Vocational counseling is part of the education system. Information and matching services could be strengthened through information systems (computer hardware and software) and consulting expertise relating to efficient administrative techniques.

9.38 The problem of generating relevant and credible labor market information is more difficult than creating means for exchanging information. Workers have little relevant employment history and few credible credentials that employers can consider. New firms and new modes of management lack reputations which establish job requirements and career possibilities. Such information will accumulate with time. Thus labor markets need time to develop as an efficient means for matching workers and jobs. Moreover, the quality of the work force will improve over time as workers invest in human capital in response to labor market signals.⁸ Relatively high wages in certain jobs will prompt workers to invest in the training or experience necessary to compete for these jobs. Especially given the tremendous amount of uncertainty in the economy, labor supply responses will be slow. To a large extent the development of the work force will be a generational process.

9.39 Training and retraining programs can provide crucial opportunities for workers seeking to adapt to the new economic circumstances. Under Soviet planning, a centralized bureaucracy sought to mold human beings to the requirements of socialist production. The goal is not to redirect this bureaucracy towards making human beings for the market. A much more decentralized approach is necessary. Private sector involvement and local resource mobilization must be key objectives. Workers and enterprise managers should play a key role in designing training programs, for these groups are best positioned to assure that training programs actually enhance job opportunities. Local government financing is important to ensure that ongoing programs are embedded in local institutions, and that training programs are not merely a means of securing subsidies from the national budget. On the other hand, the continued involvement of the central Government is necessary. The central Government will have an important role in coordinating efforts and distributing costs, especially in response to high unemployment and regional distress.

9.40 The shift to a market economy will involve a transitional period of high unemployment. Evidence from unemployment experience in Western Europe and America indicates that the length of unemployment spells is an important economic variable. Most studies indicate that the probability of a worker being re-employed decreases as the length of the worker's unemployment spell increases. Thus longer unemployment spells lead to a higher long-term equilibrium level of unemployment.⁹ *The implication is that long unemployment spells have enduring effects on workers and the economy.* Long unemployment spells represent a structural rather than transitional danger.

9.41 An effective unemployment benefit system is essential for providing income support for unemployed workers. Active labor market policies, such as special retraining programs for the unemployed, are also needed. Even in the medium term, "natural" economic growth is not likely to create enough jobs to employ all the workers who are currently employed unproductively or inefficiently. The Government should construct explicit policies for job creation. Such policies might include incentives for new firms in labor-intensive industries and public works projects such as health, education, communication, and transportation infrastructure. Rather than representing backsliding from the ideal of a market economy, job-creation programs can build public capital important to a market economy.

9.42 The transition to a market economy will generate sectoral and regional labor market shocks. Tight budgets, declining international tensions, and the uncompetitiveness of the arms industry in international markets will cause declining employment in the military industries. Since the military industries are regionally concentrated (see Table 9-1), regional unemployment is a probable result. The location of other industries does not reflect comparative advantage. For example, the virgin lands movement of the late 1950s pushed agriculture into western Siberia to compensate for inefficient production on existing farms. Market forces will increase efficiency in agriculture and shift its regional patterns. Industrial location reflects an over-emphasis on economies of scale. Production of basic industrial commodities is concentrated in a few locations and distributed by rail throughout the country. Market forces are likely to push industrial production towards smaller, more regionally dispersed firms. The lack of industrial diversification in many cities means that the decline of the large industrial enterprises will create acute regional problems. The Government will need to develop structural adjustment policies that encourage worker retraining, worker mobility, and the migration of capital to depressed areas. Priorities in enterprise restructuring need to reflect the costs of causing unemployment in particular industries and locations.

Wages and the Change in the Wage Regime

9.43 Under state socialism the state played a dominant role in determining wages. The 1986 wage reform and the 1987 Law on State Enterprises gave enterprises greater freedom in relating wages to profit performance. Concern that this freedom might be used to devote too large a proportion of enterprise resources to the payment of wages led in 1989 to the imposition of a very sharply progressive tax with marginal rates of up to 200 percent on increases to the wage bill that were considered to be excessive. As elsewhere, the tax was disliked by managers and workers alike, and last year was replaced by a provision limiting the deductibility of wage costs for the purpose of computing taxable profits to four times the minimum wage. It was hoped that enterprise management would use their greater autonomy to resist wage increases in the new and harsher economic environment. But the outlook and habits of enterprise managements will take time to change. Resistance to wage increases on the part of managers is reportedly low. After a sharp drop in real wages in January, these have tended to creep up again. Box 9-3 analyzes recent wage trends.

9.44 The Government has instituted a process of tripartite collective bargaining, and labor agreements have either recently been concluded or are about to be concluded for most industrial sub-sectors. The general tendency is to maintain previously established differentials. Lack of competition allows enterprises to pass wage increases on to their customers, and credit policies and the shortage of enterprise liquidity have not yet had a generally constraining influence on wage increases. In tripartite discussions government rather than management representatives have most strongly resisted wage increases. The role of unions in the previous system was passive on wage issues. They were more concerned with the administration of benefits. For the most part unions remain fairly traditionalist; however, new, more aggressive, independent unions are beginning to appear.

9.45 The government itself has been inconsistent in its attempt to restrain wages. In November the government resolved to raise wages of teachers relative to industrial wages. Thus teachers' wages were increased 2.8 fold in contrast to the 90 percent received by other parts of the "budget sector". Not surprisingly, this raised issues of comparability with others in the sector, and a series of separate decisions has given the whole sector roughly the same increase as teachers. Subsequent inflation meant that the November wage increase was quickly eroded. This development prompted further strikes and another wage increase of 170 percent. In the case of miners, the government itself was unable to resist pressures to raise wages to levels which if widely emulated would provoke hyperinflation. Miners in June 1992 commonly earn Rb 30,000 or more per month—at least ten times the average wage.

Table 9-1. Regional Employment in the Military-Industrial Complex

Region	Military-industrial employment ('000's)	Percentage of total employment
Northwest (II)	455.3	30.7
Urals (VIII)	1116.4	30.7
(Udmart ASSR)	(167.7)	(55.3)
Volga-Vyatka (IV)	451.1	28.5
Volga (VI)	750.9	27.9
(Saratov Oblast)	(212.1)	(50.9)
Central (III)	1211.4	22.7
Western Siberia (IX)	472.5	22.7
(Novosibirsk Oblast)	(172.4)	(43.5)
Central Chernozem (V)	247.2	22.6
Far East (XI)	178.3	17.8
Kaliningrad Oblast (120)	18.9	15.0
Eastern Siberia (X)	167.5	13.9
North Caucasus (VII)	255.1	13.7
North (I)	92.2	9.4
Russian Federation	5416.8	23.5

Note: Where data are available, oblasts with over 40 percent military-industrial employment are listed in parentheses. Roman numerals in parentheses identify the region on the map on page X.

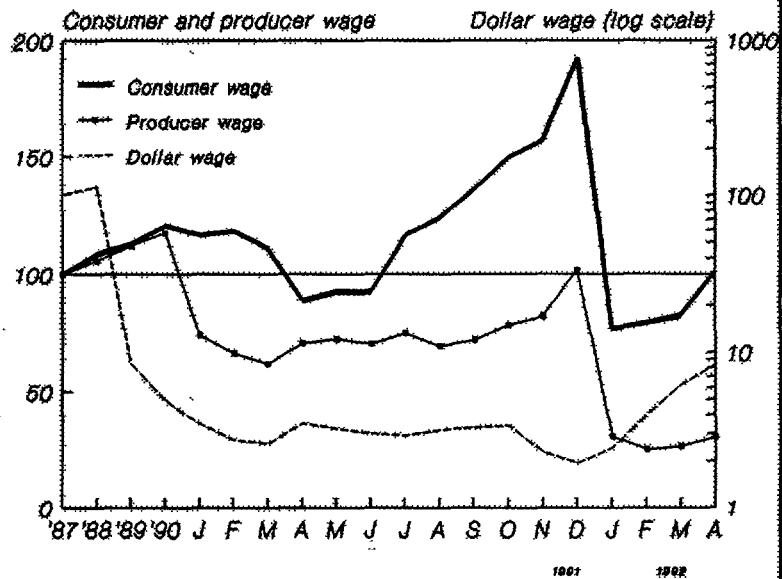
Box 9-3. Real Wage Trends

To assess the extent of wage changes in the economy, there are at least three real wage measures one might consider: industrial wages deflated by an index of consumer prices, industrial wages deflated by an index of wholesale industrial prices, and industrial wages valued in foreign currency by the contemporaneous market exchange rate. While the three measures are obviously related, each is most relevant for a particular issue. The consumer wage is most relevant to workers' welfare, the producer wage is most relevant to firms' labor demand, and the exchange-valued wage is most relevant to competitiveness in external markets.

The graph below indicates that in recent years the different measures of real wages have moved rather differently. The consumer wage fell slightly in 1991 and decreased significantly in the first quarter of 1992. The April 1992 level of the consumer wage was roughly the same as that in 1987. In contrast, the producer wage decreased much more over the past two years, and in April of 1988 the producer wage was only 38 percent of its 1988 level. This fall in producer wages does not imply an equal fall in unit labor costs. Labor productivity also fell. In fact, labor productivity may have fallen enough to raise unit labor costs despite the fall in producer wages.

The exchange-valued wage behaved much differently than both the consumer and producer wage. The exchange-valued wage dropped dramatically in 1990 and 1991, and then rose sharply in the first quarter of 1992. In April 1992 its level was about the same as in late 1989: \$30.61 per month. Exchange rate appreciation and wage inflation since April 1992 probably puts the current wage (mid-June 1992) at about \$50. The dollar value of industrial wages in Czechoslovakia, Hungary, and Poland are roughly three times as great. In Bulgaria, a highly open economy with well-functioning exchange markets, industrial wages are \$53 per month. Such comparison might be taken to suggest that depreciation of the ruble is not necessary for stabilization, and that some further appreciation might be sustainable.

Box Figure 9-3. Trends in Real Wages, 1987-92



Continued

9.46 In the short-term, wage setting cannot be left to the market. Until enterprise restructuring is well-advanced, the incentives facing state enterprise create excessive wage pressure. This is apparent in the rapid growth of relative wages in industry (see Table 9-2). Stabilization cannot be maintained without countervailing restraints. The Government needs to impose, as a transitional measure, a tax on excessive wage increases. Given the likelihood that enterprises will begin shedding labor, such a tax is more appropriately related to the average level of wages than the total wage bill. The Government must also avoid automatic indexing of wages through wage agreements that use an indexed minimum wage as a numeraire. Such agreements increase the economy's susceptibility to hyperinflation.

Box 9-3. Real Wage Trends (Continuation)

Given that the dynamic response of wages, prices, and exchange rates to actual and anticipated shocks may be rather different, one must be cautious in interpreting monthly real wage data. For example, comparing December 1991 to December 1990 indicates that consumer wages rose 38 percent. What actually happened was that wages rose as controls on enterprises loosened in late 1991. With price liberalization in 1992, prices moved much faster than wages, causing a sharp downward movement in consumer and producer real wages. Thus comparing consumer wages in January 1992 to those in December 1990 indicates that consumer wages have fallen 45 percent.

In considering wage trends, one needs to recognize that non-wage compensation is a significant share of labor costs in the Russian Federation. Data on non-wage labor costs are scarce; however, interviews with managers of state enterprises indicate that provision of housing, food, health, education, day care, and other goods and services for workers and their families may in some instances account for about 60 percent of total labor costs. This large share of in-kind benefits means that a significant share of workers' compensation package is automatically indexed. Thus inflation increases the share of non-wage compensation in the workers' compensation package. This fact suggests that the price rise in January 1992 did not decrease workers' compensation as much as the drop in real wages indicates.

Moreover, real wages prior to 1992 do not indicate real consumption possibilities. Widespread shortages of consumer goods prior to 1992 meant that a significant share of wage income could be used only to accumulate monetary balances (see Box 2-2 in Chapter 2). Thus the "real" real consumer wage was significantly lower than the consumer wage given in Box Figure 9-3. The price liberalization in January 1992 wiped out much of the value of monetary balances and eliminated shortages of goods. While measured real consumer wages were lower in 1992 than in 1991, in 1992 opportunities to transform wage income into goods were greater.

Producer prices moved upward faster than consumer prices in January 1992, and continued to rise more in the first quarter of 1992. Thus the producer wage fell more than the consumer wage, re-enforcing a pattern that had already developed across 1991. Wage inflation appears to be continuing to respond to the drop in real wages produced by the January 1992 price shock. Thus real wages are rising. Given the changing nature of the compensation package and the goods market, an important but difficult question is the level at which real wages will stabilize.

A fundamental issue is productivity and unit labor costs. Holding factor shares constant, productivity, output, and the real (producer) wage are directly proportional. In 1991 productivity, labor utilization, and output fell. Consumer wages did not fall as much as producer wages because of offsetting increases in government subsidies and decreases in labor utilization. Such factors cannot be sustained over the long term. Over the long term, technology and capital mobility determine a sustainable level of unit labor costs. Thus productivity growth determines growth in real consumer wages in the long run.

9.47 In the longer term the Government must sharply reduce its role in wage setting. Alternative institutions such as employer and worker organizations need to play a greater role in negotiating outcomes in the labor market. More regional and sectoral decentralization in the process of wage setting will improve labor market flexibility. Greater wage dispersion is likely to emerge in response to the pressures of supply and demand. The Government and other actors in the labor market need to recognize that relative wages serve as important economic signals that influence investments in human capital and choices among production technologies. Actions which attenuate or distort these signals promote the misallocation of resources and hinder economic growth.¹⁰

9.48 As is common in other socialist countries, enterprises have supplemented wages with a variety of subsidies and payments in kind. For example, compensation packages often include enterprise-supplied housing and other services, particularly day-care and kindergartens. Sometimes an enterprise pays the capital costs of a school or polyclinic even if subsequent recurrent costs are met by local authorities. Urban enterprises may make special deals with agricultural ones to ensure that their

employees do not have to search for food. The beneficiaries may be past, as well as current, employees—for example pensioners who continue to live in subsidized company housing.

9.49 Private sector growth will be concentrated in small firms that will not have the incentives or capability to provide the range of non-wage benefits that large state-enterprises provide. In fact, a key constraint on the growth of the private sector will be the development of supporting markets or social

programs for housing,

day care, and health services. Mechanisms for providing these services independently of the state enterprises need to be developed as quickly as possible. Enterprises should reduce the role of non-wage benefits in the workers' compensation package as quickly as alternative mechanisms for securing such benefits can be developed. Doing so minimizes informational requirements and transaction costs in negotiating labor contracts, and fosters gains from specialization and the social division of labor. Focusing labor compensation on a monetary payment also aids labor mobility. Thus it is a crucial step in promoting the development of the labor market.

Table 9-2. Relative Wages by Sector, 1970-92
(Economy-wide average = 1.0)

	1970	1980	1990	1991/Q1	1992/Feb
Industry	1.08	1.08	1.05	1.08	1.28
Agriculture	0.82	0.88	1.04	0.81	0.52
Transportation	1.14	1.21	1.18	1.15	1.37
Communication	0.79	0.86	0.86	0.87	0.84
Construction	1.25	1.19	1.27	1.25	1.29
Trade	0.78	0.82	0.87	0.86	0.68
Health	-	-	-	0.76	0.63
Education	0.85	0.79	0.68	0.81	0.66
Science	1.12	1.04	1.19	1.23	0.70
State security	-	-	-	1.51	1.17
State admin.	1.02	0.95	1.23	1.15	1.17
Non-material sphere	-	-	-	0.86	0.68
Economy (R/month)	126.10	177.70	296.80	315.00	2,004.00

Efficiency and Equity in the Social Services

9.50 The primary problem in social services such as health and education in Russia is financial. While the quality of both health and education is not uniformly high, as discussed below, the problem lies not in the sectors themselves, but in the impact of the fiscal crisis. Issues of reform in health and education touch upon how to maintain acceptable standards under conditions of budgetary stringency, and to move some way towards financing reform. In health it may be useful to consider introducing some level of competition among providers; in education it is possible to consider alternative forms of funding, and the possibility of private sector development.

9.51 There is a need for a safety net for health, education, and other social services. Local authorities should not be given responsibilities for important social services without being assured of adequate resources. The current budgetary allocation for education is 3.3 percent of GDP, and the allocation for health expenditure is 2.3 percent of GDP (see Table 9-3).¹¹ While the size of the budget fell sharply in 1992, the share of the budget devoted to education and health is higher in 1992 than it was in the late 1980's.¹² Thus education and health have not borne a disproportionate share of the budget cuts. On the other hand, there are clear indications of budgetary pressure. Relative wages in the education and health sectors have fallen sharply in the past year, as is apparent in Table 9-3.

9.52 The greatest danger posed by budget cuts is not that the services will disappear, but that they will be increasingly less cost-effective as a larger and larger proportion of total expenditure becomes wages and salaries. In general it is better to economize on teachers than on textbooks; research has

generally shown that class size has little effect on educational outcomes, but textbooks are very significant. The same observation applies to health, where overstaffing is already commonplace and equipment and access to medical supplies is very poor. While it is essential in the long run to close some hospitals, and to switch some of the resources to primary care, this is not the likely consequence of simply slashing budgets. Given the increasing and generally desirable decentralization of social services, there may be little in the short run that the Russian Government can do except to ensure that expenditure cuts are not directed at key non-personnel inputs, and that, if necessary, some personnel should be dismissed and retrained for other work.

Table 9-3. Ratios of Budgetary Social Expenditures to Total Planned Budget Expenditures and Projected GDP, 1992

Expenditure category	Social expenditure as % of total budget expenditure	Social expenditure as % of GDP
Education	10.7	3.3
Schools	3.2	1.0
Vocational schools	1.0	0.3
Universities	2.5	0.8
Health care	7.3	2.3
Social welfare ^a	0.9	0.3
Social support fund	0.0	0.0
State allowances and compensations ^b	3.1	1.0
Children allowance	2.8	0.9
School food compensation	0.0	0.0
Transfers to pension fund	1.9	0.6
Total expenditures	100.0	31.2

a. Expenditure on social welfare homes for old aged, invalids, orphans, domiciliary services, sanatoria vouchers, etc.

b. Due to price increases.

Memo: Total budget expenditure = R 2,102.7 billion, GDP = 6,750.0 billion, as presented by Russian authorities to Parliament, March 10, 1992.

Source: State budget system of the RF (tables), March 1992. (Gosudarstviennaya budzhetnaya sistiema RF). Staff calculations.

9.53 Health care in Russia presents a mixed picture. Russia has twice the OECD average ratio of doctors per capita and about 50 percent more hospital beds per capita. But the doctors are poorly trained and badly paid, pharmaceuticals and medical supplies were scarce even before the current well-publicized emergency, and hospitals are ill-equipped and often unsanitary. (For example, for the Soviet Union as a whole in 1988, 27 percent of rural hospitals had no sewerage system, and 17 percent no running water.) In principle, health services have been free, but side payments to obtain attention have been commonplace. Poor services are reflected in poor health levels, though environmental conditions, dietary habits, and heavy smoking are also to blame. Infant mortality is at least 22 per thousand (adjusting official data to conform to World Health Organization (WHO) definitions; many observers believe that the figure is much higher). This compares with 16 in Poland, 11 in Czechoslovakia, and less than 10 in many OECD countries. Adult mortality remains high; in contrast with dramatic gains in the expectation of life at age 15 in Western Europe in the last 30 years, in Russia this has been static for women and has actually fallen for men.

9.54 There was some initial reluctance to undertake reforms in health, but it has since been overcome. A law of November 1991 provides for obligatory health insurance based on premiums collected from employers to be introduced at the beginning of 1993, with the budget paying the

contributions for those who are not employed. It has already been observed that it may be unwise to increase the costs of labor to employers just at the time when massive structural unemployment is developing. Moreover international experience suggests that insurance administered through a multitude of organizations incurs high collection and administration costs, which are then reflected in a high cost of medical care. This problem is likely to be particularly serious in Russia, which lacks appropriate management and administrative systems. There will in any case need to be a very significant contribution from general revenues both for those who are not covered by employers' contributions and to prevent excessive regional inequalities. In addition, the appalling state of health infrastructure and situation of medical supplies will require considerable public spending.

9.55 The centralized provision of funds is quite consistent with decentralized management and some elements of competition among providers. Recent reforms to the British National Health Service have embodied this approach. Israel and the Netherlands, for example, use insurance companies to manage and provide care using public funds. The law is flexible enough to be compatible with a number of different financing and service delivery structures and it is important that the alternatives be carefully assessed before a final decision that will affect the long-term welfare of virtually the entire Russian population is made. Some areas are already experimenting with an alternative system of contracts between the health authority and hospitals and polyclinics. In addition the implementation of the new system will need to be carefully planned. Following such a decision, it is necessary to pay much more attention to priorities within the health system, and in particular to give much greater attention to primary care. (In the former USSR, some 78 percent of health expenditures is directed at hospitals, compared with 40 percent in the US.)

9.56 The problems in education are rather less dramatic and less subject to international comparison than those in health. Overall, the Soviet system succeeded in producing a well-educated industrial labor force. Very few people now join the labor force with less than a full secondary education, the proportion of the adult population which has completed higher education is at or above the level of several Western European countries, and the quality of scholarship in the leading academic institutions is also very good. The primary issue in education is now financial; with a cutback in public expenditures on education from 7.9 percent of GDP in 1989 to 3.3 percent allocated in 1992, it is not clear that current standards can be maintained. In the prevailing budgetary crisis, many of the universities are in very serious financial difficulty, and university teachers are distracted from academic disputes by the need to find additional sources of income.

9.57 Substantive criticism of the system has focused on its mediocre uniformity, and the centrally-established, strongly ideological curriculum in general education, and the narrowness of much of its training, especially for engineers. Another problem has been the disjunction between the curriculum in the last two years of secondary school and the requirements of university exams, causing many people to pay for additional private tuition for their children.

9.58 In the longer run, financing reforms that would reduce the role of public expenditure in education are under consideration. In the past, public education was free at all levels and stipends were provided to higher-level students. Decentralization is now being encouraged to the point where school principals would have their own budgets, and would be encouraged to raise other resources through money-earning school production or directly from parents. Alternative private systems are encouraged, and the recognition that it is the duty of the educational authorities to support children, not schools, may lead in some areas to the use of educational vouchers. Pressures on the Ministry of Education to introduce a fee system for basic general education are, however, being justifiably resisted. At a higher level, there is interest in the possibility that students might work their way through college, with universities helping

to provide the necessary job opportunities. These potential reforms are generally in the early stage of development, but are greatly to be commended.

The Responsibility of the Central Government

9.59 The responsibility for the maintenance of a social safety net during periods of potentially highly unequal regional consequences of reform must remain with the central Government of the Russian Federation. Excessive centralization in the past should not be replaced by excessive decentralization. The principle that it is ordinarily more efficient to have the potential beneficiary determine whether it is worthwhile to pay the costs of a service are not in dispute, and local control and financing of social services comes much closer to this ideal. But especially in the transition period where many localities are critically dependent on income from a handful of very vulnerable productive activities, there are already danger signs that decentralization may be proceeding too rapidly. For example, oblast authorities have been asked to assume budgetary responsibility for health and education expenditures, as well as for residual consumer subsidies. While these authorities also receive a large proportion of direct taxes on enterprises and individuals, little attention has been paid to the danger that the yield of such taxes in some oblasts may fall precipitously as the stabilization and adjustment process proceeds, and that the experience of different areas will differ greatly.

9.60 The appropriate levels of administrative and fiscal responsibility and methods of financing in all areas of social services therefore need urgent examination. It should be noted that budgetary underpinning by the central Government is not inconsistent with a great deal of local administrative responsibility, as the British and Canadian health services show, and local administrations may use budget money to promote competition among private or quasi-private suppliers of social services.

9.61 The central Government must also consider that, much as reforms in this area ought to rebase the financing of these services on a stable fiscal basis, the fiscal situation itself is likely to remain fluid for some time. Furthermore, the demands made upon the safety net during the transition are likely to be extraordinary. Thus in the short run, the financing of the social safety net will be pragmatic and *ad hoc*.

Notes to Chapter 9

1. State socialism attempted to channel all economic claims through the state. Part of the transition to a free economy involves recognizing claims for support that persons have on each other. For example, market economies recognize in a variety of ways and to a variety of degrees claims that children have on their mothers and fathers, claims that spouses have on each other, and claims that the elderly have on their mature children. Because these claims are personal and relational, they cannot be created simply by decree. Nonetheless, these claims are important in market economies. Changes in the legal system, the tax system, and the system of social benefits need to recognize that personal relations and property relations are significantly intertwined in a market economy.
2. The focus here is on the minimum floor to living standards. Given the relatively equal income distribution and the threat to livelihoods posed by the extremely rapid rate of price increases, this is the most important immediate issue.
3. The merits and/or the fiscal capacity to sustain a "socially guaranteed minimum" are debatable. Many societies do without it, notably the poorer countries where the size of the "un-entitled" population is too large to contemplate a tight safety net based on publicly funded cash transfers. And even high-income economies may eschew the system as inefficient. Arguably, private transfers (encouraged through appropriate tax provisions) can substitute for the state in the provision of charitable assistance.
4. Purchases for the minimum food basket would consume about 80 percent of the basic benefit. This proportion should rise as energy, transportation, and housing subsidies are increasingly removed. The calculation was prepared by the World Bank (in consultation with experts from the Academy of Science) at the request of the Ministry of Social Protection. In response Government experts suggested a minimum consumption line some 20 percent higher (based on calculations reflecting larger meat consumption but somewhat fewer calories.)
5. A different policy might be required in the future. But as Layard and Ellam (1992) argue, "for the time being the right policy is surely to continue with discretionary adjustment of the pension in line with the evolution of wages."
6. Another issue of eligibility concerns transfer rights among the states in the FSU. There is no agreed system of transferring pension rights across the constituent republics of a formerly unified system. One needs to be urgently developed and negotiated.
7. Over-staffing refers to the difference between current staffing levels and efficient staffing levels *under an alternative incentive regime* in which worker productivity and labor costs determine labor demand.
8. Though one of Russia's strengths is the quality of her work force, it must be recognized that much of the existing human capital will be lost in the transition. Many of the existing capital goods are either obsolete or were built for purposes for which the country, or the region where they are installed, has no comparative advantage. A similar problem arises with the existing stock of human capital.
9. The effect of past unemployment experience on the economy's response to the business cycle is called hysteresis.
10. The Government has recently proposed an indexation scheme in which wages up to 1.5 times the minimum wage (MW) would be fully indexed to changes in the CPI in the previous quarter, wages from 1.5 to 3 times MW would have an indexation factor of .5, and wages over 3 times MW would be unindexed. Under such a scheme inflation would produce serious distortions in relative wages.
11. These figures may exclude some local expenditures, and they do not capture health and education benefits that enterprises provide.
12. In 1988, the shares of the budget spent on health and education were 9.6 percent and 2.5 percent respectively. See *A Study of the Soviet Economy*, Table J.2, p. 122.

PART III

Sectoral Reforms

Systemic reforms, as argued in Part II of this report, are critical to placing Russia on the path to sustainable macroeconomic stability. Yet macroeconomic stabilization may temporarily reinforce the declines in output. Systemic reforms will have to be articulated in the context of each sector to reverse these declines. *More importantly, a sense of relative sectoral priorities will have to emerge.* The failure to define sectoral priorities may lead to a misallocation of extremely scarce resources (including external finance) during the transition, and could jeopardize, or significantly delay the benefits of reform.

Part III of this report addresses the issues in four key dimensions: environment, energy, agriculture, and housing and urban reform. These sectors are critical to the reform process and, though much more remains to be done, an initial idea of sectoral design exists already.

Environment. The Russian Federation's abundant natural resources were fundamental to the Soviet Union's earlier successes in industrialization and economic growth and have been extensively exploited. In many cases this has led to undisciplined, inefficient and heavily-polluting forms of economic development, exacerbated by the incentives set by centralized planning. The process of structural reform envisioned in the transition to the market should help remove some of the worst excesses by eliminating the obsolescent production techniques and encouraging energy efficiency. Apart from exceptional cases such as nuclear safety/waste disposal and some egregious cases of air pollution, the key to the transition in environment is therefore to prevent the atrophy of current environmental regulatory capacity.

Energy. Appropriate reform of the energy sector in Russia could resolve both the problems of macro stabilization and of closing the external financing gap. Sectoral reform is linked to some realistic pricing of energy outputs—and this is a key driving force for enterprise reform and technological change. While successful reform of all sectors of the Russian economy is a prerequisite to effective transition in the long-run, the energy sector's link to the macroeconomic balance and enterprise adjustment makes immediate reform of this sector imperative for the short-term survival of the reform program. Increases in energy prices will have to be phased to match world prices to revive production. This will allow for increased fiscal revenues, increased foreign exchange earnings, and install the correct incentive framework for enterprise reform.

Agriculture. Reform of the agricultural sector in Russia should ultimately lead to a structurally transformed sector which is capable of supporting both domestic agricultural demand as well as some level of wheat exports. This transformation will relieve the burden of agricultural imports in Russia's balance of payments, as well as the budgetary burden of sectoral subsidies. The key to this will be the imposition of hard budget constraints on agricultural enterprises, supported by the elimination of local price regulation, and trade liberalization. Adjustment in the livestock sector is urgent—and this should be done through the removal of explicit and implicit subsidies. In the longer run, there is much scope for productivity gains in Russian agriculture and related services. State support for this continuing transformation will be critical—as will access to foreign know-how and financing.

Housing. Housing in Russia has traditionally been heavily subsidized, and enmeshed in the system of non-wage benefits given to workers by the enterprises. Reform in the housing sector will therefore be a critical component of fiscal adjustment as well as of enterprise reform. At the same time

because of the key role housing plays in social welfare, steps such as rent reform or the development of a private-sector housing market must be coordinated with policies on wage reform, and the development of the financial sector. The key to this change is the separation of housing policies from poverty and unemployment problems; the entire sector cannot continue to be structured to the needs of the most disadvantaged.

The complex and, at times, constraining linkages between macroeconomic stabilization and structural reforms have been elaborated in Parts I and II. As the following chapters indicate, the complexity is not mitigated by the need to consider these reforms in the context of sectoral needs and priorities. On the contrary, the linkages proliferate, and the complexity increases several-fold. At the same time sectoral considerations only underscore the need for prompt and resolute action on the reform program, and thus the message of these chapters is consistent with the preceding—in spite of the contradictions between short-term and longer-term incentives to reform, the gains of delayed or partial reform are likely to be both fleeting and inequitable.

CHAPTER 10

Environmental Issues and the Transition to a Market Economy

10.1 Russia's environmental problems are deeply rooted in the structure of its economy.¹ Soviet planning promoted the rapid growth of crude processes that exploited Russia's vast trove of natural resources. Undisciplined by scarcity-based pricing, the extractive and heavy industry ministries built huge, inefficient, and heavily-polluting installations. Russia also experienced rapid forest-cutting, steady deterioration of soils, and polluting runoff from wasteful application of fertilizers and pesticides on the collective farms. At the same time, some important environmental initiatives were undertaken during the Soviet era. Accomplishments included a substantial drop in air pollution during the 1980s, major investments in wastewater treatment, and one of the world's largest reforestation programs. The economic reform program currently under implementation should also improve environmental conditions in many areas. At present, however, it is clear that the Russian Federation has some of the worst environmental problems in the world.

10.2 Nuclear radiation hazard has been most highlighted by the news media and reducing it significantly will take years and billions of dollars. However, serious air pollution is an even more widespread problem. Large populations in the Urals and Kuznetsk industrial areas are constantly exposed to extremely hazardous emissions from nearby metals-processing facilities. In the Russian Arctic, the smelting center at Noril'sk produces about 10 percent of the country's *total* hazardous emissions, including 1.2 million tons of sulfur dioxide (SO₂) per year. Human health conditions there are reportedly among the worst in Russia, and approximately 550,000 hectares of surrounding forest have been degraded by acid rain.

10.3 Fortunately, such catastrophic conditions are not typical of the Soviet legacy. Under socialism, the USSR did internalize some environmental concerns much earlier than more recently industrialized countries whose per capita incomes are now comparable with Russia's. While military-industrial priorities frustrated regulation of air pollution from strategic heavy industrial facilities, many other plants have installed abatement equipment. Water treatment is generally comparable with Southern European performance, and managed reforestation has largely offset rapid timber cutting.

10.4 Thus, Russia's current environmental conditions present a mixed picture. Some of the more extreme environmental problems will almost certainly be ameliorated by the transition to a market economy. For example, hazardous air pollution in some major urban/industrial regions should fall as obsolescent heavy industrial facilities are retired and newer, cleaner technologies are introduced more quickly. With the right prices, energy efficiency should improve, reducing the load on nuclear and coal-fired production units. Private farming should improve application practices for fertilizers and pesticides; production may cease altogether on some marginal lands east of the Volga River, where erosion has been a growing problem.

10.5 However, enterprise and price reform, while a positive factor in many cases, will not serve as a substitute for effective environmental regulation. It will be extremely important to focus scarce public resources at the points where expected environmental improvements are greatest. In this context, a critical task for the next few years will be preservation and improvement of the regulatory system already in place. Market-based instruments and decentralized management have recently been mandated by legislation, but effective implementation will require consistent support in the face of fiscal

retrenchment. During the transitional period, providing such support should be a top priority for the World Bank and other international funding agencies.

The Soviet Environmental Legacy

10.6 For decades, Soviet planning locked the Russian economy into a resource-intensive growth pattern whose environmentally destructive consequences presaged the problems of more recently-industrialized economies: rapid forest cutting with crude extraction techniques; slow but steady deterioration of soils; rising intensity of fertilizer and pesticide application; relatively high energy intensity; high air-pollution intensity of manufacturing, with widespread health effects; serious water pollution, with considerable damage to fish stocks and great potential damage to human health and downstream ecosystems; and uncontrolled hazardous waste dumping.

10.7 Soviet-style governance also had a number of uniquely damaging characteristics: the hypertrophy of pollution-intensive heavy industrial production in gigantic complexes; government shielding of strategic industries from existing environmental regulations; extreme inefficiency of energy use; and the failure of an inward-looking nuclear establishment to incorporate proper safeguards into indigenous reactor designs and procedures for handling nuclear wastes.

10.8 At the same time, the Soviet system also endowed Russia with an environmental management system considerably more advanced than that of most non-OECD countries. Existing environmental information systems in Russia are relatively unsophisticated, but they are more broad-based than in some economies of the OECD. The "polluter pays" principle has been legislated, and in 1991 alone over Rb 2 billion of fines were assessed. In September 1992, pollution fines and taxes were increased by an average of 500 percent, with further increases to be indexed to the inflation rate. The Government is also working on legislation specifying payments for the mining or extraction of natural resources, with plans to implement a pilot program in 12 to 15 oblasts of Russia in the near future. Legislation on water use is currently pending before the Supreme Soviet, and the Ministry of Ecology is working to resolve gaps and inconsistencies in a number of other laws related to natural resources and the environment. Technical staff are generally well-trained, thanks to the Soviet emphasis on scientific and technical education over many years.

10.9 The evidence also suggests that Russian environmental regulators have performed reasonably well in most cases, especially given the magnitude of their assigned task and the crude regulatory instruments available to them. High-level decisions by Soviet investment planners assured that the Russian industrial "end of pipe" would be almost hopelessly large. Nevertheless, average air and water quality have been much improved by environmental regulation and enforcement. The same is true for the forest stock and wildlands preservation. While Russia has had high rates of crude forest extraction, its state sector has been capable of supporting reforestation at nearly compensatory levels. Wildlands preservation management has also been reasonably effective. The following sections briefly review current environmental conditions and trends.

Renewable resource stocks

10.10 *Forests.* The Russian taiga forest is the world's primary storehouse of wood resources. Covering over 700 million hectares, it is twice as large as the Brazilian forest, and as large as the next four "forest giants" combined (see Table 10-1). The forest stock in Russia is 80 percent coniferous, with a predominance of spruce, fir, larch, and pine in the sub-arctic climate zone. Further south there are large tracts of deciduous forest (oak, ash, maple, and elm). Despite reliance on crude extraction

techniques, forest cover has declined only about 16 percent since 1917. The rate of deforestation between 1917 and 1980 was only about 0.25 percent per year, as the inaccessibility of many forest areas offset the crude extractive techniques being used and reforestation was actively promoted. In the 1980s, the Soviet Government accelerated its reforestation effort. From 1981 to 1985, an average of 4.5 million ha/year were replanted, compared to an average cut of 5.6 million ha/year. This rate of reforestation was much higher than Canada's over the same period and nearly as high as that of the United States (see Table 10-2). Because of this effort, the rate of deforestation in Russia fell to 0.15 percent/year in the 1980s.

Table 10-1. Closed Natural Forest: Russia and Other Countries, 1980 (millions of hectares)

Country	Area
Zaire	105.8
Indonesia	113.9
US	226.5
Canada	264.1
Brazil	357.5
Russia	710.3
World	2,822.6

Source: World Resources (1992-93).

10.11 Russia's forests could permanently produce huge wood volumes if managed sustainably, but the breakdown of many programs following the collapse of the USSR raises serious concerns. Effective control of large forest areas has been ceded to local authorities, which may have neither the expertise nor the resources to continue the reforestation program. In the extreme case of a total cessation of reforestation efforts, the deforestation rate in Russia would jump to 0.75 percent. If the current annual extraction volume continued without reforestation, the entire taiga forest could be gone within 130 years. This would represent a huge ecological and economic tragedy for Russia and the world as a whole.

Table 10-2. Reforestation Rates, 1981-85

	Base forest stock ('000 ha)	Annual reforestation ('000 ha)	Reforestation rate (percent)
Canada	264,100	720	0.273
USSR	739,900	4,540	0.614
US	226,454	1,775	0.784

Source: World Resources (1992-93).

10.12 **Fisheries.** The Russian catch of both marine and fresh water fish expanded significantly in the 1980's, with increases of 24 percent and 26 percent, respectively. At the same time, heavy riverain pollution probably degraded traditional fish stocks both in the rivers themselves and in their main outlet bodies—the Baltic, Caspian, and Black Seas, and the Arctic Ocean. The Caspian Sea alone receives (mostly through the Volga) about 40 percent of Russia's annual waste water production. Seventy percent of the fish recently sampled from some parts of the Volga River had above-background mercury levels. Not surprisingly, the sturgeon catch in the Caspian Sea fell by about 50 percent from 1974 to 1987, while the pike perch catch declined by over 90 percent.

10.13 Despite serious pollution-related problems, Russian fish production has expanded for at least four reasons: increased harvesting in dam reservoirs on the major rivers; substitution toward non-traditional fish stocks; acceptance of higher contamination risk for traditional stocks; and, in some cases, harvesting beyond sustainable yields. However, continued expansion along these lines will ultimately lead to steeply rising marginal costs. Reducing riverain and coastal pollution is likely to be a more economical alternative.

10.14 **Soils.** The croplands of the ex-USSR are, like the taiga forest, one of the world's great resources. Russia alone has about 10 percent of the world's total cropland in production. However, Russian agriculture owes much of its expansion to development at the extensive margin. This extensive development and poor management of collective farms are reflected in very low yields, which are typically only 30 to 40 percent as high as yields in Western Europe and North America.

10.15 During the period 1954-57, particularly massive development was undertaken in the southeastern *chernozem* (black soil) belt straddling the border between Russia and Kazakhstan. Precipitation in this area is very low, and there is a high incidence of wind erosion. Extensive croplands such as these have not been well-managed, and there has been severe soil depletion in various forms (erosion, humus reduction, etc.). Overall, total soil quality in Russia has declined by an estimated 30 percent since 1900—a tremendous loss. Although some of the degraded land will revert to steppe following privatization of agriculture, market incentives could also lead to more intensive tilling of older croplands west of the Volga. Appropriate government extension services will be needed to ensure that these soils are not rapidly depleted.

10.16 **Groundwater.** In the aggregate, Russia has no water problem. Annual internal renewable water resources are second only to those of Brazil, at approximately 4,000 cubic kilometers, and current annual withdrawals amount to only 8 percent of the total available. At specific locations, however, particularly in European Russia, the unit cost of clean water is rising because of groundwater reduction and contamination. By one estimate, one-third of currently useful groundwater supplies are significantly contaminated by industrial and agricultural pollutants. The share of contaminated water will undoubtedly continue to grow until hazardous waste disposal practices are radically changed and Russian farmers adopt new pesticide- and fertilizer-minimizing techniques that are still infrequently employed even in most OECD economies.

Table 10-3. Protection of Wilderness Areas, Flora, and Fauna

	Mean of performance percentiles ^a
Chile	69
Russia	67
US	66 ^b
Mexico	56
Germany (FRG)	54
Spain	51
Indonesia	49
UK	47
China	46
Japan	43
South Africa	41
Philippines	38
Brazil	33 ^b
India	30
Turkey	26
Portugal	24

a. Of rankings in five categories: protected territory, wilderness, mammals (threat probability), birds (threat probability), and endemic Plant Taxa (threat index).

b. Median percentiles.

Source: World Resources (1992-93).

Energy

10.18 **Energy efficiency.** Concessionary energy resource pricing and little pressure for efficiency enhancement have combined to make the Russian economy one of the world's least energy-efficient (see

10.17 **Protected areas and wildlife.** Russia currently has the largest stock of wilderness area and, next to Canada, the largest proportion of national land in wilderness of any large state. To date, much wilderness preservation is due to Russia's continental scale and the failure of any but the indigenous populations to adjust well to the rigors of the far northern climate. However, around 5 percent of the national territory has been explicitly set aside for nature reserves, national parks, and semi-protected areas. Russia's total number of botanical gardens ranks second only to the US. In relative degree of endangerment of birds, mammals, and endemic plant taxa, Russia's performance is consistently in the international midrange. On a composite index of performance in five categories (wilderness, protected areas, mammals, birds, and plants) Russia ranks second among 16 countries in an international comparison sample (see Table 10-3). At present, performance is clearly superior in this category. As with reforestation efforts, however, there are already clear indications that existing management systems are breaking down. This could seriously threaten Russia's protected area and wildlife.

Table 10-4). In 1990, Russia's energy use per unit of GNP was eleven times that of Japan, six times that of the UK and four times that of the US. Russia is bottom ranked even when it is compared with low- and middle-income economies, whose average energy efficiency is much lower than that of the OECD; only China and Poland are more energy-inefficient in the comparison sample of countries. Russia's energy inefficiency has been a prime cause of its high atmospheric pollution intensity. Only radical price reform, coupled with massive new investment in more efficient technologies, will lead to major improvements, and that process has now begun. In the public sector, future energy policies should incorporate principles of demand management and incentive-based regulation, which are becoming standard in the OECD economies.

Table 10-4. Relative Energy Efficiency, 1990 (petajoules/\$ billion of GNP)

Country	Efficiency
Japan	5.5
Germany (FRG)	8.1
UK	10.0
Korea	14.8
US	15.2
Brazil	18.8
Thailand	22.1
India	38.0
Russia	60.1
China	74.8
Poland	81.5

Source: World Development Report (1992); World Resources (1992-93); Bank staff estimates.

10.19 Nuclear energy played a crucial role in Soviet energy planning. During the 1980s, the USSR expanded commercial nuclear capacity by about 28,000 mw (see Table 10-5)—faster than any other country in the world. Almost all nuclear power plants are located in densely populated areas of Western Russia, with many cities such as St. Petersburg heavily dependent on nuclear energy.

10.20 Unfortunately, the safety performance of the Soviet nuclear industry has been the poorest in the world. More than half of the nuclear power in Russia comes from RBMK reactors, which pose immediate risks of Chernobyl-type accidents. Of equal concern, however, is the enormous problem of sub-surface radioactive leakage from storage and burial sites for spent fuel from commercial generation. In some cases, radioactivity is spreading through nearby groundwater. Military waste handling may have caused even more severe damage. Total fallout from the Maiak nuclear weapons facility has been estimated at 40 times the level of Chernobyl. There has been severe contamination around nuclear testing sites near Tomsk and Krasnoiarsk in Siberia and on the island of Novaia Zemlia in the Arctic Ocean. Thousands of containers of nuclear waste and spent reactor cores have been dumped into the Arctic Ocean and into the Ob' River, apparently exposing large numbers of people to hazardous radiation. By official Russian estimates, over 400,000 people living near military facilities in the Urals/Cheliabinsk region suffer from radiation-related illnesses. For the future, the Government faces the daunting task of extracting, reprocessing, and disposing of the material in thousands of nuclear warheads.

10.21 Estimates of the costs of decommissioning Russia's commercial RBMK nuclear units alone range from \$6 billion to \$50 billion. Measures to address other radiation dangers will cost billions more. The Group of Seven (G-7) countries have recently pledged several hundred million dollars to begin addressing the problem, but much work remains to design an overall approach that meets appropriate safety standards in the most cost-effective manner.

Table 10-5. Growth in Nuclear Energy Generation in the USSR

Year	No. of plants	Installed MW	% of all electrical generation
1970	4	875	1
1980	22	12,000	6
1990	50 ^a	40,000	12

a. Of which 29 are operating in Russia.

Source: ENVAP Staff Working Paper.

Table 10-6. Yield Response to Fertilizer Application Rates, 1988-90 (regression residuals)

Country	Residual
US	0.46
Indonesia	0.23
Thailand	0.22
Korea	0.10
Japan	0.04
Brazil	-0.04
China	-0.06
India	-0.19
Poland	-0.26
Russia ^a	-0.43

a. Bottom-ranked in an international sample of 26 countries.

Note: Higher residuals imply higher yield response. Numbers represent residuals from the regression:

$\ln(\text{yield}) = a + b \ln(\text{fertilizer application rate})$.

Adj $R^2 = 0.75$; $N = 26$; $a = 5.812$;

$b = 0.461$ ($t=8.76$).

Source: World Resources (1992-93).

due to a combination of regulatory measures and an increase in the share of low-emissions energy sources from 27 to 41 percent of total energy production. Most of the change in energy mix reflects a rapid (90 percent) increase in natural gas consumption. Rapid growth from much smaller base levels also occurred for nuclear (343 percent) and hydro (30 percent) sources.

10.24 Despite the impressive declines in absolute terms, emissions remain extremely high by world standards. Table 10-7 shows that Russia's GNP-adjusted carbon dioxide (CO₂) emission intensity is second only to Poland's in a representative international sample.³

10.25 The intensity of emissions is primarily due to three factors: the relatively high share of industry in the Russian economy; the high concentration of industrial output in heavily polluting subsectors; and the pollution intensity of Russian production technology. Industry accounted for about 55 percent of Russian GDP in 1989, which was extremely high even by the standards of newly industrialized countries (NICs) such as Korea (45 percent) and Brazil (39 percent). The Russian industrial sector is second only to Poland in its degree of concentration in heavily polluting activities (such as steel, paper, and chemicals). In addition, Russian plants generally operate with "dirty" processes that were abandoned by OECD countries after 1970 and never adopted at all by NICs such as Korea. For example, in 1989, open hearth installations still represented 52 percent of the USSR's steelmaking capacity, compared with 5 percent in the US, 11 percent in Mexico, and 0 percent in Brazil, Mexico, and Spain. Another example is provided by massive flaring of natural gas from poorly equipped petroleum production facilities.

10.26 Not surprisingly, air emission levels are extremely hazardous in some major industrial areas. SO₂ concentrations in many areas are above 300 ug/m³, which is twice the United Nations' safety threshold and six times Russia's own official standard. The worst pollution is in the Urals and the Kuznetsk industrial areas and a few isolated mining/smelting sites in the Arctic (see Table 10-8). The high intensity of SO₂ emissions in Russia has had effects on the physical environment as well as human

Air, water, and soil pollution

10.22 *Agricultural inputs.* Russian intensities of fertilizer and pesticide use per unit of cropland are in line with other countries with comparable per capita incomes and quite low by OECD standards. However, application practices on collective farms have been enormously wasteful. Table 10-6 shows that, for cereal production, Russian farms got the lowest yield response from fertilizer application in a large sample of countries studied. Russian yield response for root and tuber production was not much better. Polluting runoff into rivers and groundwater would fall under privatization if fertilizer and pesticide application intensities remained constant. However, these will probably rise toward OECD levels when economic growth resumes, nullifying much if not all of the environmental gains from increased efficiency.

10.23 *Air pollution.* The intensity of sulfur dioxide emissions in Russia has fallen by 70 percent over the past decade.² The rapid fall in emissions was

health. One extreme example is the damage caused by the ore-smelting center at Noril'sk, which is 300 miles above the Arctic Circle. The center produces over 10 percent of all SO₂ emissions for the entire country—an atmospheric loading of 12 tons/km². The resultant acid rain has severely degraded 550,000 hectares of forest around Noril'sk, equivalent in area to almost twice the size of the US state of Rhode Island.

10.27 Air pollution—mobile sources. In Russian cities that are not dominated by heavy industry, motor vehicles are frequently the major source of harmful air pollution. For the country as a whole, motor vehicles contribute about one-third of total hazardous emissions in urban/industrial areas, including 22 percent of total nitrogen oxides, 44 percent of hydrocarbons, and 60 percent of carbon monoxide. Trucks are the greatest mobile contributor to air pollution; they constitute only 23 percent of the vehicle stock but account for 77 percent of the emissions. Undoubtedly, the demise of central planning will increase the potential for air pollution from increased motor vehicle traffic. However, compensating adjustments in fuel mix and vehicular emissions intensity are also occurring. From 1980 to 1990, for example, unleaded gasoline increased from 18.5 percent to 48 percent of total production. Newer vehicles will be closer to existing OECD standards. On balance, air pollution from mobile sources will probably increase moderately even if environmental regulations are enforced; weaker enforcement efforts could permit substantial increases in pollution from these sources.

10.28 Water pollution. The industries that contribute most to air pollution tend also to be the heaviest water polluters, with metals, pulp and paper, chemicals, and petroleum refining being among the worst offenders. As discussed above, there have also been localized incidents of radioactive contamination of water sources. However, in recent years, 80 percent of pollution control investments have been directed at water problems. The resulting waste treatment effort, conservatively estimated for 1990 at 40 percent of total volume, is comparable with average performance in Southern Europe. A national sample of Russian water supplies in 1989

Table 10-7. CO₂ Emission Intensity Compared With GNP/Capita (regression residuals)

Country	Residual
Poland	1.46
Russia	1.20
China	0.63
US	0.58
Hungary	0.53
Yugoslavia	0.40
Greece	0.26
Mexico	0.12
UK	0.07
Korea	0.05
Germany (FRG)	-0.06
Turkey	-0.14
Chile	-0.17
Japan	-0.33
India	-0.36
Thailand	-0.53
Switzerland	-0.84
Brazil	-0.91

Note: Higher regression residuals imply higher emission intensities. Estimates based on the regression:
 $\text{Ln}(\text{CO}_2/\text{GNP}) = a + b \text{Ln}(\text{GNP}/\text{capita})$;
 Adj. R² = 0.43; N=26;
 a = 3.822, b = 0.450 (t=4.47).

Source: World Resources (1992-93); World Development Report (1992).

Table 10-8. Comparative Urban/Industrial Pollution: Estimated Sulfur Dioxide Concentrations (ug/m³)

Region	Concentration			Number of cities sampled
	Median	Maximum	Minimum	
Urals	272	665	178	11
Kuznetsk/				
West Siberia	267	343	191	4
Moscow	224	397	123	6
Volga/Other				
Central	154	331	67	6
Baikal/East				
Siberia	124	214	14	6
Pacific	123	314	43	8
Arctic	98	863	31	4

Note: Rough approximations derived from reported atmospheric loadings in tons/km². U.N. Suggested Standard is 100-150 ug/m³.

Source: Ministry of Ecology

revealed that less than 10 percent of municipal supplies did not meet Russia's exacting bacteriological standards, and only around 20 percent failed to meet equivalent chemical content standards. Water supplies for industrial use were of almost the same quality.

10.29 While public water supplies are generally available at good quality, total pollutant volume is high, and fishery damage is significant in rivers whose basins drain major urban and industrial areas. Forty percent of total Russian effluent flows into the Caspian Sea, mostly from the Volga River. An estimated one million tons of oil annually leak into the 'Ob River from Siberian oil production fields. Effluent loads are also high in the Don, Irtysh, Enisei, and Angara rivers. None of these rivers is potable, but neither are their counterpart rivers in much wealthier OECD economies.

Post-Reform Economic Change and Environmental Consequences

10.30 Pressure on the Russian environment is presently falling wherever economic output is declining. Before the economy stabilizes, the decline in overall production will also reduce emissions and the rate of extraction of natural resources. If the reforms succeed, subsequent growth and environmental change will differ sharply from the Soviet pattern. For purposes of projection, the following assumptions will be made here: (a) state property in industry, extraction, and agriculture will be privatized or offered for long-term leasehold; (b) open trade and investment policies will be maintained; (c) price movements will be unconstrained; and (d) the Russian Government will concentrate its attentions on core market support and regulatory functions, including a strong emphasis on environmental protection. The projections that follow assume that rapid movement toward these objectives will be achieved. Slower adjustment would imply future trends closer to the historical Soviet pattern.

Economic reforms: principal catalysts of environmental change

10.31 The economic reforms, if sustained, will induce an upheaval in the composition and location of Russian economic activity. Three changes will be particularly significant for the Russian environment:

- Relative prices will rise sharply for energy-intensive goods and services, particularly transportation.
- Trade outside the ex-COMECON nations will become more important.
- After enterprise reform, many new investors will respond strongly to the drastic changes in relative prices.

10.32 From an environmental perspective, the following consequences follow from these changes.

- Relative profitability will fall for agricultural production in the new lands east of the Volga River. Some marginal lands will revert to steppe, and there will be a significant increase in the share of cropping in European Russia.
- Services and light industry will grow faster than heavy industry and agriculture in the domestic market. Urbanization will increase, and a larger portion of the population may reside in European Russia. The demise of central planning will greatly increase the importance of motor vehicles relative to railroads.

- Rising transportation costs will increase the regional comparative advantage and market share of heavy industry located near raw material and energy sites in Siberia and the Pacific Far East. In those regions, pressure will grow on timber resources and protected areas.
- Competitive advantage will shift toward newer, more technologically advanced plants operating at a smaller average scale. Many giant, archaic, and heavily polluting facilities will be drastically restructured or driven out of business.
- Some Russian heavy industry will expand its international market share, exploiting comparative advantage based on plentiful material and energy resources, a large, technically-trained and experienced industrial work force, and current wages which are at or below Korean levels. This trend is already observable in world pig-iron markets.

Environmental consequences

10.33 Table 10-9 summarizes current environmental conditions and expected changes if a rapid transition is successfully implemented and a relatively high standard of regulation continues. While the general direction of environmentally significant responses to reform seems clear in many cases, the relative magnitude of many changes will depend on the strength of Russian environmental regulation in the coming decade.

10.34 *Positive impacts.* At the aggregate level, the human health hazard from exposure to *air pollutants* should decline significantly. The benefits of this change will be geographically uneven, with large benefits for older industrial centers, medium benefits for other cities, and some increased exposure for populations in Siberia and the Far East. Gains from cleaner products and processes will be partially offset by increased motor vehicle traffic and rising exports from some Russian heavy industrial sectors.

10.35 Aggregate *soil degradation* should be slowed by the reforms. The geographic incidence will be most important in the new lands east of the Volga, but improvement could occur in European Russia as well.

10.36 *Uncertain cases.* The industrial shakeout should also reduce water pollution in European Russia, although the effect should be less pronounced than for air emissions because water treatment systems are more effective at present.

However, there may be significantly more agricultural effluent and little or no change in municipal wastewater. On balance there may be modest improvement in European Russia, but probably not enough to change the status of fish stocks. In Siberia, most rivers are likely to be somewhat more polluted in the wake of the reforms.

Table 10-9. Russian Environmental Trends: Summary Assessment

Category	Pre-reform status	Pre-reform trend	Probable reform-induced change	Regulatory change	
				Stronger	Weaker
Radioactively hazard	--	0	0	+	-
Forests/wildlife	++	-	0/-	+	--
Soils	-	-	+	0	**
Groundwater	-	-	-	+	**
Air quality	--	+	+	+	-
Water quality/fisheries	-	+	0/+	+	-

++ Very positive.
 + Positive.
 0 No change.
 - Negative.
 -- Very negative.
 ** Not relevant (no previous regulation).

10.37 Post-reform price changes will raise both the relative cost of wood products and the relative price of transporting cut logs. The result for the remaining European forest is uncertain because cost increases may be offset by two factors. First, the lifting of restrictions on information flow should lead to a structural increase in the demand for paper. Second, migration from other parts of Russia and other CIS states could lead to an increased demand for firewood and encroachment on existing forest area. Continued cutting and decline of forest habitat at recently observed rates can be reasonably forecast. In Siberia and the Far East, decreased international access costs and the steady rise in international wood prices should at least compensate for increased transportation costs. The rate of cutting and forest habitat decline should therefore stay constant or increase somewhat.

10.38 Price reform will reduce aggregate energy demand, but the economic appeal of nuclear power generation may be enhanced by an increase in the relative cost of fossil fuels. Market signals alone will not guarantee that adequate nuclear power safeguards are put in place; improved regulations will be the key to risk reduction.

10.39 *Negative cases.* The rate of groundwater contamination in European Russia will probably rise as the runoff of agricultural pollutants increases in the post-reform era. Increases in runoff can be minimized only if extension programs are developed to teach farmers more ecologically sound application practices.

Future Environmental Policy: Major Issues and Priorities

10.40 In Table 10-9, three issues with the greatest potential importance have very negative (–) ratings, either on initial conditions or expected changes: (a) air pollution; (b) potentially rapid deforestation if environmental management becomes weaker; and (c) the radioactivity hazard. Environmental problems in these areas should probably be given the most attention during next few years. In addition, Table 10-9 identifies groundwater pollution from hazardous waste disposal as a priority problem because it has gotten steadily worse and shows no prospect of improvement in the transition unless new regulations are enacted and enforced.

10.41 As discussed above, price and enterprise reforms should lead to a number of positive environmental outcomes. Particularly significant will be air pollution reduction from the shutdown of many unprofitable heavy industrial facilities which are obsolescent and highly polluting. During the transition era the Government should neither exempt such installations from normal regulation nor, except perhaps in extremely dangerous cases, provide extra finance for the installation of costly pollution abatement equipment. Available government resources should be focused on retraining and supporting temporarily unemployed workers while they seek employment in the growing sectors of the new Russian economy. Privatization arrangements will explicitly have to address the issue of liability for the past stock of environmental damage caused by a number of heavily-polluting industries. Future activities of the newly privatized firms will have to meet environmental standards, but the Government will have to determine what contribution the new owners will have to make towards the cleanup of existing problems.

10.42 Price and enterprise reform alone will not achieve the desired reduction in environmental damage, however. Regulatory mechanisms will be needed to send the appropriate signals to producers and consumers. Restructuring and improving environmental management during the transition period will provide high social returns, and it would be extremely shortsighted to relinquish the existing regulatory system. Russia has inherited an organization that is sectorally broad-based, technically competent by world standards, and served by established monitoring and reporting facilities. Under present legislation, it is empowered to move toward the use of market-based regulatory instruments where appropriate.

Making sure that the regulatory authorities have the capacity to use these instruments should receive a very high priority.

10.43 The relative importance of *air pollution* depends critically on the timing of the transition to a market economy. If the reforms proceed slowly, many unprofitable and heavily polluting state enterprises will remain a major source of environmental hazard. Rapid closures in a quick transition would significantly lessen the problem. In either case, regulatory policy should shift as rapidly as possible toward effective use of market-based instruments that are applied equally to all sources of hazardous air pollution. For some catastrophic cases such as the Noril'sk smelter complex, immediate intervention to force the installation of effective scrubbers or a shutdown of particularly dirty production facilities should be considered.

10.44 The *taiga* is still massive, but present cutting levels will deplete it very rapidly if the system of management and reforestation breaks down. According to some reports, many previously managed forest areas are now being "privatized" for the profit of local officials in parts of eastern Russia. The global ecological implications alone should make action on this front a very high priority. While private ownership may under some circumstances improve incentives for sustainable management, the policy framework for exploitation of forest resources needs to be carefully considered. It will be important for the Government to ensure sustainability and also to achieve an appropriate level of rent recovery from the sector. Pending the shift to a greater emphasis on private ownership or long-term leasehold, every effort should be made to preserve those existing forestry management schemes that remain viable. In the long-run, appropriate market-based regulatory instruments should be used to promote sustained-yield forest management in the private sector.

10.45 Continued operation of *nuclear* reactors with no containment vessels in populous areas of European Russia carries with it the constant risk of another Chernobyl. Unfortunately, several major cities are heavily dependent on these units. Improper disposal of nuclear wastes has also created an enormous radioactive contamination problem for large areas in the Urals, the Kuznetsk area, the Ob' River, and parts of the Arctic Ocean. Rectifying these problems will take years and huge resources.

10.46 Russian environmental regulation has had the same shortcoming that afflicted Western practice for many years—insufficient attention to the *off-site disposal of hazardous solid and liquid wastes*. No systematic data are available, but recent accounts of common practice suggest that Russia has a massive offsite dumping problem. If that is the case, the cleanup bill is already very high, and it will escalate further as proximate soils and groundwater stocks are progressively contaminated. While costly remediation of most existing dumpsites should probably be delayed until more resources are available, there is an immediate need for much stricter regulation of hazardous waste generation.

10.47 In summary, Russia has some of the most severe environmental problems in the world. At the same time, its regulatory efforts over the past decade have improved environmental conditions in several respects, and anticipated structural changes in the economy should lead to further improvements. Adequately addressing Russia's environmental problems over the coming years will require continued systemic reforms in the economy, combined with a strong regulatory effort in those areas where market prices alone will not lead to an optional degree of pollution abatement.

Notes to Chapter 10

1. This chapter draws heavily on a more detailed paper entitled "Environmental Problems and the Transition to a Market Economy in the Russian Federation," ENVAP Staff Working Paper, July 1992 (World Bank).
2. Intensity is defined as the volume of emissions per unit of national output. The Russian rate of decline in the 1980s is roughly the same as the average for Western Europe and is higher than the US rate of 51 percent.
3. When emissions are compared across countries, CO₂ intensity is closely correlated with SO₂ and NO₂ intensity.

CHAPTER 11

Reforming the Energy Sector

11.1 The Russian Federation is the second largest energy producer in the world, accounting for about 14 percent of world commercial energy production. Despite having one of the most energy-intensive economies it is able to export over 40 percent of its total energy production, making it the world's largest exporter of energy. Energy exports represented 43 percent of Russian exports to non-Soviet areas in 1989 and are likely to have increased to almost 50 percent of such exports since the collapse of the CMEA. These facts alone would place the energy sector among the most important sectors to be considered in formulating and implementing a reform program for the transition to a market economy (see Box 11-1). Since 1990, however, *oil production in the Russian Federation has declined by one million barrels per day each year for the last two years and may fall even more rapidly in the near future. Gas production* has levelled off and shows early signs of following in the path of the oil industry. *Energy consumption* in the Russian economy is far too high in relation to economic output and must be reduced. A number of policy measures to promote stabilization of energy consumption, production and exports must therefore be implemented. Rapid stabilization of the Russian economy is unlikely to be successful unless it incorporates most of these measures.

Recent trends and current outlook

11.2 Delayed policy reform will have significant consequences for production levels for oil and gas production. Essentially, it will perpetuate the declining trends now seen in the oil sector and beginning to emerge in the gas sector—at a critical stage in the Russian Federation's transition to a market economy. The importance of the energy sector to the fiscal balance, to exports, and to enterprise reform means that postponement of reforms—even for one year—in the energy sector will have numerous repercussions in the economy as a whole.

Oil production

11.3 Oil production reached its peak in 1987 and the subsequent decline accelerated to over 10 percent per year in 1991 (see Figure 11-1). The annual decline in 1992 will probably reach 13 percent. These trends reflect a number of factors. Output from a small number of large fields has entered a period of natural decline. The potential for enhanced recovery from these fields is limited due to the oilfield management practices used earlier in their life. In many fields, the decline is compounded by the lack of finance to perform well workovers. Wells which should be repaired then put back onstream are remaining idle. Of even greater importance for the medium to longer term, lack of finance has prevented the development of discovered/proven fields to replace output from the large declining fields which have provided the bulk of the output to date. Finally, in 1991 and 1992 the traditional equipment supply arrangements for the Russian petroleum industry (e.g., from Azerbaijan) have been severely disrupted following the breakup of the Soviet Union. In the absence of price, tax and institutional reform, the annual rate of decline of oil production in the period 1993 and beyond will probably be in the range 8-12 percent—still high, but slightly lower than in 1992.

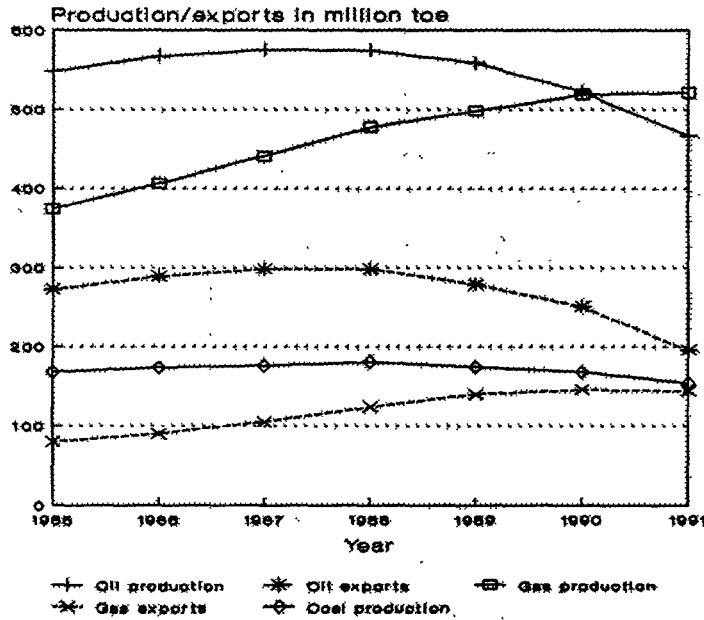
11.4 Oil production will not stabilize until renewed, substantial investment for rehabilitation of existing facilities and development of new fields¹. Given that present oil prices at the wellhead barely cover operating costs on average, there is no realistic prospect that Russian oil producers will be able to

Box 11-1. Key Features of the Energy Sector

Russia is one of the most energy-intensive economies in the world. In 1990 its energy consumption amounted to 5990 kilograms of oil-equivalent (koe) per person. This lay between the figures of 5650 koe per person for Finland and 6350 koe per person for Sweden, two other countries with similarly harsh climates but whose per capita incomes were 8 or more times that of Russia. Along with Poland it came just behind Bulgaria and Romania in a ranking of countries in terms of their 1990 levels of energy consumption per dollar of GDP. Recent changes in national incomes and exchange rates will probably move Russia clearly to the top of this list.

Gas accounts for 42 percent of primary energy consumption, oil for 31 percent, and coal for 19 percent. As Figure 11.1 shows, gas production has been rising steadily from 1985 to 1990 and levelled off in 1991 while oil production reached its peak in 1987 and has been declining rapidly since 1990. Oil production has been falling for three main reasons: (a) the period of easy recovery of oil from a number of large fields is ending; (b) the low level of investment in exploration, development, rehabilitation and maintenance in the last few years; and (c) low prices combined with high taxes have left the Producing Associations in the oil sector with barely enough revenue on average to cover current operating costs and insufficient foreign exchange to import essential supplies and equipment not produced in Russia.

Box Figure 11-1. Energy Production and Exports



Because of the relative costs of transporting gas and oil with production concentrated in Western Siberia, there has been a deliberate policy of substituting gas for oil in domestic consumption so as to free as much oil as possible for export. As a result, domestic consumption of oil has remained almost constant since 1985. Gas consumption has grown by 28 percent over the same period, representing more than the growth in total energy consumption since domestic consumption of coal has been falling since 1989. Despite this increase in domestic consumption of gas, total production has grown sufficiently to allow exports to increase from 21 percent to 28 percent of gas production.

Continued

finance any significant volume of investment until wellhead prices have made substantial progress towards world prices. The Government should take advantage of this transitional period (i.e., while prices are being raised) to introduce institutional changes to ensure that investment funds are used more efficiently in the future than in the past—for example, by introducing major improvements in oilfield management practice. This should proceed on two parallel tracks: full commercialization of the oil producer

enterprises (the Producer Associations), and much greater use of joint venture arrangements with the international oil industry.

Box 11-1. Key Features of the Energy Sector (Continued)

Box Table 11-1 details the share of fuel costs in total costs by industry and the share of each industry in total final consumption of the four fuels based on 1987 data. Since the real price of fuels has changed little since the late 1980s, these figures give a reasonable basis for discussing the current situation. The direct cost of energy exceeds 10 percent of total costs in basic chemicals, cement and iron & steel. These are standard energy-intensive industries and the share of energy costs for these industries is below that typical in West European economies, since the low efficiency of energy use does not wholly offset the impact of low energy prices.

Consumption of coal is highly concentrated with iron & steel accounting for over one-third of final demand for coal, while the government and exports are other important elements in final coal use. The power sector is, of course, also the largest user of coal but this is included in figures on primary rather than final energy demand. The power sector is also the largest user of gas, followed by exports, basic chemicals and iron & steel. Demand for oil is more evenly spread over sectors with agriculture, transport, construction following behind exports. The chemical industry is again one of the largest consumers of electricity along with households and government consumption.

Box Table 11.1 - Energy costs and energy consumption in selected sectors, 1987

	Direct cost of energy as % of total costs	% of Final Energy Demand				% of Total Energy Demand			
		Coal	Gas	Oil	Elec	Coal	Gas	Oil	Elect
Agriculture	1.9	3.1	2.1	11.8	3.9	2.4	1.1	9.7	3.7
Textiles	1.0	0.3	0.5	0.5	2.2	0.2	0.3	0.4	2.0
Paper products	6.3	0.8	0.5	0.8	1.0	0.6	0.3	0.6	0.9
Basic chemicals	15.0	4.9	14.2	3.9	10.5	3.7	7.9	3.2	9.9
Cement	19.1	0.6	2.9	0.8	0.8	0.4	1.6	0.6	0.8
Ferrous metallurgy	11.3	33.7	9.8	1.3	4.6	25.4	5.5	1.0	4.3
Non-ferrous metallurgy	7.3	3.7	1.9	2.2	5.1	2.8	1.1	1.8	4.8
Machinery	2.3	3.5	5.1	4.0	7.3	2.6	2.8	3.2	6.9
Electrical equipment	2.3	0.2	0.3	0.4	0.7	0.1	0.2	0.3	0.7
Transport equipment	2.6	0.4	0.6	0.9	1.6	0.3	0.4	0.7	1.5
Construction	2.0	1.0	0.8	8.9	5.3	0.8	0.4	7.3	5.0
Transport	5.9	1.3	8.3	8.4	7.2	1.0	4.6	6.9	6.8
Communications	2.7	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Distribution	3.1	1.4	0.5	1.4	3.7	1.1	0.3	1.2	3.5
Private consumption	1.7	2.5	3.7	4.8	10.9	1.9	2.0	3.9	10.3
Public consumption	14.7	16.5	4.0	5.5	11.4	12.4	2.2	4.5	10.8
Exports	15.1	15.5	31.8	21.6	2.0	11.7	17.7	17.7	1.9

Source: Goskomstat, 1987.

11.5 The international oil industry could play a major role in the recovery of the Russian oil sector during the transition and beyond. In the transition, international risk capital could finance a significant share of the investment needed to re-start development of major new fields (see scenarios below). At the same time, joint ventures between international oil companies and Russian oil companies would facilitate transfer of commercial management skills and modern methods of enhanced recovery in

existing fields. As domestic oil prices approach world prices, the domestic oil industry would finance an increasing share of development investment. Continued participation of foreign oil companies would then ensure an adequate level of competition for exploration and development rights. However, none of these benefits will accrue to the Russian economy until petroleum taxation and institutional arrangements—including petroleum legislation and sector administration—are brought into line with normal international practice.

Gas production

11.6 Gas production rose steadily through the 1980s, levelled off in 1991, and may register its first-ever decline in 1992. Deferred maintenance on gas export pipelines has reduced the reliability of deliveries to Western Europe and now threatens future expansion of gas exports. Also, gas consumption within Russia will decline in 1992 and 1993 as a result of the collapse in industrial consumption. Gas production will therefore have to be reduced unless the gas industry is capable of financing the transmission and distribution investments needed to penetrate the domestic markets for fuel oil and coal. This investment is not possible with the present structure of gas prices and taxes. While, the international gas industry could participate in the immediate investments needed in gas transmission, this contribution will be minimal until there is a significant improvement in gas prices, taxes and institutional arrangements. In the absence of major reforms, gas production will enter a period of decline in 1992 or 1993.

Coal Production

11.7 Coal output in Russia peaked in 1988 at 426 million tons. By 1991 the annual rate of decline had accelerated to 11 percent—bringing output down to 353 million tons, about the same as in 1970. Coal production in the European part of Russia and the Urals had already peaked by the mid-1970s. The subsequent growth and decline in Russia's total coal output has been dominated by the large Siberian coal basins (75 percent of the 1991 total) and, in particular the Kuznetsk basin (125 million tons in 1991) and the Kansk-Achinsk basin (50 million tons). Though part of the decline in production was the consequence of widespread strikes that occurred in the Spring of 1991, other factors such as the disruption of traditional patterns of equipment supply and deteriorating geological conditions would have caused a fall in production even without any strikes. Some of the problems faced by the coal industry are outlined in Box 11.2.

Energy consumption

11.8 Energy consumption in Russia started to level off in 1990 at nearly 6 tons of oil-equivalent per person per year. It appears that total energy consumption since then has fallen less than the decline in industrial output and national income, that is, there is a lag between changes in economic output and corresponding changes in energy inputs. There are two reasons for the lag. First, industrial enterprises are borrowing from other enterprises (via interenterprise arrears) to avoid both labor reductions and closures. This is an economy-wide problem which must be solved if consumers are to respond to input prices at all. Second, movements in real (inflation-adjusted) energy prices have given mixed signals to energy consumers. Energy price increases have been large and infrequent. In between these increases, high rates of inflation have eroded the real value of energy prices to levels well below their starting point. This "sawtooth" pattern of real energy prices is not progressing steadily towards the reform targets (world prices or economic costs) and provides no consistent incentives for energy consumers to adjust their consumption patterns. Better methods of energy price adjustment are essential to the success of the macro-stabilization package.

Box 11-2. Problems of the Coal Industry

Coal accounted for 19 percent of primary energy consumption in 1990, down from 42 percent in 1970 and 29 percent in 1980. This steady decline has been caused by the shift to nuclear power in coal's main market—electricity generation—and by the rapid growth of gas consumption—up from 20 percent of the total in 1970 to 44 percent in 1990. Apart from the power sector the main users of coal are the iron and steel industry and district heating plants which absorb 17 percent of total coal consumption each. The commercial, public and residential sectors, which jointly account for 16 percent, remain important users but coal is gradually being displaced by gas among small scale energy consumers. As in Western Europe, the prospect is that coal consumption will be increasingly concentrated over the next 5-10 years in the power sector and the iron and steel industry as gas displaces it in district heating plants, the service and residential sector, and non-metallurgical industries. This change will mean a substantial contraction in the total market for coal over the same period.

The center of gravity of the coal industry has been steadily moving east and so, to some extent, has coal consumption. In particular, large coal-fired mine-mouth power stations have been built in the Siberian basins to send coal-by-wire to the main electricity consumption centers west of the Urals. This involves electricity transmission over distances and at voltages that are unparalleled anywhere else in the world. For future developments, after domestic price distortions have been eliminated, it is not clear to what extent coal-by-wire from Siberia will be able to compete with gas-fired power generation west of the Urals.

Rail transport of coal poses similar problems. Rail freight rates have been held at token levels for many decades. As these rates rise to full cost recovery levels, the transport radius over which coal can compete profitably with other fuels will shrink drastically. Low production costs in the Siberian basins—at least lower than in the basins in European Russia and the Urals—may not be low enough to compensate for rail freight costs over thousands of kilometers.

Aside from the transportation aspects, the problems faced by the Russian coal industry are similar to those faced by the industry in Germany, Poland and the U.K. Each has been operated until recently as a single monopoly with massive cross-subsidization between low- and high-cost mines. Labor shedding has been difficult and employment has stayed at unrealistically high levels when the industry should have been contracting in the face of increasing competition from oil and gas. The full scale of the subsidies to the coal industry has been concealed by mandatory purchases of coal by electricity generators. Government attempts to prevent explicit budget subsidies reaching unsustainable levels have simply shifted the balance towards operating subsidies, leaving the industry starved of investment funds.

The Russian coal industry faces an inevitable contraction over the next decade. The challenge is to manage the process so that mines that are able to deliver coal to the consumer at a competitive price stay in business and have access to the capital that they need for rehabilitation and modernization. Breaking up the industry into competing commercial enterprises will be a key step in this process.

11.9 Under a scenario of delayed energy policy reform, Russia's energy intensity will initially increase, due to the lag in adjustment by energy consumers. And when the adjustment does occur, domestic energy consumption will fall by about the same amount as industrial output and national income, but not more. The failure to improve domestic energy efficiency will be critical in determining oil and gas export levels over the period 1992-1994 (see below).

Policy Recommendations

11.10 There is general agreement among specialists (whether in the Ministry of Fuels and Energy, in the World Bank, or elsewhere) on the general nature of the "reform package" that is necessary to reverse the undesirable trends in the petroleum sector. What remains to be done is: a) to work out the details of the reform program including its timing, and b) to make the political decision to move ahead in this area. Reforms in the energy sector should be implemented on an urgent basis, as an integral

part of the macroeconomic stabilization program, because they offer the best opportunity for significantly relieving present and prospective budget and balance of payments constraints. The possible outcomes of alternative reform scenarios are summarized in the following section. It is clear that there are major benefits in moving ahead quickly (the "effective reform in late 1992" scenario) as opposed to delaying action by a year (the "no effective reform until late 1993" scenario). Indeed, an acceptable financial stabilization package for 1993 probably cannot be sustained without early implementation of energy sector policy reforms. The results of the "effective reform in late 1992" scenario are incorporated in the overall balance of payments and budget projections in Chapters 2 and 4.

11.11 The essential core elements of the energy policy package would be the following:

Energy markets and incentives:

Domestic energy prices should be raised to world market levels and potentially competitive energy markets should be decontrolled.

Petroleum taxation needs to be revised to encourage new investment.

Regulatory framework:

A petroleum legal framework needs to be enacted.

Clear and stable energy sector administration must be put in place and energy enterprises put on a commercial basis.

Promising petroleum development acreage should be opened up to fair and transparent bidding procedures open to domestic and foreign private capital.

Energy markets and incentives

11.12 *Energy markets* cannot even begin to work properly until domestic quantity controls (state orders) are eliminated. State orders for crude oil, refined products and coal must be eliminated as a first priority. Prices in potentially competitive energy markets (eg, wellhead prices of crude oil and ex-refinery prices of oil products) should be decontrolled at the same time. In these markets, the Government should use export taxes to manage the transition to world prices. After an initial increase, export taxes should be progressively lowered so that domestic prices reach international levels, preferably within about two years. The system of export taxation, designed to take changes in the exchange rate into account, is all that is needed to provide the desired transitional "wedge" between internal and world prices. This approach to pricing would permit the elimination of administrative allocation of petroleum and petroleum products, including quantity controls (export quotas) in the energy export market.

11.13 *Petroleum taxation* needs to be revised. Present levels of taxation (80-85 percent of gross revenue valued at world prices is absorbed by taxes and subsidies) are unprecedented in the international petroleum industry, will stop new investment and may even reduce current production. Taxes on production from new development projects should be lowered significantly, ideally through exemption from export taxes. Taxes on current production can be set at a higher level, provided producers are guaranteed sufficient funds to cover operating and maintenance costs. Even these taxes should be reduced substantially over the next two years to encourage essential rehabilitation investments. In parallel with these changes, the structure of petroleum taxation in Russia must be changed from one that is revenue-based to one that is profits-based.

Regulatory framework

11.14 *A petroleum legal framework* needs to be enacted which will clearly define ownership and development of the oil and gas sectors so that new investment, especially from the private sector, is encouraged and government's rights over natural resources are fully protected. As soon as possible, the Government should introduce comprehensive legislation for petroleum operations and licensing. This legislation should be specific to petroleum and should complement or, if appropriate, replace the Law on the Subsoil for petroleum activities. At the same time, the Government should complete the drafting and publication of model licenses and contracts for petroleum operations under the petroleum law.

11.15 *Institutional reform* in the energy sector is urgently required. The Government should assign unambiguous responsibilities for energy matters among Ministries and other agencies, particularly for licensing of petroleum development. The present ambiguities cause delays, allow competition between government agencies and are detrimental to new investment. At the same time, the Government should clearly establish the status of oil and gas sector enterprises, their relationship to government and a framework for their commercialization and restructuring over the medium to longer term.

11.16 *Tendering of new fields* to the international petroleum industry is the only practicable medium-term possibility to slow down the recent precipitous decline in commissioning of new oilfields. Enormous proven petroleum reserves, crucial to economic recovery, are being left undeveloped for lack of finance. As soon as the authority for petroleum licensing has been clearly established in legislation and follow-up regulations, the Government should establish a pilot program to tender 10-12 very attractive development prospects to the international petroleum industry. Suitable provision should be made for the participation of Russian enterprises in licenses issued as a result of such tendering.

The Impact of Policy Reform

11.17 If the initial macro-economic stabilization program incorporates a strong energy policy package, there is scope for very substantial improvements in energy consumption, production and exports. The possible quantitative impact on the basis of illustrative assumptions are shown in Figure 11-2 and in the table below².

11.18 In the third quarter of 1992 (i.e., before the onset of the 1992/93 heating season) under the reform scenario, state orders in the domestic energy market would be phased out. Energy export quotas would also be eliminated. The process of reducing the present implicit subsidy to domestic consumers of petroleum products would be moved forward, as the export taxes on both crude oil and refined products were set at levels which raised domestic prices significantly closer to world prices. The resulting increase in revenues would be shared by the producers and the budget. Wellhead prices of crude oil and ex-refinery prices of oil products would be decontrolled, so the transitional export tax would be the only "wedge" between domestic and world prices. At the same time, other energy prices would be raised administratively to levels broadly consistent with the new oil prices.

Impact in 1992

11.19 This initial increase in wellhead prices would significantly reduce the shutting-in of idle wells, thereby reducing the rate of decline on current production. If the higher wellhead prices are already in effect for most of the second half of 1992, it may be possible to prevent oil production from falling below 395 million tons for 1992—down from 516 and 461 million tons in 1990 and 1991. If not, oil output in 1992 is more likely to fall to around 360 million tons. Due to the lag between price increases and effective adjustment by consumers, the benefits of 1992 price energy increases and energy

market liberalization would not show up as lower energy consumption until 1993. Oil and gas consumption are the same in both scenarios for 1992.

Table 11-1: Russia Energy Scenarios 1992-96

	1990	1991	1992	1993	1994	1995	1996
Scenario A: Effective reform in late 1992							
Oil (millions of tons)							
Production	516	461	395	375	375	395	410
Consumption	227	242	213	160	140	130	120
Exports to FSU	133	128	102	90	80	75	70
Exports to ROW	156	91	80	125	155	190	220
Gas (billions of cu. m.)							
Production ^a	641	643	630	580	550	550	560
Consumption	418	416	444	380	350	330	320
Exports FSU	140	139	99	90	80	80	80
Exports ROW	83	88	87	110	120	140	160
Scenario B: No effective reform until late 1993							
Oil (millions of tons)							
Production	516	461	360	320	300	320	350
Consumption	227	242	213	200	160	140	130
Exports to FSU	133	128	102	90	80	75	70
Exports to ROW	156	91	45	30	60	105	150
Gas (billions of cu. m.)							
Production ^b	641	643	630	580	550	540	530
Consumption	418	416	444	410	380	350	330
Exports FSU	140	139	99	90	80	80	80
Exports ROW	83	88	87	80	90	110	120

a. From 1994 onwards gas production is constrained by export volumes.

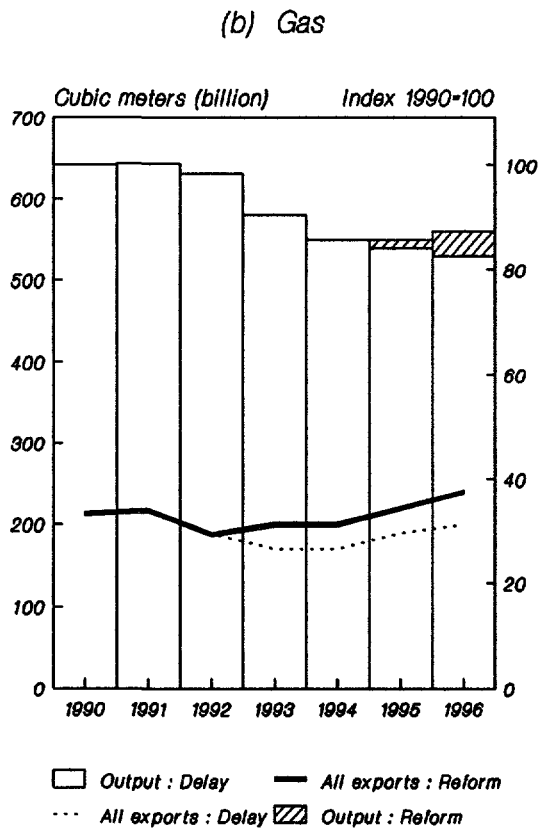
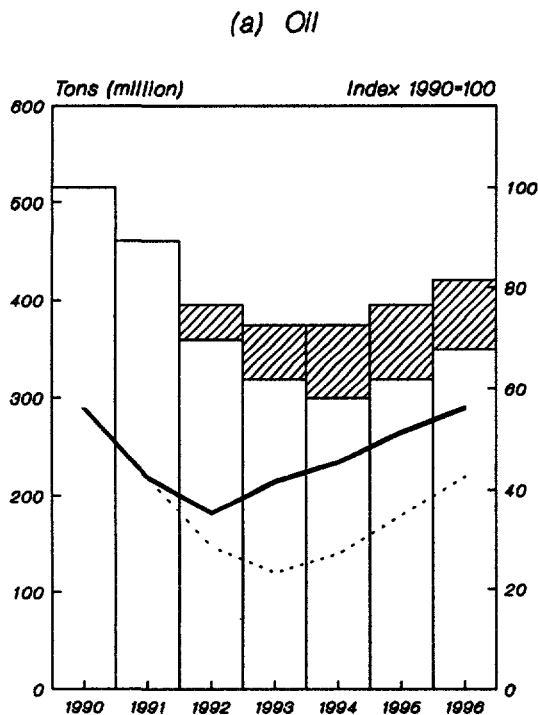
b. From 1995 onwards gas production is constrained by export volumes.

Impact in 1993

11.20 Export taxes on oil would be reduced significantly after the 1992/93 heating season, i.e., by mid-1993. After this second increase in wellhead prices, most oil and gas producers would be in a position to finance well workovers as well as some other investments. Many would start to pay normal corporate profits tax. Nonetheless, in the absence of additional production from startups on new fields, increased workover activity would not be sufficient to offset the natural decline of existing fields. Oil output would fall from 395 million tons in 1992 to around 375 million tons in 1993. In the absence of energy price and tax reform, the present rapid decline in oil output would continue—from 360 million tons in 1992 down to around 320 million tons in 1993. Hence, already in 1993, early energy price and tax reform could yield a supply side benefit of up to 55 million tons of oil (i.e., 375 less 320).

11.21 By mid-1993 in a scenario of sustained reform, interenterprise arrears would have been significantly reduced and there should be significant progress in restructuring. Industrial energy consumers would adjust to the energy price increases to be introduced before and after the 1992/1993 heating season. At a minimum, energy consumption in 1993 will reflect the decline in industrial output and national income recorded in 1991/1992. On this basis, oil consumption would drop to around 160 million tons in 1993—down from 213 million tons in 1992. In the absence of energy price and tax reform, oil consumption in 1993 would remain closer to 1992 levels, perhaps around 200 million tons. Hence, on the demand side, early energy price and tax reform could yield an additional benefit of 40 million tons of oil (i.e., 200 less 160) in 1993.

Figure 11-2. Alternative Scenarios, 1990-1996



11.22 According to these scenarios the total increment in oil available for export in 1993 as a result of supply and demand side responses to early price and tax reform is in the order of 95 million tons (i.e., 55 plus 40) worth \$11.4 billion assuming an fob export price of \$120 per ton. To put this estimate into perspective, the current estimates for Russia's oil exports in 1992 to countries outside the FSU are in the range 45 to 80 million tons.

11.23 In the gas sub-sector, higher wellhead prices in 1993 would not induce an immediate supply response. Gas output in 1993 is likely to be the same with or without reform, i.e., 580 billion cubic meters—down 8 percent from the projected output of 630 billion cubic meters in 1992. There should be, however, a strong response on the demand side, similar to the response to oil price increases. On the same basis as for oil, consumption of natural gas would drop to around 380 billion cubic meters in 1993—a 14 percent decline from 1992. And, in the absence of reform, consumption of gas might stay up around 410 billion cubic meters. According to these scenarios the total increment in available gas in 1993 as a result of demand side responses to early price and tax reform is in the order of 30 billion cubic meters (i.e., 410 less 380). For comparison, the current estimate for Russia's natural gas exports in 1992 to countries outside the FSU is 87 billion cubic meters. As first priority, the gas industry would allocate its additional investment resources to reducing the backlog of deferred maintenance on the main gas export pipelines. The main benefit of this investment would be to increase the willingness of West European gas importers to sign new gas contracts in later years.

Impact in 1994-1996

11.24 *Oil output.* By the end of the third quarter of 1992, the current work on petroleum legislation, model licenses and contracts, and petroleum-specific profits taxes would be largely complete. Relevant legislation and regulations are scheduled to be presented to the Supreme Soviet in the fourth quarter of 1992.

As a result of the legislative changes, the petroleum-related administrative responsibilities of different ministries and different levels of government would be clarified. Licenses would be issued to Russian enterprises for their current oil and gas production areas by early 1993 and additional petroleum-specific profits taxes would take effect at the same time. All the necessary conditions would be in place for tendering of petroleum development projects to start in early 1993. The supply side impacts of these reforms would be felt starting in 1994 (details below).

11.25 From mid-1993 in the reform scenario, wellhead prices could be substantially more than half of world prices. At these price levels, some of the low-cost domestic producers would already be in a position to finance enhanced recovery and additional wells in existing fields. These producers would also start to pay the proposed additional petroleum-specific profits taxes. The new petroleum legislation, effective from early 1993, would facilitate new Russian/foreign joint ventures. Hence, after the increase in workovers in 1992/93, the next source of additional oil output would be incremental production in existing fields from both Russian producers and Russian/foreign joint ventures. This additional oil output would start to appear in early 1994.

11.26 In the medium to longer term, with continued and deepening reform, the main boost to production would come from tendering of petroleum development projects, such as the development of fields that have been discovered and proven up to the point where they would normally be handed over to a domestic oil producer enterprise. Careful management of the bidding process should ensure a satisfactory sharing of petroleum rents (i.e., higher than normal returns to investment) between the Government and the investors. In particular, bids would reflect the fact that development risks have been significantly reduced by previous expenditure on exploration and delineation drilling on the tendered fields. Initially (1993-95), the successful tenderers would be international companies with participation from Russian enterprises. After domestic wellhead prices have reached world levels, most of the domestic producers should be financially capable of competing head-on with international bidders for new exploration and development rights.

11.27 These scenarios for oil output in the years 1994-96 are based on the following simplified assumptions about proven reserves awaiting development:

About ten large fields, each with 100-150 million tons of recoverable reserves, could be brought on stream with a total output of about 100 million tons per year. Because many of these fields are technically difficult, it may take three to five years to reach full production in these fields.

A further 50-100 medium/small fields are also available for development. These fields could be developed by smaller companies for a total output of a further 100 million tons per year within two to three years.

11.28 On the assumption that the initial round of tenders would lead to some licenses being awarded in mid to late 1993, new production from these development projects might start to appear by late 1995. Production from new fields would build up over the period 1996-2000, leading to a general stabilization of the oil industry by the end of the 1990s. Allowing for the natural decline of existing fields and somewhat less than the full development of the 200 million tons per year from new fields, total oil output might be rebuilt to a level of around 450 million tons per year by 2000. Thus, even with concerted policy action and new investments, Russian oil output in the late 1990s would remain well below the level in 1990 (516 million tons) and about the same as in 1991 (461 million tons).

11.29 On the basis of this favorable scenario, the drop in oil output would stop in 1993-94. The 1993 level of output (*375 million tons*) would be maintained in 1994. A fragile recovery would begin in 1995 (*395 million tons*) and 1996 (*420 million tons*). This recovery would be delayed by about a year if the energy policy reform package were not implemented until late 1993. In that case oil output would be about 70-75 million tons per year lower from 1994 through to the end of the 1990s. The loss of export revenue would amount to \$8.4-9 billion per year. Early energy policy reform therefore has a large impact on the exportable surplus of oil (details below).

11.30 These scenarios imply very large volumes of investment in the oil sector. Recently it was estimated that \$25 billion would be required over the rest of the decade to stabilize oil production at projected 1993 levels. On this basis investment expenditures of \$6-7 billion per year would be required to reach an output target of 450 million tons per year by the end of the decade. The 1992 worldwide petroleum exploration and development budgets for the international oil companies are estimated at \$54 billion—a very large pool of risk capital. With a combination of good petroleum legislation, reasonable taxation and clear tendering procedures, Russia could reasonably expect to attract up to ten percent of this budget, up to \$5 billion per year.

11.31 *Oil consumption.* In mid-1994, after the 1993/94 heating season, wellhead prices would rise to full parity with world prices. If the adjustment scenario holds, this third major round of energy price increases would be introduced by reducing export taxes on crude oil, refined products and natural gas to zero. Economic output (GDP) and industrial production are projected to grow very slowly from 1993 through 1995 with somewhat faster pickup in 1996. However, enterprise reform would be well advanced and industrial restructuring would be gathering momentum. Energy consumption would continue to fall. Enterprises would complete their adjustment to the earlier declines in industrial output and national income. And they would begin their adjustment to the more than threefold real increase in energy prices over the period 1993-94. By 1996, annual oil consumption could be as low as *120 million tons*, down from a peak of 242 million tons five years earlier, in 1991. This "saving" would be worth \$14.6 billion per year at present prices, equivalent to 25 percent of Russia's projected earnings from all merchandise exports in the same year.

11.32 These energy savings would be delayed by about a year if the energy policy reform package were not implemented until late 1993. In that case oil consumption would be 10-20 million tons per year higher from 1994 through to the end of the 1990s.

11.33 *Gas output.* Following the same trends as in the oil sector, gas consumption would continue to decline from 1994 through 1996. By 1996, annual gas consumption could be as low as *320 billion cubic meters*, down from a projected peak of 444 billion cubic meters four years earlier, in 1992. Again, this saving of 124 billion cubic meters per year should be compared with the Bank's projection of 87 billion cubic meters for Russia's 1992 natural gas exports to countries outside the CIS. Unlike the oil sector, the decline in gas consumption would eventually force the gas industry to cut back its output:

- Gas exports to convertible currency customers—mainly the countries of Western and Central/Eastern Europe—are limited by existing and future contracts. The willingness of these countries to sign new contracts for additional gas depends partly on their perception of the reliability of the export pipeline system, principally in Russia, but also in Ukraine and Czechoslovakia. Russia's gas exports to European countries are expected to stay at around 87 billion cubic meters in 1992. To illustrate the effect of exports on production, we assumed that these exports could rise to 160 billion cubic meters by 1996 under the most favorable circumstances. Even in this scenario, gas production would

have to be cut back from 1994 onwards to accommodate lower total demand. Alternative assumptions change this date by one or two years.

- Gas exports to CIS trading partners will soon be switched to a convertible currency basis. At that point, their ability to pay for gas imports could decline considerably. The Bank's scenarios are based on a decline in Russia's gas exports to the CIS from 99 billion cubic meters in 1992 (projected) to a plateau of 80 billion cubic meters in 1994-96.

11.34 These scenarios are based on a very sketchy view of the future potential for *inter-fuel substitution* in the Russian domestic energy market and its impact on energy exports. For example, over the last two decades Russia has invested heavily in replacing other fuels (coal, heavy fuel oil) with natural gas. As a result, the share of natural gas in Russia's energy market is now one of the highest in the world. For this reason, the scenarios used in this chapter do not include large scale fuel-switching in favor of gas. Nonetheless, Russia's coal industry will inevitably contract considerably over the coming decade and gas would normally take a large share of that market. To do so, the gas industry would need to be able to finance large investments in new gas transmission and distribution infrastructure.

11.35 Natural gas could also penetrate further into the heavy fuel oil (mazut) market. However, Russia already exports large volumes of heavy fuel oil at unattractive prices in order to keep refinery output at the levels needed to meet domestic demand for lighter products (gasoline, diesel, aviation fuel, etc.). Replacement of fuel oil with gas in order to increase oil (i.e., fuel oil) exports therefore raises a series of difficult policy issues concerning investment in rehabilitation and modernization of refineries.

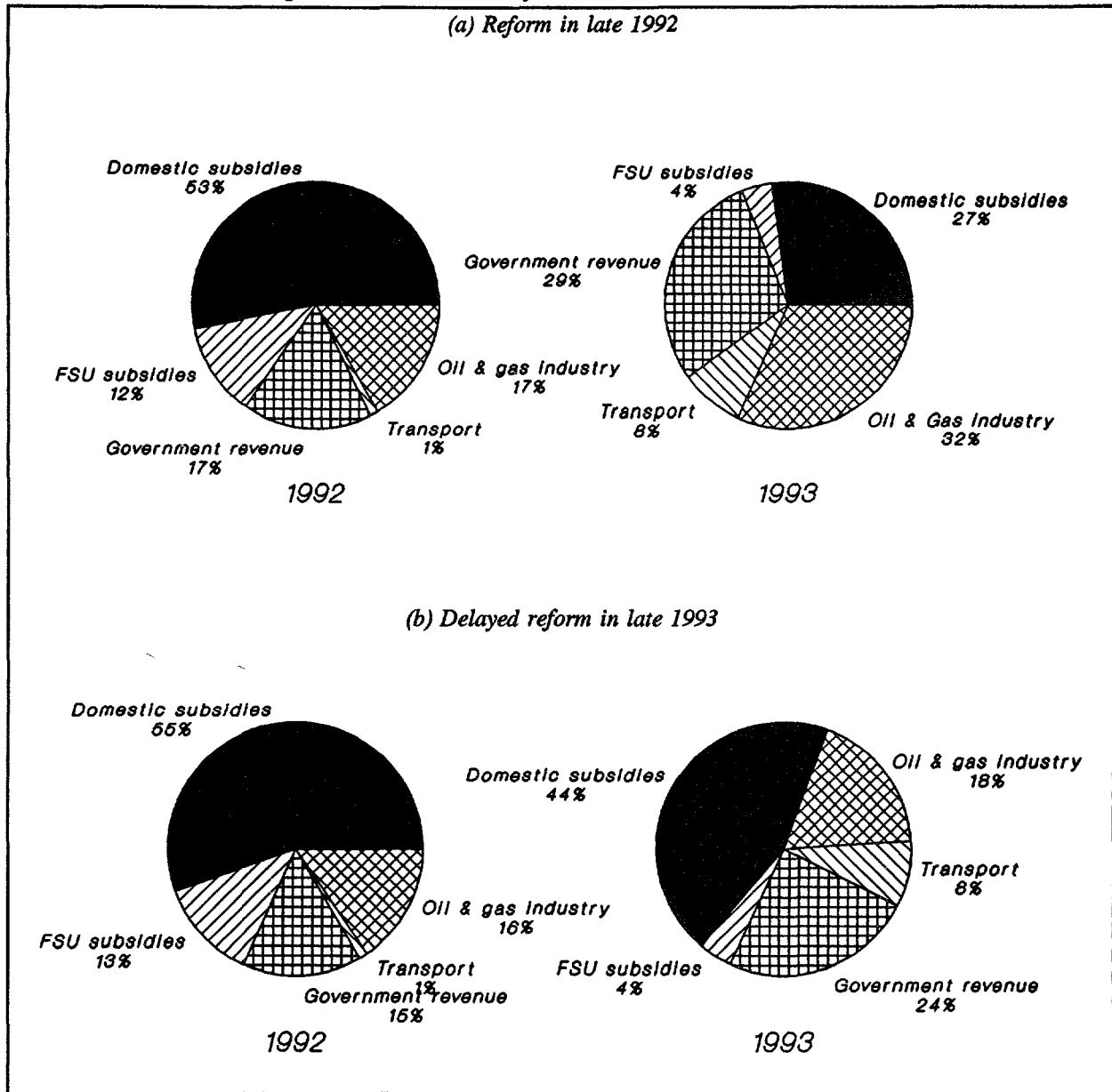
11.36 *Exports.* In summary, the response to the recommended package of energy policy reforms would be as follows: (a) a decline in energy consumption, starting in 1993 and reaching significant levels by the middle of the decade; (b) stabilization of oil output by about 1994, followed by growth back to around 1991 levels by the late 1990s; (c) rapid stabilization of oil exports (see below) followed by steady growth; (d) forced cutbacks in gas output by 1994/95 unless gas can penetrate further into the domestic energy market. Key indicators of these results are given in Table 11-1. If the recommended reforms are put in place starting in late 1993 rather than late 1992, the one year delay in results will have a large negative impact on the balance of payments and the budget deficit.³ As noted above, an acceptable macro-stabilization package for 1992-93 cannot be constructed without early implementation of the recommended energy policy reforms.

Oil and Gas Revenues

11.37 The reforms will have a major impact on the revenues accruing to the oil and gas industry and to the government over the next four years. Details of the financial projections for the alternative scenarios are given in Table 11.2 while the percentage allocations of the potential revenue from oil and gas production valued at world prices are shown in Figure 11.3. The financial projections are expressed in terms of constant mid-1992 prices with an exchange rate of \$1 = Rb 100 being used to convert world prices to ruble terms, so that dollar values can be obtained by dividing the figures in the table by 100. The estimates for 1992 are based on the prices, taxes and other assumptions representing the situation in June and July 1992 expressed at an annual rate, so that they are not comparable with the fiscal estimates for 1992 presented earlier in this report.

11.38 It is important to consider potential revenues at world prices rather than actual revenues at domestic prices because, as shown in Figure 11.3, 65 percent or more of the potential revenues in 1992 are accruing to domestic consumers in Russia or to other republics via price subsidies. This share will

Figure 11-3. Allocation of Potential Oil and Gas Revenues



be halved in 1993 under the 1992 reform scenario but will remain very high if reforms are delayed. Cutting consumption subsidies is essential if the resources necessary to fund investment in the oil and gas sector are to be found. Under the 1992 reform scenario the share of potential oil and gas revenues retained in the oil and gas industry increase from 17 percent in 1992 to 32 percent in 1993 and to 44 percent in 1994. The additional resources, equivalent to \$12 billion dollars in 1993 and \$23 billion dollars a year in 1994, should provide the incentive and the cash flow to ensure that the decline in oil and gas production is reversed and to stimulate exploration for new reserves or the development of technology to exploit known but difficult to extract reserves. On the other hand, delay will mean that the oil and gas industry will receive little extra revenue until 1994 with predictable consequences in terms of a continuing rapid decline in production.

11.39 The reduction in consumer subsidies will allow the government's share of the potential revenue from oil and gas production to increase from 17 percent in 1992 to 29 percent in 1993 and 37 percent in 1994. The additional revenue, nearly \$10 billion in 1993, is crucial to the maintenance of a sustainable budget deficit but it is sufficient to allow the government to provide some assistance to social groups which are particularly hard hit by the increase in energy prices. Government revenue from the oil and gas sector is projected to remain stable from 1994 onwards as the decline in the export tax revenue is replaced by revenue from the profits tax on oil and gas enterprises. In fact, the trading profits of oil and gas enterprises should increase sharply in 1995 and should continue to rise more gradually after that. This might allow the profits tax rate to be increased gradually, provided that those investing in the industry have the assurance that it will not rise above some maximum effective rate which is announced in advance. Care is required to ensure that any increase does not encourage short term extraction strategies which damage ultimate recovery rates, but an appropriate tax regime can be established which provides an incentive to bring forward investment without jeopardizing the longer term prospects of the industry.

Energy policy reforms

11.40 The policy recommendations above outlined the five core elements of the recommended package of energy policy reforms. The Government has launched preparatory work in each of these five areas. This section addresses the current status of the preparatory work, including some of the key points being debated within the Government.

Energy pricing and taxation

11.41 Any improvement in the present system of prices and taxes must satisfy a number of requirements: (a) it must provide an immediate increase in government tax revenue; (b) it must result in an initial price of crude oil *at the wellhead* that covers operating costs of existing flowing wells—so that these wells will not be shut in; (c) it must exempt development of new oil projects from any taxes on gross revenue—so that investment in future production can re-start; (d) it must facilitate elimination of quantity controls (state orders and export quotas) and de-control of (non-monopoly) energy prices as soon as possible—so that energy markets can start to function properly; and (e) the export tax must take into account change in the real exchange rate for the ruble (as, with financial stabilization, the auction market rate converges towards a relatively stable equilibrium real exchange rate).

11.42 Most of the recently debated reform proposals do not meet more than two or three of these criteria. In particular, there is very limited recognition of the fact that energy markets cannot function at all while quantity controls remain in place throughout the sector.

11.43 Instead, the price reform debate has focused on a number of rudimentary questions. For example: (a) why are decontrolled prices better than controlled prices? (b) why increase energy prices if it only triggers an even larger increase in inflation? (c) why increase energy prices if no-one is paying their energy bills at the current price levels? (d) why increase energy prices if enterprises cannot pay and will simply shift the entire increase onto the budget deficit? (e) why increase wellhead prices for domestic oil and gas sales when the oil and gas producers need foreign exchange rather than rubles? (f) why are world prices relevant to the domestic market?

11.44 Most of these arguments implicitly rest on the assumption that there will be no reforms elsewhere in the economy—no stabilization, no convertibility, no commercialization of state-owned enterprises, and no industrial restructuring. Energy pricing and taxation reform will make little progress

until it is recognized that adjustment in the "real" sectors, such as energy, is a central part of the stabilization and adjustment program.

11.45 The Government has been working on these issues as part of the *Energy Pricing and Taxation* project of the World Bank's Russia Technical Cooperation Program (TCP). As of July 1992, work is proceeding on two parallel tracks. The first objective of this project is to assist key advisory groups in Russia to re-orient their economic models to reflect the transition to a market economy rather than the rigidities of the former planned economy. Such a model should demonstrate that the impact of energy price increases on inflation, the budget deficit, industrial costs of production and household budgets will be significantly less severe than currently predicted. Second, the Government is considering a draft set of guidelines designed to ensure that inter-fuel pricing distortions would be minimized during the transition towards world prices.

Petroleum production taxation

11.46 The tax regime for petroleum development needs to take into account the special characteristics of petroleum rent and the worldwide competition for risk capital available from the international petroleum industry. The present tax regime for petroleum development in Russia is the outcome of a relatively uncoordinated series of measures on pricing and taxation. The combined effect—probably unintentional—is that the total notional tax-take is far too high, and significantly above that found in other major petroleum producing countries. For reasonable ranges of assumptions regarding project cost, size of field and prices, the Government's take is in excess of 100 percent of profits, even when such profits are significant. Enterprises avoid taxes by seeking special deferrals and, in the extreme, by not complying with legislation. In either case, the outcome is sub-optimal. The current set up encourages unproductive rent-seeking behavior within and outside the sector; it discourages new investment (especially from foreign firms) and causes havoc in the fiscal accounts.

11.47 Equally important, the present tax structure is mainly in the form of price controls and taxes on gross revenue or production. Both are completely insensitive to the underlying profitability of a project. As a result, first, the Government's tax take, expressed as a percentage of project profit, is higher for low-profit projects than it is for high-profit projects. And second, the taxpayer's after-tax profits will fluctuate dramatically with fluctuations in prices, costs and volumes, thus increasing risk and discouraging investment. This is the reverse of what would happen under a well-designed tax system.

11.48 Finally, investors, both domestic and foreign, must be protected from the central-regional tensions over division of tax receipts.

11.49 A new petroleum tax regime must be developed urgently along the following lines: (a) the general profits tax, currently 32 percent; (b) a simple royalty in the 5 to 10 percent range; (c) an additional, flexible tax element which might be negotiated separately for each petroleum license area as a percentage of profit expressed as production net of costs ("production sharing") or as net cash flow. The World Bank has been working with the authorities on these issues. The Bank recommends separate petroleum tax legislation along the lines commonly found in major petroleum producing countries. A suitable draft has been prepared and was discussed with Government officials in July 1992.

Petroleum legislation

11.50 The recently enacted Law on the Subsoil does not specifically address the particular needs of the petroleum industry. Its potential use as an omnibus law to govern petroleum development as well

Box 11-3. Some Misconceptions about Energy Prices/Taxes and the Budget

It is sometimes argued that raising energy prices will have no or, even, an adverse effect on the public deficit and/or the monetary situation in the short run. The argument seems to run as follows: Assume that there is no energy conservation so that enterprises use as much energy per unit of output as before the price increase. If all enterprises set their prices on a cost-plus basis, the effect of the change will be to transfer income from final consumers - i.e. households, the government (via public consumption and publicly-financed investment) and exporters - to energy producers. Now, suppose that the government attempts to protect households from the impact of higher energy prices by raising wages, pensions or subsidies for household energy consumption so that the burden of the transfer falls on the government rather than households. If exporting enterprises pay a marginal tax of 100 percent on their net profits, this part of the transfer associated with higher energy prices will also fall on the government via lower tax revenues. Thus, if the government does not tax away all of the additional revenue received by energy producers, the net increase in their income can only come at the cost of an increase in the budget deficit.

Variants on this analysis can easily be constructed. If producers are not able to pass on all of the additional costs which they have to bear, the deficit will increase because of a fall in revenue from turnover or profits taxes. The monetary situation may be deteriorate if the higher energy prices simply lead to a more rapid build-up of inter-enterprise credits, especially in the hands of the energy producers. Asymmetries in the treatment of such debt under the tax system or in the responses of producers to changes in their balance sheets due to inter-enterprise credits would mean that government revenue, total credit creation and real expenditure may all be affected. In such circumstances it is understandable that raising energy prices may be seen as provoking a wide range of undesirable consequences for fiscal and monetary control.

It is, however, important to stress that these consequences have really nothing to do with the energy sector as such. The same arguments might be applied to raising agricultural prices or changing the cost of imported goods as a result of an exchange rate devaluation. The basic problem lies in the extreme rigidity of the economy described in the analysis. Prices are not allowed to affect either the consumption of energy or the real incomes of most groups within the economy. It follows that the real income of energy producers (or of farmers or the real cost of imports) can only be increased at the expense of the future by raising government borrowing or by an inflation tax on everyone. The moral to be drawn from the analysis is *not* that energy prices should not be increased but rather that, if energy prices must be increased for efficiency reasons, the burden of the resulting income transfer to energy producers must eventually fall on the real level of household incomes and of enterprise profits. Attempting to isolate specific groups from the effect of this income transfer by wage compensation or 100 percent marginal tax rates simply increases the inflationary cost of making the necessary adjustment.

as that of other minerals is contrary to accepted international practice and is not recommended. The best solution would be to adopt a specific Petroleum Law (along with the specific petroleum taxation regime—see above) to supersede the petroleum-related provisions of the Law on the Subsoil or, at the very least, not be in conflict with them. In the event of a conflict, the Law on the Subsoil should be amended to obviate the conflict in favor of the specific provisions of the Petroleum Law. The need for a separate Petroleum Law is now widely accepted in principle and there have been as many as five competing drafts in circulation in recent months. The Government is still working to unify these drafts; the discussions were ongoing as of mid-July.

Institutional and enterprise reform

11.51 Under present arrangements, the potential for conflict on petroleum matters between the Ministry of Fuel and Power and the Committee on Geology could be particularly damaging. Determined progress on enterprise reform—the linchpin of the adjustment effort—could be delayed without a resolution of these issues. The Government should consider a reform along the following lines. The Ministry of Fuel and Power and the Committee on Geology could be consolidated into a single Ministry for Energy whose role would ultimately be restricted to: (a) policy recommendations and decisions on

the overall framework for the energy sector; (b) limited regulatory oversight of energy enterprise operations; (c) petroleum licensing; and (d) exercise of the ownership function in relation to state-owned energy enterprises. As early as possible, the new ministry would establish a clear program for licensing of exploration, development and production of oil and gas reserves. At the same time the new ministry would distance itself from the commercial activities of the energy enterprises.

11.52 At present, the nature of the legal relationship between the Government and the energy enterprises is ill-defined. Specifically for the oil and gas enterprises, the Government would be well-advised to: (a) establish the oil and gas enterprises as joint stock companies as soon as possible; (b) consolidate exploration and development activities where possible; (c) divest ancillary activities (eg, services and manufacturing) where possible; (d) vest *100 percent ownership* of the shares in the Government at its various levels; (e) establish clear rules for the governance of the new joint stock companies, including the role of the Ministry for Energy in relation to Board appointments, strategic plans, performance targets, major capital or asset restructuring, etc.; (f) allow mergers, subject to reasonable anti-monopoly criteria; (g) allocate licenses for oil and gas fields which are already in production; (h) allocate selected other discovered but undeveloped fields to the new companies on the condition that they be returned for re-licensing if they are not under development within three years; (i) prepare and implement a program for the early and progressive privatization of oil and gas enterprises, taking into account any mass privatization program that may be implemented; and (j) outline a framework for the minimum required economic and technical regulation of the oil and gas companies, providing for encouragement of competition wherever possible.

Tendering and licensing

11.53 Official responsibility for tendering and licensing remains extraordinarily vague. Enterprises, associations and local and central authorities have all claimed rights over tendering. At present, potential investors have to obtain approvals from several local agencies and branches of government, at least six central ministries or committees and, ultimately, the President and the Supreme Soviet. The regulatory regime must be clarified. It is critical that: (a) primary authority for tendering, negotiations and licensing be placed in a single agency which has no vested interest in the outcome; (b) the tendering agency be authorized to conclude the process without involving Parliament; (c) the license be an authorization to proceed with exploration and/or development without any further negotiation. The Bank has and will continue to work closely with the Government in these areas.

11.54 As soon as the organizational arrangements are in place, the tendering agency should prepare a pilot program of 10-12 very attractive development projects for tendering to the international petroleum industry, with suitable provision for the participation of Russian partners. In these initial tenders, the tendering agency would designate a Russian partner for each license at the moment the tender is announced. The Russian partner would then join the successful bidder on the basis of a wholly or partially carried financial interest.

Notes to Chapter 11

1. According to one estimate the investment required to stabilize Russian production of crude oil and condensate at between 380 and 400 million tons per year from 1993 to 2000 would amount to \$10-11 billion per year.

2. The 1992 reform scenario assumes that the ratio of the average domestic price for crude oil paid by refineries to the world price is 50 percent in 1993 and 80 percent in 1994 and 100 percent for 1995 onwards. Similar assumption apply to the price of gas. In this scenario the government receives a royalty of 20 percent of gross producer revenue from 1993 (up from 10 percent in 1992) while the differential between domestic and world prices in 1993-94 is maintained by an export tax which is replaced by a profits tax with an effective rate of 30 percent of trading profits from 1994 onwards. For the alternative scenario it is assumed that these changes are delayed by one year so that the average domestic prices for oil and gas are one-third of the corresponding world prices in 1993 and 60 percent of world prices in 1994. The higher royalty rate is applied from 1993 but the profits tax is not introduced until 1995.

3. With a one-year delay, oil exports would fall to 147 million tons, and gas exports to 186 billion cubic meters in 1992. The comparable figures for 1993 are 120 million tons for oil and 170 billion cubic meters for gas.

CHAPTER 12

Stabilization, Sectoral Adjustment, and Enterprise Reform in the Agricultural Sector

12.1 Russia has a very rich natural agricultural endowment and a large internal market (see Box 12-1), but recent changes in the Russian economy have put severe strains on agricultural production, marketing, and profitability. A well-managed three-to-five-year program of agricultural adjustment, in conjunction with an appropriate mix of new investments, could move the sector toward greater efficiency and a path of sustainable growth. The needed adjustment is very large, however, because a legacy of inefficient enterprises, distorted prices, and inappropriate technology now stands between the sector and its natural potential.¹

12.2 A successful transformation of the agricultural sector will require continued simultaneous forward movement in four areas:

- macroeconomic stabilization and greater integration with world markets to create an environment supportive of sustained investment and productivity gains;
- enterprise reform to create accountable and responsive economic agents;
- a sectoral policy to provide appropriate signals to economic agents and absorb some social costs of adjustment to the new signals; and
- a restructuring of critical support services, including input/output distribution and marketing, research, extension, and credit.

12.3 Some progress has been made in each of these areas, but obstacles remain. The momentum toward convertibility and stabilization of the ruble has slowed. Implementation of land reform and farm restructuring is proceeding, but with the Parliament's recent failure to legalize full private ownership of land, the extent and pace of enterprise reform is diminished. A new program of price subsidies provides support for producers during the adjustment period, but it mutes the signal to adjust where it should be heard most clearly, that is, in the livestock sector.

12.4 On balance, the steps undertaken to date do not point to a high likelihood of successful agricultural adjustment over a three-to-five-year period. Successful adjustment will require renewed progress toward macroeconomic stabilization, full private ownership of land, and sectoral policy emphasizing adjustment coupled with targeted social protection, where warranted. As this policy framework is put into place, some transitional support from the Government will be needed to prevent further dramatic declines in production. Over the longer-term, substantial new investment in the sector will be needed to ensure both greater productivity at the farm level and higher efficiency in transportation and marketing of output. A viable rural banking system can help farmers finance much of the needed investment. Foreign investment should be encouraged, since it can entail substantial transfer of technology. The Government, with financing from bilateral and multilateral sources, will also have to invest in a range of public infrastructure and services.

Box 12-1. Russian Agriculture

The agriculture sector in Russia contributes about 16 percent of total GDP and employs about 13 percent of the labor force. Livestock is important in the Russian agricultural economy. Crops and horticulture produce approximately 40 percent of the gross value of Russian agricultural output, and livestock produces the remaining 60 percent. Between one-quarter and one-third of the total agricultural labor force (including management and clerical workers) on collective and state farms is employed directly in tending animals.

Russia's aggregate agricultural growth in the 1980s reflected the pattern for the Union as a whole; that is, growth of about 2 percent annually from 1980 through 1989, and negative growth thereafter. At approximately 215 million hectares, Russia's agricultural area (excluding forests) is larger than Kazakhstan's (198 million hectares) and Ukraine's (41 million hectares). Irrigation is, at present, relatively unimportant; about 4 percent of the arable land is equipped for irrigation. The intensity of use of Russian agricultural land is intermediate between the extensive wheat and grazing lands of Kazakhstan and the intensively cultivated Ukrainian lowlands.

Approximately 53 percent of planted area in Russia is devoted to grain crops. About 30 percent of the grain area is sown in winter crops, and the remaining 70 percent in spring grain. Because the winter crops tend to be higher yielding, winter grains make up approximately 40 percent of the Russian grain crop. Other important field crops include sugar beets, flax, sunflower, potatoes, vegetables, feed roots, hay and succulents, and fruits. Russian wheat growing conditions are most similar to those of Canada, the United States, and Argentina, and yields lag those in Canada by about 10 percent. Yields of potatoes, sugar beets, and feed, including grasslands and hay, lag North American levels much more than do grains. Significant increases in yields as well as efficiency gains can be achieved in these crops through better management and improved technology. Yield increases in grains may be more modest, but increased efficiency in input use and reduced post-harvest losses can bring significant economic gains.

Yields and efficiency in the livestock sector lag world levels more than in the crop sector. Milk yields at about 2,800 kilograms per cow are from 50 to 60 percent of Western European levels and 40 to 45 percent of US levels. Feeding efficiency in meat production is estimated to be approximately half that of Western Europe. Low yields in the livestock sector derive in large part from chronic feed shortages, because more animals are kept than can be efficiently fed. The low quality of feed used and the poor genetic stock of animals also reduces productivity in the livestock sector.

Russia was the largest food importer of the former Soviet states, and it has traditionally been a net importer of most food products with the exception of eggs, bread products, potatoes, and fish. In 1990, prior to the recent fall in demand, Russia imported 13 percent of the meat and 17 percent of the milk it consumed. Between 68 million and 75 million tons of grain have been used for feed in Russia recently, compared to imports of between 18 and 23 million tons (including inter-republic trade). A one-third reduction in demand for grain for feed would thus turn Russia from a net importer into a net exporter of grain.

Food consumption in Russia, on average, remains adequate in terms of calories and average nutrient level, even with the reduction in 1991 and 1992. Regional variation in food consumption was significant under the old distribution system, and it has become even more so with the disruption in internal trade at the end of 1991 and slow response to formal liberalization of internal trade in 1992.

Adjustment Towards a More Efficient Agricultural Sector

12.5 The sectoral adjustment that must be achieved is very large. The legacy of socialist agriculture included a dysfunctional organizational base, with poorly defined property rights and weak incentives for efficiency and growth. Severe price distortions are embedded in the choice of technology and factor intensity. The system also deliberately produced geographic distortions of comparative advantage. Since 1965 the inefficient agricultural production base has been supported by direct transfers of capital through the banking system and the budget. Policies were pursued to guarantee terms of trade that were more favorable than in the rest of the world, particularly for the highest-cost farms. Beginning

in 1991 several developments pressured the traditional financial flows to the agricultural sector, and farm profitability has fallen. In the long run the agricultural sector can recover, and the potential of the vast and rich agricultural natural resource base can be realized. Recovery will require curtailment of activities with negative value added and adoption of production practices consistent with new factor prices.

12.6 An agricultural sector that contributes to, rather than drains, national income will be quite different from the sector as now constituted. Policy formulation would be facilitated by attempting to visualize the outcome of a successful adjustment process. The need for a vision is made particularly important because agricultural policy is likely to be interventionist during the transition. If enterprise reform were to proceed quickly and domestic relative prices rapidly converged to world levels, agricultural producers and traders would implement the sectoral adjustment. There would be little need for active agricultural policy other than to absorb the social costs of redeploying resources. Enterprise reform, even if consistently implemented, will necessarily be lengthy, however. Due to the large divergence between domestic and world prices, domestic price distortions are also likely to linger. A triangular interplay of simultaneous change in the enterprise, in the stabilization program, and in interventionist agricultural policy is likely to characterize the economic environment for the next several years. *In this environment there are few anchors for agricultural policy, and a vision, however vague, of the structure of a healthy future agriculture is invaluable as a guide for adjustment.*

12.7 The grains and livestock sub-sectors can be seen with some degree of clarity, but the composite residual of all other crops is less clear. In the grains sector, modest increases in yields (perhaps on the order of 10 percent) over the large grain area, combined with very large reduction in grain used for feed, would greatly reduce Russian grain imports and could well turn Russia into a net exporter, with wheat as potentially the main export grain. Any policies to constrain domestic grain prices (for example, to support the livestock industry) or tax exports will harm the overall adjustment process by impeding the potential for the agricultural sector to save foreign exchange and thus reduce the pressures on the balance of payments.

12.8 The livestock industry exhibits the most severe distortions within agriculture as a whole, and a significant reduction in herd size, a shift away from concentrate feeds toward grazing, and an improvement in productivity per animal will much reduce the need for feed, capital, and labor in livestock production. Within the current livestock industry is a core of potentially more efficient commercial production that will survive the adjustment. Policy intervention in the livestock sector should facilitate the closure of nonviable enterprises so that resources can be allocated to more productive purposes. Great care will be needed to mitigate the social dislocation that will be caused by this process in some regions of the country.

12.9 The residual of the crop sector has a largely domestic market. The potential for yield increase is greater than in the grain sector, but the potential for shifts in area and location is also great. In particular, marginal lands in the steppe, east of the Volga and in the northern areas of European Russia, are likely to go out of crop production. Adjustment in this subsector will depend on recovery of domestic demand and integration of regional markets, as well as relative prices of inputs.

12.10 Russian agriculture should emerge from the adjustment process with a strong grains sector and possibly wheat exports, a much smaller livestock sector satisfying most or all domestic demand for meat and milk, and increased production of forage, fruits, vegetables, potatoes, and other crops. The very large recent imports of grain and meat will be reduced, and partially replaced by increased imports of protein meal. Eventually, larger imports of tropical products such as vegetable oil are likely. The directions of adjustment are, for policy purposes, more important than the end points. For example, it

is important to allow grain prices to move toward world prices and to cease massive subsidy of imported grain for domestic resale,² but it is very difficult to predict the size or directional flows of potential grain exports that may occur in the future.

12.11 Sectoral adjustment has been initiated by the stabilization program—price liberalization, higher interest rates, and more liberal trade policy and realignment of the exchange rate—and ultimately will be implemented through enterprise reform. A central component of the reform program will be the elimination of government price-setting and a substantial reduction of subsidies. Ensuring competitive markets is important so that price signals are effectively transmitted to producers. The stabilization program will transmit parameters of a new economic environment back to the producer, processor, and distributor of food and fiber. Most important among these evolving parameters for the food sector are:

- reduced demand for food at higher prices and lower real incomes;
- shifts in the composition of foods purchased toward those with low income elasticities (bread, potatoes, and fluid milk) and away from those with high income elasticities (meat and poultry);
- higher relative prices of agricultural inputs of industrial origin, such as machinery, fertilizer, and chemicals;
- higher interest rates, and consequently higher costs for capital-intensive production processes, such as the livestock industry; and
- higher transportation costs that radically change regional comparative advantage in food production and require substantial shifts in land use.

Maintaining the Momentum of Reform

12.12 In agriculture, as in other sectors of the Russian economy, stabilization and enterprise reform are interdependent. Enterprise reform is part of a process of sectoral adjustment, through which activities profitable under new relative prices and incentives will displace now unprofitable ones. Which activities to expand, which to contract, and how, are decided at the enterprise level by the agents managing the enterprises. During the transition, price signals may be temporarily wrong as relative prices adjust, and the structure of enterprises may cause them to respond either too slowly or inappropriately. Currently, ownership structures are unclear, markets function poorly and, given the resource constraints, the administrative apparatus will continue to disintegrate. Key governmental institutions must be safeguarded—and they should focus on speeding up the transition. The solution to the problems of the transition lies mainly in shortening the transition. As discussed in Chapter 6, enterprise limbo is the most intractable and potentially destabilizing aspect in the transition. Adjustment must proceed relatively rapidly, since neither the sector nor the economy as a whole can afford continuation of activities with negative value added on a large scale. Part of the adjustment will be achieved by restructured state and collective farms responding to new signals. The response of these enterprises will differ from that of fully private firms.

12.13 A number of major reforms have already been taken. These reforms have propelled the sector toward adjustment but have also generated forces resistant to the further changes. Yet, as shown in Box 12-2, failure to continue the adjustment process will lead to stagnation of the agricultural sector. Even though the sector represents a relatively modest share of Russian GNP, failure to achieve the needed

agricultural adjustment will also have a severe negative impact on the macroeconomy and on prospects for recovery in other sectors. Agricultural adjustment that supports stabilization will have a disproportionately large positive impact because the sector is visible, closely monitored, and weighted highly in wage bargaining.

12.14 To date, the Government has taken steps to initiate the adjustment process with reforms in the following areas:

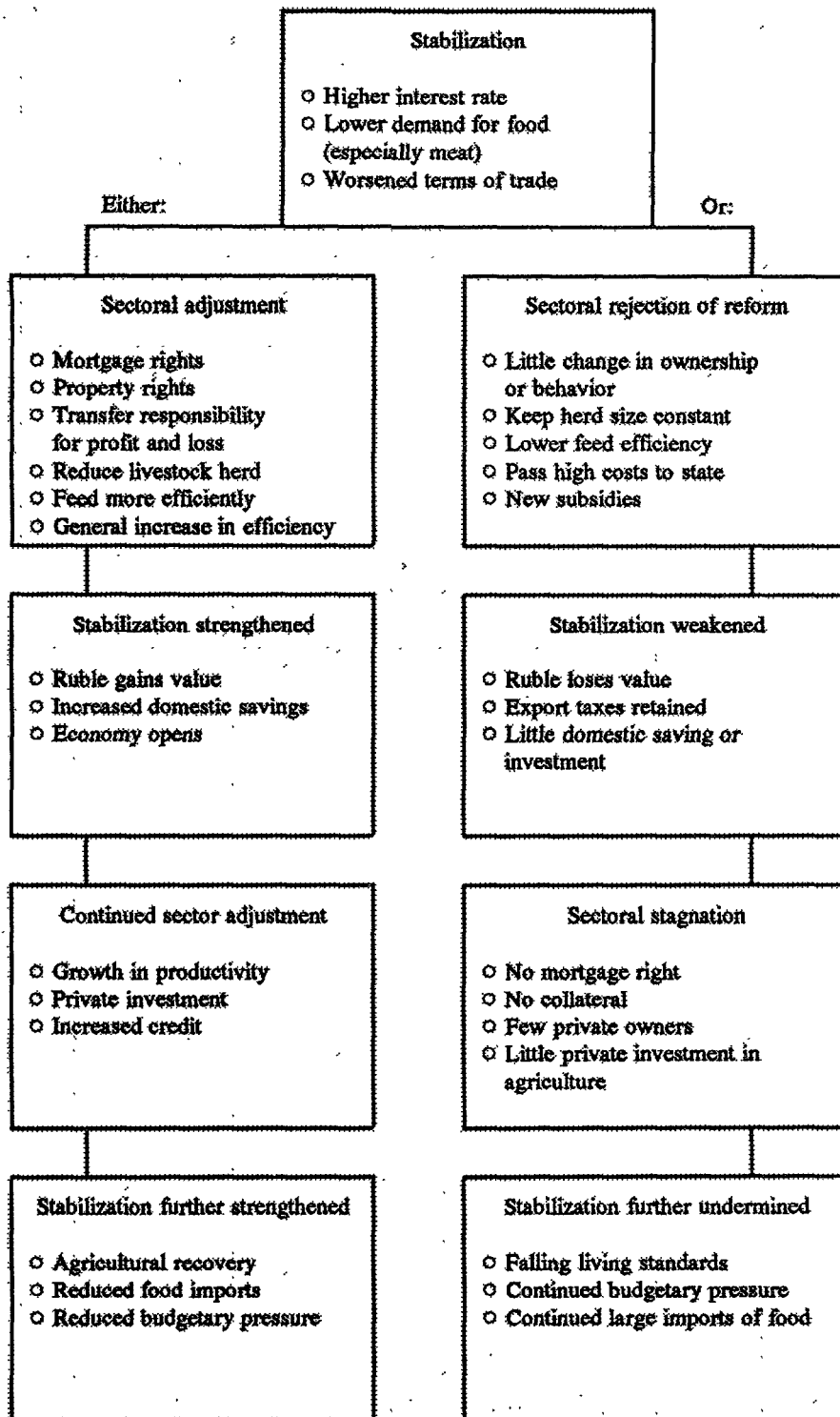
- Prices, by decontrolling prices of most inputs and outputs for agriculture;
- Marketing, by eliminating barriers to trade links among enterprises and reducing sales quotas on agricultural output;
- Enterprises, by devising a program to reorganize and privatize state and collective farms;
- Land, by adopting a package of laws that establishes the right of private farms to exist and gives private farms the right to hire laborers and to have equal access to credit and other inputs; and
- Credit and banking, by taking initial steps toward creation of a commercial banking system in the countryside.

12.15 The reforms already undertaken indicate the basic commitment of the Government to restructure the sector. At the same time, however, the existing reforms are not enough to achieve the desired objectives of adjustment. The momentum of reform must be maintained, and the adjustment process deepened, by further measures, including:

- Rapid privatization of small-scale agroprocessing enterprises, input dealerships, and retail food outlets; and adoption of a detailed strategy for privatizing larger enterprises;
- Preparation of revised land legislation that would ensure full rights to own, sell, and mortgage land;
- Establishment of a framework to: (a) decrease the reliance of farm enterprises on government-directed and subsidized credit programs, and (b) restructure and collect outstanding agricultural sector debts;
- Reduction and rationalization of current subsidy programs to contribute to macroeconomic stabilization and to target available resources in a manner that facilitates rather than impedes structural adjustment; and
- Introduction of measures to reduce remaining barriers to the efficient functioning of markets.

Continued government support to agriculture could actually result in further stagnation of the sector if it is not carried out in a context of continued reform in the above areas. Some of the most important considerations involved are discussed in further detail below.

Box 12-2. Stabilization and Enterprise Reform in Agriculture—Two Scenarios



Enterprise and Credit Reform

12.16 Higher productivity is achieved through enterprise restructuring and investment, and for each of these a genuine owner who accepts responsibility for profit and loss is needed. In agriculture, the creation of active agents requires both the assignment of land ownership and assignment of the assets of the former state and collective farms. Only the assignment of ownership gives an agent an incentive to carry through restructuring. Without ownership and financial accountability, losses can be passed on, and pressure to seek higher productivity is weak. Full private ownership of land, with rights to mortgage and sell, is necessary for reinvestment in productive private agriculture. Without land as collateral for loans, capital-intensive modern agriculture cannot be fully private. Thus assignment of land ownership, implementation of land laws, reorganization of state and collective farms, and the development of appropriate credit policies and financial institutions are all part of enterprise restructuring in agriculture (see Box 12-3).

Land reform and farm restructuring

12.17 Russian land law currently permits private ownership of land with a right to bequeath, but very restricted right of sale. The right to mortgage has recently been established by Presidential decree, but such a mortgage right is not very meaningful in the absence of the right to sell land and of institutions capable of making loans. Full ownership rights, including sale rights, would require changes in the Constitution that have not yet been adopted. Currently, Russia also lacks a comprehensive land information system, and developing such a system is a massive undertaking. Although it is unlikely that such a system can be devised prior to the beginning of the privatization process, obtaining the full benefits of private land ownership will require cadastral surveys and a mechanism for titling and registering land. Developing rural taxation and credit instruments based on collateral both require widespread titling and registration of land.

12.18 In July 1992, the President introduced into Parliament a bill that would transform the Agricultural Bank of Russia into a Land Bank. The new bank would be given powers to issue and supervise the trading of land certificates. It would also be able to carry out mortgage operations based on these certificates and could make working capital loans using the harvest as collateral. If this bill is enacted, it would represent a step forward in the move toward private ownership of land, although the sale and purchase of land technically remain forbidden under the Russian Constitution. Further analysis is also needed regarding whether it is desirable over the longer terms to have a bank carry out functions related to land registration and administration.

12.19 The framework for farm restructuring is contained in the December 1991 presidential decree on land reform, and in recommendations issued by the Ministry of Agriculture on January 14, 1992 governing reorganization of collective and state farms. According to the Presidential decree, all state and collective farms must either explicitly decide to retain their current organization or must reorganize and register new structure by January 1, 1993. Farms that have been declared bankrupt will be liquidated and their assets sold. The general assembly on each farm chooses the form of land ownership (individual, corporate, or collective) and the form of farm organization. The decision of the assembly is implemented by a commission chaired by the farm manager, and including the farm administration, local governmental officials, members of the local land reform committee, and representatives of major creditors. There are three main forms of reorganization:

- full division of the farm into parts, either individual private farms, small voluntary cooperative enterprises, or a combination of these;

Box 12-3. Enterprise Reform at the Farm Level: the Traditional Farm Enterprise

Agricultural production takes place on state farms, collective farms, and in the private sector. There are approximately 12,000 state farms, and an equal number of collective farms. Prior to the mid-1960s the organization of state and collective farms differed significantly. In principle, state farms are state enterprises, and collective farms are cooperatives in which all assets except land are owned by members. These differences ceased to be meaningful in the 1970s and 1980s, as procedures for paying workers and access to state credits became almost the same on the two types of farms.

State and collective farms tend to be diversified enterprises producing both crop and livestock products. Diversification is more pronounced in the collective farm sector than in the state, but it is more common than specialization throughout. This diversification has important implications for the agricultural adjustment, since it implies that if the adjustment in the livestock sector is not carefully managed, it will bring down incomes on almost all farms.

Collective farms have on average 6,600 hectares of total land, and about 4,000 hectares of planted area. The average collective farm has 312 full-time-equivalent workers. The average collective farm thus has about 21 hectares of total agricultural land (including meadows and pasture, as well as arable) per full-time-equivalent worker. The average collective farm has approximately 1,900 cattle, one-third of which are cows. The number of cattle in the collective farm sector is about twice the number of pigs, showing the importance of beef and milk production in the Russian livestock industry, particularly in the collective sector. State farms are, on average, somewhat larger than collective farms.

Almost all collective farms have some cattle. Fourteen percent of collective farms and 20 percent of state farms have cattle herds larger than 3,000 animals. Approximately 21 percent of all cattle in Russia, and 25 percent of cattle on collective and state farms, are in herds of 3,000 or larger. Although there are exceptions, farms with large cattle herds tend to be more dependent on purchased concentrate feed, and have weak local feed bases. Few are properly equipped to dispose of wastes created by the large herds fed on imbalanced diets. The large herds are housed in buildings that were expensive to heat and cool even under the subsidized energy prices in the past, and energy costs will be much higher in the future.

The private sector prior to 1991 was limited primarily to household plots of farm employees and smaller gardens of urban residents. This traditional private sector held about 3 percent of the arable land, most of which was planted to potatoes, vegetables, and fruits. On small household plots, families held 17 percent of the cattle (25 percent of cows), 19 percent of pigs, 25 percent of sheep, and 83 percent of goats. Households produced little of their own feed, and depended on the large farm to supply it, as well as tractor services, transportation to market, and, in many cases, marketing, as well.

The household and collective/state sectors were part of an integrated system. Prior to 1991, there was no private sector of significant size independent from the collective/state sector, although the household sector, often referred to as the private sector, produced a substantial proportion of total gross output. Since 1991 a new private sector is emerging, and at present new private farms unconnected with state enterprises or collectives hold about 2 percent of Russian agricultural land.

- creation of a joint-stock company (with fully tradable shares) or of a closed form (with shares tradable internally); and
- reconstruction of a producers' cooperative, with greater emphasis on semi-autonomous work groups within the collective and more land devoted to household production.

12.20 Fundamental to each of these forms of reorganization is the division of the farm land and assets into shares. According to the Ministry of Agriculture, this step had already been undertaken by most farm enterprises as of mid-September 1992. If all entitled recipients choose to remain in collective or corporate management, the shares may never be individually identified and valued. If any recipients

choose to leave the collective, however, they should have the right to an individual share of land and assets even if the majority of shares remain collectively held. By the end of 1992, the Russian Government should have transparent procedures in place allowing state and collective farm workers to claim specific land and physical assets should workers choose to become private farmers or to associate with other farmers on a cooperative basis. In September 1992, a Government decree also set guidelines for the privatization of agro-services and agro-processors. These guidelines are designed to reduce the monopoly power currently enjoyed by such enterprises.

12.21 Even prior to the completion of the privatization process, the Ministry of Agriculture has adopted a "hands-off" approach toward the management of individual farm enterprises. There are indications that this devolution of management responsibility has already improved enterprise performance in sowing and harvesting this year. Incentives for greater productivity will increase as the privatization process moves forward. Another major development to date has been the increase in the amount of land managed under household subsidiary plots. The number of individual private farms has increased, and the reservations about private farming expressed in public opinion polls have decreased, but the amount of land farmed by individual farmers is still very small.

12.22 Failure of the Parliament to legalize full private ownership of land in April signaled political reservations about the future of private farming, which explains in part the continued dominance of state and collective farms. It is likely therefore that if the agricultural sector is to support and strengthen the stabilization program, the initial mechanism of adjustment will have to be greater financial accountability of moderately restructured collective enterprises.³ In the short run, at least, the continued responsibility of these enterprises for most agricultural production strengthens the argument for an administrative program of sectoral adjustment to supplement the terms-of-trade incentives brought about by price liberalization. Nevertheless, as budget constraints require the Government to reduce subsidies to the sector, price incentives will begin to be the primary determinant of structural change in the sector.

12.23 If implementation of the decrees passed to date succeeds in defining a new ownership structure for agricultural assets, over time the new owners will seek higher return to management of their assets, and the collective and state farms will reorganize for higher productivity. The process will be accelerated and strengthened when full private ownership of land becomes legal.

Credit reform

12.24 Credit reform is central to enterprise reform. In the past, Soviet credit policies led to large implicit subsidies to the agricultural sector, since interest rates (between 0.75 and 2 percent) were well below the inflation rate. In addition, loss-making enterprises were bailed out with credit, the repayment of which was postponed and eventually written off. In 1990 alone, the Government forgave accumulated farm enterprise arrears equal to about half of total agricultural NMP for that year. Nominal interest rates for agriculture were raised in early 1992, but real interest rates fell because of higher inflation. The build-up of arrears also continued. Following the rise in nominal rates, the Government announced increased interest-rate subsidies for the sector. Privatization, in conjunction with relative price changes, will not lead to the desired restructuring of the agricultural sector until the credit system begins to impose a hard budget constraint on enterprises and reflects the opportunity cost of capital in the economy as a whole.

12.25 As in other sectors, agricultural enterprises have tended to use subsidized credit to augment wages and maintain excessive levels of employment. This has a perverse effect on the restructuring of production on large farms. It also discourages individual workers, who have no access to subsidized

credit, from leaving the large farms to begin private production. Plentiful unconditional credit at negative real interest rates encourages inventory accumulation, with the consequent disruption to future availability of both inputs and outputs. A reform in credit policy should involve moving real interest rates toward positive levels and stringently enforcing loan repayment obligations. In the short term, a move toward working capital loans, with the crop as collateral, would be one possible approach, since it would ensure both loan repayment and marketing of the crops (as opposed to stockpiling by the producer). Any special credit facilities might be reserved for enterprises that have already agreed to privatize and restructure.

12.26 There is some evidence that a shortage of credit has recently been a constraint on the purchase of agricultural inputs. This credit shortage was due partly to negative real interest rates, which caused excess demand for credit from all sectors. However, turmoil in the banking sector, which is undergoing radical restructuring and is operating in the context of rapid inflation and uncertain government monetary policy, also played a role. Pending the evolution of a geographically dispersed and commercially oriented banking system, the Government may have to take measures to ensure access of agricultural enterprises to credit. These credits should be provided at positive real interest rates to discourage excessive borrowing, and loan collection should be vigorously pursued. The goal would be to minimize distortions in resource allocation while ensuring that enterprises had the credit needed to function.

12.27 Over the medium and longer term, the policy environment needs to promote the development of a viable rural banking system that can both mobilize savings and extend credit to farm enterprises at positive real rates of interest. An effective rural banking system could improve the ability of farm enterprises to manage cash flows and enhance their capacity for self-finance. Experience in other countries has shown that rural banks can also help finance small business activities by workers who leave the agriculture sector. The recent move to give the Agricultural Bank new powers to make mortgages and working capital loans is a sign that the Government recognizes the importance of improving the rural credit system. Future efforts should be directed toward ensuring that rural banks serve small borrowers, mobilize savings, and provide a wide mix of banking services. Promoting competition and allowing financial institutions to make loans to all sectors of the rural economy will be necessary to meet these objectives. Trying to provide for all agricultural needs through a single institution that monopolizes the market is probably not the best approach.

Price and Market Liberalization in Early 1992

12.28 The January 1992 decision to remove most price controls and to end restrictions on internal trade was undertaken in response to an accelerating decline in food marketed in autumn 1991. The retention of price controls on agricultural products throughout 1991 in an inflationary environment brought a decline in agricultural marketing that threatened food supply in traditional deficit areas. Had incentives to market continued to decline into the 1992 crop year, both production and marketing would have been severely depressed in 1992 and 1993.

12.29 Although prices of most agricultural commodities have been freed in the sense that producers, processors and retailers are largely free to determine their own prices, domestic prices remain below world levels. Procurement through the system of state orders is declining in magnitude, but the procurement prices offered by the Government are lower than not only world prices but prices offered in private domestic markets as well. Massive government subsidization of imported grain and meat also keeps domestic prices down. Finally, exports of agricultural commodities have been strictly controlled, preventing domestic prices from rising to FOB-parity levels.

Effect on physical availability

12.30 The objectives of the liberalization were to arrest the decline in marketing, reduce speculative demand for food, and improve producer incentives for the coming agricultural year. The increase in prices initially had a marked impact on the extreme disequilibrium evident in retail trade in December 1991 just prior to liberalization. By mid-February the assortment of goods available in stores sampled by Goskomstat in 120 cities throughout the Russian Federation had increased considerably. Demand for food fell as consumers turned to household stocks and changed consumption patterns. Consumption patterns also changed. In the first half of 1992, per capita consumption of meat and milk products fell by an average of about 15%, while consumption of bread products rose by 10%. There was little change in consumption of eggs, vegetable oil, and potatoes.

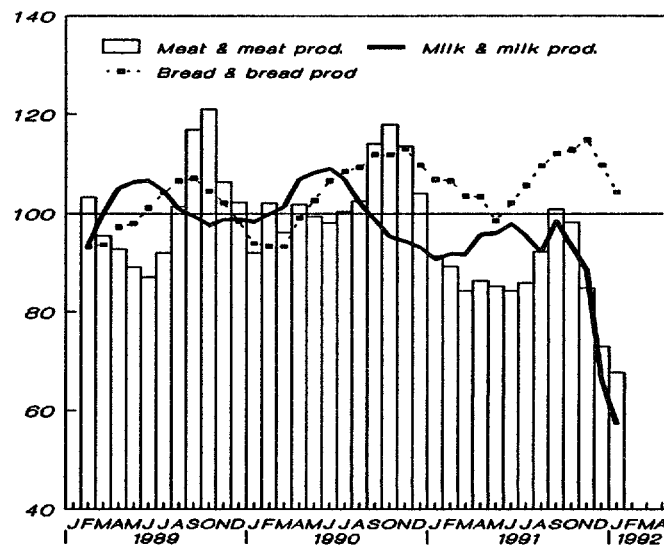
12.31 The increased availability reflected movement of products out of inventory and lower demand. Both developments reduced orders for processed foods. Output of processed food has declined sharply since 1990 (see Figure 12-1).⁴ The fall was largely due to a sharp decline in orders. These large declines in production of processed food in early 1992 reflected primarily the temporary withdrawal of consumers from current purchases, although there was also some decline in production of raw materials.

12.32 Immediately after the price liberalization in January, producers and processors began to report excess supplies of meat, reflecting the fact that retailers in

both state and collective shops had set prices above market-clearing levels. Subsequently, consumer incomes rose, real prices declined, demand increased, and markets began to clear. As nominal consumer incomes continued to rise over the next several months, prices in collective farm markets rose enough to keep supply and demand in balance, but prices in state retail outlets rose more slowly. By early July, the prices of milk, beef, and eggs in state retail stores were 80, 75, and 50 percent, respectively, lower than in collective farm markets. Consequently, many foods were not available in state retail shops.

12.33 The problems with meat illustrate several characteristics of food markets. The decline in demand for products with high income elasticities is still evident, although it has been softened since early 1992 by increases in nominal incomes that exceed growth in food prices. Because of the geographic separation of markets, excess demand in one province does not necessarily attract the excess supply of its neighbor. Local governments have begun to play a strong role in local food markets by regulating trade and subsidizing prices. Monopoly power in processing and distribution and the current dominance of state enterprises in this sphere impedes the downward adjustment of prices even when excess supply is evident.

Figure 12-1. Indices of Food Output, 1989-92



Source: Goskomstat.

12.34 The response of retailers and processors to the price liberalization has been characterized as the typical monopolist's strategy of cutting output to maintain high prices. This characterization is drawn from the observation that production and sale of processed products has declined, and prices have risen. Food processing and distribution is in fact fully monopolized, since even where two plants physically serve the same area, they have an inherited division of assigned territory. Yet the behavior of processors and retailers observed to date does not necessarily reflect only monopolistic behavior, but also that of firms with unclear objective functions in temporally and spatially disjointed markets. Although monopoly is a significant problem in food retailing and processing, poorly developed market information, lack of flexible links among markets, and poorly defined ownership of products also impede improved performance in the food distribution system. Competition is clearly needed for better performance in food processing and retailing, and early progress in privatization and private entry is essential.

12.35 These developments suggest that despite formal liberalization at the federal level, prices in different channels and different cities remain *de facto* constrained. Continued constraints and lack of spatial market integration are leading again to worsening disequilibrium in food markets as nominal incomes increase, although the situation is not as severe as in December 1991. The constraints include access to transportation, most of which remains in the public sector. The paucity of private agents engaging in commercial trade in food and responding to price differentials constrains market development, and can be remedied by continued privatization and private entry in trade. Local authorities impose price controls and trade restrictions, and local regulation may explain much of the regional dispersion in prices. Continued improvement in the availability of food in retail markets will require accelerated change at the enterprise level in transportation, processing, distribution, and trade. Locally imposed price ceilings and restrictions on trade impede the creation of an integrated Russian market and reduce the welfare of producers and consumers.

Effect on prices

12.36 The Soviet agricultural sector was heavily protected. Although food prices were kept low, the price of agricultural inputs was kept even lower. Consequently, the sector faced input-output terms of trade that were much more favorable than world levels, and the sector adjusted its mix and intensity of input use to reflect these relative prices. Over the past two to three years, the terms of trade for agriculture have moved towards world levels. Starting in 1990, prices of agricultural inputs began to increase slowly, and by late 1991 many of them were under relatively little *de facto* control by the Government. By contrast, farmgate prices were strictly controlled, and the input-output terms of trade for agriculture declined. The terms of trade would have declined even faster if not for the price liberalization in January 1992 that freed most agricultural output prices.

12.37 Given the rapid inflation rate, the fact that pre-1992 prices did not necessarily clear markets, and the recent emergence of many new market channels, it is increasingly difficult to get accurate, timely, and internally consistent price information. All data should therefore be interpreted cautiously. Bearing this in mind, the real effects of output price movements can be assessed by comparing them with price trends for: (a) agricultural inputs, (b) other commodities in the economy, (c) wages, and (d) world prices. From this analysis, a broad picture emerges: agricultural input prices have risen faster than output prices; food is cheap relative to other goods and has been getting relatively cheaper over time; real food prices have not risen dramatically; and prices of both inputs and outputs are generally only one-quarter to one-third of world prices at the unified exchange rate.⁵ These conclusions, and their implications, are discussed in further detail below.

12.38 *Decline in the input terms of trade.* Following the price liberalization in January 1992, food prices remained *de facto* constrained by a combination of direct controls, quotas, and trade impediments. Input prices, with the exception of fuel prices, were less constrained and thus rose more rapidly. Calculation of precise terms-of-trade effects is impossible given the lack of detailed farm budgets, but the magnitude of the effects is clear from Table 12-1. This table shows that, compared to 1990, the prices of outputs have risen by a factor of about 10 times for grain crops and 8 times for livestock products. By contrast, the price of inputs have risen by a factor of 21 (for grain combines) to 68 (for urea). Figure 12-2 shows the barter (input) terms of trade for grain and livestock products over the same period, and it also compares the input terms of trade in Russia with those obtaining in the U.S. In Russia, the tons of wheat needed to

purchase a 45-HP tractor nearly tripled, from 52 to 142.⁶ For fertilizer, the increase was even more dramatic; in March 1992, farmers had to sell about six times as much wheat to buy a ton of urea. There were also severe shocks in the livestock sector. The tons of livestock products needed to buy a ton of mixed feed was more than three times as high for poultry and more than four times as high for beef.

12.39 The rapid deterioration in the input terms of trade has put a severe squeeze on profitability. A preliminary analysis following the energy price increase in May 1992 suggests that many producers cannot even recover variable costs of production. Hardest hit has been the livestock sector; the average revenue/variable-cost ratio for poultry is estimated at only about 0.4. Winter wheat and maize fare only slightly better, with ratios on the order of 0.9. In the absence of a hard budget constraint for farm enterprises, these figures do not necessarily imply a massive decline in production for 1992; they do, however, assure that there will be a substantial build-up of arrears.

12.40 The input terms of trade faced by agriculture in the 1980s and early 1990s strongly influenced the choice of technology and factor intensity. For example, in the livestock sector, cheap feed contributed to a feed efficiency level only half of that in North America (see Box 12-4). Russian livestock are mostly stall-fed, which is economic only with highly subsidized energy prices. Adjustment in the sub-sector will require movement toward grazing, yet the pasture base is very poorly developed. To cushion the subsector, the Government in May reintroduced subsidies for livestock, mostly in the form of transfers to cover losses.

12.41 Given the large implicit and explicit subsidies to the sector, price liberalization was bound to result in a deterioration in the input terms of trade and thus create incentives for greater efficiency. The speed of the adjustment will depend partly on whether producers perceive the terms-of-trade changes

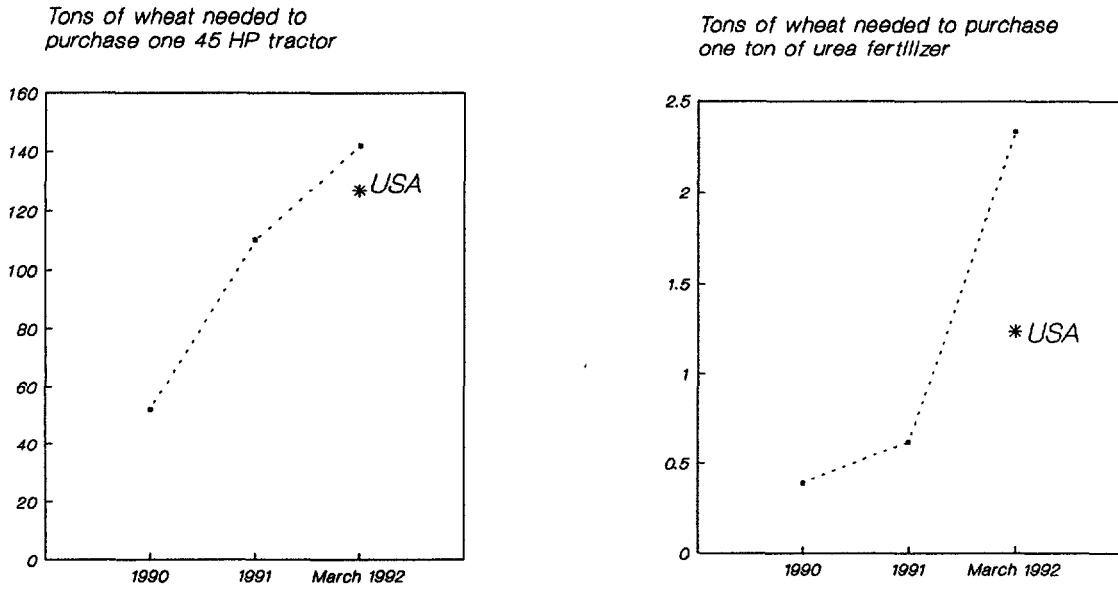
Table 12-1. Increase in Farmgate Prices of Outputs and Inputs, 1990 to 1992

	Times Increase in 1992 Price vs. 1990 Price	Memo: March 1992 Price (Rb/Ton or Unit Price)
Outputs		
Wheat	11.3	3,400
Corn	9.5	3,600
Cattle	5.3	20,700
Hogs	8.1	25,000
Poultry	7.5	19,200
Milk	7.0	4,608
Eggs (per 1000)	12.1	1,270
Inputs		
Mixed Feed	25.3	4,500
Large Combine	21.3	1,000,000
45-HP Tractor	30.6	240,000
Urea	67.6	7,840
Diesel Fuel	6.3	835

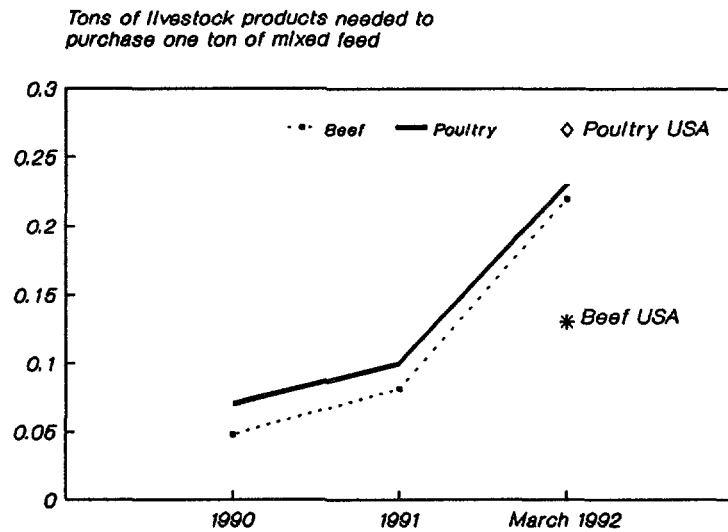
Source: Goskomstat and World Bank staff estimates.

Figure 12-2. Crop and Livestock Sectors

A. Crop sector



B. Livestock sector



Box 12-4. Adjustment in the Livestock Sector

There has been a substantial fall in meat consumption in Russia since January 1991, but less change in livestock inventories at the farm level. Much of the adjustment in consumption thus far has been in imports (from abroad and other republics), which traditionally accounted for about 13 percent of Russian meat consumption. In 1992 little meat is being imported from trading partners within the former USSR.

The livestock inventory is very large, and subsidized credit (real interest rates are in fact negative) reduces the cost of holding this excessive inventory. Livestock numbers are coming down, but not fast enough to maintain feed efficiency even at its former low levels. As a consequence, scarce feed is being wasted. Shortages of veterinary medicines are, moreover, reported to be acute. Availability of total feed in Russia in feed units was 24 percent less on February 1, 1992 than on the same date in 1991. The drop in availability of concentrate feed was greater, at 31 percent relative to the same date a year ago. The decline in feed available per animal unit was 18 percent, reflecting the reduced number of animals. Productivity per cow has dropped 11 percent from its former low levels.

This year's small decline in the herd is part of a trend that has brought a cumulative decline in cattle and hog numbers of about 6 and 10 percent, respectively, since 1987.^a These data do not support the anecdotal accounts of massive distress slaughter of livestock in response to increased costs. On the contrary, they suggest that lagged adjustment of animal numbers as feed supply declines has reduced feed efficiency. Corn imported under credit at about \$100 per ton and resold to livestock operations at, until recently, 1,000 rubles per ton, or one-tenth of its value at the market exchange rate, has been used for daily maintenance of animals. Had the herd been reduced enough for efficient feeding, the subsidized corn would have produced more meat or milk.

Even in the face of falling productivity prior to the new subsidy program, farms showed little intention of reducing herds, and in the case of pigs actually planned a slight increase in herd size. In a survey of marketing intentions for meat over the coming months, producers indicated a reluctance to sell for the prices that processors were offering, even though when asked explicitly about price expectations, few expected market prices to rise. Producers appeared to expect substantial intervention from the Government, and withheld marketing accordingly.

a. According to official data of Goskomstat RF, the total number of cattle held on July 1, 1992 was 94 percent of the number on the same date in 1991. The number of cows was 95 percent that of the prior year. The inventory of pigs and poultry dropped over the same period by 14 and 15 percent, respectively.

as permanent or transitory. Some producers will not be able to adjust adequately, and will go out of business if a hard budget constraint is enforced. However, Figure 12-2 also shows that the input terms of trade may now actually be worse in some cases for Russian agriculture than for US agriculture. This is a major cause for concern, since it would reduce Russia's competitiveness even as Russia's productivity levels increase.

12.42 Part of the decline in terms of trade for farm enterprises has been attributed to monopoly forces at work on both the input and output sides. There is a lack of competition in agricultural marketing, input distribution, food processing, and food distribution networks, especially at the local level. Marketing and processing margins for food products were very low in the former Soviet Union, reflecting both disguised subsidies as well as low downstream value added and poor convenience of availability to the consumer. There are serious data and measurement problems, but margins appear to have increased rapidly, from a range of 10 to 30 percent in 1990 to a range of 50 to 125 percent in 1992. However, rising margins do not necessarily imply super-normal profits. Margins in Russia remain well below the levels prevailing in the US, which range from 70 to 200 percent for livestock products and are

about 165 and 320 percent for sugar and flour, respectively. (Part of the difference can be attributed to the higher degree of processing and greater attention to marketing in the US.) On balance, increased margins are probably due in some part to monopoly forces.

Table 12-2. PPPs for Food, Clothing, and Durables: 1990-1992 (Rubles/US\$)

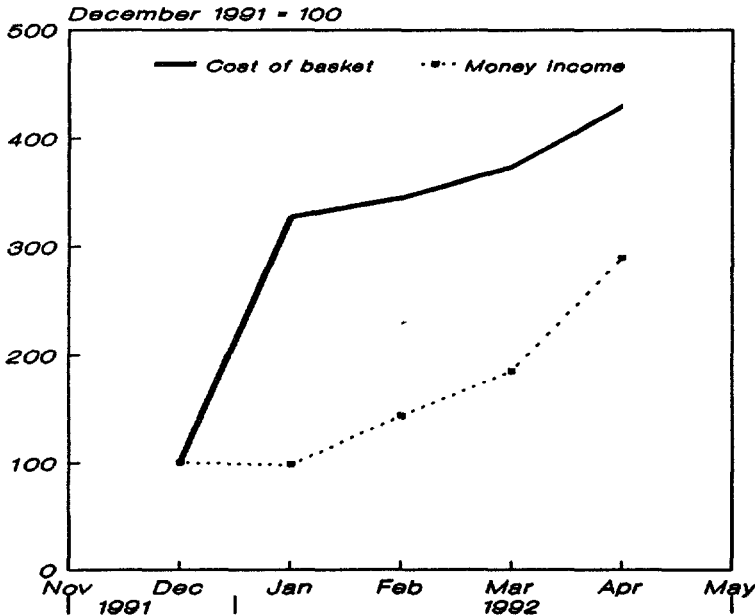
Year	1990	1991	1992 (Feb)
1. Food	0.70	1.40	8.00
2. Clothing/ Footwear	2.00	4.50	28.50
3. Durables	1.67	4.60	40.00
Ratio of 1:2	0.35	0.31	0.28
Ratio of 1:3	0.42	0.30	0.20

Source: Institute of World Economy and International Relations.

12.43 Decline in terms of trade compared with the rest of the economy. A central feature of the former Soviet economy was cheap food prices. Food prices have always been relatively cheaper than many other consumer prices when compared to world levels. One objective of the price liberalization in January 1992 was to move relative prices closer to world levels. Food prices did increase severalfold after price liberalization, but the prices of other goods in the economy also rose rapidly. In fact, the available data indicate that relative food prices may have actually declined in the early stages of price liberalization. Table 12-2 shows Purchasing Power Parity (PPP)

exchange rates—that is, the exchange rates at which domestic prices for different types of goods would equal world prices. In 1990, the PPP exchange rate for foodstuffs stood at 0.75, well below that of clothing (2.00) and durables (1.67). By February 1992, the PPP for food had increased tenfold, but the PPPs for clothing and durables had increased even more—by factors of 14 and 24, respectively. The relative price of food fell by 20 percent compared to clothing and over half compared to durables. Although these PPP data should be treated with caution in the current environment of rapid inflation, they do suggest that in a liberalized economy the real price of food may have to increase further.

Figure 12-3. Changes in Average Monthly Cost of Food Basket and Average Money Incomes, January-April 1992



Source: Center for Economic Reform and World Bank staff estimates.

12.44 Roughly constant food prices as deflated by wages. There was great concern about food affordability following price liberalization. An index of average food prices increased from a level of 100 in December 1991 to over 300 in January 1992, and slowly drifted up further to over 425 in April (see Figure 12-3). Per capita money incomes lagged, but began to catch up rapidly beginning in February, rising to about 290 in April. Consequently, an average food basket that cost 22 percent of income in December 1991 rose to 88 percent of income in January 1992, but fell back to 38 percent by April. Nominal wage increases have thus compensated for much of the nominal price increases for food in the first several months of 1992.

12.45 Notwithstanding the decline since December 1991, food affordability as of April may not have been much below levels considered acceptable in prior years. As discussed in Box 9-3, real wages (as deflated by the overall CPI) were at an all-time high in December 1991, but this reflected the huge monetary overhang rather than real purchasing power. The real wage did fall in January 1992, but by April 1992 it had recovered to levels prevailing in 1987. Initial data indicate that by June 1991, industrial wages were in fact over 10 percent above their 1987 level in real terms. Two additional factors also indicate that food affordability may not have declined, or at least as not as much as sometimes perceived. First, the PPP numbers given above suggest that food prices at least initially increased more slowly than other prices in the CPI since 1990, meaning that the "food-deflated" real wage is higher than the CPI-deflated real wage. Second, enterprises tend to provide substantial amounts of food to employees as in-kind compensation, and thus food consumption may not be as price-responsive as sometimes assumed.

12.46 *Consumer and producer prices remain well below world levels.* Agricultural trade in Russia is constrained by barriers on both the import and export side. Imports are formally free, but the gap between domestic prices and world prices means that most food and feed cannot be resold without a subsidy of three-quarters of its value at current exchange rates. As a consequence, commercial import is limited to small quantities of high-value products. The remainder of agricultural imports, both food and feed, have been financed by government-guaranteed concessional credits and resold to domestic users at very large implicit subsidy through the system of multiple exchange rates. The amount of the subsidy is reflected in the build-up of hard currency debt by the Government, without offsetting local currency revenues. By September 1992, Central Government licensing of most agricultural exports apparently had been eliminated. However, a number of factors (e.g. Local Government restrictions and the system of state orders) continued to impede free exports of agricultural goods.

12.47 Table 12-3 shows how domestic prices compared to world prices in March 1992. Almost all domestic prices were less than half of world prices at the prevailing exchange rate. As discussed earlier, this general phenomenon was possible because of trade restrictions and direct and indirect controls that remain on prices even after the January 1992 price liberalization. Relative to world levels, consumer prices in Russia remain lower than producer prices, despite the increasing margins discussed above. This is partly due to a lower level of processing compared to the US, but it also reflects the continued direct subsidization of consumer prices for milk and bread. Detailed weights from farm budgets are not available, and thus it is difficult to determine whether input prices on the whole are closer to world prices than are output prices. The impact of complete liberalization of the price and trade regime on agriculture's profitability is therefore not clear.

12.48 The Government is committed to dismantling trade impediments that have prevented domestic prices from rising to world levels.

Table 12-3. Domestic Prices vs. World Prices, March 1992
(percent of world price at R125=US\$1)

	Producer level ^a	Consumer level
Outputs		
Wheat/wheat flour	25	14
Maize	18	n.a.
Milk	13 (20)	4
Cattle/beef	13 (17)	10
Hogs/pork	23 (31)	14
Poultry	23 (29)	22
Eggs	28 (31)	n.a.
Bread	--	4
Butter	--	20
Inputs		
Fertilizer ^b	42	--
Grain Combine	14 ^c	--
Tractor	20 ^c	--
Mixed Feed	20	--
Diesel Fuel ^d	18	--

a. Numbers in parentheses represent producer price after subsidy. Prices for inputs are at farmgate level.

b. Unweighted average.

c. After adjustment for quality.

d. As of May 1992.

Source: Goskomstat and World Bank staff estimates.

Imports are formally free, but the Government has imported both food and livestock feed at a special exchange rate well below the new unified rate. The Government has agreed that following the introduction of the unified rate, all subsidies on imports will be made explicit and put into the budget. The overall fiscal constraint will probably prevent the Government from subsidizing food and feed to the same degree as in the past, and domestic prices could thus rise. Continued dismantling of export restrictions will cause the price of exportable agricultural products to rise toward world levels. Such price movements will enhance the profitability of agriculture and cushion the expected declines in production.

12.49 Immediately following the liberalization of agricultural trade and before the domestic price structure and exchange rate fully adjust, the gap between domestic and foreign prices will be large, the border will be relatively open, and opportunities for arbitrage will be substantial. Exports of a wide variety of agricultural goods can be expected while the price gap remains. These exports will include agricultural commodities for which Russia can be expected to have a long-run comparative advantage, but they will also include an eclectic variety of other products. The short-term export volume is not likely to be large, and its composition may not reflect Russia's international comparative advantage, since most products will be more profitable abroad than at home.

12.50 These exports are a predictable feature of the short-term adjustment, but they are likely to cause protest from Eastern/Central European countries, where protectionist pressure is already rising, and from the donor community, which will be shipping concessional food into the same ports from which Russian exports will leave. Uneconomic agricultural exports will stop as the exchange rate adjusts, and acceleration of adjustment of both the exchange rate and the domestic price structure is the most effective way to address the problem.

Reform of the Price and Incentive Regime in the Short Term

12.51 The above analysis highlights a number of features of the agricultural economy. Most striking is the extreme deterioration in the terms of trade, in some cases to levels that may put the sector at an absolute disadvantage with the rest of the world. Any sector—no matter how dynamic—in any country would have difficulty adjusting rapidly to such dramatic shifts in relative prices. Continuing trade reform will bring domestic prices of inputs and outputs closer to world prices, but it is not yet clear whether such price movements will improve or worsen agricultural profitability. It is likely however, that the sector's terms of trade will decline further if various levels of government attempt to moderate food price increases by various administrative means.

12.52 This raises the issue of overall policy regarding relative food prices. The above analysis suggests that increased food prices (relative to both agricultural inputs and other consumer goods) would be desirable for a number of reasons. Increased output prices would help avert the substantial decline in agricultural production that could occur as budget constraints are hardened. Higher grain prices are likely to force an adjustment in the livestock sector that will lead to much lower grain imports (and possibly net exports over the longer term), contributing to the needed improvement in the balance of payments. Increased food prices would also help move relative consumer prices toward world levels, an essential component of structural adjustment for the economy as a whole.

12.53 The impact of higher food prices on the average consumer may be less than feared. Given nominal wage movements, it is not clear that food-price increases have reduced the affordability of food to the average wage earner, and thus further price increases may be feasible. However, the data on wage trends do not apply to pensioners and the emerging un- and underemployed segments of the population,

whose nominal incomes have not kept pace with price increases for food and other goods. Devising an appropriate safety net will be vital to safeguard the welfare of these groups and to make food price increases more politically acceptable.

12.54 One argument against letting food prices rise all the way to world levels is that the ruble is currently undervalued and should appreciate over time. According to this argument, it may not be desirable for the Government to allow the real price of food to rise in the short term only to fall back in the medium term. This view may have had some validity in early 1992, but the rapid rate of inflation during the year, combined with a relatively small move in the nominal market exchange rate, has meant that the ruble has already appreciated substantially in real terms and thus may no longer be as undervalued as is sometimes assumed.

12.55 In summary, the structural changes in the economy are likely to raise input and output prices for agriculture and food prices for consumers. On the whole, such price movements are desirable. However, some government intervention in the short term is necessary for a number of reasons. Most importantly, the sector needs time to adjust to the severe deterioration in its terms of trade. Even if farm enterprises were profit-maximizers at the terms of trade obtaining prior to price liberalization (which they probably were not), adjusting to the new set of prices would take time. The livestock subsector will require careful attention to ensure that potentially viable enterprises are restructured quickly while employees in non-viable enterprises are assisted in their move to other sectors or regions of the economy. Food imports can cushion consumption in the face of moderate declines in domestic production, but more serious falls in production could cause turmoil in food marketing and distribution systems. Government intervention could also offset the effects of monopoly power in input and output markets. The Government should vigorously press for increased competition in all sectors of the economy, including agriculture, using a combination of tools, including trade liberalization, a regulatory environment allowing easy entry of new firms, and anti trust measures against emerging cartels. If these tools do not work quickly enough, temporary subsidies could be considered to offset monopoly effects on prices. Subsidizing agricultural production to prevent food prices from rising to world levels may no longer be justified on the grounds of an overvalued exchange rate.

12.56 Unfortunately, the revenues available for future government subsidies will be much more limited than in the past. During the period 1988-91, explicit subsidies to the agricultural and food sectors were on the order of 10 to 12 percent of total GDP. In addition, the implicit exchange rate, interest rate, and fuel-cost subsidies were an estimated 5 percent of GDP, meaning that total subsidization of agriculture was over 15 percent of GDP. To achieve macroeconomic stabilization, the Government has recently committed itself to reducing producer subsidies for all sectors to a total of 5 percent of GDP for the coming year. On current plans, however, subsidies to the agricultural sector alone would be about 6 percent of GDP, and there are strong pressures to increase subsidies to the sector even further. The pressures need to be resisted, and even the current subsidy program for agricultural must be reduced to meet the Government's overall macro targets.

12.57 The limited availability of resources makes it extremely important to target subsidies in a manner that promotes rather than impedes the adjustment process. The breakdown of the Government's projected subsidy program for 1992-93 is shown in Table 12-4.⁷ While it is difficult to determine the breakdown by subsector, both the farm investment and imported inputs categories primarily benefit livestock producers.⁸ This means that livestock subsidies probably account for over three-quarters of the total, and much of this support is in the form of simple "bailouts" of loss-making enterprises. Such an allocation is the reverse of what is desirable, given the negative long-term prospects for livestock production. A greater proportion of any subsidy package should be directed toward the grain sector,

Table 12-4. Agricultural Producer Subsidies^a, 1992-93

	Percentage of Total
Farm investment	26
AKKOR (private sector)	5
Operational expenditure	6
Interest rate	10
Producer price: livestock	9
Producer price: northern areas	1
Social infrastructure	5
Fuel and lubricants	10
Imported inputs	28
Total	100
<i>Memo:</i>	
Agricultural producer subsidies as percent of GDP	6

a. Includes interest and exchange rate subsidies.

Source: World Bank staff projections based on Government plans and recent price and exchange rate changes.

subsidies to cover the difference between retail and procurement prices of food, and (b) subsidies on imported foodstuffs, which were previously administered through the system of differential exchange rates but will now have to be financed on budget. Given the desire to move relative prices closer to world levels, the Government should consider a dramatic reduction in price subsidies for domestic and imported foodstuffs. Funds programmed for price subsidies should be redirected to support the implementation of a social safety net, which will ensure that the limited available resources are targeted at the neediest segments of society.

Longer Term Investments in a Restructured Agricultural Sector

12.59 Restructuring the policy framework alone is a necessary but not sufficient condition for renewed growth in the agricultural sector. The Government's role in the sector will change dramatically, but a strong program of support will be essential to help the sector meet the country's needs during both the transitional period and over the longer term. International donor agencies can be expected to provide financing and technical assistance for the Government's efforts. In the longer term, however, most investment in the sector will be carried out by the private sector, and the Government's role will be to facilitate this investment through an appropriate regulatory and legal framework. Major efforts will be needed to develop a viable rural banking system that can help finance private sector investment. The Government should also facilitate foreign direct investment, which has the potential to provide substantial financing, as well as technology transfer.

12.60 As discussed above, the agricultural sector has been subjected to a severe deterioration in its terms of trade. The sector has also faced physical shortages of some critical inputs. The Government can usefully play a role in the short term by helping the sector adjust to terms-of-trade changes and by ensuring an adequate flow of inputs to the sector. The general principles that should guide government efforts to address the terms-of-trade problem are sketched out above. In addition, under the recently negotiated Rehabilitation Loan, the World Bank will finance, *inter alia*, the import of critical inputs for agriculture to help maintain production of primary commodities and processed foods. Further finance

which has much more favorable prospects. Bailouts of loss-making enterprises in any subsector should be avoided since this type of assistance impedes efforts to impose a hard budget constraint. Strong consideration should be also be given to allocating more of the available resources to support existing private farms and to promote the privatization of state and collective farms. Such support can usually be provided most efficiently through the provision of public services (research, extension, and infrastructure) rather than direct subsidies to producers.

12.58 The 1992-93 subsidy projection of about 6 percent of GDP cited above does not include the planned program of food subsidies for consumers. Consumer subsidies, which could approach 4 to 5 percent of GDP in 1992-93, take two forms: (a) direct price supports in the form of

for critical imports may be considered under a future agricultural sector loan if physical shortages persist. Issues to be addressed in the longer term, along with the roles of foreign investment and international assistance, are discussed below.

12.61 *Distribution, storage, and processing.* Although increasing on-farm productivity will be key to transforming and reviving the agricultural sector, major efficiency gains are also needed in input and output distribution networks, storage, and processing. Improvements in these areas will have a major impact on the quality, quantity, and price of food available to consumers. The Government should privatize all of these activities as quickly as possible, since private ownership will provide incentives for an immediate rise in efficiency, which could have a substantial favorable impact on the quantity and quality of domestic production available to consumers. However, it will be important that the existing state-run systems continue to function in areas without adequate private sector activity.

12.62 On-farm use of agricultural inputs has declined substantially over the past two years. Machinery use has declined by 15 to 20 percent, pesticide applications are down by over 50 percent, and fertilizer application is down over 25 percent. Grain fed to livestock is also down, and there is a severe shortage of perennial forage crop seed. These declines are due partly to dramatic price increases. Farm enterprises have also adopted more ecologically sound application practices for pesticides. However, part of the decline is due to a breakdown of the traditional production and distribution networks, which have been highly centralized. Under the Soviet system, enterprises were assigned certain quantities of inputs based on production targets. Enterprises had little say in the quantities received, nor did they have an effective means of conveying quality preferences to manufacturers. Following the breakdown of central control, enterprises began exercising greater discretion in orders for inputs. Enterprises responded particularly to the poor quality of domestically produced farm machinery by refusing further purchases and demanding more spare parts and accessories, which have been chronically in short supply. The centralized production and distribution systems have thus broken down in part because of their inability to respond to the demands of producers.

12.63 Once production leaves the farm, Russia suffers from major post-harvest losses. For the sector as a whole, up to a quarter of total crop production is lost during transportation and storage. Annual grain losses alone run into the billions of dollars at world prices and are roughly equal to import requirements. Losses for other crops and livestock products are also huge. Losses are due primarily to inadequate storage facilities and drying and cleaning equipment, coupled with poor stock-management practices. According to some estimates, only 60 percent of storage requirements are being met, and drying equipment can meet only about a third of demand. Storage silos are generally poorly constructed and maintained, with low capacity utilization and turnover rates, and they are located far from production areas.

12.64 The food processing industries in Russia are largely obsolescent because of decades of under-investment. For example, many of the sugar processing plants were built prior to 1917. An estimated 40 percent of sausage plants are in such poor condition that they should be demolished. Overall, some 70 percent of food processing factories need to be completely rehabilitated. Packaging lines are in short supply, meaning that less than half of non-milk food products at the retail level are properly packaged. To make matters worse, raw material often arrives at processing plants in deteriorated condition, since many food processing plants are located in urban areas and the transportation system is poor. Increasing operational problems with available plant facilities and equipment, in conjunction with difficulties in supply of inputs, have actually caused the output of processed foods to fall since 1990.

12.65 Improving efficiency in distribution, storage, and processing will require privatization backed by massive investment. Fortunately, private sector mechanisms are already evolving. Over 600 private commodity exchanges have been established, and the Government is aggressively promoting privatization of retail outlets in areas such as Nizhnii Novgorod. The privatization process is likely to begin at the small-scale retail and transportation levels and move back through the distribution chain. The food processing industry is also characterized by small-scale operations, which are good candidates for early privatization. Prior to privatization of large-scale storage and other functions, the Government should not make major new investments in the facilities it runs, but rather focus on improving management incentives and practices to contain losses. The Government might also try to devise innovative ways to help emerging private farms to finance improved on-farm storage, which could result in immediate reductions in post-harvest losses. Despite the need to press ahead rapidly on privatization, it will be important to maintain a modified functioning of the state-owned distribution system so that the Government will be able to distribute food and inputs directly to areas where the private sector either does not operate or is exercising monopoly power. Under such a scheme, the Government would buy commodities through the market rather than forcing farms to sell at artificially low prices.

12.66 To support the emergence of the private sector, the Government will have to provide certain services of a "public goods" nature, such as price and market information, food inspection and phytosanitary standards, and possibly technical assistance and training services. Distribution costs can be reduced dramatically in many cases if the quality and quantity of road, ports, and telecommunications facilities are increased; the Government should program substantial investment resources for this purpose. The Government will also have to take strong measures and ensure competitive behavior, as monopoly tendencies are already emerging and threaten to offset the benefits of privatization. Trade liberalization and a regulatory framework that facilitates entry of new firms are two powerful tools to promote competition; breaking up quasi cartels reportedly being coordinated by some ministries will also be important. Given the highly centralized nature of production in the Former Soviet Union, the Government should accord a particularly high priority to negotiating agreements allowing free movement of both inputs and outputs across new borders within the FSU.

12.67 *Agricultural, research, extension, and education.* Soviet support services for agriculture were geared primarily to support the needs of large state and collective farms. The primary emphasis has been on maximizing production rather than profits, leading to recommended input levels that are extremely inefficient at world prices. In addition, the linkages between agricultural education, research, and extension have been very poor. Improving the quality of these services will be vital if the sector is to shift quickly toward more efficient patterns and techniques of production. Better support services will require a reorganization of existing structures, including selected privatization, and a major transfer of science and technology from other countries.

12.68 Russia has hundreds of universities, colleges, and other institutions specializing in agricultural education. The focus is primarily on agricultural science and there is almost no training in economics, farm management, or marketing. These institutions generally have very limited access to information produced by their counterparts in other countries. The character of agricultural education heavily influences the type of work done at research centers, where basic research is given high priority and adaptive research is weak. The quality of staff and work at these centers is mixed, as is the quality of the facilities, and poor communications mean that much of the work duplicates efforts at other centers either in Russia or the rest of the world. The little adaptive research that is done addresses the problems faced by large state or collective farms rather than the very different constraints faced by small farm enterprises. Teaching and research institutions have tended to provide direct support to the relatively small number of state and collective farms, meaning that there is not an agricultural extension service

similar to that in most other countries. The exception is for veterinary services, which are provided by departments under the Ministry of Agriculture. The regional veterinary centers and raion-level offices are well-staffed and well-equipped.

12.69 To provide adequate support services for emerging small farm enterprises, immediate steps are needed to establish a nation-wide extension network. This network will have to be linked closely with the research centers, whose focus should be reoriented toward the needs of smaller farms and whose overall management needs to be improved dramatically. To provide the skills needed in a market economy, agricultural education needs to be redefined to include more economics and management training; the overall structure of the education system should also be reviewed, with a substantial decrease in the number of institutions likely proving desirable. Private sector involvement should also be encouraged in some cases. For example, in most countries private veterinarians provide most clinical services, while government centers concentrate on public health matters such as diagnostic support, disease control, and hygienic inspection. Private companies can also carry out certain types of research, but pressures to privatize the current government research centers should be resisted.

The Role of Foreign Direct Investment

12.70 Restructuring the agricultural sector will require massive private investment. When the policy environment is conducive, foreign investment can provide capital, technology, and management and marketing expertise, all of which are in extremely short supply in Russia. In addition, foreign investors are often needed to facilitate export market access, especially in the highly competitive world markets for processed food products. Major opportunities for foreign investment also exist in grain storage, transportation, and the manufacture of agro-chemicals. There are already a number of joint ventures underway with foreign investors, and the recent unification of the exchange rate and relaxation of controls on repatriation of profits and dividends should spur further interest. Continued efforts are needed to improve the legal and regulatory framework, however, if Russia is to attract the amount of foreign investment necessary.

The Role of International Assistance

12.71 International assistance to date has focused mostly on the provision of food imports. About \$4 billion of food assistance has already been provided to Russia in 1992, with an equal amount expected before the end of the year. This assistance has been crucial to maintaining food availability at reasonable prices throughout the country. Continued food assistance, albeit on a smaller scale, will be needed in 1993 and possibly later, depending on the recovery in domestic food production. This recovery can be accelerated by additional technical and financial assistance in support of government programs. For example, foreign assistance will be needed in carrying out cadastral surveys and setting up a land information system, both of which will require massive financial and technical resources. Foreign expertise can also be useful in helping to set up an effective extension service and a viable rural credit system, which will be vital to support the restructuring of the agriculture sector. Bearing in mind the mixed experience of other countries, consideration might also be given to area development projects, which would provide a broad package of assistance covering extension, storage, marketing, and credit in an attempt rapidly to increase productivity and create functioning markets in selected high-potential areas.

12.72 Given the massive requirements for private investment, it may also be desirable to explore ways in which international agencies can channel resources, at least indirectly, to the private sector. Some international institutions have private sector subsidiaries that can lend directly or take equity

positions in private companies. Experience with "two-step" lending through the commercial banking system (via the Government) has been poor when the loans were not passed through on commercial terms, but this may pose less of a constraint as Russia's financial sector develops over the next several years. International institutions are also experimenting in other reforming socialist economies with programs such as private enterprise development and credit guarantee funds for domestic investors, and investment guarantee funds for foreign investors. The success of such schemes is usually heavily dependent on the overall legal, regulatory, and investment climate of the countries involved.

Notes to Chapter 12

1. This chapter draws heavily on two documents: (a) "Review of Food Policy Options and Agricultural Sector Reforms: Joint Report to the Russian Federation and Members of the Commonwealth of Independent States," The World Bank and Commission for Technical Cooperation with the World Bank: Washington, March 1992 (revised version forthcoming); and (b) "Russian Federation: Agricultural Strategy During the Transition," Agriculture, Industry, and Finance Division, EC3: June 25, 1992 (internal World Bank working paper; revision forthcoming).
2. For 1992, estimated grain imports are expected to cost about \$3 billion after taking into account an estimated \$1 billion in price subsidies from the EC and the US. At current domestic prices, the Government would only recover about \$300 million from sales of imported grain to processors and consumers.
3. During reorganization, the implementing commissions can choose, with the agreement of local governmental authorities, to transfer schools, clinics, and other social services to local authorities, along with outstanding debt on the facilities.
4. Output was less than January 1991 for sausage (61 percent decline), meat (31 percent decline), fluid milk products (46 percent decline), and cheese (31 percent decline). Production of butter increased 18 percent, because butter is storable and fluid milk prices were still controlled. Sugar production fell sharply. Production of flour, meal, bakery products, mixed feed, and beverages also fell.
5. On July 1, 1992, the Government adopted a unified exchange rate of about R125: US\$1. This rate will periodically be reset to reflect movements in the foreign exchange market in Moscow.
6. These figures have been adjusted to account for quality differences. There is some indication that the wheat-tractor barter terms of trade may have improved in April 1992 as demand for low-quality domestic tractors fell, but precise data are not yet available.
7. These projections are based on government plans as updated by recent public pronouncements and price and exchange-rate movements.
8. The table assumes that following the unification of the exchange rate on July 1, the Government will provide explicit subsidies equal to the subsidies implicit in the old system of differential exchange rates.

CHAPTER 13

Distortions in the Urban Economy and Housing Reform Priorities

13.1 Russia is a highly urbanized country. In 1991, 74 percent of its 148.5 million people lived in cities. The internal organization and economic efficiency of Russian cities therefore play a major role in the overall performance of the national economy. Among urban assets, the housing stock constitutes more than 20 percent of the total reproducible assets of the economy—even more if the value of on-site and off-site infrastructure related to housing is included.¹ During the post-war period the Soviet Union had the highest rate of urbanization among the nine main UN demographic regions of the world. As a result, a high proportion of the housing stock is of recent vintage compared with European or U.S. cities. The urban growth in Russia was less concentrated than in market economies; the share of population living in cities with over 1 million people is low by international standards. Although Russia has built much housing fast, conditions in the housing sector are inconsistent with the level of technological development of the country and its economic potential. Russia probably has the most distorted housing system among socialist economies in transition, with poor organization, unrealistic relative prices, inefficient and inadequate housing production, low rents in the existing stock, and long waiting lists.

13.2 Because housing occupies such a large place in Russia's total national wealth, restructuring the housing sector is a crucial element of a successful structural reform program. This chapter focuses on the sector itself but what happens in housing will have important repercussions throughout the economy. Reducing the large (and mostly hidden) subsidies to housing and related urban services is a key component of fiscal adjustment, especially at the local level. Yet the pace and modality of housing reform will impact directly on social welfare—and these repercussions will set clear limits to the scope of sectoral reform. Changes in the wage regime and issues of enterprise and labor market reform cannot be dealt with independently from housing issues, as was discussed in Chapter 9. Finally, housing, and specifically the building industry, is a major sector of the economy and a large component of the slowdown in growth. In Russia, as elsewhere, the industry may be a pacesetter in the resumption of growth.

13.3 Urban housing is now almost entirely built, owned, and maintained by the state and enterprises.² Housing has been essentially free and represents only one percent of Russian households expenditures until now. The reason is that free housing has been a major element of total labor compensation, complementing very low cash wages. Unfortunately, the state provision of housing has meant low housing quality, poor maintenance, misallocation over time, and chronic shortage. As a result, housing mobility in Russia is also among the lowest in the world and a major obstacle to labor market adjustments. Two fundamental changes that must take place in parallel are extensive change in the ownership of the stock *and* the raising of rents and utilities until full-cost pricing has been achieved. Such changes are essential to the proper functioning of the housing system. Housing policy decisions must be based on the resource cost of housing. Housing investment and operations must be dissociated from poverty and unemployment problems: it is not sound to base overall rent policies on the problems of the most disadvantaged families. Social housing policy and direct support to low-income households are only a subset of the overall reforms needed by this very large economic sector. Separate social housing assistance programs targeted to the poor must be developed as part of the safety net with distinct financing.

13.4 To manage the transition to a market driven housing system where households are free to choose their housing, new policies must deal in a coordinated and integrated way with the existing housing stock and new production. Reforms must focus on four priorities. *First*, the rent and housing maintenance systems must be restructured. Full price (rent) liberalization cannot be achieved immediately. It would require substantial change in the wage regime. Yet, a major change in the subsidies going to the operations of the housing stock is necessary to achieve financial balance for owners and managers of social housing. A new and better privatization program is needed to replace the existing ones. Rent reforms and realistic pricing will stimulate privatization. In turn, revenues from privatization must be used to improve the operation of the housing system.

13.5 *Second*, a clear distinction must be made between housing finance and housing subsidies. Subsidies targeted to lower-income households should be used to insure a minimum level of consumption. Subsidies should come from the budget, while housing finance serves to finance housing investment. The development of a housing finance banking system is the most critical element for the future of overall housing reforms and the mobilization of household savings. The first step should be the development of financially sound mortgage instruments to finance new housing construction and property transfers.

13.6 *Third*, the development of competition and diversity in the production of housing is a high priority. The financial mechanisms used under central planning have impaired normal functional links between construction decisions and operations and maintenance with a severe impact on the quality of housing. The extreme building management concept of "one client, one designer, one builder" implemented in 150 major cities should be discarded in favor of demand-based competition. The end of these city-level monopolies can take place immediately. Financing mechanisms and contractual reforms will be the leading edge of reform in the building industry, which, together with other forms of construction, employs 17 percent of the Russian labor force. A reform strategy for the building industry is therefore a very high sectoral priority.

13.7 *Fourth*, demand-oriented housing reforms and competition within the building industry are going to cause profound changes in the type of housing being produced. Large-panel industrial housing has no future and will be replaced with new, more efficient and more satisfactory multiple-unit buildings or individual housing. This in turn will imply important changes in the urban planning system and the development of property-rights-based urban land markets. Important changes in financing of urban infrastructure linked to municipal finance reform are also inevitable. The financing of land infrastructure and housing-related services is presently undifferentiated and inefficient under the present "communal economy" system. This system lumps expenditures into very broad accounts—and therefore the actual costs of various infrastructure and urban services are poorly known.

13.8 Under Soviet central planning, housing was not directly managed as a major sector of the economy but as a set of social programs indirectly linked to other investments (see Box 13-1). And surely the social consequences of an ill-functioning housing system in Russia are both large and evident. There is a tendency to confuse social safety net issues and housing reform issues. However, *international experience shows unambiguously that the long-term success of housing reforms will require a clear differentiation between poverty and unemployment problems on one hand and housing problems on the other*. It is essential to assist the weakest social groups during the transition, but it would also be a fundamental and very costly error to decide, for instance, rent and price issues by reference to the most disfavored social groups. Managing the economic transition will require new and well-aimed forms of social assistance.

Box 13-1. Investment in and Production of Housing

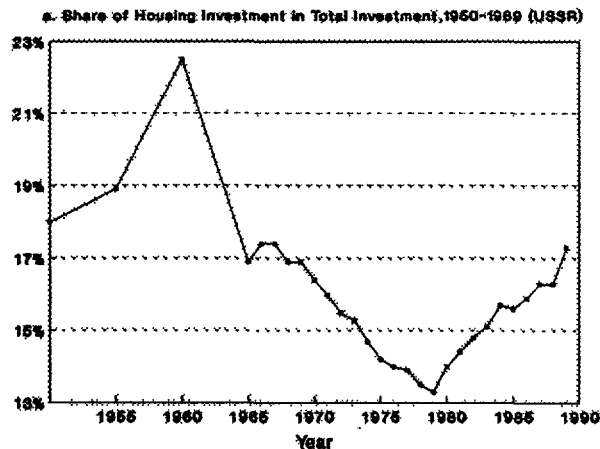
The central planning system, with its total separation of capital investment decisions from operation and maintenance, has had perverse effects on the housing sector as well as on other sectors of the economy. The "low wage" and the "low rent" policies have been the mechanisms behind Soviet under-investment in housing compared with market economies having similar levels of urbanization and technological development. Household savings which were centralized by the state were not fully reinvested in state-provided housing but diverted to "priority sectors," particularly heavy industries. The criteria which were used to make housing production decisions were predominantly the engineering criteria of speed and volume. Serialized industrial housing construction has dominated production since the early 1960s. Builders have disregarded final user preferences and have created low-quality units with high maintenance costs and large rehabilitation needs. The energy efficiency of the entire Russian housing stock is extremely poor—by a factor of two to three—compared with Western Europe.

As Box Figure 13-1 shows, underinvestment in housing lasted until 1956 when, under Khrushchev, the share of housing in total investment rose very sharply and massive serialized industrial housing projects began to develop. Thanks to these massive housing production efforts, the level of housing space per capita rose from a very low value of 4 m² in the late 1950s to 15.8 m² of usable space per capita in 1989. These impressive efforts to catch up with both a huge backlog and rapid urbanization never succeeded in eliminating chronic shortages, however.

Today, space shortages are reflected in the fact that 36 percent of the urban population has a living area below the official sanitary norm of 9 m². As a result, lower space standards per person than this norm are used to allocate housing to people on waiting lists. These standards differ by city. A striking feature of the administrative-command system is that shortages and the length of waiting lists are inversely related to the size of cities, a pattern which is exactly the opposite of market economies, where housing problems are more easily solved in small cities than in large cities.

The share of housing in total national investment has behaved quite differently from the physical volume of output. The share of housing in total investment fell continuously between 1960 and 1980 and has been rising since then (see Box Figure 13-1). However, physical output measured in millions of square meters continued to rise. During the 1980s, emphasis was again placed by the Government on improving housing conditions. The share allocated to housing investment rose again, but by then overall investment was falling. The net effect is that the volume of housing production reached a peak in 1987 and has been declining at an accelerating pace since then. In 1991 housing production fell 20 percent below the level of 1990—the 1991 production was below levels of the 1950s. The level and composition of output by type of "investor" in 1991 was, however, little different from 1990. Of a total of 48.3 million square meters constructed, 85.3 percent was initiated by the state, 9.7 percent by individuals, and 5 percent by cooperatives. The 1992 outlook is for a level of housing output significantly lower than in 1991.

Box Figure 13-1. Share of Housing Investment in Total National (USSR) Investment, 1950-89



13.9 Price liberalization and privatization will drive the reform of the housing sector. If these trends accelerate as envisaged, the pressure in the short-term will be great. This chapter focuses primarily on the problems associated with macroeconomic reforms and the major distortions present in the existing housing system, and not on the details of sectoral policies.³

Major Distortions in Housing and Urban Development

13.10 Developing appropriate sectoral foundations to overall macroeconomic reform means first of all a significant reduction of the largest economic distortions—reflected in subsidies—which exist in the housing sector. The priorities are: to restore meaningful pricing, to give individuals control over their own housing (which in turn requires restructuring the flow of funds through the housing system), to develop competitive, decentralized, and diversified housing production, and to develop new forms of ownership for the management of the public housing stock prior to possible privatization.

13.11 Russia has the most distorted urban ownership structure of the main socialist countries. In Russian cities, 83 percent of the housing stock is under state control. If state-controlled cooperative units are deducted from this percentage, 78 percent of the housing stock is under direct state ownership.⁴

13.12 As Table 13-1 shows, enterprises manage about 44 percent of all existing urban stock, in spite of the decades-old policy encouraging transfer of enterprise stock to the local authorities. They also dominate new production; in 1991, enterprise housing funds financed 45.5 percent of total housing output. Enterprise stock is much more costly to operate than local government housing. In 1990, operating subsidies per square meters of the total enterprise stock were reported to be 5.4 Rb as opposed to 0.14 Rb for municipal housing. Enterprise stock is also in a worse state of disrepair.⁵

Table 13-1. Ownership of Housing Stock in Russia, January 1991

Housing stock	Total national housing	Urban housing	Percent
	(million square meters of usable space)		
Total	2,137.7	1,506.9	100.0
State-owned	1,373.8	1,167.9	77.5
Local government	488.7	476.3	31.6
Enterprises (own budget)	842.2	657.4	43.6
Enterprises (central budget)	42.9	34.3	2.3
Cooperative-owned			
Building coops (new units)	78.9	78.6	5.3
Collectives: kolkhoz, sovkhov (unit transfers)	54.8	7.1	0.4
Privately owned	628.4	252.2	16.7

Source: Russian Ministry of Economy.

Rents and housing prices

13.13 Russia appears to have some of the most—if not the most—distorted housing prices in the world. First, housing rents have been frozen since 1928 and are extraordinarily low.⁶ Second, the free-market prices observed on the new auction markets of major cities do not bear any relation to the purchasing power of the average population. Third, the supply price of housing also appears to be severely distorted and does not reflect the true economic cost of the resources involved. Subsidies to the present housing system are very large and not targeted. They are also very poorly measured.

13.14 As a result of the extremely rigid rent control system, rent-income ratios (reflecting the contribution of renters to their state-provided housing) are very low and the required operating subsidies correspondingly high. Rent-income ratios in the former Soviet Union were the lowest among reforming socialist economies (see Table 13-2). In the cities of high-income market economies, rent-income ratios (excluding utilities) are typically about 20 percent.⁷

13.15 Housing prices that have recently been observed in auctions in major cities like Moscow, St. Petersburg, Nizhnii-Novgorod, and Ekaterinburg (formerly Sverdlovsk) are extraordinarily high in relation to the purchasing power of ordinary households. The prices of typical 50 square meter apartments in late 1991 and early 1992 ranged from 18 to 750 times the average annual wages of an urban household. These price-to-income ratios (PIR) reveal profound disequilibria and distortions in the barely emerging urban housing markets.⁸ They cannot be any guide to broad housing privatization policies. Moreover, the auctions so far have involved a very small share of the housing stock. High housing prices reveal the desire of the companies or cooperatives that buy such units to protect themselves against inflation, the severe shortage of office space, and expected capital gains in highly desirable central locations. When the volume of free sales expands, these PIR values can be expected to decline significantly and rapidly.

13.16 The real resource cost of new housing is very difficult to establish in Russia because the system of state orders has combined mandatory physical deliveries with accounting prices that did not reflect true resource costs. Initial attempts to evaluate the housing supply price structure in 1989 suggest that the production system is highly distorted. Implicit subsidies to new production continue to be large. The ratio of input costs to producer prices in 1989 was by far the worst for housing:⁹ it was estimated at 6.02 compared with 2.67 for communications, 1.62 for transportation, between 1.8 and 1.2 for food products, and a more sensible ratio below one of 0.54 for consumer durable goods.¹⁰ In other words, real housing costs were estimated to be more than six times the official price before the recent acceleration of relative price changes.

Table 13-2. Rent Income Ratios in Selected East/Central European Countries prior to Economic Reform, Various Years (percent)

Country	Year	Total payment	Rent only	Utilities only
Bulgaria	1988	12.1	7.6	4.5
Hungary	1987	8.7	1.6	7.1
Poland	1986	4.4	2.0	2.4
Romania	1989	4.4	3.0	1.0
Yugoslavia	1988	9.3	2.8	6.5
USSR	1989	2.5	1.0	1.5

Source: State statistical agencies of various countries.

Wages, rents, and the impact of price liberalization

13.17 Distortions in the housing system have worsened since price liberalization, and are much more apparent. State income policies and their large implicit wage taxes cause demand side distortions. Russia's labor markets have been operating under the principle of "low cash wages" from which the state has removed the purchasing power for housing, transport, health services, and education. These services are then provided either free or at heavily subsidized prices as "distribution goods" controlled by the employer or local governments. In contrast, most of the serious distortions observed in the housing systems of both developing and developed market economies—when such markets are distorted—are supply-side distortions.¹¹ *In order to give households control over their housing conditions, it will be necessary to move to full market wages and to give back to households the capacity to fully maintain a rental unit or to own one.* Such restructuring of financial flows will have beneficial effects on housing production, but it implies important interactions between enterprise reform, wage reform, and housing reform.

13.18 Given the wage regime, price liberalization has excluded housing rents. Such an approach can only be transitional.¹² Russia's level of urbanization and development indicates that the average rent-income ratio could be at least 10 percent (in line with the other semi-reformed socialist economies of Europe) instead of the 2.5 percent shown in Table 13-2. Higher rent-income ratios of about 10 percent are already the rule in the small cooperative housing sector. The effect of frozen rents has been worsening since at least 1989 for municipalities and state enterprises, the two main owners of housing. In 1992, the burden of subsidies on local governments has been growing at explosive rates and rent reforms are now inevitable. According to estimates from the Ministry of the Economy, the trend in coverage of municipal maintenance costs by rents has been deteriorating sharply from covering nearly half of maintenance in 1989 to less than a third in 1991 and to less than 5 percent in the first quarter of 1992. Without rapid rent reforms the housing stock will move from its previous state of chronic under-maintenance to an accelerating deterioration of most housing units. In the past, commercial rents have been largely used to cover part of the shortfalls in revenues, but since the renters are themselves public agents, there is a limit to this cross-subsidization.

13.19 Adequate measurement and control of Russian housing subsidies is extremely difficult in a system with a multitude of bureaucratic actors and with major price distortions. There are three main categories of housing subsidies and transfers in the Russian system: stock maintenance (operation, repair, heating, hot water, and other services); new production; and stock rehabilitation and modernization. Apart from on-budget housing expenditures, large, off-budget, unaccounted-for, and/or implicit subsidies are present throughout the sector.

13.20 The two main channels for housing subsidies in Russia have traditionally been local government enterprises, which share the management of the existing stock and the development of new construction. The bulk of subsidies—both in terms of existing stock and new production—are currently channeled through the enterprise sector. There is no aggregate information on housing and housing-related expenditures by enterprises, yet there is little doubt of the magnitude of the crisis. Enterprises are transferring their stock to municipalities at an accelerated pace. In extreme cases they are abandoning their housing as has been reported in the Tiumen and Magadan oblasts. Increasingly, the housing problem is a local government problem—and cities are not prepared to deal with it (see Box 13-2).

13.21 In addition to housing rents, utilities (heating and hot water in particular) are also heavily subsidized. The full magnitude of subsidy rates is difficult to determine accurately because significant subsidies are hidden in various budgets unrelated to housing. The general rule is that local governments

pay for the subsidies going to the municipal housing stock. State enterprises pay the subsidies on the units that they own. In the wake of the large price increases of April 1991, the January 1992 price liberalization has sharply increased utility costs and has triggered destabilizing subsidies.

13.22 The impact of price increases on *households*—especially the price of energy which rose again in May 1992—can be gauged by the level and composition of the monthly payments made by residents of municipal housing units in Ekaterinburg (formerly Sverdlovsk) in 1991, which is representative of housing payments in most other cities. A single housing bill covering all monthly charges is paid to the municipal housing maintenance organizations. The level of these charges in 1991 and the range of increases during the first quarter of 1992 is shown in Table 13-3.

Box 13-2. Housing Subsidies in the City of Riazan

The city of Riazan illustrates recent trends in municipal-budget housing subsidies. Unlike Moscow and St. Petersburg, which enjoy special autonomous status, Riazan is a medium-size city that is more typical of Russian cities. The population of Riazan is about 527,000 people. About 93 percent of the city's 8.1 million m² of housing stock is publicly owned. Most of the enterprise housing has been transferred to local authorities; now, 80 percent of the total stock is the city's responsibility.

Before 1990, total subsidies and transfers to housing constituted 13 percent of the city's total budget expenditure. In 1990, the total housing subsidies in the Riazan budget had increased to 20 percent of total expenditure (1991 figures are not available). The most rapidly growing housing subsidy goes to the city's housing maintenance organizations. Rents, which covered over 20 percent of operating revenues in 1991, could only cover 5 percent in the first quarter of 1992. As a result, the maintenance subsidy (including heat and hot water), which constituted only about 0.8 percent of the total budget expenditure in 1990, has expanded to 4.6 percent of the city's budget in the first quarter of 1992. Funding for capital repairs had to be cut drastically, from 2.6 percent of the total budget in 1990 to 1.1 percent in the first quarter of 1991. All capital repairs in the first quarter of 1991 were from previous years' plans. In 1992 the budgeted amount covers barely 28 percent of estimated rehabilitation for the city's badly under-maintained stock. The budget for new housing construction will be cut in 1992, and expenditure will be limited to ongoing projects. The R 2 million budgeted for the first quarter has increased by over R 15 million which was transferred to the oblast from the federal budget.

13.23 The impact of price liberalization on municipal budgets varies from city to city, in spite of the national guidelines promulgated in laws and decrees. Before 1990, most operational and maintenance expenditures on the municipal housing stock were financed by local governments themselves—60 percent of them at the raion and city level. Capital expenditures for new construction were fully centralized, financed and implemented by the Ministry of Economy (formerly Gosplan). This division of responsibilities reflected the complete dissociation between the capital and operating budgets throughout the housing sector. Another major flaw in the financing system is that the financing of housing investment remains treated as a one-time cash expenditure, with no amortization allowance in rental charges.

13.24 Housing expenditures are still found in public budgets of all levels of government. A major change in 1992 is the transfer of financial responsibilities with respect to housing from the central budget to the oblast level and below. The change in expenditure assignments follows a December 27, 1991 resolution of the Russian Parliament on the division of state property among various levels of government (see Appendix 3-1 on fiscal federalism and municipal finance). Housing has become a municipal property and is being transferred to local raions and cities.¹³ The new budget law of April 1992 empowers local governments to increase housing rents and adjust utility tariffs according to national guidelines. This is a major change.

13.25 There is at present no coordination between wage adjustments and new housing costs. Utility operating costs vary by city according to plant infrastructure, input costs, and the city's ability to rely on extra-budgetary resources. Municipal subsidies are rising sharply everywhere, but cost recovery from households is limited by wage adjustments that diverge from changes in utility costs. The present situation is unstable. Until April 1992, different oblasts had different attitudes regarding the shifting of rising costs to households, and tariff adjustments were not uniform. The net impact on household budgets is to raise housing expenditure ratios to new levels which have not yet been quantified by reliable surveys. Rising arrears and delinquency rates on housing bills could become very significant for municipal organizations. The rate of arrears on municipal housing was already reported at 17 percent overall in Ekaterinburg and up to 40 percent in some areas of Moscow in 1991.¹⁴

13.26 The impact of price liberalization on *enterprises* (and their response) is not well known.¹⁵ It appears to depend on the nature and size of the enterprise. For instance, the social budgets of enterprises operating in priority sectors (such as military enterprises) were often large. In early 1992, these enterprises aimed to avoid raising rents on new units. However, they slowed down sharply or even stopped the building of new units, as some started doing already in 1991. Typically, a significant amount of enterprise profit was devoted to housing and amenities to their staff according to authorized plans or through budget account manipulations or both. Small enterprises in non-priority sectors hold a housing stock of much lower quality which is often more poorly maintained than municipal housing. These weaker enterprises now want to transfer their housing units to local governments. The new tax treatment of enterprises discourages them from new housing investment.

The building industry and declining output

13.27 The production of housing in Russia today is monopolistic, inefficient, obsolescent, and impervious to consumer preferences. Housing shortages and production delays are endemic (see Box 13-3). Housing research and development work has had limited effect on dominant methods of production, and the building industry has shown a very low rate of innovation. The building industry is very large and is financed (up to 85 percent) either directly from the budget or by state enterprises. As a result, it is not directly influenced by household demand.

13.28 The sharp decline in housing construction results from the compounded effects of rapidly rising construction prices, cutbacks in central and local budgets that are imperative, and the recent

Table 13-3. Monthly Housing Payments in Ekaterinburg, 1991 and First Quarter 1992 Increases

Item	1991 (rubles)	First quarter 1992 increase (times)
Rent	4.20	-
Heating	2.85	3
Hot water	1.79	3
Cold water	1.06	5
Electricity	3.93	2 to 3
Gas	0.84	5
Telephone	0.88	2 to 3
Radio fee	0.49	variable
Total monthly bill	16.00	3

Note: The total monthly bill is based on average characteristics of housing in Ekaterinburg: family size: 3.1 people; apartment size: 50.7 m²; living space: 31.3 m²; number of rooms: 2.2.

Source: Building Association of Ekaterinburg (Sverdlovsk) SCIC-Gestion Ile de France-CDC (Sverdlosk), *Housing Maintenance and Rehabilitation Plan for the Municipal Stock*, Paris: 1992. This study included a 1991 survey of 1,040 households and detailed engineering surveys of the maintenance and rehabilitation requirements of a sample of 47

Box 13-3. The Building Industry and Production Delays

The organization of the Russian building industry and the types of housing units it produces constitute major impediments to economic stabilization and privatization. The Russian housing industry is dominated by highly monopolistic state enterprises. In the name of reforms and greater efficiency, building organization became further concentrated in many cities during the 1980s. Demands by investors were centralized into one office and managed under the organizational principle of "one client, one designer, one builder." The "single client" system was implemented in 149 Russian cities by 1989. Today, it monopolizes directly about half of the total housing production in cities. The rest of the production comes from a variety of non-competing state organizations which are heavily controlled by local construction committees and industry associations. The share of individual and cooperative housing, which had been declining continuously between 1945 and 1985, began to rise in 1986. The building of individual housing, however, remained illegal in cities over 100,000 people until 1987. As a result much of the production of individual housing remains confined to small cities, to rural housing, or suburban dachas.

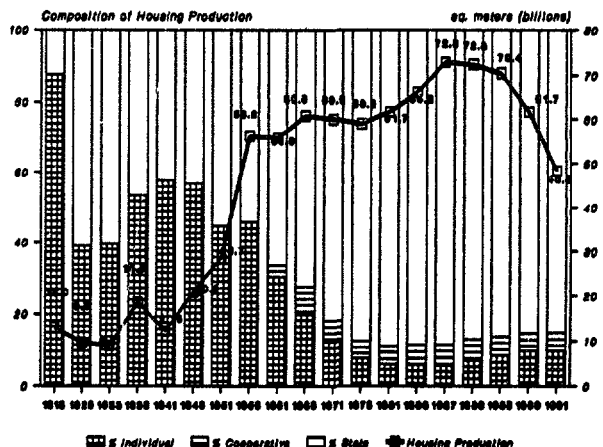
The building industry in Russia is characterized by notoriously long production cycles because building organizations often had more incentives to start new projects than to complete existing ones. Production delays result in exceedingly large volumes of work in progress compared with national output. Official statistics systematically under-report this problem, yet they show that work in progress as a percentage of annual investment has steadily worsened since 1987. In 1988, work in progress represented 84 percent of the annual housing output; by 1990 it had reached 103 percent. The estimate for 1991 (official statistics have not yet been released) and 1992 is at least 300 percent. Partial interview data from several cities suggest a sharp deterioration in 1991 and 1992. A prevailing estimate is that only one-third of the work in progress might be completed in 1992.

accentuation of material shortages associated with the disruption of inter-regional and inter-republican trade. Construction costs have experienced explosive increases with price liberalization partly because the monopolistic production and distribution of materials and supplies remained in place. The rise in construction prices has been quite disruptive. The range of house building costs per square meter is estimated to have accelerated from Rb 300 to Rb 320 per m² of housing in the period 1986-89 to Rb 880 to 1,000 per m² in 1991. The anticipated costs for 1992 (based on first quarter builder projections) are Rb 6,500 to Rb 34,000 per m². The central value might be Rb 10,000 per square meter for the usual state output of mediocre quality (see Figure 13-1).¹⁶

13.29 The housing sector now faces an extremely severe financial squeeze with the rapid increase in construction prices, the decline in public revenues due to the slowdown of the economy, and deep cuts in capital investment funds by the central Government. Cities and state enterprises which are the two main channels for housing funds must make difficult resource allocation decisions which will force a deep restructuring of state building enterprises. Their choice is between the completion of work in progress, the production of a limited number of new units, and the rehabilitation of the stock.

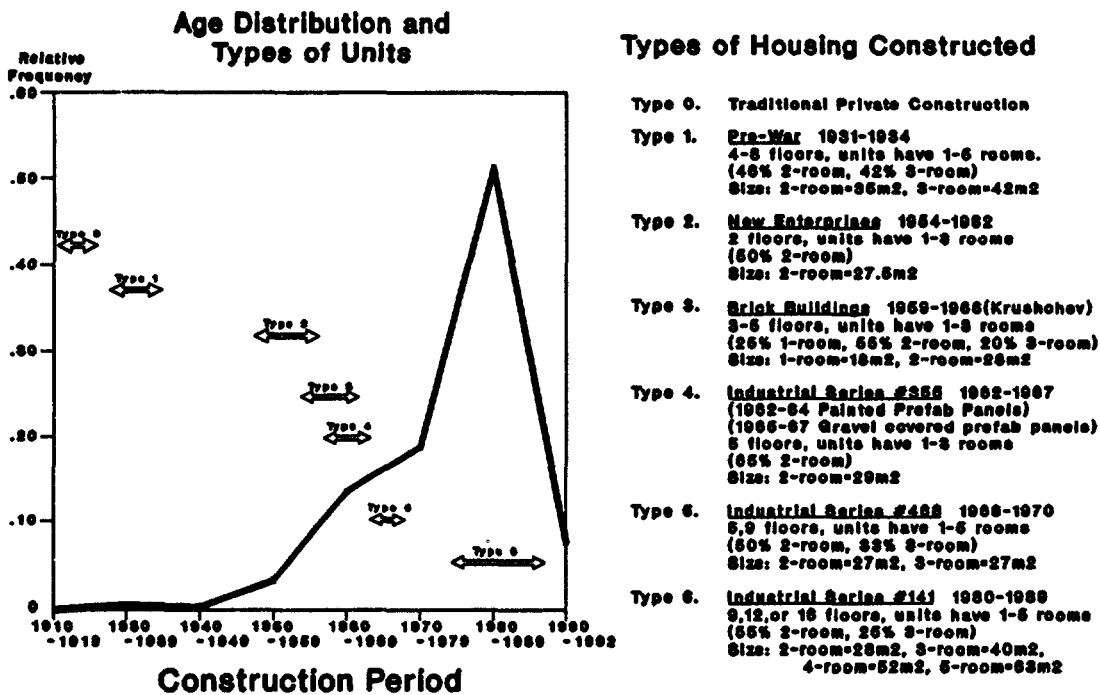
13.30 The budget for maintenance of the housing stock and city infrastructure (the "communal economy") has been cut back drastically at a time when a very high percentage

Figure 13-1. Housing Shortages and Structure of the Housing Stock



of the total stock needs major rehabilitation. The scale and nature of maintenance problems faced by Russian cities are large and unknown in market economies. A detailed 1991 engineering survey of the housing stock in Ekaterinburg (1.735 million people) reveals that 28 percent of the stock requires significant rehabilitation. This maintenance and rehabilitation will be costly and could not possibly be initiated nor managed by individual households because all of this housing consists of large-panel industrial buildings. A startling 70 percent of the Ekaterinburg housing stock in poor condition is recent and was built in the last 20 years. Figure 13-2 gives the age profile of the housing stock in Ekaterinburg and the main types of industrial housing constructed in different periods.

Figure 13-2. Housing Stock in Ekaterinburg



The effect of Soviet urban planning on land use and city efficiency

13.31 In an open economy, the competitiveness of a country is very significantly affected by the internal efficiency of its cities. In many ways the urban sector can be seen as an intermediate good for high-value-added export sectors. Urban efficiency is linked to low urban operating costs including the high quality of the telecommunications system, urban infrastructure services and utilities, energy efficiency, transportation efficiency, and the ability of commercial services and industrial activities to relocate according to changing technologies and relative prices. Russia is now a highly urbanized country, but it has built its cities under grossly distorted relative prices for three critical urban inputs: raw land (that is, site value) which had a zero price, capital on which interest was not charged, and energy which was priced considerably below the world price. These deeply distorted relative prices have led

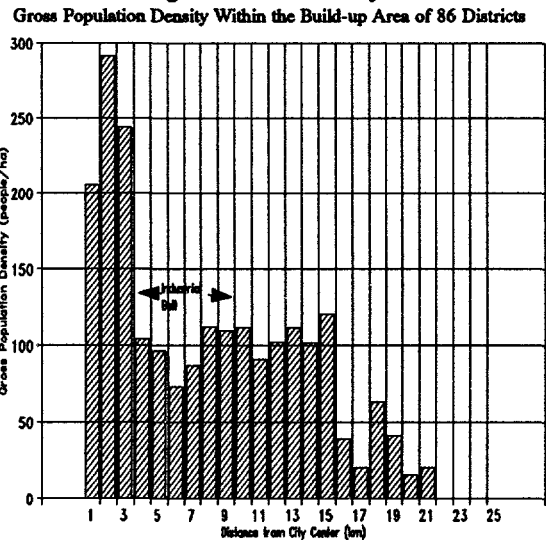
to a misallocation of resources and an economically inefficient city structure (see Box 13-4). Overall, industrial, commercial and residential mobility are extraordinarily low and difficult.

Box 13-4. Land Use in Russian Cities

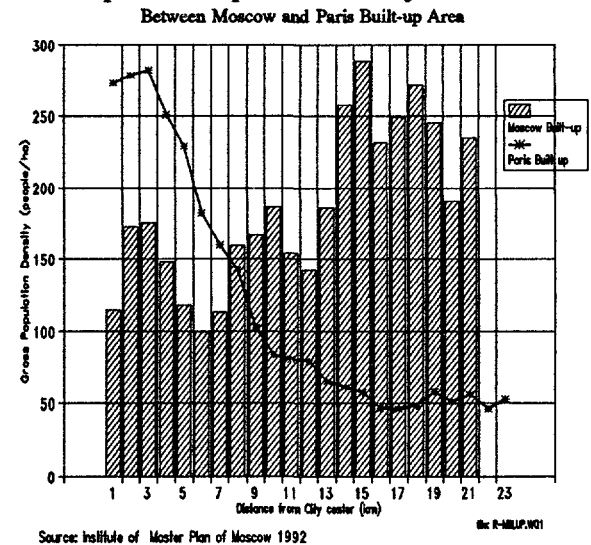
Comprehensive analyses of land use in Moscow (9.003 million people), St. Petersburg (4.467 million), and Ryazan (0.527 million) raise concerns about the legacy of the Soviet urban planning system in terms of distorted land use, negative density gradients, and urban inefficiency. Soviet cities have been built under master plans dominated by the rigid requirements of very-large-scale, industrial housing projects and are transportation- and energy-intensive. Their population density gradient is perverse as a result; it rises as you move away from the center. A frequent pattern is a small, high-density, pre-revolution city center, surrounded by a ring of low-density rusting industries, followed by rings of high-density, massive, serial industrial housing. For instance, the net population density in Moscow is highest 15 kilometers away from the center where it is equal to the density in the center of Paris. The contrast between land allocation and the land density profile in Paris and Moscow is striking (see Figure 13-3). Russia used up a considerable share of its natural resources to achieve such a form of urbanization. The lack of land prices and land markets encourages land hoarding and has prevented the recycling of old industrial fallow land in the center of cities.

Figure 13-3. Gross Population Density within the Built-up Area of Municipality and Comparative Population Density Gradient (Moscow, St. Petersburg, and Paris)

a. St. Petersburg: Land use analysis



b. Comparative Population Density Gradient

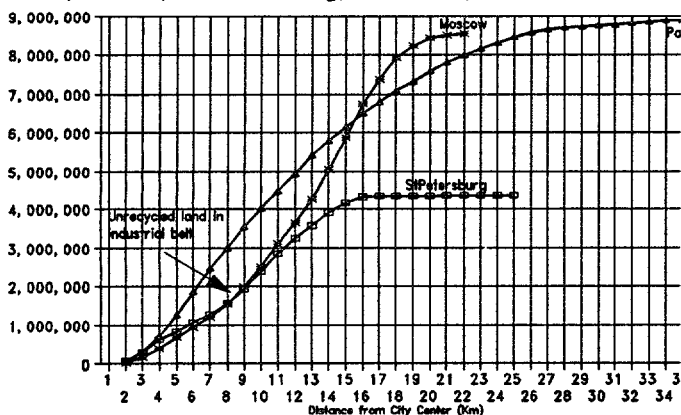


13.32 The structure of Soviet cities is now interfering with price liberalization, housing privatization, and future urban investment. With price liberalization and the opening of the Russian economy to world trade, urban relative prices could adjust sharply and force local governments into ever-higher levels of subsidies to housing and other urban sectors in a very untimely way. Moving rapidly to market pricing in the urban sector could cause two main kinds of problems. Problems of "adverse selection" will occur during housing privatization as the real estate price gradient rotates and rises very sharply near the center. Citizens in centrally located apartments have the prospect of substantial capital

gains, and those located in the periphery will get an asset of very low and possibly negative economic value.¹⁷ The second problem is the shortage of capital for the transition to markets.

13.33 City land use and urban plans must be thoroughly reviewed and their economic implications carefully considered. Capital-saving infrastructure development or redevelopment schemes will be essential. Recent plans by several city governments to give a large number of free plots of land in the periphery to those presently caught in the motionless waiting lists will affect the dynamics of urban development: how will the infrastructure be financed?¹⁸ The impact of radically different relative urban prices can be mitigated through appropriate shifts in urban land use and investment strategies for urban infrastructure, commercial, and residential investment. Provided that land markets can develop quickly to reveal more accurately the value of various sites, a recycling of centrally located fallow industrial land or other misused sites and in-fill strategies may prove economical as suggested by the comparison of population distribution patterns of Paris and two Russian cities (see Figure 13-4). However, to avoid quick and arbitrary decisions, complex financial and technical studies of alternative infrastructure rehabilitation strategies are required.

Figure 13-4. Comparative Population Distribution (Moscow, St. Petersburg, and Paris)



Source: Institute of The Master Plan of Moscow, St. Petersburg Institute of Urbanistic Theory, 1990.

Priority Issues in Housing Reform

Rent reforms, new owners of social housing, and housing allowances

13.34 Cities are barely coping with increased housing costs. In the first quarter of 1992, actual expenditures exceeded the first quarter's housing maintenance budgets by considerable amounts; the deficit will grow further with the anticipated transfer of enterprise housing to local authorities. The problem is compounded by related subsidies. Heating and hot water subsidies have escalated in the first quarter of 1992. They are projected to constitute almost 5 percent of the total 1992 local expenditures, even though

in January the central Government increased all residential utility tariffs between two and five times (including a threefold increase of heating and hot water charges). Furthermore, current budget projections do not account for the unknown effects of adjustments in energy prices expected to occur in 1992.

13.35 If the problem of recurrent expenditures is bad, it is even worse for housing investment. The central Government's share of total housing investment is expected to fall to 19 percent in 1992 from 92 percent in 1987. The transfer of housing construction financing to local governments in 1992 combined with the explosive inflation in the construction sector will severely curtail capital spending. For most municipalities, the housing construction program will be limited to the completion of on going projects.

13.36 Exploding subsidies and new demands threaten the fiscal position of local governments. City governments face an unprecedented immediate budgetary crisis, compounded by major uncertainties. Many of their problems relate to macro economic and management issues over which they have no control, including the massive cost increases accompanying price liberalization (discussed above), the macro-economic imperative to reduce or eliminate budget deficits and to privatize city-owned facilities,

and the prospect of rising unemployment associated with falling production. City agencies cannot predict the quantity of services required, their unit cost of services, or the amount of revenues they will receive.

13.37 Rents must be increased. In raising rents, however, the poor must be considered. International experience shows that housing allowances are an important element of rent reform. They improve targeting and subsidy transparency, clarify resource costs, and in the long term they are not an obstacle to local government resource mobilization like rent control. A rent reform action plan must also provide for the management and maintenance of the social housing stock by financially and managerially autonomous non-profit organizations. Housing privatization through free distribution is no panacea, since part of the housing stock is of low quality and in the wrong location so that such housing may not be worth owning, once relative urban prices have fully adjusted. Yet rent reforms will play a positive role in improving privatization decisions. Rent reforms are not inflationary. Rather they are an important part of the fight against inflation and of the necessary realignment in relative prices. Housing privatization means greater equality of effort across different income groups and types of housing tenure. Housing allowances are an important tool to address the social impacts of reforms on the poor, and to achieve rent reforms.

13.38 State enterprises are facing many of the same serious problems with their housing stock as municipalities; many enterprises are anxious to dispose of part or all of their housing stock. However, an evaluation of the scale and nature of housing problems in various types of enterprises has yet to be made. An explicit policy framework is needed to address the issues of maintenance, rehabilitation, privatization, and new production as they relate to enterprise restructuring.

Privatization

13.39 The main reform initiated in the housing sector is the privatization of the stock. All tenants are being offered an option to become owners of their dwellings. Concurrently, a number of economic, institutional, financial, fiscal, and administrative reforms are under discussion, or are awaiting clarification or implementation. Housing privatization alone, however, will not be a solution to the problems in the sector. Privatization will not have a major effect on municipal finances in the short run.

13.40 The process of privatization began early in 1989, when a December 1988 decree on selling off state housing came into effect. The subsequent privatization law passed in Russia in 1991 gave the new owners full ownership rights. In 1991 and in the first quarter of 1992, oblasts and cities have followed the basic federal blueprint which shaped the many regional versions. Generally, tenants are entitled to get a certain share of their dwelling's space free of charge, with pricing of the remaining space prescribed by the law. So far, very few apartments have been privatized (about 4 percent of the stock).

13.41 Housing privatization is moving very slowly because incentives are not in place. Tenants have no perception of possible future benefits of becoming owners—such as improvement of maintenance services and better use of their savings—or risks involved in retaining their present renting status. They do not fully anticipate the inevitable rent increases or further deterioration of maintenance services. Moreover, administrative services are not yet in place and privatization rules have not been publicized.

13.42 Though privatization will proceed at different paces and in varying ways across Russia, a basic common strategy has to be developed, grounded in a unifying legal framework. Determined progress awaits the resolution of critical issues such as: ownership versus leasing of land, valuation of existing structures, modalities of sale and/or transference of ownership, and administration and maintenance of communal spaces and facilities.

Pro-competition and pro-employment policies in the building industry

13.43 A high percentage of all the new housing, including cooperative housing, has been produced by large, inefficient, capital-intensive, and monopolistic state organizations producing low-quality and unpopular housing. Price liberalization has had the desired effect of breaking the traditional central planning process of joint allocation of funds and materials for the execution of projects; the primary problem is now the availability of funds to build. However, with the fiscal stabilization program initiated by the Government since January 1992, the output of the building industry has been falling very rapidly. There are strong pressures to revive this large component of the economy and to maintain the maximum employment of resources in the sector. The share of output of the new private builders will remain small in the immediate future and cannot immediately be substituted for some 90 percent of state-financed housing. We have reported that 85 percent of output in volume is state housing. In addition, cooperative buyers receive very large subsidies to close the gap between housing costs and their purchasing power. Similarly, loans for individual housing are heavily subsidized. Moreover, this private supply meets the needs of much less than the top 10 percent of the population, especially now that real incomes are falling. A program for the building industry should include: (a) the most critical actions required to introduce competition in the sector, and (b) local financial and management plans to determine the allocation of scarce funds between works in progress, new construction, and the massive rehabilitation needs of the existing housing stock.

Long-term finance under inflation

13.44 The need for safe and sound banking and for viable financial intermediation are still inadequately appreciated in Russia.¹⁹ There are strong populist pressures to provide subsidized credit to various "priority sectors," but under the present inflation, subsidized credit becomes an automatic destabilizer. The problems are particularly severe for agriculture and housing where long-term mortgage finance is needed for investment (subsidies can become very costly because of long loan maturities). An action program is important to address: (a) problems of long-term mortgage finance as well as construction finance, (b) the competitive issues raised by the need for specialist institutions, and (c) solutions to mobilizing and protecting financial savings under inflation.

Land reform

13.45 Because Russia is a highly urbanized country the internal efficiency of its cities has a direct bearing on the overall economic economy. At present, cities lack land markets, and industrial, commercial, and residential activities are often in the wrong locations. A major bottleneck to improving cities is the absence of clear property rights. The Russian economy is faced with a severe shortage of domestic savings for the foreseeable future, yet serviced land and urban infrastructure are under-used and usually provided at a nominal price (or no price) to most users. The trade-offs between recycling existing serviced land and the production of new urban land are poorly understood. Local governments are facing a severe fiscal crisis, yet they are disposing of very valuable assets at nominal prices or free of charge while complaining about a shortage of serviced land. Many of the current reforms are piecemeal and lack an overall framework. Russia urgently needs a coherent program as well as implementation guidelines for the clarification of land ownership rights, land valuation, and effective mechanisms for the trading of urban land. The financing, location, and maintenance of urban infrastructure should be included in this framework.

Infrastructure and municipal finance

13.46 The crisis in municipal finance calls for immediate action. As yet, the cities have done little to cut expenditures, improve efficiency, increase tariffs or improve financial procedures. Expenditure reductions could include hiring freezes, reductions in administrative staff, and postponement of capital expenditures. Efficiency improvements could be obtained by improving procedures and supervision and, most importantly, by using competitive bidding. This should be done before services are cut. Unless expenses are reduced in a planned way, services will have to be cut to unacceptable levels. Tariff increases are required for rents, public transportation, water and sewer, and heating. Unfortunately, needed increases may be neither affordable or acceptable to the population. Additional revenues should be raised through the sale of city property to private investors and from the imposition of property taxes. Privatization of enterprises will probably provide more losses than gains to cities, because they will need to absorb social facilities and functions in order to make enterprises attractive to private investors. Finally, financial systems are poor. New budgetary, accounting, and information systems should be put in place, along with financial controls.

Notes to Chapter 13

1. In market economies the share of the housing stock is even higher and ranges between 30 and 45 percent of national wealth in the US, Germany, and France. For international comparisons, see B. Renaud "The Housing Sector in the National Economy and its Financing: The International Experience and its Relevance to China" Paper presented at the International Urban Finance Senior Policy Seminar, Tianjin, China, August 1988.
2. Since at least 1985, there has been considerable interest and activity in the development of individual housing in suburban areas for both seasonal and year-around use. Such new housing is still small compared with state produced housing but may rapidly develop into a very important component of the housing industry.
3. A full discussion of the present situation and of the housing reforms needed is beyond the scope of this Country Economic Memorandum. A report on housing reforms is being prepared. It will cover the operation of the traditional housing system and important legal, institutional, financial, and technical issues encountered in market-oriented reforms.
4. This high rate of state ownership compares with 67 percent in China, 56 percent in Poland, 33 percent in Romania, and 25 percent in Hungary. In the late 1980s the share of public housing was about 2 percent in the US, 7 percent in Germany, 17 percent in France, 30 percent in the UK, 38 percent in Sweden, and 41 percent in the Netherlands. This Western public stock is usually managed by independent, financially autonomous non-profit enterprises, private companies, or cooperatives.
5. The two main explanations for the truly higher subsidies to enterprise housing appear to be: (a) very high fixed administrative and operating costs for a small stock that tends to be geographically dispersed, and (b) inadequate accounting and the inclusion of other costs in housing subsidy budgets.
6. The rigid and uniform rent control policy does not differentiate between households of different incomes and housing circumstances. A recent international comparative study of 68 urban housing markets shows that among the countries or cities which engage in some form of rent control, only the least-developed countries follow the rigid, undifferentiated, and costly rent control policies of the kind still found in Russia. See Stephen Malpezzi and Gwendolyn Ball, Rent Control in Developing Countries, World Bank Discussion Papers 129, September 1991.
7. The rent-income ratios (measured as median rent as a percentage of median income) in major Western cities are currently: Amsterdam 21, percent; Helsinki, 18 percent; Munich, 18 percent; Paris, 21 percent; Toronto, 20 percent; Washington, D.C., 23 percent; Seoul, 32 percent; Singapore, 32 percent; Sydney, 21 percent; and Tokyo, 16 percent. See Stephen Mayo *et al.*, Housing Indicators Project, World Bank-UN Habitat, preliminary findings and interim report, June 1992.
8. In a sample of 52 major cities covering a full range of income levels, PIR values range from 1.9 to 12.4. The high value is for another socialist city where the housing system is economically distorted: Beijing, China. The highest PIR values for market cities in the sample are Munich, Germany (9.6), and Seoul (9.2). See Housing Indicators Project, interim report, June 1992.
9. Producers prices are the prices of inputs adjusted by the tax or subsidy applied to them, including the taxes and subsidies on the inputs used to produce the inputs. These producer prices are the approximate equivalent of wholesale prices in a market economy.
10. See V. Shironin, as quoted in Peck, Merton J., and Thomas J. Richardson, What is to Be Done? Proposals for the Transition to the Market, New Haven: Yale University Press, 1991, p. 45.
11. The evidence is reviewed in the new World Bank Policy Paper Housing: Enabling Markets to Work currently under final internal review. For international evidence and a formal economic analysis of supply-side distortions and their causes, see Bertrand Renaud Affordability, Price-Income Ratio, and Housing Performance: An International Perspective, INU Report 81, World Bank, June 1981.
12. See Chapter 7 for a fuller discussion of the wage regime and the problems of the transition.
13. Adding to confusion, the administrative system use the term "raion" for both very large, high-level territorial administrative bodies and small local units.

14. These arrears appear to have two components in Russia. Some have a definite element of renters' strike—in Ekaterinenburg, arrears were concentrated in specific buildings and tended to correlate with poor maintenance. Yet there is a need to differentiate between no payments and late payments. Russian households tend to make housing payments coincident with bonus payments from employers. Arrears may thus not be critical in terms of behavior; renters always pay but they always pay late.

15. Housing subsidies channeled through enterprises follow a complicated path. On the resource side, enterprises have used their own housing funds and other profit-based funds, which they mix at their own discretion with dwindling central government transfers for both housing maintenance and new housing production. On the expenditure side, the measurement of capital outlays is made quite difficult by: (a) very different financial and barter arrangements between enterprises and their local governments concerning the production of housing and infrastructure, and (b) various housing-related loans, grants, and in-kind transfers to their own employees, which are largely unreported.

16. The construction costs for the military housing program funded by Germany range between R 50,000 to R 75,000 per m² because standards of construction are higher, some materials have to be imported to meet deadlines, and labor costs are also higher.

17. There are no relevant land prices and only low energy prices to guide urban choices. As a result, housing units are uniform in size irrespective of distance. In market cities, households optimize their choice of housing size and location under the total constraint of their rent-income ratio (15 to 30 percent) plus transport-to-income ratio (4 percent-8 percent). As a result, smaller housing units tend to be found in the center of cities and large units at the periphery; families trade off housing space with travel time and cash costs.

18. The 1992 program of Moscow city government released in late March 1992 calls for a ten-year program to build detached housing units in the Moscow region requiring 40,000 hectares. For 1992 alone the plan calls for the allocation of 30,000 land plots requiring 3,000 hectares mostly outside Moscow city limits within the territory of Moscow Oblast.

19. The development of banking services for housing and of a new housing finance system is a critical dimension of reforms. The main issues and priorities will be discussed more extensively than is possible in this chapter in a separate report on the financial sector.

TECHNICAL ANNEXES

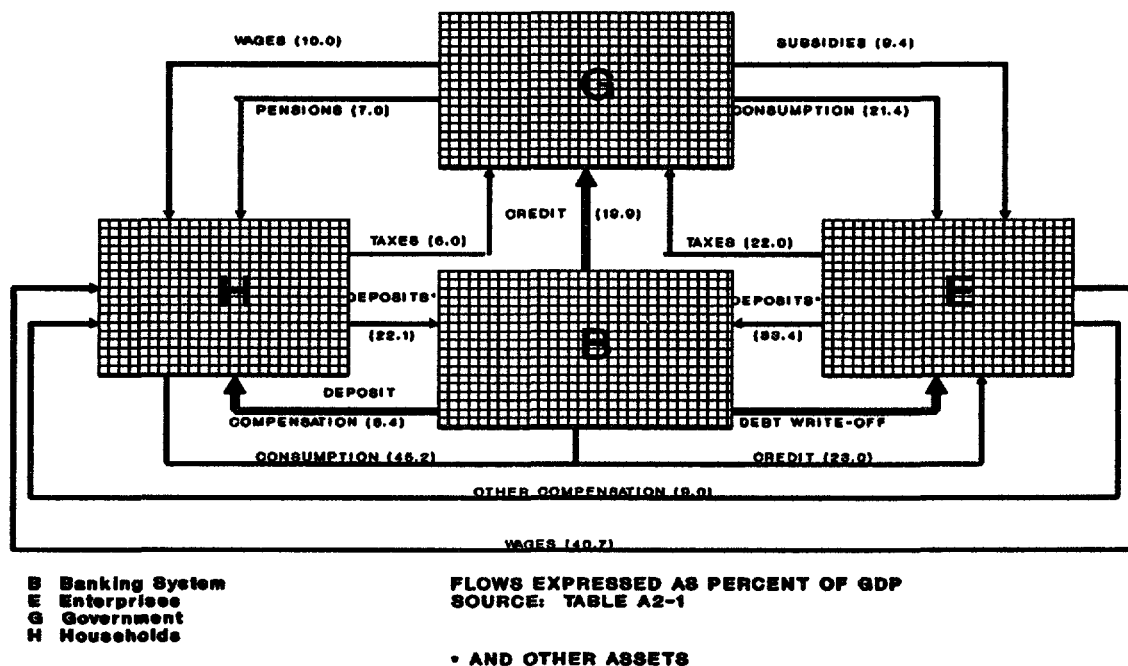
ANNEX 2-1

The Flow of Funds

1. The fundamental fact of economic life is the budget constraint: expenditure must equal income plus what can be borrowed. For an entire economy, expenditure can only exceed income by borrowing from foreigners. For the government, expenditure can exceed income not only by borrowing from foreigners, but also by borrowing from households and enterprises. Borrowing is often not truly borrowing, but rather an implicit tax on the lender. Macroeconomic ills can often be diagnosed by tracing financing flows from households, enterprises, and foreigners to the government.

2. A useful device to do this is the flow of funds. Flow of funds data show double entry accounting among sectors—each expenditure by someone is income for someone else; each new debt of one agent is an asset of another agent. Figure 2-1 shows the complexity of these flows in the Russian economy in 1991. Box A2-1 presents a more detailed breakdown of the statistics presented in Figure 2-1.

Annex Fig. 2-1. The Flow of Funds in 1991



3. The first column in Box A2-1 records income from production (-) accruing to households, enterprises, and the government (all as a + in the corresponding columns). The bottom part of the same GDP column reflects the purchases of final output by (+) made by households, enterprises, the government, and the external sector (shown as - in the corresponding column).

4. In addition to income from output and purchases of output, sectors also make direct transfers to each other. For example, the government made transfers to enterprises to finance investment

**Box A2-1. Income, Expenditure, and Financing Flows in 1991
(Percentages of GDP)**

Income/expenditure	GDP	H-HOLDS	ENTERP	GOVERN	EXTER	MONETARY
Wages	-40.7	40.7				
Profits	-28.3		28.3			
Depreciation	-8.5		8.5			
Indirect taxes	-13.2			13.2		
Other	-13.1	13.1				
Subsidies	3.9			-3.9		
Investment from budget			5.5	-5.5		
Direct taxes		-6.0	-8.8	14.8		
Pensions		7.1		-7.1		
Deposit compensation		6.4		-6.4		
Debt write off			2.8	-2.8		
Other adjustments			1.8	-1.8		
Expenditure from funds		5.9	-5.9			
Total consumption	75.0	-43.6		-31.4		
Net exports	1.5				-1.5	
Total investment	17.4	-1.6	-15.9			
Change in stocks	6.1		-6.1			
Income less expenditure	0.0	22.1	10.3	-30.9	-1.5	0.0
Total financing flow		-22.1	-10.3	30.9	1.5	
Credit flow		0.1	26.2	21.8		-48.1
Currency flow		-7.7	0.5			7.3
Deposit flow		-13.8	-13.8			27.6
Interbank flow			-3.1			3.1
Net other items flow			-10.6			10.6
Net foreign assets flow			-1.0		1.5	-0.5
Other financing		-0.7	-8.4	9.1		

Notes:

- 1) Credits are positive, debits are negative.
- 2) Monetary sector includes external flows.
- 3) The fiscal deficit comprises the flow of assets from the government sector plus deposit compensation, debt write-off, and other adjustments.
- 4) Net other items flow was used as a balancing category.

(5.5 percent of GDP), households and enterprises paid taxes to the government (14.8 percent of GDP), and the government paid pensions to households (7.1 percent of GDP).

5. The overall income-expenditure balance of each sector is shown in the line, "income less expenditure". A deficit is shown as negative and a surplus as positive. A deficit will correspond to a positive flow of financing of the same amount, shown in the next line. Many of these financing flows were intermediated through the monetary system. For example, the household surplus of 22.1 percent of GDP was used to accumulate deposits and currency, both liabilities of the monetary system (the latter is defined to include the Central Bank of Russia, the appropriate parts of the old Gosbank, Sberbank, other state banks, and commercial banks). The monetary system used these resources to make loans to the government (shown in the line "credit flow") which helped finance the budget deficit.

6. Tables B1-B and B1-C present comparative accounts for 1990 and 1991 for the household and enterprise sectors. Note that intrasectoral transactions such as investment and stock accumulation do not appear in the sectoral flow of funds. Household investment (structures and durables) was 1.6 percent of GDP in 1991 and is included in consumption. Depreciation allowances were traditionally remitted to sectoral ministries which used to transfer funds among enterprises. Enterprises were given increasing control over these resources with the decentralization that took place after 1988. The fall in depreciation allowances in 1991 may indicate the growing strength of enterprises vis-a-vis ministries.

7. The comparative data in Tables B1-B and B1-C further document the large sector imbalances in 1991. Credit flows to firms and deposit accumulation by firms and households were much larger in 1991 than in 1990. These flows reflect the loose credit conditions and large fiscal deficit in 1991.

8. The statistical concepts in Table B1-C are the same as those used in the Joint Study of the Soviet Economy (1991). The data here, however, refers to Russia rather than to the Soviet Union. The data was taken from *Finansy RSFSR* and the Statistical Yearbook for the Russian Federation, as well as from unpublished figures supplied by the Russian Federation Goskomstat. All the numbers shown are direct estimates of the concepts listed.

Table B1-B. Income and Expenditure Balance of Households, 1990-91 (Percent of GDP)

	1990	1991
Income:		
Wages Fund	43.8	40.7
Pensions	7.7	7.1
Deposit Compensation	0.0	6.4
Other	10.0	19.1
Total Income	61.5	73.3
Expenditure:		
Goods and Services	46.3	45.2
Taxes	7.3	6.0
Total Expenditure	53.6	51.2
Saving:		
Deposit Accumulation	4.7	14.4
Cash Accumulation	3.1	7.7
Total Saving	7.8	22.1

Source: Mission estimates.

Table B1-C. Finances of State Enterprises and Collective Farms, 1990-91 (Percent of GDP)

	1990	1991
Source of Funds:		
Profits	25.5	28.3
Depreciation Allowance	14.3	8.5
Investment Support	8.5	5.5
Credit Flow	-4.8	23.0
Total Sources	43.5	65.3
Use of Funds:		
Gross Fixed Investment	21.8	15.9
Profit Tax	12.1	8.8
Deposit Accumulation	1.7	22.3
Change in Stocks	1.6	6.1
Expenditure from Funds	6.4	5.9
Total Uses	43.6	59.0

Source: Goskomstat of Russia.

ANNEX 5-1

Intergovernmental Fiscal Relations and Municipal Finance

Intergovernmental Fiscal Relations

1. One of the defining characteristics of intergovernmental fiscal relations in the Russian Federation is the extent to which they have been, and still are, not regulated by law for their allocation between levels of government. Despite the passage of a law on basic taxation (see below) in early 1992, the system still relies on the Soviet model of sharing most of the major taxes between levels of government, on the basis of negotiated arrangements between the Ministry of Finance of the Federation and the departments of finance of the oblasts, autonomous regions, krajs, and okrugs.
2. The discretionary system being used today has a number of consequences. The pattern of iterative, individualized bargaining with each and every locality built into the system cumulatively imposes greater costs upon the center than upon the individual localities. For the sub-national governments, this system implies budgetary uncertainty and an inability to plan for the delivery of desired levels of services, a lack of transparency, and perceptions of unfairness, in which cities, rayons and oblasts are pitted against one another as they compete for what they perceive to be a too-small revenue "pie," with negotiation and bargaining the only vehicle for improving one's lot.
3. At the same time both the local and the central governments see advantages in the lack of specific division of expenditure responsibilities. Local governments use their wider responsibilities to bargain for a larger share of revenues and the federal Government has had an additional instrument to balance its own budget. The discretionary process also provides the Ministry of Finance (MOF) with the flexibility to distribute resources among oblasts to achieve any desired degree of equalization or other agreed or implicit objectives. But this lack of definition can not go on much longer if the system of intergovernmental relations in the Russian Federation is to move away from the "bargaining" mode of the past, toward more certainty and predictability. Without a specific assignment of expenditure responsibilities it will not be possible to analyze the revenue sufficiency of alternate tax assignments—including those in the most recent tax laws—nor will it be possible to fruitfully consider the desirability of alternate systems of intergovernmental transfers.
4. For the future there does not appear to be a correspondence between expenditure assignments and revenue shares. The economic program envisages (a) a marked increase in taxes, primarily on petroleum products, and in general, foreign trade taxes and (b) a restructuring of expenditures to provide priority to outlays associated with social protection. Virtually all the additional revenues included in recent legislation will accrue to the *federal* Government, while most of the additional social expenditure will emerge at the local government level. Sub-national budgets are also vulnerable to central government "mandates" with respect to wage scales, benefit directives and prices, which affect local expenditures, and to tax exemptions mandated by the federal Government on taxes that accrue to local budgets.
5. Therefore, expenditure and revenue assignments at the sub-national level are likely to be inconsistent for 1992 and beyond. Unless this is addressed, the mismatch of local revenues and expenditures foreseen under the new legislation could put the success of the government's economic program at serious risk: the federal Government would spend according to its budget, using all additional

resources, while the local governments will be bound to incur deficits, which may have to be financed either by the federal Government or by local borrowing. Alternatively, the local governments could be driven—by economic, as much as political motives, as were the former Union republics—to withhold more than their share of revenues, and threaten to bankrupt the federal budget.

6. The new law on "Basic Principles of Taxation" governing intergovernmental fiscal relations represent a significant step ahead in clarifying the roles and responsibilities of the sub-national government sector, as it emerges from the past system of unified budgeting and central planning and control. Further refinements to the laws will help to ensure the system contributes to a fiscally stronger and more responsive sub-national government sector, as local governments use their resources to respond to local needs and to provide services needed and desired by the local economy. These refinements need to address the following areas:

7. *Correspondence of revenue and expenditure assignments.* There does not appear to be a correspondence, or matching, between the taxes presently assigned to the sub-national level of government and their present expenditure responsibilities. The recent transfer of expenditure responsibilities for food subsidies and consumer protection to the sub-national level without quantification and a corresponding shift in revenue shares is a dramatic example of this lack of correspondence. Such expenditures are better suited to "administrative delegation" to the local level, with financing retained by the center. A similar mismatching may apply in the longer run, since there is no reason to expect that the taxes and the expenditures assigned to the local level will grow at the same rate. To achieve this correspondence, there is a need for concrete empirical work which defines the present magnitudes of taxes and expenditures assigned to the sub-national level, and their elasticities. This is a complex, and essential technical exercise, and should be the next step in the definition of the future intergovernmental system. The World Bank could provide assistance in designing this analysis. Subsequent laws on intergovernmental finances would then be based on an empirically consistent framework drafted in a coordinated fashion.

8. *Expenditure assignment.* More generally, there is a need to define more concretely the assignment of expenditures to each level of government. The present murkiness may seem advantageous to the federal Government, which has an additional instrument to balance its own budget. But this lack of definition can not go on much longer if the system of intergovernmental relations in the Russian Federation is to move away from the "bargaining" mode of the past toward more certainty and predictability. Without a specific assignment of expenditure responsibilities it will not be possible to analyze the revenue sufficiency of alternate tax assignments, including those in the Law on the Principles of Taxation, nor will it be possible to properly evaluate the impact of alternate system of intergovernmental transfers.

9. *Correction of the revenue assignment.* The present assignment of taxes to the respective levels of government differs considerably from what might be thought of as "best practice." Those taxes most suited to macroeconomic stabilization and equalization (the personal income tax (PIT) and corporate income tax (CIT)) are assigned to the sub-national level, and those which better fit the need of sub-national government for a stable revenue base (for example, the value added tax (VAT)) are assigned to the center. A rethinking of the whole matter of tax assignments and a change to the "tax sharing" (see below) is worth considering, and should be done after decisions on expenditure assignment have been made.

10. *Natural-resource taxation.* Revenue sharing from the taxation of natural resources to various sub-national governments is a crucial question which is now being addressed in draft legislation.

While it is probably realistic to assume that some share of such taxes will accrue to the local jurisdiction, it would be desirable for the major share of such revenues to accrue to the central Government. But there are many difficult questions to be resolved on this issue. The mission suggests that additional work be undertaken to examine the issues, and those of autonomous resource-producing oblasts, krajs, and ASSRs, whose fiscal issues were not explicitly addressed by the mission.

11. *Efficiency and accountability of sub-national government.* The benefits of decentralization relate to the gains which accrue when local officials are responsive to local needs. For these gains to take place, the system must allow decisions about the provision of government services with local benefits to be made by local governments, and there must be a some degree of matching of local resource mobilization with local expenditure responsibilities. This argues for greater expenditure discretion in those expenditures fully assigned to the sub-national level, and greater flexibility for sub-national governments to raise their own revenues. The mission argues that this discretion on the tax side is best given through the ability to levy surcharges on central taxes (such as CIT and PIT—VAT is, as is well known, unsuitable), by encouraging the use of the property and land tax, and user charges, rather than by emphasizing additional, minor, "nuisance" taxes to local governments. This revenue flexibility is a crucial step for making government accountable to local residents and to improving the efficiency with which local public services are delivered. (For more details, see section below on municipal finance.)

12. *Tax administration.* So long as the federal Government shares in all the bases, the mission would recommend that the present responsibilities of the State Tax Administration for collecting all taxes of both national and sub-national governments not be changed, and that they continue to collect all national taxes and any surcharges. At a later time, consideration should be given to developing a local valuation capability to administer property and land tax.

13. *The role of government and the role of enterprises.* There continues to be a confusion about the role of government, with many local governments viewing entrepreneurship in market activities and "internal joint ventures" as a profitable source of incremental (and frequently extra-budgetary) revenues. This is fundamentally inconsistent with the drive to privatize. Similar confusion obtains about the role of enterprises in directly financing schools, hospitals, roads, sewers, and other *public expenditures*. So long as these expenses are not fringe benefits to enterprise workers they should be covered from local government revenues and the facility should be operated by the local government. It is essential that the tax assignments to local government accommodate this shift of expenditures from enterprises to local government. The estimation of tax and expenditure correspondence suggested above should incorporate these effects.

14. *Growth compared with fiscal equalization.* The present laws do not incorporate an equalization objective, since the assignment of taxes to the local level on a purely "derivation basis" necessarily means that higher-income territories will derive more revenue. Some equalization is appropriate, especially because some responsibility for the social safety net has been passed to local governments. But there are important trade-offs here; equalization will penalize those better-off regions which have the greatest industrialization and growth potential. The intergovernmental fiscal system should give significant scope to the initiatives and fiscal energies of the better-off areas, in the interests of more rapid economic growth. This could be achieved by allocating a relatively larger proportion of revenues on a derivation basis, and by giving oblasts and larger cities limited powers to set tax rates, through a surcharge mechanism described below. The important issue of "how much equalization" should be taken up as part of the work on "correspondence," described above.

15. ***Rules and discretion in the transition.*** A major challenge lies in developing an intergovernmental fiscal system which is flexible enough to be compatible with macroeconomic stabilization and the major structural shifts which are taking place in the economy, and at the same time provides a framework for intergovernmental finances that is also appropriate for the longer term. The system must be sufficiently flexible to accommodate such change; but it must also provide a sufficiently stable and firm structure, and framework of certainty, for the effective operation of central and sub-national governments. Because the reform of sub-national finances is being undertaken at a time when macroeconomic stabilization is a dominant concern, the decentralization of public finances should take stabilization considerations as a high priority. However, it is important that the structure which is put in place now, be designed not only for the transition, but that it also address other considerations necessary for the longer term.

16. ***Longer-term structure.*** For the longer term, the Federation will want to evolve a system which also addresses: (a) the incentives and powers of local governments to raise revenues, (b) expenditure discretion; (c) budgetary certainty, (d) transparency, and (e) the objective, stable, non-negotiated criteria. All of these elements are necessary if the outcome of greater efficiency, local government accountability, and responsiveness of local decision-making to the needs of local residents is to be achieved.

17. ***An option.*** One system that would meet these objectives would have three components: (a) sharing of some proportion of the major national taxes on a derivation basis with uniform sharing rates across oblasts; (b) tax sharing of another pool of funds on the basis of an equalization formula, and (c) increased local tax powers.

18. Under such an option, a proportion of the major federal taxes would be shared with local governments on a derivation basis, thereby giving oblasts that are successful in promoting economic growth a larger share of the revenues. A second pool for equalization, would distribute some share of national taxes on the basis of a formula that takes expenditure needs into account. Several such formulas are discussed in the main text. For revenue certainty, and transparency, the size of the respective pools of funds, and the formula should be fixed for a three-to-five-year period. Finally, certain local governments would be given discretion to set some tax rates probably in the form of a surcharge on PIT or CIT, and purely local property taxation and user charges would be encouraged. Further development and quantification of this or other options will require detailed empirical work in the future.

19. ***Scope of the intergovernmental system.*** A final important issue is whether the new intergovernmental system should address only the relations between the center and the oblasts, or whether it should also address intergovernmental issues within oblasts. The first approach is more consistent with a "federal system," in which localities are responsible for intra-jurisdictional decisions; moreover, dealing with some 2,000 raions would be administratively complex for the center. However, it opens the possibility that policies within oblasts may be inconsistent with those of the center, and the center loses an opportunity to ensure its legitimate interest in stimulating certain activities at the local level. It may be that some "framework law" is appropriate, in which oblasts are required to "pass through" some proportion of the revenues they receive downwards to the raion or city level, according to some agreed guidelines.

Municipal Finance

The crisis in municipal finance

20. City governments face an unprecedented immediate budgetary crisis, compounded by major uncertainties. Many of their problems relate to macroeconomic and management issues over which they have no control. Such issues include:

- The rapid conversion to a market-based economy, accompanied by massive cost increases, falling production and the prospect of rising unemployment. City agencies cannot predict the quantity of services required (that is, welfare), their unit cost of services, or the amount of revenues they will receive. City agencies are reeling from the price increases in their inputs, and the expected adjustment in energy prices will cause major and unknown additional cost increases.
- The macroeconomic imperative to reduce or eliminate budget deficits and to privatize city-owned facilities.

21. The system of local government has also been restructured, and cities need to digest new structures, relationships, and methods of financing. Again, they have limited ability to change these structures; instead they must accommodate themselves to the fact of their existence. Specific issues include:

- New structures and systems of sub-national government with overlapping and unclear responsibility assignments between various levels. There are four levels of government, two of them (municipality and district) at the city level. In addition, the cities of Moscow and St. Petersburg have special oblast status.
- Increased expenditure responsibilities. Responsibility for virtually all locally based services (that is, public transportation including Metro, health, etc.) have been ceded to the cities, including expenditure responsibility in the fields of poverty relief and other social programs.
- A new tax system at the federal level, with allocations of some of these taxes to localities. Such taxes cover at least 90 percent of budgetary expenditures of municipal and lower (city district) governments. The yield of the various taxes that have been assigned is uncertain, and there is limited scope to raise local taxes and service charges.

22. Finally, there are significant problems at the city level alone—problems that they have some power to influence. These include:

- Rivalries between the legislative and executive branches of city government (in some cities), and between the bureaucrats at the working level and their higher-level managers. Differences of opinion and power struggles lead to situations where legislatively mandated budgets are not implemented by the executive, and where top executives cannot control the expenditures of the departments under their supervision.
- Incomplete and unclear information on the city's financial position, exacerbated by a tendency toward secrecy. Information on "extra-budgetary" revenues and expenditures is closely guarded; such revenues and expenditures may account for 5 to 30 percent of the

cities' funds. Accounting systems are based on cash and make little distinction between capital and operating costs; information on revenues earned, expenditures incurred, or commitments made is not readily available.

23. Because revenues and expenditures were so unpredictable, budgets for sub-national government were decided only for the first quarter of 1992. In any case, these budgets were not adhered to; city departments and districts admit to having exceeded first quarter budgets by major amounts. Annex table 5-1a shows per capita (of population) cash revenues and expenditures for two major cities.

Annex Table 5-1a. Municipal Finance in Two Cities, Per Capita Revenues and Expenditures 1991 and First Quarter 1992

	Moscow				Nizhnii Novgorod			
	1991 (Actual)		1st Qtr 92 (Budget)		1991 (Actual)		1st Qtr 92	
	Rubles	%	Rubles	%	Rubles	%	Rubles	%
Federal tax allocation	1,117	80.9	962	93.7	617	82.8	409	94.5
Other taxes	212	15.3	0	0.0	92	12.4	17	4.0
Charges and other non-tax revenues	44	3.1	15	1.5	36	4.9	3	0.7
Privatization proceeds	9	0.6	48	4.7	0		4	0.9
Total revenues	1,381	100.0	1,026	100.0	745	100.0	433	100.0
Subsidies to city enterprises	393	28.0	347	34.6	240	32.0	171	40.0
Education & pre-school services	277	18.6	233	22.4	98	13.0	100	23.0
Health	236	16.9	161	16.0	129	17.0	127	29.0
Social welfare	113	8.1	65	6.4	51	7.0	65	15.0
City council and central administration	17	1.2	12	1.2	6	1.0	5	1.0
Capital investment	310	22.1	152	15.2	45	6.0	81	19.0
Other expenditure	55	4.0	34	3.0	22	3.0	7	2.0
Total Expenditure	1,401.0	101.0	1,004.0	98.0	592	79.0	556.0	128.0
Surplus/(deficit)	-19	-1.4	23	2.3	153	21.0	-124	-29.0

Note: Cash expenditures do not include expenditures incurred but not paid.

Coping Mechanisms

24. The staffs of the cities have chosen to cope by (a) negotiating with higher levels, (b) devolving, (c) borrowing, and (d) permitting extra-budgetary revenues. As noted in Chapter 14, they have been reluctant to cut expenditures or increase tariffs.

25. Because the systems are not yet firmly established, negotiations have been taking place on resource transfers. These negotiations involve the districts (city raions) and their municipalities, the service enterprises (that is, heat, water etc.) and the cities, the cities and their oblast, and the oblasts, and the central Government. Negotiated transfers from higher levels has a long history in Russia, and is widely practiced in both market and socialist economies. In the long run, such negotiations should stop. Cities need a stable source and amount of funds that are provided under clearly understood rules. However, in the short term, negotiations will have to continue until the amount of revenues and expenditures to be undertaken by various levels are more predictable and controllable.

26. Higher levels of government have devolved expenditure responsibilities to the cities, and municipalities have passed them to their districts and enterprises. Sometimes, city service enterprises (that is, water, housing, and roads) have established "private" companies to handle service activities in various geographical sub-districts. These companies obtain funds from both public and private sources (that is, they use city-owned equipment and city paid personnel to sell services to private companies). In some cities (Moscow, in particular), the district level of city government is undergoing major reorganization. This has further confused the already blurred responsibility for service provision and revenue and expenditure responsibilities. Decentralization is a good idea, but it needs to be controlled, and proper financial procedures put in place.

27. City-owned service companies claim that the amounts promised in the first-quarter budget were inadequate in light of cost increases. The city-owned enterprises (that is, water and sewer, housing maintenance, etc.) appear to be meeting their needs by not paying bills and by running overdrafts in their bank accounts. Eventually, these practices will result in demands for major increases in unplanned subsidies from the municipal accounts.

28. City departments and city-run services are also having a difficult time in meeting expenditure requirements. They appear to be obtaining funds from "extra-budgetary" sources to cover expenditures over their budget. For example, hospitals and schools are requesting voluntary contributions from the industrial enterprises that supported them during the Communist era. It is not likely that industries will be willing and able to continue these contributions over the medium and long term, given their own financial outlook. Extra-budgetary revenues include donations from private organizations, leasing of city property, fines, participation in joint ventures, etc. These revenues and the expenditures that they finance are not included in the financial information that is shared with higher levels. The cities' need for these revenues may compromise its willingness to develop the private sector.

Annex Table 5-1b. Per Capita Subsidies in Moscow and Nizhnii Novgorod, 1991 and First Quarter 1992

	Moscow		Nizhnii Nov.	
	1991	1st Q 1992	1991	1st Q 1992
Food and drugs price support compensation	27	103	140	13
Metro subsidy	22	22	8	9
Tram and bus transport subsidy	51	36	18	44
District heating subsidy	40	72	13	22
Housing management subsidies and repairs	117	61	28	26
Other enterprise subsidies	64	2	2	3
City maintenance and other works	72	51	32	34
Provision for Fuel decontrol				21

Other requirements

29. These coping strategies are unsustainable. Most of the strategies (for example, arrears and borrowing) will end up as larger claims by the Government on available resources. This is incompatible with the financial program at the national level. As yet, the cities have done little to cut expenditures, improve efficiency, increase tariffs, or improve financial procedures. Expenditure reductions could include hiring freezes, reducing administrative staff, and postponing capital expenditures. Efficiency improvements could be obtained by improving procedures and supervision and most importantly by using competitive bidding. This should be done before services are cut. Unless expenses are reduced in a planned way, services will have to be cut to unacceptable levels. Tariff increases are required for rents, public transportation, water and sewer, and heating, as existing subsidies are not sustainable (see Annex

Table 5-1b).¹ Unfortunately, needed increases may be neither affordable nor acceptable to the population. Additional revenues should be raised through the sale of city property to private investors and from the imposition of property taxes. Privatization of enterprises will probably provide more losses than gains to cities, because they will need to absorb social facilities and functions (that is, kindergartens and clinics) in order to make enterprises attractive to private investors. Financial systems are poor. New budgetary, accounting, and information systems should be implemented, and financial controls put in place. These systems should take advantage of modern technology in order to increase efficiency and quality.

Notes to Annex 5-1

1. The box shows only cash subsidies that were paid in 1991 or budgeted in the first quarter of 1992. It does not include subsidies that were incurred when City owned services spent more than their budget. The amount of these unplanned subsidies (which would be reflected in increased accounts payable and other borrowings) are unknown as yet.

ANNEX 6-1

Benefits to Workers and Managers in the Government's Privatization Program

Enterprises that are joint-stock companies

1. In the case of joint-stock companies, the employees of an enterprise can choose among three benefit options outlined in the Program.

Employees buy control. Under the first option, the employees of the enterprise may choose to buy common shares representing 51 percent of the authorized capital by closed subscription. In effect the control of the enterprise would be in the hands of the employees. The procedures for valuing assets and carrying out this closed subscription will be specified in regulations to be approved by the GKI.

Non-employees buy control. Under the second option, employees do not choose to buy at least 51 percent of the company and instead the bulk of the shares are sold to outside investors. In this case, the employees individually will receive, without charge, non-voting shares representing 25 percent of the authorized capital of the enterprise. Each employee, however, may not receive shares with an authorized value (face value) of more than 20 minimum monthly salaries. Initially these shares will be preferred, non-voting shares, though this status may be changed later. There are no special restrictions on employees selling their shares except those general restrictions that apply to the sale of all other shares.

2. In addition, employees may buy another 10 percent of the shares under favorable terms. These terms are:

- a 30 percent discount from face value;
- payment in installments for a period of three years;
- a down payment of not less than 20 percent of the face value;
- that the total shares purchased by each employee may not exceed six minimum monthly salaries.

3. Executive officers of the enterprise (director, deputy director, chief engineer, and chief accountant) shall also be given an option to buy shares. They may buy shares at the face value equal to no more than 5 percent of the authorized capital in accordance with the terms of their contracts.

4. *A group of employees contract to run the enterprise.* Under the third option, a group of enterprise employees, with the approval of the workers' collective, may offer to contract with the state to undertake a privatization plan over one year (the contract cannot be renewed or prolonged), and to maintain the solvency of the enterprise during the workout period. In return for this commitment, the group obtains an option to purchase—at the expiration of the contract—20 percent of the shares at book value. If the group fails to meet the contract terms, it forfeits the option and the shares can be disposed of through the first or second options, above. All employees of the enterprise (including members of the

group) may purchase up to 20 percent of the shares at a 30 percent discount from book value, with 20 percent down and payment in installments over three years.

Enterprises that are not joint stock companies

5. In the case of enterprises that are not converted into joint-stock companies (typically smaller enterprises), it is not possible for managers and employees to be given shares. In these cases, the employees and managers will instead be given some of the proceeds of the sale. It must be pointed out that the Program is not clear on whether the distribution of proceeds refers to the net or gross price of the enterprise. Obviously, this reference needs to be clarified since the enterprises are presently holding a substantial amount of debt, both from banks and other enterprises. The amount of the proceeds to be given to the managers and employees depends on the terms under which the enterprise is sold—in particular, whether the new owner is required to operate the business in a specific way after privatization or whether the employees themselves are the new owners.

6. If the enterprise is sold with no conditions attached, then the workers and the managers receive a larger proportion of the proceeds. In this case, the employees will receive 30 percent of the purchase price but not more than 20 minimum monthly salaries. If, on the other hand, the enterprise is sold with conditions such as requiring the new owner to maintain existing levels of employment, finance the social sector, produce certain goods and services, etc., then the workers will receive a smaller proportion of the proceeds. The Program refers to this type of sale as a "commercial competition." In this case, employees will receive 20 percent of the purchase price but not more than an amount equal to 15 minimum monthly salaries.

7. Another possibility is if a partnership or a joint stock company formed by the employees themselves bids for the enterprise in an auction. If at least one-third of the employees participate in the partnership or company, this bidder is entitled to a 30 percent discount and payment in installments for a period of one year. The initial down payment must be at least 30 percent of the purchase price. If the employee partnership or company is the only bidder, the appropriate Committee shall make a decision whether to accept this offer within one week after the competition or auction under procedures to be established by the GKI.

Enterprises that are being liquidated

8. The last possibility is that the enterprise is liquidated and its property or assets are sold at auctions. In this case, the employees will receive up to 30 percent of the proceeds from the sale but not more than an amount equal to 20 minimum monthly salaries.

Annex Table 6-1. Major Benefits Available to Employees when an Enterprise is Sold or Liquidated

Privatization method	Benefits to employees
Sale of Shares in a Joint-Stock Company	
Employees buy at least 51 percent of shares	Opportunity to become the owners of their enterprise. The price of shares is to be determined by GKI. No other benefits.
Company sold to non-employees	Gift of up to 25 percent of shares ^a Right to buy another 10 percent on favorable conditions ^b Executive officers may in addition buy 5 percent
Company contracted to a group of employees	If contract is fulfilled, the contractor's group can buy up to 20 percent of the shares at book value. In addition, all employees may purchase up to 20 percent of the shares at 30 percent discount from book value If contract terms are not met, reverts to the terms of options 1 and 2 above
Sale of Enterprise that is not a Joint-Stock Company	
Enterprise sold without conditions	Receive up to 30 percent of the purchase price ^a
Enterprise sold with conditions	Receive up to 20 percent of the purchase price ^a
Enterprise sold to workers (1/3 must participate)	30 percent discount on purchase price and payment in installments All employees still receive up to 30 percent of the purchase price ^a
Liquidation of Enterprise	
Property/assets sold	Receive up to 30 percent of sale proceeds ^a

Note: a. But not of a value greater than 20 minimum monthly salaries.

b. But not of a value greater than 6 minimum monthly salaries.

c. But not of a value greater than 15 minimum monthly salaries.

Source: World Bank staff estimates.

ANNEX 7-1

Accounting and Auditing

Accounting

1. The Soviet accounting system was designed to provide information necessary for the operation of a centrally planned economy.
2. State agencies and enterprises were the only users of enterprise accounting information. The prime functions of accounting were to monitor and control economic resources to meet the targets of the central plan.
3. Accounting information for planning purposes flowed in both directions, up and down the administrative hierarchy. Enterprises in all sectors of the economy transmitted accounting information including outlines of their future planned activities, to higher entities to assist the central planners, and then received from their superiors control figures (norms) and planned indexes of production and various other indicators of performance which they were required to fulfil. Information for control purposes, on the other hand, flowed generally up the administrative hierarchy from the reporting enterprise to the controlling Ministry and other government agencies and organizations, e.g., the Ministry of Finance, the USSR State Committee for Statistics (GOSKOMSTAT), the State Bank of the USSR (Gosbank USSR), and other banks involved in short-and long-term financing of the enterprise.
4. In order to satisfy the information needs for central planning and control of economic activities in the USSR, the accounting system has been developed in a way that is different from internationally acceptable accounting concepts and principles. Some important divergence are:
5. *Matching of revenues and expenses.* Traditionally, it is a characteristic of the Soviet accounting system to recognize revenues when actual cash receipts are received and to recognize expenses when payments are accrued. This mismatch between revenues and expenses distorts the periodic determination of income for a particular period. Russia has to move to accrual accounting in order to be in accordance with International Accounting standards.
6. *Risk and conservatism.* The Soviet accounting system presupposed a "risk-free" business environment. It was assumed that the values of current assets would not be affected by changes in underlying economic conditions, therefore, the "conservative approach" and the "lower-of-cost-or-market principle" were unknown in Soviet accounting practice. In the traditional system, no provision was made for uncollectible accounts receivables (bad debts) of a period. Only actual bad debts were written off as and when there was sufficient evidence as to the uncollectibility of accounts receivables. Prompt recognition of non-performing assets and adequate provisioning for their risk of default is essential for a well-functioning financial system.
7. *Intangible assets.* According to Soviet accounting regulations, intangible assets were not included in the financial statements as they are in most market economies.
8. *Fixed assets.* The recording of additions to fixed assets and depreciation in the Soviet accounting system differed significantly from internationally acceptable practices. A Soviet enterprise

normally received all fixed assets free of charge from government sources. The acquisition of fixed assets increased the stocks of assets (fixed assets) and liabilities in the "contributed capital" account.

9. The accumulated depreciation account was shown as a *deferred* revenue item in the liabilities side of the balance sheet. Thus fixed assets were carried in the assets side of the balance-sheet at cost, whereas in international practices they are shown as net of accumulated depreciation.

10. *Cost of production.* Under the Soviet accounting system, both direct and indirect costs incurred during the accounting period were lumped together. No distinction was made between "product costs" and "period costs". Therefore, non-production expenses were allocated to the cost of production - this practice was a way of carrying forward overhead in the value of unsold products. According to international practices, this overhead is expended in the period in which it occurs and decreases income immediately.

11. In order to move towards the application of internationally acceptable accounting principles, the Russian enterprises should rapidly deal with these main divergences. On December 19, 1991, a new Chart of Accounts for all enterprises and organizations except financial institutions and those whose objective is not to make profit, has been approved by the Russian Ministry of Finance and is being promulgated. The application of this Chart of Accounts will make it possible for Russian companies to report their financial results according to the main international accounting principles.

12. Nevertheless, the traditional Soviet accounting system placed more emphasis on bookkeeping than on the whole process of accounting. Accounting used to correspond to filling out forms and needed mainly processors. As there are about 2 million accountants to retrain from scratch and no specific implementation program, it would be difficult to expect all the companies to report on international principles in the near future.

13. This has a major impact on 1) any loan review to be done by any bank, 2) the basis for evaluation of companies to be privatized, 3) the information available for decision-making.

14. None of the steps needed to implement the international accounting standards for financial institutions had begun at the end of 1991. Since January, a program of "broad adaptation of banks' financial statements" to international standards is being developed under the Technical Assistance Trust Fund, to be implemented as much as possible for the preparation of 1992 financial statements. A transitional chart of accounts is in preparation.

Auditing

15. Auditing in the Western meaning of the term has never existed in the Soviet Union. Since there were no shareholders and every creditor was a state enterprise, the notion of an independent controller had no meaning at all.

16. The term "inspection" or control on the contrary is very well known and there is very often confusion between audit and inspection - Lenin wrote "the goals of control are twofold: the simple inspection of inventories and the most complex: control of correctness of work."¹ Control focussed on production, less on the financial accounts and hardly ever on the profitability of enterprises.

17. In the late 80's and early 90's the first auditing firms were launched. A Soviet firm, INAUDIT, part of the Ministry of Finance, has been created to audit joint ventures and the big six

international audit firms have developed activities in the Soviet Union. However, these activities tend to be more consulting services, training etc. than auditing per se.

18. To perform independent audits, an auditing profession has to be created rapidly. This will require massive training: in auditing theory and mainly in auditing practices (on-the-job training, internships abroad, and the like).

19. These radical changes in accounting and auditing cannot be implemented overnight. The strategy should be to move step by step towards a full implementation of international standards which may take at least three to five years.

20. In the meantime, the initial step would be to adapt the existing system to bring the main divergences into line with international practices in terms of principles and presentation. Simultaneously, but with a medium-term deadline, the authorities should prepare a detailed reform of accounting and auditing standards and practices. Finally, very basic and practical training programs have to be launched all over the country.

Notes to Annex 7-1

1. V.I. Lenin, *Collected Works*, volume 37, p 339.

ANNEX 11-1

Energy Prices and Trade

Why is energy price reform so important ?

1. While there is general agreement on the objectives and the general priorities for reforming the energy sector, there is much more controversy about the order in which different policy changes should be introduced and about the speed at which the necessary transition to much higher real energy prices should take place. The argument revolves around the differentiated but interlinked impact that reform in the energy sector will have on enterprise behavior, the budget, and foreign trade.
2. Enterprise reform and adjustment is the next key step in sustaining reform. Enterprises will not adjust until they face both hardened budget constraints and rational incentive structures. Part of the rational incentive structure is higher energy prices. Higher energy prices, in turn, will have two major consequences.
3. In the *short-term*, higher energy prices will redistribute income and resources away from energy consumers towards energy producers and the budget. For energy producers, this shift will recast their incentives to production. The budget, on the other hand, will benefit through the export taxes levied to bridge the differential between the domestic and world prices for energy.¹ The division of the gross revenue transferred between these two recipients must in the short-term depend upon the resources required immediately in order to stabilize oil production and the fiscal needs of the government's stabilization program. Subsequently, the transfers can be increasingly directed towards producers to provide the technology, equipment and human resources that will be needed to ensure that future oil and gas production follows a stable or even increasing trend.
4. In the *medium-term*, energy users will be pressed to adapt to the higher real level of energy prices by energy conservation via changes in the composition and methods of production and of household consumption. Without such adjustments, raising energy prices will have little effect other than to exacerbate the general level of inflation. However, without much higher energy prices there is little or no prospect that the necessary economies in energy use will be achieved. Ensuring that higher energy prices really do lead to changes in behavior depend upon general reforms which affect the constraints and incentives under which enterprises and households operate. These are discussed in Chapters 4 and 9, but there are some questions which call on specific characteristics of the energy sector that are discussed in this chapter.
5. The constraints to this progression of events are largely political and social. Until enterprises and households begin to adapt to higher energy prices, any transfer of resources towards energy producers and the budget via price increases will be extremely painful because it will involve a direct reduction in real incomes of most of the population at a time when real incomes are already declining due to the decline in trade, investment and government spending. On the other hand, if real energy prices are not increased - with the consequent pain that this causes both industrial and domestic consumers - there will be little or no incentive for energy users to adapt their behavior.
6. *Without* changes in the behavior of energy consumers and producers induced by immediate price increases, oil production would continue to fall, followed a few years later by a decline in gas

production. Domestic energy consumption would remain high because of a failure to provide the incentives towards energy conservation and a lack of resources to invest in developing new fields and in more efficient techniques of production. The burden of adjustment would fall on exports of oil and, later, of gas, so that export earnings would collapse and the country would have to depreciate its exchange rate rapidly in order to generate export earnings from the rest of the economy. Such a depreciation would increase upward pressure on prices, thus hindering the reduction of inflation and the establishment of a stable monetary environment. Since the government relies heavily upon tax revenues which are directly or indirectly linked to the energy sector, it would also experience substantial difficulties in controlling the budget deficit. Overall, the difficulty of making the transition to a market economy would be immeasurably increased by the costs of replacing exports of energy as the main source of foreign earnings.

7. If, on the other hand, energy price increases spur the necessary changes in enterprise behavior, oil and gas production would stabilize initially and, with a very large injection of private investment (mainly from abroad in the immediate future), and some transfer of technology, begin to rise again. In this scenario, even a gradual recovery of industrial production to 1990 levels would not offset the declining trend in energy use, as enterprises will be using energy far more efficiently than before. Stable or rising production combined with lower consumption would permit a large increase in oil and gas exports which, combined with the possibility of capital inflows induced by opening up the oil and gas sector to foreign investment, would lead the ruble to appreciate in real terms. This would exert downward pressure on inflation, and would force enterprises producing non-energy traded goods to become more efficient in order to survive against competition from imports and from non-traded sectors that would otherwise bid domestic factors away from them. With an appropriate tax regime the government would be able to increase the amount of revenue that it obtains from the oil and gas sector without undermining the incentives for energy producers and consumers. A combination of fiscal and monetary stability with structural changes in the industrial and energy sectors would thus initiate a "virtuous circle" that could result in rapid economic growth through the remainder of this decade.

8. The analysis in this chapter argues the case for as radical a transition as is politically possible. The key to a radical transition is raising the real prices for energy in the initial stages of the reform program. Inevitably, there are risks in adopting this strategy. Enterprises may be very slow to adapt to higher real prices for energy while at the same time it may prove technically and economically more difficult to arrest the decline in oil production than currently envisaged. The consequences would be substantial economic disruption incurred at a large political cost with little benefit in terms of higher export earnings and a reduced government deficit. However, the risks of not moving rapidly are arguably even larger. An economic system that is a hugely profligate user of energy because of the dramatic underpricing of all fuels is unlikely to be changed without an extremely painful shock. The different responses in Western Europe and the USA to the 1973 oil price shock illustrate this point most vividly. Any attempt to mitigate or defer this shock may simply postpone and, worsen the difficulties of moving to higher levels of energy efficiency and the freeing of resources to improve the foreign trade balance and the budget.

Energy Price Reform and Consumers

Households

9. The impact of the real changes in fuel prices implemented in May 1992 on the general cost of living will be very small - an increase of less than 1 percent. This does not mean that the nominal price changes have no effect but that this is simply part of the general increase in prices which has

Box A11-1. Gradualism versus shock treatment

The most powerful argument in favor of a gradual rather than a rapid adjustment in energy prices is that the price elasticity of energy demand is very low in the short run, especially in formerly socialist economies. The advocates of this view point to the lack of meters to monitor use of gas and hot water in most apartment buildings and to the poor insulation of the housing stock. Typically, they argue also that programs of energy conservation designed to introduce better technical standards governing energy efficiency and to stimulate the introduction of energy-saving technologies can achieve a substantial reduction in energy use even without large price incentives.

Some of this may be wholly or partly true, but the arguments take insufficient account of the larger picture. In 1989 primary energy consumption (in terms of conventional fuel equivalent) per person was 3610 kwe in Austria, 4540 in Czechoslovakia, 4210 in West Germany, 3030 in Hungary, 3250 in Poland and 4,880 in the USSR. The average GNP per person ranged from \$1760 in Poland and \$2560 in Hungary to \$17,300 in Austria and \$20,700 in West Germany. Over the decade 1973-83 when energy prices increased substantially in real terms in Western Europe energy consumption per \$ of GDP at constant prices fell by 24 percent in Austria, by 23 percent in West Germany and by 9 percent in Czechoslovakia but rose by 9 percent in Hungary and by 8 percent in Poland. These examples illustrate the key role of real energy prices in determining both the absolute level of energy consumption and its changes in both the medium and longer term which emerges from all studies across time and across countries. Structural and technological changes are also important factors in determining long run patterns of energy consumption as comparisons of Austria, Czechoslovakia and Hungary demonstrate. Increasing energy prices is a necessary but not sufficient condition for the achievement of higher levels of energy efficiency. Without the incentives offered by setting energy prices equal to the real opportunity cost of energy, enterprises and households will have no reason to invest effort and money in energy conservation. Further, econometric analysis of the adjustment to the introduction of higher real energy prices in Hungary over the 1980s suggests that it is quite reasonable to expect that the real price elasticity might be -0.15 over a period of 2-3 years.

Experience in countries such as Poland and Mexico suggests that, later in the reform process, after the initial shock of price adjustments has been absorbed, further increases in real price of energy are seen as being more disruptive and politically difficult than during the initial phase of adjustment. The consequence in those cases was that real energy prices followed a zig-zag path of large rises which were eroded over a few months followed by another rise which achieved nothing more than returning real prices to their earlier level. There was little or no increase in average energy prices over the cycle, but the political costs of even maintaining real energy prices were high while the large swings in real prices sabotaged attempts to enforce stricter market discipline on energy enterprises such as gas and electricity utilities. The net effect was to undermine both the credibility of the reform and the incentive to use energy more efficiently.

By contrast, the Bulgarian experience of price reform has been much more encouraging. The reforms introduced in February 1991 involved a very rapid adjustment to world prices for most goods and to about one half of world prices for energy. Standards of living declined very sharply because the average level of wage compensation was about 50 percent. There was general relief that goods were actually available in the shops rather than unmet above high prices, since queuing or empty stores had meant that the real cost of items was very high even when their nominal money prices were low.

These arguments suggest that there is a serious case for implementing a larger adjustment of energy prices during 1992 than is currently envisaged in order to reduce the magnitude and difficulty of the increases which are planned for later in the program. Of course, it is also essential that fuel prices should be regularly adjusted to maintain their level in real terms, since otherwise the phased adjustments will have to be even larger in order to recoup the losses due to inflation between each adjustment.

occurred or will occur. An increase in fuel prices to 50 percent of world prices would, of course, have a larger impact. Real increases of this magnitude would add about 28 percentage points to the general increase in the cost of living. Much of this is due to the very large increases in the prices which must be paid by households, especially for electricity, since these have lagged so far behind the general adjustment in prices. Though this is a significant addition, it is still likely to be swamped by the overall

scale and uncertainty of prices increases following the general liberalization of prices and exchange rate adjustments.

10. The full adjustment of energy prices to the levels prevailing in West European countries, both for energy relative to other traded goods and for different fuels relative to each other, will involve a seven-fold increase in electricity and four-fold increases for oil and gas prices paid by industry. For households the policy would imply raising electricity prices to 29 times their current level while gas and oil would be raised to about 12 times their current level. Such rises in energy prices would lead to an increase of almost 55 percentage points in the cost of living. This overstates the full effect of adjusting energy prices to world price levels on consumers because the additional revenue from taxes on the oil and gas sector made possible by the relative price adjustment should allow the government to reduce other taxes on commodities or incomes, thus mitigating the impact on real disposable incomes.

10.1 The government has to make a judgement about the relative importance of protecting the real income of the population as a whole and the impact of the general price reform, including energy prices, on the price level and inflationary expectations. For energy specifically, this choice affects the distribution of the burden of adjustment between sectors of the economy, between different industries, and between different groups of households. If the government attempts to protect most of the population from the change, the required adjustments will come more slowly and may be more painful in the longer term. Thus, it would be preferable to adopt a scheme which offers an initial lump sum increase in wages that gives some degree of wage compensation for the anticipated initial increase in prices but establishes a very low or zero marginal rate of compensation for subsequent price changes. The price reform implemented in Bulgaria in February 1991 provides an example that might be considered.

10.2 The compensation scheme could be arranged to give specific protection to vulnerable groups by increasing the family allowances and the standard pension to take account of changes in the cost of living due to higher energy prices without offering the same protection to those on higher incomes. Compensatory cash supplements are preferable to fuel coupons since households should be encouraged to save energy wherever possible.

Enterprises

11. The decline in industrial output and national income since 1990 should result in a substantial fall in total energy consumption. The reduction in energy consumption may lag behind that in output as enterprises keep plants operating at less than full capacity, but experience in other countries undergoing the transition to market structures suggests that this lag will not be long. The projections assume that domestic consumption of oil and gas will fall in line with the weighted average decline in GDP over the previous two years with a main weight on output 1 year ago. Since there seem to be problems with the reported consumption figures for 1991, the base year is taken as 1990 and the fall in GDP over 1990-92 is assumed to be 27 percent. The projections take account of the detailed composition of industrial energy demand as reflected in the input-output table and of the effects of changes in the composition of both output and final demand.

12. It is assumed that there is no short-term response of energy demand to the higher prices charged for some or all fuels. This assumption is reasonable for 1992-93 since real energy prices have fallen in the first half of 1992 relative to the wholesale price index as price adjustments have lagged behind the general level of industrial inflation. As noted in Box A11.2 above, the price increases which occurred in May 1992 do little more than catch up with the inflation of prices which has occurred in the first 4 months of the year. If fuel prices were to be increased to an average of 50 percent of world prices

Box A11-2. Recent Changes in Energy Prices

After a long period of stability the prices of all energy products were raised substantially in January 1991 as part of a general price reform. Producer prices for crude oil and natural gas were raised by 130 percent and 100 percent respectively and that for coal by 70 percent. Prices of petroleum products were increased by 60 percent on average and the average price per kwh of electricity approximately doubled [check]. Further price increases occurred in an erratic manner during the course of 1991 in response to a variety of pressures from coal miners, oil producers and refineries, and others. The average prices received by producers were also affected by various changes in the rules governing the right of enterprises to keep a part of the foreign exchange earnings from their exports and the share of their output that could be sold at "free market" or negotiated prices. Table A11.1 gives details of energy prices over 1990-92 together with comparisons between Russian prices at the beginning of June 1992 and West European prices for the first quarter of 1992 assuming an exchange rate of US \$1 = Rb 100.*

As part of the general round of price increases in January 1992, price ceilings for energy products were established which determined the effective prices for these items. Producer prices for crude oil, gas and coal were allowed to rise to five times their previous level. The average price for electricity seems to have been increased by about nine times on top of the changes which occurred in the course of 1991. Market prices on commodity exchanges in March 1992, for the relatively small share of output which is not allocated according to state orders, were much higher than the controlled prices. For coal the commodity exchange price was about Rb 375 per tonne as compared with controlled prices in the range Rb 130 - 150 per tonne. The situation for crude oil and oil products was even more complex because of the regulations governing exports either to CIS republics or to the rest of the world. Crude oil without any kind of export license was being sold for Rb 1,500 - 2,000 while oil destined for other CIS countries was sold for Rb 3,000 - 5,000 per tonne. Oil accompanied by a license to export it to the rest of the world commanded a price of Rb 8,000 - 10,000 per tonne.

All of these prices exclude tax, so that domestic producers and CIS importers would have had to pay value-added tax at 28 percent (temporarily reduced to 20 percent in March) on crude oil, oil products, gas and coal. Electricity does not appear to be subject to the VAT. In principle, VAT payments on inputs should have been rebated to producers paying VAT on their output, but it is not clear whether the system was working properly in practice. An export tax, specified in ecu per tonne, was payable on all exports to the rest of the world. This amounted to 26 ecu per tonne in March 1992, which left a massive incentive to obtain export licenses.

A new price decree came into effect on May 15th 1992. This raised the producer prices for crude oil, gas and coal, introduced a new production tax structure, and abolished the right of the Producing Associations to dispose of a proportion of output at market prices. Assuming that producers set their prices at the maximum allowable level, the wellhead price for oil is Rb 2200 per tonne, of which producers actually receive Rb 600 per tonne after deducting royalties and excise taxes. While obtaining reliable cost data is extremely difficult it is apparent that average operating costs are two to three times the net revenue received by producers. The price for gas to industry and power stations is Rb 1600 per tem plus the cost of transport from Siberia to the user, while coal prices were increased to Rb 950 per tonne at the mine. Electricity and heat prices were subsequently raised to three times their pre-May level, which leaves these prices once more lagging behind fossil fuel prices relative to comparable European prices for each fuel.

* There are some important issues, particularly for crude oil and gas, concerning the transport and distribution margins between well-head and industrial purchaser prices which seem to be unrelated to costs and arbitrarily (or monopolistically) distributed over output being sold to different markets. The same applies to the margins between ex-refinery and consumer prices for petroleum products. While important for the incentives facing energy producers and for the distribution of the rent generated by exploiting natural resources, these issues do not directly affect domestic consumption and will not be discussed here.

Continued

Box A11-2. Recent Changes in Energy Prices (Continuation)

One worrying aspect of the recent changes in energy prices is that the prices charged to households have been increased much more slowly than those charged to industrial users. In Western Europe the average price for electricity per kWh paid by households is typically nearly twice that paid by industries. This price differential reflects the additional costs of distributing power to a dispersed population of consumers whose demand tends to be closely correlated with the overall load curve for the whole power system. In Russia the average price for households is now only 20 percent of the average price for industry, which implies a large cross-subsidy from industrial to household users. Up until 1990 there was little difference between the prices paid by the two groups of consumers, so that subsequent adjustments have been moving the price structure in the wrong direction. Experience suggests that it is very difficult to unassemble such cross-subsidies once they have become a regular feature of the pricing system. They are very damaging to attempts to impose greater financial discipline on utilities as well as to the development of pricing schedules which appropriately reflect the costs of meeting demand. Thus, it is important that these cross-subsidies should be eliminated as rapidly as possible. The same considerations apply to the pricing of gas and hot water as well as to electricity. The distortions implied by cross-subsidies are particularly large in the case of hot water where domestic tariffs per gigacalorie were between 6 percent and 8 percent of industrial tariffs.

Section (b) of Table A11.1 gives index values for the real prices of energy products with 1990=100.² Note that if inflation continues to run at about 25 percent per month in 1992 while energy prices are held constant, the real value of energy prices falls by approximately one-half in 3 months. It follows that holding energy prices constant for 6 months in such an inflationary environment means that the average real price by purchasers over the period is only about 56 percent of the real price at the beginning of the period. If the period between adjustments is reduced to 3 months, the average real price will be about 74 percent of its initial value. Despite massive nominal increases in energy prices their real level (relative to the CPI) in June 1992 had only risen to between 2.2 and 3 times their level in 1990. If energy prices were now to be kept constant in nominal terms until the beginning of September, the overall effect would be that real energy prices in 1992Q3 would be about double those for 1990. (Using the WPI suggests that the real price of most energy products has fallen relative to 1990 - by 25 percent for gas and about 15 percent for oil products. This decline will only be exacerbated by holding nominal prices constant over the next few months.)

At an exchange rate of US \$1 = Rb 100 domestic energy prices for industrial users are mostly less than one-quarter or one-fifth of comparable world prices. The ratios of domestic to world prices are even lower for products consumed by households, either because of the extent of cross-subsidies in tariff structures or because Russian taxes on petroleum products such as gasoline and diesel fuel are much lower than West European tax rates. Depending upon the reference exchange rate adopted, large increases in the real prices of energy will be required in order to meet the target of raising domestic energy prices to one-third of world prices by September 1992. If the current market exchange rate of \$1 = Rb 130 holds through the summer (without any adjustment for ongoing inflation), it would be necessary to increase the prices of crude oil and gas to about 2.5 times the current levels in order to achieve this goal.

² The deflator used to construct most of the columns in the table is the Moscow consumer price index (CPI). In principle, it would be more appropriate to deflate industrial energy prices by the wholesale price index (WPI) because this would show any changes in the real cost of energy inputs relative to the value of industrial output which is the crucial variable determining industrial consumption of energy. The WPI has risen much more rapidly than the CPI - to 2930 as compared with 1220 with 1990=100. However, it is far from certain that this is reflecting the prices paid or received by industrial producers since the volume of output has fallen so much and many enterprises are not actually paying for the goods that they are receiving. Thus, the final column in the table is intended only as a general indication of the change in the real price of energy relative to the WPI up to June 1992. Energy prices for the beginning of the month were deflated by the previous month's price index - i.e. the early June figures were deflated by the May index.

Continued

Box A11-2. Recent Changes in Energy Prices (Continuation)

Table A11-1a. Nominal Energy Prices, 1990-92

Fuel (Ton Unless Specified)	Official Prices Paid by Industry (Rb) ^a					West European	Russia/ ^b
	1990		1991		1992	Prices (9201)	World Price
	Jan	Jan	July	Jan	June	Rb at US \$1 = 100	(%, June 92)
Coal - Ex-Mine	12.2	21	30	150	950	2750	33
Gas (1000 cu.m) - Into							
Power Station/Plant	26.0	52		260	1600	9250 ^c	19
Crude oil - Into Refinery	26.0	60	74	350	2200	11900	18
Gasoline - Ex-Refinery	60.5	117		714	4424	19300	23
Gasoline - Consumer ^d				1358	6518	105000	6
Electricity (1000 kwh)							
- Industry	14.0	28	50	400	1200	8000	15
- Households	10.0	20	30	120	240	14000	2
District Heat (Gcal)							
- Industry	5.5	11		110	300	3200	9
- Households	1.5	3		9	17		

Source: Plancecon and mission estimates.

Table A11-1b. Real Energy Prices, 1990-92

Indices of Real Energy Prices Paid by Industry (Jan. 1990 = 100)

Fuel	1991		1992		
	Jan	July	Jan	June	June: WPI
Crude Oil - Into Refinery	220	144	530	303	102
Gasoline - Ex-Refinery	184		465	262	89
Electricity - Industry	190		1125	312	104
District Heat - Industry	190		787	198	66
- Households	190		236	41	

Source: Mission estimates.

Notes:

- (a) Excludes VAT unless stated.
- (b) European border prices.
- (c) Includes road tax and VAT.
- (d) Includes road tax.

during 1993, the real increases in fuel prices would lead to some conservation of energy during 1993-94. Again the projections are based on a lagged response to higher fuel prices and on quite conservative estimates of the likely price elasticity of demand.

13. With a small number of exceptions the general dispersion of consumption shown in Box Table 11.1 suggests that adjustments in individual fuel prices should not have a highly disproportionate impact on specific sectors. The most vulnerable sectors are iron and steel with respect to the price of coal and basic chemicals with respect to the prices of both gas and electricity. This is borne out by examining the sectoral price increases associated with an adjustment of fuel prices to 50 percent of their world levels. The overall real increase in the cost of living for this case was 9 percent. The real price adjustments for individual sectors exceed 20 percent in four predictable cases: basic chemicals (34 percent), cement (31 percent), other non-metallic mineral products (22 percent) and iron/steel (21 percent). These figures take account not only of the direct impact of energy prices on production costs but also the indirect impact via the prices of other intermediate goods and services.

14. Because the change in the cost of living caused by the adjustment to world energy prices is very large, there are obvious pressures to spread it over a period of several years. A common line of argument is that higher energy prices will have little or no impact on total energy consumption in the short-run, so that it is not worth incurring the economic and political costs of change for a very limited gain. On the other side it is argued that postponing the adjustment may simply make the whole process of adapting to market prices for energy more painful in the short run and less beneficial in the medium-term than a large but decisive adjustment early in the process of reform (see Box 11-2 and Annex 11-1). For the Russian economy as a whole it is vital that price signals are used to induce rapid energy conservation and to provide incentives to stimulate investment in the production of oil and gas. Russia's high levels of energy consumption per person and per unit of GDP has already been noted. Reducing energy consumption per unit of GDP by 50 percent is a target that could be achieved over the next 5-8 years, since it would still leave Russia well above the equivalent values for Korea, Turkey and Western Europe. Such a reduction in energy consumption would transform the country's external trade situation and growth prospects, but *it can only be attained by relying to the greatest possible extent on the shock of a rapid and very large increase in real energy prices which will force enterprises to find ways of using energy more efficiently.*

15. Nor should the impact of small reductions in energy consumption in the short run be underestimated. An overall reduction of 10 percent in total energy consumption combined with a shift in the composition to allow the saving to be exported in the form of oil would permit an increase of about 38 percent in oil exports relative to the 1991 level (assuming constant production). Focusing on the oil sector alone, a 10 percent decrease in domestic consumption would imply a 12 percent increase in exports relative to 1991. Even if the price elasticities of demand are quite small in the short run, the magnitude of the necessary increases in real prices is such that they should have a significant impact on both domestic consumption and exports within a rather short period of time².

Energy Prices in Inter-Republican Trade

16. Exports of crude oil and petroleum products to the other republics in the former Soviet Union accounted for 46 percent of net oil exports by volume in 1990 and 59 percent of the lower volume of exports in 1991. For gas the share of the former Soviet republics in net exports was 60 percent in 1991. Thus, both the volume and prices established for inter-republican exports of oil and gas will have a large impact on Russia's total export earnings. On the volume side it is likely that energy demand will

fall at least as sharply in republics with large industrial sectors such as Ukraine and Belarus as in Russia itself. Without taking account of changes in prices it is reasonable to project an overall decline of 30 percent in demand for inter-republican exports of oil and 25 percent for gas. The aggregate estimates are roughly in line with the volumes specified in trade agreements between Russia and the other republics which are built into the revenue projections discussed earlier, but the official figures envisage a sharper fall in gas exports than in oil exports which seems improbable on both technical and economic grounds.

17. In principle, Russia is providing a large implicit subsidy to oil and gas importing members of former Soviet Union by allowing them to purchase agreed quantities of oil and gas at Russian domestic prices rather than the much higher world prices. There are general arguments—discussed in Chapter 6—which imply that this is not the most efficient way either of transferring resources from Russia to the other republics or of maintaining the general level of inter-republican trade. In addition, there are some specific issues concerning the impact of these implicit trade subsidies in the energy sector which will be examined here. These revolve around four questions :

1. What are the actual prices being paid by importing republics for their oil and gas supplies? This leads on to the issue of who is actually benefiting from the policy.
2. Why are the net benefits to the importing countries much lower than might be inferred from a simple comparison of the gap between Russian and world energy prices ?
3. What is the impact of the policy on domestic producers and consumers of energy inside Russia?
4. Is there anything that the Government could do to ensure that the policy has its intended effects?

18. *Actual prices in inter-republican trade.* Russia's intentions concerning the pricing of inter-republican exports of oil and gas remain somewhat unclear. It seems that the official position is that those republics which have concluded trade agreements with Russia should be able to buy oil and gas, up to the volumes specified in the agreements, at prices equivalent to the wholesale prices paid by Russian industry (including VAT). However, the most recent pricing decree states merely that the prices charged for such exports should be in accordance with the prices or pricing rules specified in the trade agreements and it is the mission's understanding that the most important agreements—such as those with Belarus and Ukraine—do not deal with the issue of prices at all. Inquiries in Ukraine suggest that, in practice, barter accounts for a substantial fraction of inter-republican trade in oil while money purchases by oil refineries and for power generation have been based on prices much higher than internal Russian prices. In late April and early May the indications were that the average cost of oil imports from Russia to Belarus and Ukraine would have reached approximately one-half the comparable world prices at an exchange rate of Rb 100 per dollar by June 1992. For gas the situation was more confused; it appears that Gazprom was delivering Russian gas to the other republics in the first quarter of 1992 at the domestic price of Rb 300 per tcm plus transport costs. No agreement on Gazprom's inter-republican export prices for the second quarter of 1992 had been concluded by late April. Turkmenistan attempted to raise the price for its gas to Rb 870 per tcm excluding transport for the first quarter and has a stated intention of charging Rb 8000 per tcm for the second quarter. However, the actual prices realized are not known because trade between Turkmenistan and Ukraine was terminated at the end of February as a result of a dispute over prices, transit arrangements and transport charges.

19. This evidence suggests that the importing republics are paying average prices for their oil and gas imports which are well above either the Russian controlled prices or the former domestic 'free' market prices. Up to one-half of the total implicit subsidy from the gap between Russian controlled prices and world market prices is being captured either by producers or by intermediaries within Russia. The volume of inter-republican trade in oil going through the commodity exchanges is not known, but it is clearly much less than the total volume of inter-republican trade in crude oil and oil products. Thus, a substantial fraction of the implicit subsidy must be accruing to Russian enterprises which are bartering oil for imports of intermediate or final goods.

20. The existence of a huge price distortion will inevitably lead to forms of arbitrage which will tend to narrow the gap between Russian export prices to the other republics and world prices. The dynamics of this outcome are elaborated in Box 6-2. Such massive arbitrage profits will have the usual effect of slowly poisoning the whole oil market with corruption, uncertainty and distortions. The total volume of exports to the former Soviet republics will be larger than would have occurred without the price distortions, unless the Government imposes very tight quotas on inter-republican exports, so that there will be a substantial loss of foreign exchange to the country. Oil producers may benefit by receiving a higher average price for their output if they are allowed to sell a part of this at 'free' market prices. However, this may be more than fully offset by the fact that the oil sector will become the residual holder of a disproportionate share of unpaid IOUs issued by enterprises seeking to maintain their production. Overall, the attempt to maintain different prices for inter-republican and world trade will contribute substantially to undermining efforts to impose monetary discipline and will promote a shift away from monetary to barter transactions based on oil.

21. *Can the Government do anything to deal with these problems?* In short the answer is no. For as long as profitable opportunities for arbitrage exist, the Government must accept either a potentially unlimited transfer to the importing republics or the kind of market distortions resulting from the imposition of export quotas that are described above. The market could be made more transparent by full liberalization of the domestic oil market - i.e. the abolition of state orders. The Government could capture most of the premium on export licenses for inter-republican trade by auctioning rather than allocating them.

22. The analysis (see Box 6-2) has shown that the magnitude of the terms of trade cushion which is being provided to the importing republics via the right to buy oil and gas imports at domestic Russian prices is much less than is usually believed. Further, the costs of providing the cushion are much larger than was probably anticipated. There are, therefore, strong arguments for considering whether the implicit transfer of income to the importing republics would not be better organized in some other manner while allowing oil and gas prices in inter-republican trade to rise to world prices.

Notes to Annex 11-1

1. This raises issues of a later fiscal adjustment as the differential is narrowed at subsequent stages in energy price reform.
2. Households account for about 25 percent of final energy consumption (including hot water supplied by municipalities). This is equivalent to about 17 percent of total primary energy consumption. Gas and hot water represent 60 percent of this consumption. Thus, even if the lack of meters and other factors hold back energy conservation in parts of the household and service sectors, the net reduction in the overall response of energy demand to prices will not be large.

ANNEX 11-2

Modelling the Impact of Energy Prices

1. The model which has been used to generate the projections discussed in Chapter 11 takes account not only of the direct, but also of the indirect effects of increasing energy prices via the pricing of industrial goods and services. The basic structure of the model is simple; further details of the various stages of the analysis are given below. Changes in producer prices for energy, wages, the exchange rate and various other taxes are treated as exogenous policy variables. Given values for these policy variables the model estimates the changes in input coefficients by industrial sector. On the assumption that producer prices change in line with these costs of production, a new set of producer prices may be obtained. This assumption can be modified to allow certain non-energy producer prices to be set exogenously or to allow certain prices to move in line with the world prices for traded goods. Producer prices are linked to retail prices by trade and distribution margins, so that changes in the cost of a general consumption bundle or of the cost of living for a specific group can be computed if the relevant weights are supplied.

Inflation

2. A crucial assumption that affects the projected impact of higher energy prices in raising the general cost of living concerns the question of the government's expectations about the real wage level. It is essential that real wages fall, perhaps very sharply, if price reforms and stabilization are to work. This means that workers cannot be fully compensated in their wages for the increase in energy prices if the reform is to succeed. The projections presented in the text are based on the assumption that there is no wage compensation for the change in the *real* prices of energy. Calculations for alternative assumptions about the degree of wage compensation show that if wages are adjusted upwards by one-half of the cost of living rise caused by increasing real energy prices the inflation impact of higher energy prices must be about 1.25 times that for no wage adjustment. If wages were adjusted by the full amount of the cost of living rise the inflation impact would be about 1.6 times that for no wage adjustment. The additional inflation in both cases occurs because wage compensation means that the burden of the real adjustment in energy prices is being shifted from wages to enterprise profits and tax revenues. Complete or nearly complete wage compensation means that adjustments in the real prices of food, energy or other items with a significant impact on the cost of living can only be achieved by accepting large nominal increases in the general price level. While minimal or partial wage compensation may appear to be much harsher, the main differences between the two outcomes are distributional as inflation affects the real values of savings and wealth, the distribution of the tax burden and the level of enterprise profits in different sectors.

Demand

3. For the demand projections, the exogenous macroeconomic parameters are changes in the components of final demand—personal consumption, government consumption, gross investment and exports. Intermediate demand for each fuel is obtained from the modified input-output coefficients and the final demand vector, while final demand for fuels depends on the price elasticities of household energy consumption.

4. The model combines elements of input-output analysis with two stage cost functions based on the KLEM translog specification. The upper stage expresses total costs in terms of price indices for capital, labor, an energy aggregate and a materials aggregate. The aggregate energy price index is in turn based on a translog cost function of the separate prices of coal, gas, petroleum products and electricity. The materials aggregate is based on the composition of non-energy material inputs for each sector in the input-output table without any substitution, so that materials inputs are all assumed to increase or decrease in the same proportion.

5. The analysis is based on a 48-sector disaggregation of the economy. It has been designed to focus on the role of industrial energy consumption and on links between energy use and the environment, so the disaggregation reflects this set of priorities. The 48 sectors include 4 energy sectors (coal, gas, petroleum products and electricity), 31 manufacturing sectors (based on the 3 digit ISIC classification with a further breakdown of the food processing sectors 311/312 to give 6 food manufacturing sectors), and 13 other sectors covering agriculture, mining, construction, transport and various services.

6. The electricity industry is treated specially. It is assumed that all adjustments in electricity supply affect fossil fuel generation, by holding the contribution of imports and generation from nuclear and hydro stations constant in absolute terms. It is assumed that between 1989 and 2000 the average level of power station and transmission losses is reduced to 10 percent of electricity consumption outside the energy-conversion industries. Finally, it is assumed that there will be a gradual shift in fossil fuel generation from coal and oil towards gas as old generating plant is replaced by new capacity.

7. The energy price elasticities discussed above refer to the own-price elasticities in the KLEM cost functions or in household demand. In the projections up to 1995 it is assumed that the fuel composition of energy demand in each sector does not change, but the projections to 2000 take account of inter-fuel substitution as well as changes in the overall energy intensity of production. The cross-price elasticities for the KLEM model are based on a consensus of estimates for the manufacturing sector in Europe and North America.

8. The model has been used to prepare longer term projections of energy demand for 1995 and 2000. They suggest that the exportable surplus of oil, gas and coal should grow at least until 1995 because domestic consumption should decline in response to higher domestic energy prices faster than any anticipated decline in production. The magnitude of the exportable surplus relative to current levels of world trade in energy products is very large for gas and above 10 percent for coal and oil.

Trade and Revenues

9. On the basis of the demand forecasts discussed in Chapter 11, some projections for trade and revenues for the oil and gas sector have been prepared. The basic projection for 1992 is outlined in the column headed 1992 while alternative projections that incorporate the more rapid declines in consumption are given in the columns headed 1992A and 1992B. Two scenarios for 1993 are elaborated in Tables 11.3 and 11.4. The first assumes that demand is affected only by macroeconomic developments and that there is no response to the price adjustments to be implemented in June 1992. The second builds on this scenario by assuming that there is a small price response - for an elasticity of -0.05 - in 1993. The scenarios are also differentiated in response to probable constraints on pipeline capacity and market demand which are expected to limit exports of gas in 1992-93. It is assumed that no more than 105 billion cu.m. of gas can be exported to the rest of the world. Under the A & C scenarios it is assumed that this constraint has the effect of lowering total gas production. In the B & D scenarios the assumption

is that gas production is maintained by substituting gas for oil in domestic consumption (on an oil-equivalent basis), thus releasing oil which can be exported if desirable.

10. The "low output" scenario for 1993 assumes that oil production falls by a further 20 million tonnes per year in 1993 from the projected 1992 output of 380 million tonnes while unconstrained gas production falls by 10 percent. Even in this scenario total earnings from exporting oil and gas to the rest of the world rise slightly because of the sharp reduction in demand. On the other hand the "high output" scenario, which assumes that output rises by 20 million tonnes per year in 1993 from the 1992 level, implies a significant increase in foreign exchange earnings from oil and gas, especially if gas can be substituted for oil domestically. In calculating the domestic financial balances presented in the second half of each table it has been assumed that the path of domestic prices (at constant June 1992 prices and an exchange rate of US \$1 = Rb 100) follows the proposal for increasing energy prices outlined at the end of Chapter 11. The crucial elements are the assumptions that domestic prices of oil and gas to industry are raised to 33 percent of equivalent world prices in September 1992, to 50 percent in April 1993 and to 67 percent in September 1993.

Table A11-2a. Russian Federation: Oil & Gas Balances + Revenue Projections
Based on Oil/Gas Demand Projections with Zero Price Elasticity

	1990	1991	1992	1992A	1992B	Low output		High output	
						1993A	1993B	1993C	1993D
Oil (millions of tons)									
Production	516.2	461.1	380.0	380.0	380.0	360.0	360.0	400.0	400.0
Consumption	227.4	241.5	166.0	152.4	94.1	145.5	125.1	145.5	74.7
ROW Exports	155.8	91.1	117.7	131.3	189.6	118.2	138.6	158.2	229.0
Crude	106.8	51.0							
Products	49.0	40.2							
FSU Net Exports	133.0	128.5	96.3	96.3	96.3	96.3	96.3	96.3	96.3
Crude	104.0	107.7	79.4	79.4	79.4	79.4	79.4	79.4	79.4
Products	29.0	20.8	16.9	16.9	16.9	16.9	16.9	16.9	16.9
Natural Gas (billions of cu.m.)									
Production	640.6	642.9	604.0	576.7	646.0	565.7	590.0	565.7	650.0
Consumption	547.6	415.9	399.7	372.4	441.7	361.4	385.7	361.4	445.7
Normal	547.6	415.9	399.7	372.4	372.4	361.4	361.4	361.4	361.4
Oil substitution	0.0	0.0	0.0	0.0	69.3	0.0	24.3	0.0	84.3
ROW Exports		91.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0
FSU Net Exports		139.0	99.3	99.3	99.3	99.3	99.3	99.3	99.3
Financial Balances (April-December 1992, Year 1993)									
ROW Export Revenue (\$ billion)			16.9	18.1	23.4	22.6	25.0	27.4	35.9
Oil			10.6	11.8	17.1	14.2	16.6	19.0	27.5
Gas			6.3	6.3	6.3	8.4	8.4	8.4	8.4
Export Tax Revenue (\$ billion)			6.3	6.7	8.7	11.3	12.5	13.7	17.9
Oil			4.0	4.4	6.4	7.1	8.3	9.5	13.7
Gas			2.3	2.3	2.3	4.2	4.2	4.2	4.2
Gross Oil & Gas Revenues (Rb billion)			2146.0	2118.9	2319.9	4785.8	4898.6	5025.5	5417.1
Oil			1022.9	1042.4	1125.5	2157.8	2157.8	2397.6	2397.6
Gas			1123.1	1076.5	1194.4	2627.9	2740.8	2627.9	3019.5
Royalties & Other Taxes (Rb billion)			429.2	423.8	464.0	957.2	979.7	1005.1	1083.4
Oil			204.6	208.5	225.1	431.6	431.6	479.5	479.5
Gas			224.6	215.3	238.9	525.6	548.2	525.6	603.9
Oil & Gas Producer Revenues (Rb billion)			643.8	635.7	696.0	1435.7	1469.6	1507.7	1625.1
Oil			306.9	312.7	337.7	647.4	647.4	719.3	719.3
Gas			336.9	323.0	358.3	788.4	822.2	788.4	905.8
Investment, Transport & Misc (Rb billion)			1073.0	1059.5	1159.9	2392.9	2449.3	2512.8	2708.5
Oil			511.5	521.2	562.8	1078.9	1078.9	1198.8	1198.8
Gas			561.5	538.3	597.2	1314.0	1370.4	1314.0	1509.7
Total Tax Revenue (Rb billion)			1057.4	1098.1	1334.8	2086.0	2231.0	2374.0	2877.0

Table A11-2b. Russian Federation: Oil and Gas + Revenue Projections
 Based on Oil/Gas Demand Projections with Real Price Elasticity = -0.05

	1990	1991	1992	1992A	1992B	Low Output		High Output	
						1993A	1993B	1993C	1993D
Oil (millions of tons)									
Production	516.2	461.1	380.0	380.0	380.0	360.0	360.0	400.0	400.0
Consumption	227.4	241.5	166.0	152.4	94.1	127.3	56.3	127.3	5.9
ROW Exports	155.8	91.1	117.7	131.3	189.6	136.4	207.4	176.4	297.8
Crude	106.8	51.0							
Products	49.0	40.2							
FSU Net Exports	133.0	128.5	96.3	96.3	96.3	96.3	96.3	96.3	96.3
Crude	104.0	107.7	79.4	79.4	79.4	79.4	79.4	79.4	79.4
Products	29.0	-20.8	16.9	16.9	16.9	16.9	16.9	16.9	16.9
Natural Gas (billions of cu.m.)									
Production	640.6	642.9	604.0	576.7	646.0	505.5	590.0	489.1	650.0
Consumption	547.6	415.9	399.7	372.4	441.7	301.2	385.7	284.8	445.7
Normal	547.6	415.9	399.7	372.4	372.4	301.2	301.2	284.8	301.2
Oil substitution	0.0	0.0	0.0	0.0	69.3	0.0	84.5	0.0	144.5
ROW Exports		91.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0
FSU Net Exports		139.0	99.3	99.3	99.3	99.3	99.3	99.3	99.3
Financial Balances (April-December 1992, Year 1993)									
ROW Export Revenue			16.9	18.1	23.4	24.8	33.8	29.6	44.1
Oil			10.6	11.8	17.1	16.4	24.9	21.2	35.7
Gas			6.3	6.3	6.3	8.4	8.4	8.4	8.4
Export Tax Revenue (\$billion)			6.3	6.7	8.7	12.4	16.6	14.8	22.1
Oil			4.0	4.4	6.4	8.2	12.4	10.6	17.9
Gas			2.3	2.3	2.3	4.2	4.2	4.2	4.2
Gross Oil & Gas Revenues (Rb billion)			2146.0	2118.9	2319.9	450.6	4898.6	4669.4	5417.1
Oil			1022.9	1042.4	1125.5	2157.8	2157.8	2397.6	2397.6
Gas			1123.1	1076.5	1194.4	2348.1	2740.8	2271.8	3019.5
Royalties & Other Taxes (Rb billion)			429.2	423.8	464.0	901.2	979.7	933.9	1083.4
Oil			204.6	208.5	225.1	431.6	431.6	479.5	479.5
Gas			224.6	215.3	238.9	469.6	548.2	454.4	603.9
Oil & Gas Producer Revenues (Rb billion)			643.8	635.7	696.0	1351.8	1469.6	1400.8	1625.1
Oil			306.9	312.7	337.7	647.4	647.4	719.3	719.3
Gas			336.9	323.0	358.3	704.4	822.2	681.5	905.8
Investment, Transport & Misc (Rb billion)			1073.0	1059.5	1159.9	2253.0	2449.3	2334.7	2708.5
Oil			511.5	521.2	562.8	1078.9	1078.9	1198.8	1198.8
Gas			561.5	538.3	597.2	1174.1	1370.4	1135.9	1509.7
Total Tax Revenue (Rb billion)			1057.4	1098.1	1334.8	2139.2	2643.7	2411.9	3289.7

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Table 1-1a: Population, 1980-90
(in percent unless otherwise specified)

	1980	1985	1990 3/
Total population (millions, mid-year) 1/	139.0	143.9	148.3
Males	46.0	46.0	47.0
Females	54.0	54.0	53.0
Under 16	23.0	na	24.3
Active Age 2/	59.7	na	56.7
Above Active Age	17.3	na	19.5
Population growth rate	0.5	0.5	0.2
Crude birth rate	1.6	1.7	1.4
Crude death rate	1.1	1.1	1.2

Source: USSR Population Census and World Bank estimates.

Notes:

1/ The breakdowns for 1980 are those of 1979.

2/ Includes women aged 16-55 and men aged 16-60.

3/ Age breakdown listed under 1990 is for 1989.

Table 1-1b: Employment, 1980-90
(in percent unless otherwise specified)

	1980	1985	1990
Employed-Total (millions)	73.3	74.9	74.4
Employed-State Sector (millions)	72.5	74.2	73.2
Males	47.4	48.1	47.6
Females	52.3	51.9	52.4
In Industry & Construct.	42.0	41.8	42.8
In Agriculture	15.0	14.3	13.4
Other Sectors	43.0	43.9	43.8
of which: education and health	17.5	17.9	19.5
Central Government	2.3	2.4	2.3
Retired (millions receiving pension)	28.3	31.2	33.8
As Percent of employed	39.1	42.0	46.2

Source: Russian Goskomstat.

Table 1-2: Population by Economic Regions, Republics, Krai, Oblasts and Okrugs, 1991 (mid-January)

	Total (thousands)	Urban (percent)	Density (pop/sq. km)
Russian Federation	148,543	73.9	8.7
I. North	6,161	77.0	4.2
1. Arkhangel'skaia Oblast	1,577	73.8	2.7
2. Nenetskaia Soviet Autonomous Republic	55	61.8	0.3
3. Republic of Karelia	799	82.0	4.6
4. Republic of Komi	1,265	76.0	3.0
5. Murmansk'skaia Oblast	1,159	92.1	8.0
6. Vologod'skaia Oblast	1,361	66.0	9.3
II. Northwest	8,305	86.8	42.3
7. St. Petersburg City	5,035	100.0	
8. Leningrad'skaia Oblast	1,670	66.0	78.1 /1
9. Novgorod'skaia Oblast	755	70.2	13.6
10. Pskov'skaia Oblast	845	63.9	15.3
III. Central	30,478	82.8	62.8
11. Brianskaia Oblast	1,464	68.3	42.0
12. Ivanov'skaia Oblast	1,317	81.7	55.1
13. Kaluzh'skaia Oblast	1,080	70.3	36.1
14. Kostrom'skaia Oblast	813	68.9	14
15. Moskov'skaia Oblast	6,718	79.5	334.5 /2
16. Moscow City	9,003	100.0	
17. Orlov'skaia Oblast	901	62.8	36.5
18. Riazan'skaia Oblast	1,349	66.6	34.1
19. Smolensk'skaia Oblast	1,166	68.8	23.4
20. Tver'skaia Oblast	1,676	71.8	19.9
21. Tul'skaia Oblast	1,855	81.5	72.2
22. Vladimir'skaia Oblast	1,660	79.6	57.2
23. Iaroslavl'skaia Oblast	1,476	81.9	40.5
IV. Volgo-Vyatka	8,480	69.6	32.2
24. Republic of Chavash	1,346	59.4	73.6
25. Kirov'skaia Oblast	1,700	70.7	14.1
26. Republic of Marii-El	758	62.0	32.7
27. Mordovian Soviet Socialist Republic	964	57.7	36.8
28. Nizhegorod'skaia Oblast	3,712	77.4	49.6
V. Central Chernozem	7,761	61.2	46.3
29. Belgorod'skaia Oblast	1,401	64.0	51.7
30. Kurskaia Oblast	1,336	59.3	44.8
31. Lipetsk'skaia Oblast	1,234	63.5	51.2
32. Tambov'skaia Oblast	1,315	57.1	38.3
33. Voronezh'skaia Oblast	2,475	61.5	47.2

Table 1-2: Population by Economic Regions, Republics, Krai, Oblasts and Okrugs, 1991 (mid-January)

	Total (thousands)	Urban (percent)	Density (pop/sq. km)
VI. Volga	16,586	73.7	30.9
34. Astrakhanskaia Oblast	1,007	68.0	22.8
35. Republic of Kalmykia	328	46.0	4.3
36. Penzenskaia Oblast	1,512	62.7	35.0
37. Samarskaia Oblast	3,290	81.1	61.4
38. Saratovskaia Oblast	2,708	74.8	27.0
39. Republic of Tatarstan	3,679	73.8	54.1
40. Ulianovskaia Oblast	1,430	72.2	38.3
41. Volgogradskaia Oblast	2,632	75.9	23.1
VII. North Caucasus	17,030	57.7	48.0
42. Republic of Dagestan	1,854	44.0	36.9
43. Chechen Republic and Ingush Republic	1,307	45.8	67.7
44. Kabardino-Balkar Republic	777	61.5	62.2
45. Krasnodarskii Krai	5,175	54.4	61.9
46. Republic of Adygeya	437	52.6	57.6
47. North-Osetien Soviet Socialist Republic	643	68.9	80.3
48. Rostovskaia Oblast	4,348	71.3	43.1
49. Stavropolskii Krai	2,926	53.8	36.3
50. Karachai-Cherkess Republic	427	49.4	30.3
VIII. Urals	20,397	75.1	24.8
51. Republic of Bashkortostan	3,984	64.6	27.7
52. Cheliabinskaia Oblast	3,641	82.4	41.4
53. Kurganskaia Oblast	1,110	55.1	15.6
54. Orenburgskaia Oblast	2,194	65.3	17.7
55. Permskaia Oblast	3,110	77.5	19.4
56. Komi-Permyatskaia Autonomous Oblast	160	30.0	4.9
57. Sverdlovskaia Oblast	4,730	87.4	24.3
58. Udmurt Republic	1,628	70.3	38.7
IX. Western Siberia	15,158	73.2	6.2
59. Altaiskii Krai	2,851	56.2	10.9
60. Republic of Altai	196	27.0	2.1
61. Kemerovskaia Oblast	3,180	87.4	33.3
62. Novosibirskaia Oblast	2,796	75.0	15.7
63. Omskaia Oblast	2,163	68.2	15.5
64. Tomskaia Oblast	1,012	68.8	3.2
65. Tiumenskaia Oblast	3,156	77.3	2.2
66. Khanty-Mansiiskii Autonomous Okrug	1,314	91.4	2.5
67. Yamalo-Nenets Republic	493	82.6	0.7

Table 1-2: Population by Economic Regions, Republics, Krai, Oblasts and Okrugs, 1991 (mid-January)

	Total (thousands)	Urban (percent)	Density (pop/sq. km)
X. Eastern Siberia	9,243	72.0	2.2
68. Republic of Buryatia	1,056	60.1	3.0
69. Chitinskaia Oblast	1,392	65.8	3.2
70. Aginskii Buryatskii Autonomous Okrug	78	33.3	4.1
71. Irkutskaia Oblast	2,863	80.8	3.7
72. Ust'-Ordynskii Buryatskii Autonomous Okrug	138	18.8	6.2
73. Krasnoiarskii Krai	3,625	72.9	1.5
74. Republic of Khakasia	577	72.6	9.3
75. Taimyrskii (Dolgano-Nenetskii) Autonomous Okrug	54	66.7	0.1
76. Evenkiiskaia Autonomous Oblast	25	28.0	0.03
77. Republic of Tuva	307	47.6	1.8
XI. Far East	8,057	76.3	1.3
78. Amurskaia Oblast	1,074	68.0	3.0
79. Kamchatskaia Oblast	473	81.2	1.0
80. Koriak Autonomous Soviet Republic	40	37.5	0.1
81. Khabarovskii Krai	1,851	79.0	2.2
82. Jewish Autonomous Oblast	220	65.9	6.1
83. Magadanskaia Oblast	534	81.6	0.4
84. Chukchi Soviet Autonomous Republic	154	72.1	0.2
85. Primorskii Krai	2,299	77.6	13.9
86. Sakhalinskaia Oblast	717	85.4	8.2
87. Republic of Sakha (Yakutia)	1,109	66.5	0.4
88. Kaliningradskaia Oblast	887	79.0	58.7

Sources: Russian Goskomstat, "Statistical Yearbook, National Economy of Russia in 1990" pp. 77-80; The Republics of the Russian Federation by Ann Sheehy.

Notes: The last Population census was conducted in mid-January, 1989. Population data for 1991 are estimated on the basis of population census data and information on births and deaths compiled by offices of the "Registry of Acts of Civil Status". These population data are reported on a de facto basis, i.e. these population figures include both permanent and temporary residents in Russian republic and exclude long-term de jure residents who are temporarily in other republics or abroad. Military residents, who may be included in population totals for their republic of origin, constitute a possible exception.

1/ Including St. Petersburg.

2/ Including Moscow.

Table 1-3: State Employment by Sectors, by Sexes

	1980		1989		1989
	Males	Females	Males	Females	Distribution (percent)
	(in thousands)				
Total	31,298	34,314	31,707	33,927	100.0
Industry	11,639	11,106	11,456	10,275	33.1
Agriculture	3,295	2,402	3,256	2,153	8.2
Sylviculture	223	57	192	44	0.4
Construction	4,734	1,974	5,760	1,998	11.8
Transport	4,535	1,518	3,736	1,211	7.5
Communication	279	685	263	627	1.4
Trade, nourishment, material & Technical, Sale, & Storages	1,119	4,469	1,118	4,483	8.5
Information & Calc. Services	35	84	32	144	0.3
Other of Material Production	380	420	514	461	1.5
Housing and Municipal Economy	1,265	1,462	1,432	1,588	4.6
Public health	516	2,862	674	3,248	6.0
Education	1,039	3,775	1,221	4,458	8.7
Culture	174	542	220	645	1.3
Art	116	130	111	137	0.4
Science	1,504	1,606	1,402	1,515	4.4
Crediting and Public Insurance	49	335	38	358	0.6
Public and Economic Management	396	887	282	582	1.3

Sources: Russian Goskomstat, Statistical yearbooks, "National economy of Russia in 1980 and 1989".

Table 1-4: Distribution of Employment by Ownership Structure

	1985	1986	1987	1988	1989	1990	1991 1/
	(In millions)						
State enterprises	68.2	68.6	68.5	67.9	66.7	61.3	56.8
Cooperatives for production & services			0.1	0.4	1.8	2.6	2.7
Consumer cooperatives	1.5	1.5	1.5	1.6	1.5	1.5	1.5
Leased enterprises 2/						2.8	5.1
Joint stock companies 2/						0.2	0.8
Joint ventures 2/						0.1	0.1
Kolkhozes	4.5	4.4	4.3	4.1	4.1	4.0	3.9
Private (personal) plots	0.7	0.7	0.8	1.0	1.1	1.2	1.7
Others 2/						0.8	1.0
Total	74.9	75.2	75.2	75.0	75.2	74.5	73.6

Source: Russian Goskomstat.

Notes:

1/ Provisional.

2/ Until 1990, the available statistics do not separate this category from the state enterprise category, implying that the size of the latter is slightly overstated.

Table 2-1: Net Material Product, 1980-90
(in current prices, billions of rubles)

	1980	1985	1986	1987	1988	1989	1990
By industrial origin 1/	274.1	352.7	359.0	364.7	385.4	412.7	425.2
Agriculture	26.6	49.7	55.6	56.0	72.0	77.5	78.0
Industry	153.5	171.3	167.7	172.2	171.6	183.6	183.4
Construction	28.7	36.9	43.1	46.6	50.4	53.5	52.4
Transportation & communications	17.8	22.8	24.1	24.3	25.4	24.1	32.2
Other	47.5	72.0	68.6	65.6	66.0	74.0	79.2
By domestic use 2/	271.1	337.1	341.1	347.0	374.9	397.8	415.2
Personal consumption	170.4	203.1	206.8	212.9	223.9	244.2	269.1
Material input in cons. serv.	20.4	25.3	26.3	27.7	29.6	31.8	34.1
Public consumption	10.9	15.1	15.8	17.5	19.1	20.3	21.6
Accumulation	69.4	93.6	92.2	88.9	102.3	101.5	90.4
Net fixed investments	45.3	50.4	55.3	58.3	58.0	53.8	46.1
Change in stocks 3/	24.1	43.2	36.9	30.6	44.3	47.7	44.3
Losses		3.9	4.1	5.0	4.9	6.0	7.6

Sources: Goskomstats of the Russian Federation and USSR, Narodnoe Khoziaistvo RSFSR v 1990 g. pp. 18-19. and IMF estimates.

Notes: 1/ Differs from GDP in that it excludes depreciation and value added for nonmaterial services.

2/ Differs from GDP in that it excludes final expenditures on nonmaterial services, net exports, and losses.

3/ Includes unfinished construction.

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Table 2-2: Growth Rate of Net Material Product, in Comparable Prices, 1986-90
(Percentage Change)

	1986	1987	1988	1989	1990
Net material product (NMP)	2.4	0.7	4.5	1.9	-5.0
Agriculture	10.3	-3.0	4.0	2.8	-6.2
Industry	0.1	1.7	6.2	2.0	-2.2
Construction	17.1	7.1	7.5	0.8	-4.3
Transportation & communications	5.7	0.8	4.9	-9.1	-5.4
Domestic trade and public catering	0.6	-4.3	7.6	8.2	3.2
Receipts from foreign trade	-8.9	-4.7	-6.8	3.9	-0.7
Other 1/	2.5	6.2	2.3	10.2	-25.7
NMP used domestically	1.7	0.5	6.8	2.3	-3.9
Consumption	1.0	2.7	4.0	5.4	2.2
Personal consumption	0.2	1.5	3.4	5.4	1.4
Other consumption	4.9	8.5	6.9	5.1	5.0
Accumulation	3.6	-5.4	15.0	-6.1	-21.7
Net fixed investments	5.8	3.5	-2.8	-10.3	-17.8

Sources: Goskomstat of the Russian Federation, Narodnoe Khoziaistvo RSFSR v 1990 g. p. 14. and IMF estimates.

1/ Material technical supply, forestry, data processing and other branches.

Table 2-3: Gross Domestic Product by Industrial Origin at Current Prices, 1989-90

	1989	1990	1989	1990
	(in billions of rubles)		(in percent of GDP)	
Sphere of Material Production	423.1	463.4	73.8	74.0
Industry	206.8	228.1	36.1	36.4
Agriculture	89.0	99.7	15.5	15.9
Forestry	0.4	0.5	0.1	0.1
Construction	60.2	57.3	10.5	9.1
Goods transportation	33.5	41.5	5.8	6.6
Communication	1.4	1.6	0.2	0.3
Trade and catering	19.7	20.6	3.4	3.3
Material supply	3.8	4.1	0.7	0.7
Procurement	2.6	2.7	0.5	0.4
Information and computing	0.9	1.3	0.2	0.2
Other material production	4.8	6.0	0.8	1.0
Sphere of Non-material Production	111.1	125.8	19.4	20.1
Market Services	58.1	63.1	10.1	10.1
Housing and communal	22.4	22.7	3.9	3.6
Passenger transportation	11.1	11.5	1.9	1.8
Communication	2.4	2.2	0.4	0.4
Finance, credit, and insurance	3.3	4.3	0.6	0.7
Science and scientific services	3.3	3.3	0.6	0.5
Health, culture, and social security	5.9	6.2	1.0	1.0
Education, culture and arts	9.7	12.9	1.7	2.1
Non-market services	53.0	62.7	9.2	10.0
General government services	51.3	60.5	9.0	9.7
Science and scientific services	13.2	13.1	2.3	2.1
Health, culture, and social security	9.1	10.4	1.6	1.7
Education, culture and arts	17.3	19.4	3.0	3.1
Finance and credit	0.4	0.6	0.1	0.1
General administration and defence	11.3	17.0	2.0	2.7
Services of Private non-profit institution	1.7	2.2	0.3	0.4
Imputed output of financial intermediaries	-2.4	-3.1	-0.4	-0.5
Total	531.8	586.1	92.8	93.6
Net import duties	39.8	40.0	6.9	6.4
Taxes on domestic products	66.3	71.1	11.6	11.4
Subsidies on products (-)	64.8	70.9	11.3	11.3
Gross Domestic Product at Market Prices	573.1	626.3	100.0	100.0

Sources: Prof. Y. Ivanov, Ms. A. Zharova, and Mr. A. Ponomorenko of CIS and Russian Goskomstat.

Table 2-4: Gross Domestic Product by Expenditure at Current Prices, 1989-90

	1989	1990	1989	1990
	(in billions of rubles)		(in percent of GDP)	
Final consumption expenditure	384.1	434.7	67.0	69.4
Households	266.0	294.7	46.4	47.1
General government (individual needs)	37.4	41.6	6.5	6.6
General government (collective needs)	77.9	92.9	13.6	14.8
Private non-profit inst., serving households	2.8	5.5	0.5	0.9
Gross capital formation	201.1	205.2	35.1	32.8
Gross fixed capital formation	190.7	195.5	33.3	31.2
Changes in stocks	10.4	9.7	1.8	1.5
Net exports (including interrepublican trade)	5.1	2.6	0.9	0.4
Data discrepancies	-17.2	-16.2	-3.0	-2.6
Gross Domestic Product	573.1	626.3	100.0	100.0

Sources: Prof. Y. Ivanov, Ms. A. Zharova, and Mr. A. Ponomorenko of CIS and Russian Goskomstat.

Table 3-1: The Balance of Payments for Russia and the USSR, 1990-91 (excluding inter-republic trade)
(in billions of U.S. dollars)

	1990				1991	
	all currencies		convert. curr.		all currencies	
	USSR	RUSSIA	USSR	RUSSIA	USSR	RUSSIA
Trade Balance	-16.9	-2.0	-1.7	3.8	0.9	5.8
Exports	103.8	80.9	33.6	27.6	71.4	50.9
Oil	27.1	27.1	13.0	13.0	11.8	11.1
Natural gas	11.1	9.6	4.3	3.7	11.8	8.3
Other	65.6	44.2	16.3	10.9	47.3	31.5
Imports	120.7	82.9	35.3	23.8	70.5	45.1
Services, net	-6.6	-4.1	-5.6	-3.6	-7.6	-4.6
Transportation and insurance	-0.2	-0.3	-0.9	-0.7	0.2	0.1
Travel	-0.5	-0.3	0.2	0.1	-0.5	-0.3
Interest, net	-3.5	-2.1	-3.7	-2.3	-3.6	-2.2
Receipts	1.2	0.7	1.0	0.6	0.8	0.5
Payments	4.7	2.9	4.7	2.9	-4.4	2.7
Other	-2.4	-1.4	-1.2	-0.7	-3.7	-2.2
Current account, excl. gold	-23.5	-6.1	-7.3	0.2	-6.7	1.2
Gold sales, excl. swaps	2.5	1.6	2.5	1.8	3.4	2.2
Current account, incl. gold	-21.0	-4.5	-4.8	2.0	-3.3	3.4
Grants		0.0			2.6	1.6
Capital account	1.3	1.3	2.0	1.2	3.3	1.1
Medium- and long-term capital	3.3	2.0	3.3	2.0	5.9	3.8
Disbursements	10.9	6.6	10.9	6.6	12.5	7.8
Amortization	-8.1	-4.9	-8.1	-4.9	-8.2	-5.0
Repayments from abroad	0.5	0.3	0.5	0.3	1.6	1.0
Short-term capital		0.0			-1.8	-0.7
Foreign direct investments	-0.7	-0.4			-0.2	-0.1
Errors and omissions	-1.3	-0.3	-1.3	-0.8	-3.2	-1.9
Overall balance	-19.7	-3.2	-2.8	3.2	0.0	6.1
Financing	19.7	3.2	2.8	-3.2	0.0	-6.1
Net foreign assets	15.2	9.2	-1.7	-1.1	-0.1	1.3
Arrears	4.5	2.8	4.5	2.7	-0.2	-0.5
Debt referral		0.0			0.3	0.2
Inter-republic residual		-8.8		-4.8		-7.5

Source: IMF.

Note: Totals may differ from those in table 4-1 of chapter 4 which contains more update information.

Table 3-2: Composition of Exports and Imports in 1989
(in billions of rubles)

	Overall		Inter-Republic		Extra-Republic	
	Exports	Imports	Exports	Imports	Exports	Imports
At world prices						
Power (electr)	1.0	0.8	0.8	0.8	0.2	0.0
Oil and gas	43.9	4.5	22.2	3.5	21.7	1.0
Coal	1.1	0.5	0.4	0.3	0.7	0.2
Other fuel	0.0	0.0	0.0	0.0	0.0	0.0
Ferrous metallurgy	8.4	10.0	6.7	7.3	1.7	2.7
Non-ferrous metallurgy	7.8	4.0	4.8	2.3	3.0	1.7
Machinery and Metal works	53.5	52.4	34.7	27.1	18.8	25.3
Chemicals and Petroleum	8.7	8.7	6.9	4.5	1.8	4.2
Sawmill and Lumber	4.9	1.4	2.5	0.3	2.4	1.1
Construction Materials	1.4	1.1	1.2	0.8	0.2	0.3
Light Industry	2.5	8.1	2.1	4.2	0.4	3.9
Food Industry	1.9	9.2	1.4	4.2	0.5	5.0
Other Industries	2.3	1.5	2.0	1.1	0.3	0.4
Agriculture	0.0	4.0	0.1	1.3	-0.1	2.7
Other material services	3.5	2.6	2.6	2.3	0.9	0.3
Total	140.9	108.8	88.4	60.0	52.5	48.8
At domestic prices						
Power (electr)	0.7	0.5	0.5	0.5	0.2	0.0
Oil and gas	18.0	2.2	9.2	1.7	8.8	0.5
Coal	1.2	0.5	0.5	0.3	0.7	0.2
Other fuel	0.0	0.1	0.0	0.0	0.0	0.1
Ferrous metallurgy	7.4	8.3	6.0	6.2	1.4	2.1
Non-ferrous metallurgy	5.1	3.2	3.1	1.6	2.0	1.6
Machinery and Metal works	38.0	48.1	26.4	21.0	11.6	27.1
Chemicals and Petroleum	11.5	12.1	9.1	5.9	2.4	6.2
Sawmill and Lumber	7.6	2.0	3.8	0.5	3.8	1.5
Construction Materials	1.4	1.4	1.3	0.8	0.1	0.6
Light Industry	8.2	28.4	7.3	12.5	0.9	15.9
Food Industry	4.1	23.7	2.8	12.8	1.3	10.9
Other Industries	2.4	2.0	2.1	1.2	0.3	0.8
Agriculture	0.8	9.2	0.5	3.4	0.3	5.8
Other material services	3.2	2.6	2.5	2.3	0.7	0.3
Total	109.6	144.3	75.1	70.7	34.5	73.6

Source: Goskomstat of the Russian Federation.

Table 3-1: The Balance of Payments for Russia and the USSR, 1990-91 (excluding inter-republic trade)
(in billions of U.S. dollars)

	1990				1991	
	all currencies		convert. curr.		all currencies	
	USSR	RUSSIA	USSR	RUSSIA	USSR	RUSSIA
Trade Balance	-16.9	-2.0	-1.7	3.8	0.9	5.8
Exports	103.8	80.9	33.6	27.6	71.4	50.9
Oil	27.1	27.1	13.0	13.0	11.8	11.1
Natural gas	11.1	9.6	4.3	3.7	11.8	8.3
Other	65.6	44.2	16.3	10.9	47.3	31.5
Imports	120.7	82.9	35.3	23.8	70.5	45.1
Services, net	-6.6	-4.1	-5.6	-3.6	-7.6	-4.6
Transportation and insurance	-0.2	-0.3	-0.9	-0.7	0.2	0.1
Travel	-0.5	-0.3	0.2	0.1	-0.5	-0.3
Interest, net	-3.5	-2.1	-3.7	-2.3	-3.6	-2.2
Receipts	1.2	0.7	1.0	0.6	0.8	0.5
Payments	4.7	2.9	4.7	2.9	-4.4	2.7
Other	-2.4	-1.4	-1.2	-0.7	-3.7	-2.2
Current account, excl. gold	-23.5	-6.1	-7.3	0.2	-6.7	1.2
Gold sales, excl. swaps	2.5	1.6	2.5	1.8	3.4	2.2
Current account, incl. gold	-21.0	-4.5	-4.8	2.0	-3.3	3.4
Grants		0.0			2.6	1.6
Capital account	1.3	1.3	2.0	1.2	3.3	1.1
Medium- and long-term capital	3.3	2.0	3.3	2.0	5.9	3.8
Disbursements	10.9	6.6	10.9	6.6	12.5	7.8
Amortization	-8.1	-4.9	-8.1	-4.9	-8.2	-5.0
Repayments from abroad	0.5	0.3	0.5	0.3	1.6	1.0
Short-term capital		0.0			-1.8	-0.7
Foreign direct investments	-0.7	-0.4			-0.2	-0.1
Errors and omissions	-1.3	-0.3	-1.3	-0.8	-3.2	-1.9
Overall balance	-19.7	-3.2	-2.8	3.2	0.0	6.1
Financing	19.7	3.2	2.8	-3.2	0.0	-6.1
Net foreign assets	15.2	9.2	-1.7	-1.1	-0.1	1.3
Arrears	4.5	2.8	4.5	2.7	-0.2	-0.5
Debt referral		0.0			0.3	0.2
Inter-republic residual		-8.8		-4.8		-7.5

Source: IMF.

Note: Totals may differ from those in table 4-1 of chapter 4 which contains more update information.

Table 3-4: Inter-republic Trade, 1990
(Million rubles in domestic prices)

	Total	Electric power	Petroleum and gas	Coal	Ferrous metals	Non-ferrous metals	Chemicals	Engineering products	Wood and paper	Construction materials	Light industry products	Food products	Agri-cultural products	Other products
Russian Exports														
Ukraine	28,892	165	3,463	270	2,266	1,689	3,338	10,312	1,261	305	2,758	834	284	1,947
Belorus	9,295	42	1,670	10	874	339	1,305	3,086	351	113	700	256	46	505
Uzbekistan	5,937	0	302	20	513	303	654	2,146	442	101	786	189	112	370
Kazakhstan	9,074	296	1,131	147	781	213	1,164	3,115	586	216	549	313	57	507
Georgia	2,700	30	170	12	210	76	307	802	180	56	397	185	68	209
Azerbaijan	2,242	12	232	5	112	65	277	635	94	56	387	117	40	211
Lithuania	3,688	7	707	5	189	143	499	1,473	140	57	240	64	37	127
Moldova	2,461	0	198	0	145	104	276	893	164	46	364	81	34	155
Latvia	2,470	34	178	4	268	122	356	953	97	32	196	33	34	165
Kyrgyzstan	1,539	0	135	8	114	62	169	519	92	31	201	59	44	108
Tadjikistan	1,497	0	100	1	84	58	175	504	105	21	216	87	18	129
Armenia	1,777	0	121	12	99	49	192	445	80	32	399	106	40	201
Turmenistan	1,275	0	10	1	80	8	108	570	77	24	161	62	13	161
Estonia	1,863	13	197	2	98	92	326	639	55	29	149	60	63	143
Total	74,710	599	8,612	496	5,832	3,323	9,156	26,091	3,724	1,118	7,502	2,443	887	4,939
Russian Imports														
Ukraine	25,249	149	93	68	4712	600	1,935	10,404	202	363	1,185	4,191	647	701
Belorus	9,938	35	608	0	87	66	1,342	4,960	178	139	1,578	604	114	228
Uzbekistan	4,840	0	409	0	86	243	370	480	3	26	2,386	439	356	41
Kazakhstan	4,276	227	395	221	691	288	545	496	9	62	653	101	428	161
Georgia	3,558	3	3	0	181	3	165	434	33	36	541	1,721	334	106
Azerbaijan	3,705	16	384	0	43	52	301	593	10	36	647	1,352	97	176
Lithuania	2,707	65	44	0	13	4	129	928	70	27	676	632	66	56
Moldova	3,489	0	0	0	27	0	92	539	45	34	564	1,754	331	104
Latvia	2,513	0	4	0	62	8	302	674	59	22	406	625	48	304
Kyrgyzstan	897	0	9	0	0	100	8	394	2	3	174	125	77	5
Tadjikistan	1,168	0	0	0	0	204	57	116	1	4	473	217	86	11
Armenia	1,851	0	0	0	7	55	101	330	3	30	760	358	11	196
Turmenistan	1,276	0	146	0	0	3	91	19	0	9	708	195	103	4
Estonia	1,816	60	0	0	4	6	151	357	81	20	406	568	26	138
Total	67,284	554	2,094	289	5,913	1,630	5,590	20,720	695	810	11,154	12,882	2,724	2,229

Source: The World Bank, DEC.

Table 4-1: Calculation of Russia's Share of Union Budget, 1991 (in billions of rubles)

	Russia's Imputed Union Share (Jan.-Oct.) (1)	Actual Russian Budget (with takeover) (2)	Notional Budget of Russia (3)=(1)+(2)	Notional Budget of Russia (% of GDP)
I. Revenue	28.8	287.6	316.4	28.0
Individual income taxes	0.0	...	...	...
Enterprise profit taxes	4.4	...	...	...
Turnover tax	0.0	...	...	...
Sales tax	3.9	...	...	...
Foreign activity	6.3	...	...	...
Revenue from revaluation of stock	2.7	...	...	...
Other	11.5	...	...	...
II. Expenditure	125.5	415.8	541.3	47.9
On the economy (ex. stab. fund)	14.8	...	...	...
Defense	68.3	18.0	88.9	7.9
External	5.9	5.2	13.1	1.2
Science	8.0	...	...	...
Government administration	5.0	...	...	...
Social expenditure	14.4	...	...	...
Interest (internal)	7.7	2.6	13.9	1.2
Specific projects	1.4	...	...	...
III. Union budget balance	-96.7	-128.2	-224.9	-19.9
IV. Adjustments	124.4	...	124.4	...
Stabilization Fund	...	...	...	...
Revenue	0.0	...	0.0	...
Expenditure	31.8	...	31.8	...
Pension Fund	0.0	...	0.0	...
Employment Fund	0.0	...	0.0	...
Deposit Compensation	92.6	...	92.6	...
Union debt write-off	0.0	...	0.0	...
V. Total budget balance	-221.1	-128.2	-349.3	-30.9
VI. Total budget balance, excluding dep. compensation & debt write-off	...	...	-224.5	-19.9
Memorandum: Nominal GDP	1,891.0	1,130.0	1,130.0	

Source: IMF, "Economic Review, Russian Federation" (April 1992).

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Table 4-2: Monetary Survey
(billions of rubles)

	1991	1992	1992	1992	1992	1992
	Dec.	Jan.	Feb.	Mar.	Apr.	May
Foreign Assets	438	509	563	685	763	911
Net International Reserves	246	239	211	213	213	227
Gold (w/o Vneshtorgbank)	280	244	218	209	215	226
Central Bank foreign exchange	2	3	5	9	11	12
Government foreign exchange	0	23	19	22	13	14
Short-term liabilities (-)	-35	-31	-31	-27	-25	-25
Banking system net foreign exchange	193	271	350	432	429	434
Net short-term non-convertible balances	0	-2	2	40	121	250
Inter-republican payments balance	0	3	7	40	120	250
Other non-convertible net foreign assets	0	-5	-5	0	0	0
Domestic credit	615	680	942	1119	1355	1383
Net claims on government	-140	-109	-98	-120	-83	-112
Counterpart to government gold	-280	-199	-172	-164	-164	-164
Counterpart to government foreign exchange	0	-23	-19	-22	-13	-14
Net claims on republican government	177	172	170	189	251	216
Net cash execution of budget	45	17	-20	-1	-2	10
Cash credit	0	26	58	59	60	40
Long-term credit	89	89	90	90	163	191
Net price subsidies	52	53	55	55	55	55
Other balances net	-8	-13	-12	-14	-24	-80
Net claims on Pension Fund	-1	-8	-17	-50	-36	-42
Net claims on local government	-37	52	-60	-74	-121	-108
Rest of the economy	755	790	1040	1239	1437	1494
Rouble credit	594	606	833	1010	1208	1265
Foreign exchange credit	161	184	207	230	230	230
Money	1201	1252	1492	1633	1777	2028
Currency outside banks	167	184	207	240	270	345
Ruble deposits	831	827	1007	1075	1131	1314
Foreign exchange deposits	203	241	279	319	376	369
Other items net	-148	-63	12	170	340	266
Net equity	110	115	140	140	186	209
Items in process of settlement	362	-384	352	472	646	544
Frozen deposits	547	547	547	547	547	547
Union accounts (net)	-770	-770	-773	-774	-756	-783
VEB net (adj. for ST liabs.)	-271	-262	-259	-251	-249	-249
Adjust: exch. rate under-reporting	9	56	149	192	92	147
Banking system net foreign exchange	130	120	210	172	119	120
Residents for. ex. deposits	-121	-65	-61	20	-27	26
Net valuation	-135	-174	-185	-194	-194	-229
Gold valuation (incl. adj.)	0	42	42	39	69	80

Source: IMF.

Table 5-1: Production and Average Yield of Major Agricultural Crops

	1986	1987	1988	1989	1990
Production (millions of tons)					
Grain					
Wheat (winter)	20.9	17.3	23.7	27.1	32.8
(spring)	26.6	19.6	16.1	16.9	16.8
Rye	9.7	11.1	12.5	12.6	16.4
Corn	1.7	3.8	3.8	4.7	2.5
Barley (winter)	2.0	1.5	1.8	2.0	3.1
(spring)	23.6	24.6	17.6	20.2	24.1
Oats	15.7	12.3	10.6	12.0	12.3
Rice	1.2	1.1	1.1	1.0	0.9
Sugar beets	29.2	34.2	32.8	37.4	32.3
Sunflowers	2.4	3.1	3.0	3.0	3.4
Soybeans	0.6	0.5	0.7	0.7	0.7
Potatoes	43.1	38.0	33.7	33.8	30.8
Vegetables	11.7	11.2	11.5	11.2	10.3
Corn (fodder)	168.0	206.0	191.0	213.0	189.0
Hay	49.3	51.7	54.5	57.9	53.9
Average yield (tons/ha)					
Grain					
Wheat (winter)	2.6	2.5	2.7	3.0	3.4
(spring)	1.5	1.2	1.0	1.1	1.2
Rye	1.5	1.5	1.6	1.5	2.0
Corn	2.5	2.7	3.0	3.3	2.8
Barley (winter)	3.7	3.2	3.2	3.5	4.5
(spring)	1.5	1.5	1.2	1.4	1.9
Oats	1.4	1.2	1.1	1.3	1.4
Rice	3.8	3.5	3.8	3.3	3.1
Sugar beets	19.7	23.1	22.3	25.4	22.1
Sunflowers	1.1	1.3	1.2	1.5	1.3
Soybeans	0.9	0.9	1.1	1.1	1.1
Potatoes	12.3	11.2	10.2	10.4	9.9
Vegetables	16.1	15.0	15.2	15.3	15.4
Corn (fodder)	16.6	21.2	20.2	21.8	18.5

Sources: USSR and Russian Goskomstat.

Table 5-2: Livestock (as of January 1)
(million heads)

	1981	1986	1987	1988	1989	1990	1991
I. Large animals, total							
Cattle	58.1	59.6	60.5	59.8	59.3	58.8	57.0
of which: cows	22.2	21.6	21.3	21.0	20.8	20.8	20.5
Pigs	36.0	39.0	40.2	39.2	39.8	40.0	38.3
Sheep & goats	65.0	63.4	64.1	63.0	62.7	61.3	58.2
of which: sheeps	62.0	60.6	61.3	60.3	59.9	58.4	55.0
Horses	2.6	2.6	2.6	2.6	2.6	2.6	2.6
of which: private farms							
Cattle					9.2	9.5	9.9
of which: cows					5.0	5.1	5.2
Pigs					5.9	6.2	7.1
Sheep & goats					14.8	15.4	16.1
of which: sheeps					12.4	13.0	13.6
II. Poultry, Total	564.0	628.0	632.0	637.0	646.0	654.0	660.0
Collective farms	11.9	8.7	7.8	7.0	6.9	6.6	
of which grown-up: hens	5.4	4.9	4.3	3.8	3.5	3.0	
geese	0.1	0.2	0.1	0.1	0.1	0.2	
ducks	1.5	0.7	0.6	0.5	0.5		
State farms	357.0	430.0	437.0	446.0	450.0	450.0	
of which grown-up: hens	136.0	155.0	153.0	159.0	160.0	158.0	
geese	2.2	1.3	1.0	1.0	0.9		
ducks	0.1	0.1	0.1	0.1	0.1		
Other farms	195.1	189.3	187.2	184.0	189.1	197.4	

Sources: Russian Goskomstat, Statistical Yearbooks, "National Economy of Russia in 1988, 1989, 1990" p. 460.

Table 5-3: Livestock Products

	1980	1985	1986	1987	1988	1989	1990
All categories							
Meat (thousand tons)	7427	8487	8916	9432	9813	10082	10112
Of which: Beef and veal	3274	3572	3756	3991	4150	4256	4329
Pork	2579	2960	3093	3264	3399	3499	3840
Mutton	338	321	345	346	371	385	395
Poultry	1134	1527	1612	1712	1776	1831	1801
Milk (million tons)	46.8	50.2	52.2	52.9	54.5	55.7	55.7
Eggs (billion pieces)	39.5	44.3	46.2	47.4	49.1	49.0	47.5
Wool (thousand tons)	213	217	226	216	227	230	227
Individual farms							
Meat (thousand tons)	2211	2194	2242	2314	2390	2409	2508
Of which: Beef and veal	602	553	555	585	573	546	NA
Pork	1011	969	1004	1031	1092	1112	NA
Mutton	177	160	154	155	157	161	NA
Poultry	382	471	489	500	527	548	NA
Milk (million tons)	12.6	12.5	12.4	12.3	12.6	12.9	13.3
Eggs (billion pieces)	10.6	10	10.1	10	10.1	10.4	10.3
Wool (thousand tons)	41	44	45	44	45	51	56
Average annual yield of milk per cow (kg)							
All categories	2169	2334	2472	2530	2643	2723	2731
Collective farms	2083	2305	2456	2525	2645	2723	NA
State farms	2184	2387	2555	2646	2756	2822	NA
Average annual number of eggs per hen (pieces)							
All categories	210	224	231	235	242	242	236
Collective farms	131	131	151	144	146	142	NA
State farms	213	226	232	237	244	243	NA
Average annual wool output per sheep (kg)							
All categories	3.3	3.5	3.7	3.5	3.8	3.8	3.9
Collective farms	3.2	3.4	3.6	3.4	3.6	3.6	NA
State farms	3.5	3.7	3.9	3.6	3.9	3.9	NA

Sources: 1980-1988 - National economy of Russia in 1988;
1989 - Russia in numbers in 1989;
Results of functioning of the National economy of Russia in 1991;
National economy of Russia in 1990, pp. 462 and 464.

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Table 6-1: Index of Industrial Output by Branches
(1985=100)

	1986	1987	1988	1989	1990	1991
Industry	104.5	108.2	112.3	113.8	113.7	104.6
Electricity	104.1	108.9	110.0	111.9	114.0	114.3
Fuel industry	104.0	106.0	108.0	107.0	103.0	96.8
Metallurgy	103.7	106.2	109.0	110.1	107.7	99.0
Machinery and metal-working	107.0	112.0	118.0	120.0	121.0	108.9
Chemical and petrochemicals	105.0	109.0	114.0	115.0	112.0	104.9
Forest-, Woodprocessing- & paper	105.3	109.0	111.0	115.0	111.0	101.0
Construction materials	106.2	109.7	115.0	117.7	116.7	113.9
Light industry	101.1	102.1	105.7	108.1	108.0	98.3
Textile	101.0	102.0	106.0	107.0	107.0	98.4
Clothing	100.8	100.5	103.0	106.0	109.0	95.9
Leather and shoe	102.0	104.0	108.0	110.0	111.0	99.9
Food processing industries	105.3	109.0	113.0	118.0	119.0	108.2
Meat and dairy	106.0	111.0	118.0	121.0	123.0	106.8
Fish	105.0	108.0	109.0	114.0	112.0	107.4
Alcoholic beverages	60.9	58.0	68.5	84.3	92.8	93.8
Other	104.0	109.0	113.0	120.0	120.0	114.1
Nonfood consumer goods	103.3	108.6	116.5	125.9	138.5	145.4

Sources: Goskomstat of the Russian Federation, Narodnoe Khoziaistvo RSFSR v 1990 g. p. 346. and Business World.

Table 6-2: Output of Main Industrial Products

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
Televisions (thous)													
1989	348	336	396	370	350	379	340	393	375	395	381	396	4,459
1990	372	370	394	390	370	390	394	414	379	435	386	423	4,717
1991	365	375	399	403	371	349	376	368	355	362	353	366	4,442
1992	282	249											
Cement (mill. tons)													
1989	7.1	6.5	7.3	7.0	7.2	7.0	7.1	7.0	6.9	7.1	6.9	6.9	84
1990	6.9	6.6	7.2	7.0	7.2	7.0	7.0	6.9	6.7	6.9	6.7	6.9	83
1991	6.7	6.0	6.9	6.5	6.8	6.4	6.5	6.1	6.2	6.2	6.0	6.0	76
1992	5.9	5.6											
Sawn-timber (mill. cub. m)													
1989	5.2	5.4	5.9	4.8	4.2	5.0	4.7	4.9	4.7	4.6	4.6	5.1	59
1990	4.9	5.1	5.6	4.6	3.8	4.5	4.3	4.3	3.9	4.1	3.8	4.5	53
1991	4.3	4.3	4.7	4.2	3.4	3.6	3.9	3.7	3.6	3.5	3.4	3.7	46
1992	3.6	3.9											
Paper (thousand tons)													
1989	464	424	467	445	444	420	437	453	438	457	444	453	5,346
1990	436	416	466	440	435	419	425	448	427	445	422	441	5,220
1991	434	387	430	392	402	386	382	412	392	404	369	373	4,763
1992	348	353											
Cardboard (thous. ton)													
1989	272	251	281	257	263	257	262	259	247	263	259	262	3,133
1990	262	258	285	257	271	254	263	258	244	248	230	257	3,087
1991	229	215	247	224	220	215	218	226	208	214	204	199	2,619
1992	180	217											
Cotton textiles (mill. square m)													
1989	507	470	521	484	472	491	423	491	480	502	475	502	5,818
1990	505	476	501	493	455	458	417	488	438	492	493	461	5,677
1991	463	453	469	476	446	413	382	408	435	476	431	453	5,305
1992	434	414											
Knitted garments (mill.)													
1989	63.1	58.9	65.3	60.3	59.9	61.2	49.6	61.0	61.2	65.8	62.2	67.5	736
1990	65.9	61.8	66.2	64.7	67.5	60.3	51.5	59.0	59.7	68.1	60.8	60.9	746
1991	56.6	55.8	56.7	59.3	56.4	52.6	44.6	51.5	54.3	58.6	51.7	54.8	653
1992	49.3	49.9											
Shoes (mill. pairs)													
1989	32.6	31.0	33.2	31.2	30.0	32.0	22.0	27.0	31.0	33.0	31.0	34.0	368
1990	31.9	30.9	33.4	32.7	30.1	28.5	21.8	25.4	27.7	32.1	28.6	29.8	353
1991	29.3	27.5	27.7	29.7	25.9	23.3	19.6	23.9	27.2	28.6	24.4	25.6	313
1992	22.7	22.5											
Meat & meat products (thous. ton)													
1989	499	439	499	393	401	446	364	471	578	580	529	372	5,571
1990	522	387	512	442	464	478	424	496	506	586	552	443	5,812
1991	454	375	413	387	402	400	373	425	488	493	387	303	4,900
1992	326	316											
Milk & milk products (thous. ton)													
1989	1,428	1,546	1,768	1,739	1,797	1,831	1,752	1,693	1,646	1,681	1,604	1,700	20,185
1990	1,682	1,578	1,786	1,752	1,857	1,854	1,793	1,741	1,623	1,622	1,573	1,573	20,434
1991	1,558	1,446	1,631	1,553	1,653	1,644	1,642	1,543	1,468	1,963	1,288	1,208	18,597
1992	842	842											
Vegetable oil (thous. ton)													
1989	108	101	116	113	105	90	71	36	54	90	100	108	1,092
1990	104	104	113	94	102	100	86	38	62	101	108	112	1,123
1991	106	94	110	103	102	93	77	38	69	103	110	111	1,116
1992	110	103											
Bread & bread products (thous. ton)													
1989	1,280	1,207	1,323	1,298	1,351	1,352	1,425	1,478	1,446	1,447	1,373	1,350	16,330
1990	1,295	1,193	1,327	1,292	1,425	1,469	1,457	1,502	1,505	1,563	1,499	1,557	17,084
1991	1,428	1,375	1,547	1,301	1,369	1,352	1,448	1,512	1,517	1,550	1,540	1,597	17,536
1992	1,347	1,313											

Source: Goskomstat of the CIS.

Note that estimates (total) may not be identical to those in other tables due to the rounding and other adjustments made.

Table 6-3a: Real Industrial Production, January 1989 - March 1992
(January 1989 = 100)

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
1989	100.0	96.9	108.0	98.1	96.7	100.9	90.8	97.9	100.5	100.2	97.4	105.0
1990	99.8	96.7	106.6	99.1	96.7	99.8	91.3	96.2	96.5	100.9	96.0	103.1
1991	95.5	92.2	100.9	92.4	90.8	91.5	84.9	84.9	90.5	89.8	84.9	87.9
1992	81.1	81.0	88.5	82.0								

Source: Goskomstat of the CIS.

Table 6-3b: Seasonally Adjusted Industrial Production Index, January 1989 - February 1992

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
1989	97.6	97.7	98.7	97.7	98.1	99.7	98.1	101.3	100.8	99.4	101.0	102.4
1990	97.4	97.5	97.4	98.6	98.1	98.5	98.6	99.6	96.8	100.1	99.6	100.6
1991	93.2	93.0	92.2	92.0	92.1	90.3	91.7	87.8	90.8	89.1	88.0	85.8
1992	79.1	81.8										

Source: Mission calculation from data of above table.

Table 6-4: Energy Production and Consumption

	1980	1985	1986	1987	1988	1989	1990	1991
Production								
Oil (including gas condensates) 1/		542.3	561.2	569.5	568.8	552.2	516.2	461.1
Coal 1/		395.2	407.9	414.7	425.5	409.9	395.4	353.3
Natural gas 2/		462	503	544.3	589.8	615.8	640.6	642.9
Electricity 3/	804.9	962.0	1001.5	1047.3	1065.5	1076.6	1082.1	1046.0 4/
Of which: Thermal								
Hydro	129.4	159.8	164.3	162.5	160.9	159.7	166.8	
Nuclear	54.0	99.3	105.2	120.4	126.1	128.1	118.3	
Imports (interrepublic)	33.0	32.3	32.4	28.9	32.5	33.8	35.0	
Exports (interrepublic)	22.0	29.9	33.5	36.9	36.4	39.2	43.3	
Domestic consumption of electricity 3/								
Of which: Industry and construction	520.3	596.8	617.3	640.2	655.3	652.6	644.7	
Agriculture	56.0	73.3	76.8	81.4	84.9	87.6	96.4	
Other sectors	98.9	122.2	127.0	132.8	135.9	140.4	144.7	
Households								
Losses	63.7	80.6	82.2	85.1	83.2	85.0	84.2	

Sources: Russian Federation Goskomstat; and USSR Goskomstat.

Notes:

1/ In millions of tons.

2/ In billions of cubic meters.

3/ In billions of kilowatt-hours.

4/ USSR Goskomstat. The Russian Goskomstat reported 1071.3.

Table 7-1: Trends in Prices (January 1991 - July 1992)

Month		Retail prices of consumer goods	Industrial wholesale prices	Auction/ MIFCE exchange rate
		(percent change)		(rubles/US\$)
1991	January	6.6	62.9	25.3
	February	4.8	18.9	34.0
	March	6.4	7.1	36.1
	April	54.4	8.2	32.9
	May	2.3	3.8	38.1
	June	0.0	2.8	40.7
	July	-0.7	17.3	52.4
	August	-0.2	15.2	52.0
	September	1.3	6.6	55.2
	October	3.9	5.8	62.2
	November	9.0	9.4	105.6
	December	12.6	11.3	169.7
1992	January	221.0	382.0	204.3
	February	24.0	75.0	175.8
	March	21.0	28.0	152.8
	April	14.0	16.5	152.8
	May	11.2	23.0	122.3
	June	15.0	36.0	125.3
	July	7.5	17.0	143.3

Sources: Roskomsat and IMF.

Table 7-2: Prices of a 19-item Food Basket 1/, December 1991 - March 1992

	Monthly			Weekly							
	1991 Dec	1992 Jan	1992 Feb	Feb 4	Feb 11	Feb 18	Feb 25	Mar 3	Mar 10	Mar 17	Mar 24
Price Index (Dec 1991 = 100)	100	322.5	339.6			323.1	339.1	353.2	360.9	367.8	388.5
Cost of the basket by city (in rubles):											
Moscow				143.1	141.0	133.0	132.0	139.0	139.0	146.0	144.0
St. Petersburg				156.6	188.5	183.2	175.9	163.5	169.5	187.6	214.9
Vladimir					122.0	121.0	128.0	140.0	160.0	167.0	166.0
Ivanovo						174.0	190.0	161.0	176.0	178.0	194.0
Orel					102.0	93.0	104.0	106.0	105.0	108.0	114.0
Iaroslav					140.0	141.0	142.0	148.0	157.0	181.0	165.0
Briansk					105.0	106.0	121.0	113.0	118.0	113.0	141.0
Central											
Smolensk				100.3			122.9	133.1	130.1	125.2	117.4
Riazan				90.9	116.8	123.0	137.0	120.2	117.9	142.6	156.2
Oriol				102.8	102.4	93.7	104.3	106.1	105.1	108.4	113.8
Kaluga				118.9	133.9	140.4	129.4	136.9	137.5	137.3	127.5
North Caucasus											
Tuapse				98.2	114.9	119.4	115.7	110.3	115.7	114.8	118.8
Nevinomisk				85.0	103.4	104.4	129.5	131.1	139.0	135.4	117.7
North											
Syklivkar				98.1	113.6	129.7	140.5	138.5	138.6	140.0	139.8
Petrozavodsk				101.6	115.7	111.9	118.3	119.3	120.1	121.3	120.2
Memorandum items:											
Milk: State shops (Rb/ltr) 2/	1.25			1.85	1.80	2.12	2.39	2.71	3.01	3.44	3.88
Kolkhoz/city mkt (Rb/ltr) 2/	8.6			10.15	10.08	10.96	10.72	10.51	10.59	9.72	10.07
State shops (Dec 27=100)	100			148.0	144.0	169.6	191.2	216.8	240.8	275.2	310.4
Kolkhoz/city mkt (Dec 27=10)	100			118.0	117.0	127.0	125.0	122.0	123.0	113.0	117.0
Vegeta. oil: State shops (Rb/kg)	8.6			12.21	15.51	19.36	20.71	14.53	19.46	26.93	32.34
Kolkhoz/city mkt (Rb/kg) 2/	37.6			33.39	37.80	32.56	34.28	43.01	41.83	47.24	48.80
State shops (Dec 27=100)	100			142.0	180.0	225.0	241.0	169.0	226.0	313.0	376.0
Kolkhoz/city mkt (Dec 27=10)	100			89.0	101.0	87.0	91.0	114.0	111.0	126.0	130.0

Source: Center for Economic Analysis and Forecasting, "Level of Prices of the Food Basket for Jan-April 1992" (Moscow; May 1992).

Notes:

- 1/ The food basket composes of: 1) beef, 1st category, 0.39 kg; 2) sausage, boiled, top-quality, 0.21 kg; 3) sausage, half-smoked, top-quality, 0.21 kg; 4) butter, 0.07 kg; 5) vegetable oil, 0.19 kg; 6) milk, 3.2-3.5% fat, 3.54 litre; 7) sour cream, 0.08 kg; 8) hard cheese, 0.04 kg; 9) eggs, 3.52 pieces; 10) granulated sugar, 0.20 kg; 11) bread, rye and wheat flour, 1.77 kg; 12) bread, wheat flour of 1st and 2nd quality, 1.28 kg; 13) millet, polished 0.17 kg; 14) vermicelli from highest quality wheat flour, 0.06 kg; 15) potato, 2.8 kg; 16) fresh white cabbage 0.57 kg; 17) onion, 0.20 kg; 18) apple, 0.21 kg; 19) cigarettes, 1.85 pack.
- 2/ The first (December 1991) column refers to December 27, 1991.

Table 7-3: Wholesale Price Indices by Industrial Sectors, December 1991 - May 1992
(Percent increase from previous month unless indicated otherwise)

	Average yearly change in 1991	1991 Dec.	Jan.	Feb.	1992 Mar.	Apr.	May
Industry total	138.1	11.3	382	75	28	17	23
Electric energy	97.4	2.9	269	55	49	35	32
Fuel industries	123.5	1.7	394	26	28	6	108
Petroleum extraction	154.5	0.0					
Petroleum processing	126.9	4.0					
Natural gas	89.6	0.0					
Coal	95.5	0.6					
Ferrous metals	110.4	20.6	361	160	25	33	27
Non-ferrous metals	133.6	3.5	500	157	67	12	27
Chemicals	108.7	10.6	502	78	33	34	25
Petro-chemicals	102.5	9.2	696	37	20	34	16
Engineering	117.1	14.1	371	123	26	10	10
Forestry, timber, wood, paper	155.2	10.6	412	63	33	16	15
Forestry	140.9	11.3					
Timber processing	132.4	9.9					
Furniture	106.6	11.3					
Paper	227.1	10.6					
Construction materials	147.0	13.8	382	69	13	14	15
Cement	178.2	1.5					
Light industry	206.4	12.7	230	61	16	6	8
Cotton	226.6	18.4					
Linen	453.3	0.4					
Wool	272.8	2.5					
Silk	124.4	8.0					
Food industry	161.0	11.8	382	30	16	18	10
Meat	249.9	20.0					
Milk, butter, cheese, milk prod	169.4	27.4					
Fish	138.4	8.8					
Flour	142.1	-0.3					
Other (pishевkusovaya)	115.0	5.1					
Sugar	49.7	1.4					
Fat	102.4	1.1					
Bread	137.3	1.1					
Confectionery	89.8	20.5					
Pasta	191.6	-0.1					
Spirits	221.8	0.0					
Liquor, vodka	217.8	0.0					
Wines	143.3	4.4					

Source: Goskomstat of Russia.

Table 7-4: Exchange Rate Developments, December 1991 - March 1992
(Ruble per U.S. dollar)

	Commercial Exchange Rate/Special Commercial Exchange Rate	Quasi Market rate	Market Exchange Rates 1/		
			Interbank Market	Russian Exchange Bank	Tourist Exchange Rate 2/
December 1991					
1-6	1.7		110	132	
7-14	1.7		170	172	101
15-20	1.7		170	144	115
21-31	1.7		169	144	108
January 1992					
2-6	55	110	150	144	109
7-14	55	110	180	178 3/	114
15-21	55	110	230	120	116
22-31	55	110	230		120
February 1992					
1-6	55	110	225		126
7-14	55	110	210		117
15-21	55	100	170		99
22-29	55	90			
March 1992					
1-6	55	90	140		
7-14	55	90	140		
15-21	55	90	161		
22-31	55	100	160		

Sources: USSR Gosbank, Central Bank of Russian Federation, and Commersant.

Notes:

1/ The inter-enterprise exchange rates recorded by banks are also market-determined rates, but are difficult to interpret because of side payments which imply that the exchange rate does not reflect the price of the transaction.

2/ Average midpoint of buying and selling rate in Moscow as published by Commersant.

3/ During an "open auction" held on January 7 (i.e. an auction in which Russian Exchange Bank is the only seller), the average exchange rate was Rb 146 per US dollar. The exchange rates quoted in this table refer to the so-called "closed auctions" where all legal persons (both residents and nonresidents) can participate as buyers and sellers of foreign exchange. The auctions were discontinued from the fourth week of January 1992.

Table 7-5: Daily Trading and Rates at Moscow Inter-Bank Foreign Currency Exchange, 2 April - 10 September 1992

Trading session date	Exchange rate (Ruble/US\$)	Total volume (US\$m)	Initial demand (US\$m)	Initial supply (US\$m)	Excess supply (US\$m)
April 2	160.0	5.25			
April 7	159.7	6.87			
April 9	155.7	3.68			
April 14	155.0	4.56	4.29	6.69	2.40
April 16	154.0	3.93			
April 21	150.5	8.85			
April 23	150.0	5.54	5.00	6.01	1.01
April 28	143.5	8.25			
May 6	128.0	7.30	6.47	11.86	5.39
May 12	127.6	14.24	13.86	15.89	2.03
May 14	127.4	15.64			
May 19	126.6	14.13	13.90	16.16	2.26
May 21	123.0	11.71	11.62	16.14	4.52
May 26	118.0	16.64	16.06	22.72	6.66
May 28	113.0	20.66	20.18	22.48	2.30
June 2	112.6	31.31	27.57	33.31	5.74
June 4	112.5	28.33	28.01	28.33	0.32
June 9	112.4	52.87	52.34	52.87	0.53
June 11	112.3	36.55	35.68	36.55	0.87
June 16	118.5	21.94	33.61	21.56	-12.05
June 18	129.0	44.95	53.40	28.08	-25.32
June 23	146.0	44.68	51.12	26.46	-24.66
June 25	146.6	23.22	23.45	18.35	-5.10
June 30	144.0	25.07	22.76	31.55	8.79
July 2	134.8	15.11	11.90	32.63	20.73
July 7	130.5	23.17	20.28	28.31	8.03
July 9	130.3	34.77	32.49	35.37	2.88
July 14	130.2	32.69	32.69	34.41	1.72
July 16	135.4	27.73	41.68	23.54	-18.14
July 21	151.1	40.56	58.91	27.02	-31.89
July 23	155.7	36.60	39.52	30.27	-9.25
July 28	161.1	19.81	24.01	15.54	-8.47
July 30	161.2	23.13	24.00	22.32	-1.68
August 4	161.4	20.99	21.07	18.12	-2.95
August 6	161.5	22.82	24.11	22.81	-1.30
August 11	161.7	34.38	39.52	30.27	-9.25
August 13	162.5	30.19	31.37	27.89	-3.48
August 18	162.5	55.39	55.39	58.78	3.39
August 20	162.6	27.30	27.31	26.47	-0.84
August 25	168.1	27.68	44.76	20.58	-24.18
August 27	205.0	42.55	70.78	20.78	-50.00
September 1	210.5	37.13	42.56	31.99	-10.57
September 3	210.5	42.72	42.49	42.72	0.23
September 8	207.9	43.85	33.73	53.72	19.99
September 10	203.0	25.46	25.11	35.72	10.61
Total		1120.2			

Source: Moscow Inter-Bank Foreign Currency Exchange.

Table 7-6: Average Monthly Nominal Wage by Sectors, 1980-91
(Yearly average, in rubles)

	1980	1985	1987	1989	1990	1991
Total economy	177.7	201.4	216.1	258.6	296.8	530.0
Industry	191.3	217.9	230.3	275.2	310.9	580.0
a) workers	188.0	215.5	227.3	266.2	299.5	
b) managers/specialists	206.7	228.7	243.8	313.4	359.4	
Agriculture	156.8	198.4	219.8	258.9	307.2	450.0
Construction	210.8	247.4	271.1	338.5	375.8	678.0
a) workers	212.2	250.0	270.6	323.4	360.8	
b) managers/specialists	206.2	234.9	269.6	368.7	421.1	
Transport	214.8	238.5	261.3	308.2	349.3	609.0
Communication	153.5	170.2	187.3	228.8	256.5	570.0
Trade	145.8	158.7	167.3	201.6	258.4	443.0
Information processing services	134.2	152.2	176.8	237.8	288.7	519.0
Housing and municipal services	139.4	154.2	162.8	191.8	224.4	431.0
Public health, sport and social securit	133.7	141.1	153.1	177.9	202.5	427.0
Education	139.9	154.8	170.2	183.6	202.9	407.0
Culture	116.4	122.9	128.3	144.9	180.4	377.0
Art	141.7	153.5	159.9	176.7	215.1	442.0
Science	184.9	209.9	224.9	314.3	351.9	558.0
Financial and insurance services	172.6	192.2	212.7	255.1	410.2	795.0
Public, economic administration	168.7	178.8	201.1	252.3	363.6	538.0
Memorandum item:						
Minimum wage 1/		70.0	80.0	80.0	80.0	130.0

Sources: Ministry of Labor, Russian Goskomstat "Statistical Yearbook, National Economy of Russian in 1989, 1990 pp. 129-130.

Note:

1/ The minimum wage was raised from Rb 70 to Rb 80 in 1986. It was raised from Rb 80 to Rb 140 following the April 1991 price reform, and raised again to Rb 180 on 1 October 1991. On 1 January 1992 it was raised to Rb 342. In practice, increases in the minimum wage were introduced gradually by employers in accord with their ability to pay.

Table 7-7: Employment Distribution by Ages and by Wages (according to survey of 1989)

Wage range (rubles per month)	Distribution (percent) within age category					Overall Distribution
	16-24	25-29	30-39	40-49	50 and over	
Less than 80	3.1	1.3	0.9	0.9	2.9	1.6
80-90	6.9	3.3	2.2	2.2	4.9	3.4
91-100	6.2	3.4	2.3	2.1	3.4	3.0
101-120	13.0	8.1	6.1	5.3	7.4	7.2
121-140	11.7	9.2	7.2	6.1	7.6	7.8
141-160	13.0	11.4	9.2	8.6	9.5	9.8
161-180	10.3	10.6	9.7	9.5	10.8	10.1
181-200	8.8	9.8	9.9	10.0	9.4	9.7
201-220	5.6	7.1	7.7	7.8	7.2	7.3
221-250	6.9	9.7	11.0	11.8	10.1	10.4
251-300	6.9	10.4	13.0	13.9	11.3	11.9
301-350	3.3	5.6	7.4	8.0	6.3	6.6
351-400	1.8	3.6	4.7	5.0	3.6	4.1
More than 400	2.5	6.5	8.7	8.8	5.6	7.1

Sources: Russian Goskomstat "Statistical Yearbook, National Economy of Russia in 1989".

Table 7-8: Average Industrial Wages, November 1989 - June 1992

	Average wage in industry (Rb/month)	Auction/MIFCE exchange rate (US\$/Rb)	Average wage in industry (US\$/month)
1989 November	275.2	0.1121	30.85
December	275.2	0.1121	30.85
1990 January	304.9	0.0974	29.69
February	304.9	0.0812	24.75
March	304.9	0.0812	24.75
April	288.9	0.0740	21.37
May	288.9	0.0629	18.16
June	288.9	0.0486	14.03
July	290.0	0.0414	12.00
August	290.0	0.0414	12.00
September	290.0	0.0414	12.00
October	359.8	0.0432	15.56
November	359.8	0.0473	17.03
December	359.8	0.0437	15.73
1991 January	320.0	0.0395	12.65
February	340.0	0.0294	10.01
March	340.0	0.0277	9.42
April	420.0	0.0304	12.78
May	447.0	0.0263	11.75
June	447.0	0.0246	10.98
July	560.0	0.0191	10.69
August	596.0	0.0192	11.47
September	660.0	0.0181	11.96
October	760.0	0.0161	12.23
November	870.0	0.0095	8.24
December	1200.0	0.0059	7.07
1992 January	1801.0	0.0049	8.81
February	2567.0	0.0057	14.60
March	3464.0	0.0065	22.67
April	3769.0	0.0065	24.67
May	4296.0	0.0082	35.23
June	5948.0	0.0080	47.58

Source: Russian Federation Goskomstat.

Table 8-1: Fixed Capital Stock at Net Value by Ownership, 1 January 1990
(in percent)

	Federal	Local	Collective farms	Other cooperatives	Private
All capital stock (including cattle)	50	39	7	2	2
Productive capital stock	56	33	9	1	1
Industry	84	15	.	1	.
Agriculture	6	56	34	.	4
Construction	54	43	1	2	.
Transport	63	37	.	.	.
Communication	29	65	6	.	.
Trade and catering services	40	38	1	21	.
Material-technical supply and sale	53	47	.	.	.
Storage	7	73	.	20	.
Nonproductive capital stock	41	49	4	2	4
Housing	39	46	5	4	6
Municipal and personal services	23	74	3	.	.
Health service	36	61	2	1	.
Education	35	62	3	.	.
Culture	42	40	17	1	.
Science	96	4	.	.	.

Source: "National Economy of Russia in 1989", p. 341.

Table 8-2: Change in Capital Productivity (Net Material Product per Fixed Capital)
(Yearly average, percentage)

	1976-80	1981-85	1986-90	1989	1990
Material sphere	-3.3	-3.7	-4.2	-3.0	-9.6
Industry	-3.5	-3.5	-2.9	-3.4	-5.2
Agriculture	-6.9	-4.0	-4.6	-4.1	-10.4
Construction	-4.7	-3.5	-4.6	-4.4	-0.6

Sources: "National Economy of Russia in 1989" and "National Economy of Russia in 1990", p. 317.

Table 8-3: Gross Fixed Investment at Comparable Prices, 1980-90
(in billions of Rubles)

	1980	1985	1986	1987	1988	1989	1990
Total	94.3	111.0	121.2	128.4	138.2	143.9	144.0
Material sphere	69.4	80.5	87.7	92.1	98.1	103.2	102.1
Industry	34.4	42.0					52.8
Agriculture	15.6	16.3	17.4	18.2	19.3	20.5	22.2
Construction	4.2	4.0					6.4
Transport & communication	12.8	15.1					17.0
Trade & other material serv.	2.5	3.1					3.8
Non-material sphere	24.9	30.5	33.5	36.3	40.1	40.7	41.9
Housing	13.2	17.1	18.6	20.2	21.3	22.3	22.9
Other non-material services	11.6	13.4					18.9

Sources: Roskomstat and National Economy of Russia in 1990, pp. 203, 492 and 523.

Table 9-1: Household Monetary Income (millions of rubles)

	1987	1988	1989	1990
A. Total labor income	209,649	228,221	261,899	307,117
1. Regular wages	186,997	201,939	221,754	252,140
1a. Wages paid by cooperatives		1,647	11,538	19,371
2. Other wages and compensations	6,043	6,757	7,589	8,801
One-time bonuses	3,082	3,427	3,927	4,913
Added Wages 1/	1,077	1,049	3,662	3,888
Business Travel	1,884	2,281		
3. Income Paid by collective farms	9,816	10,218	11,059	12,470
Agricultural collectives	9,213	9,611	10,488	11,832
Fishing collective	312	350	331	374
Hired seasonal workers	291	257	240	264
4. Income from sale of farm products	6,793	7,660	9,959	14,335
State procurement	1,946	1,799	1,875	2,299
Sale to state enterprises	299	405	574	962
Sale to consumer cooperatives	1,948	2,192	2,940	4,235
Sale at ex-village markets	136	146	146	151
Sale of cattle	2,464	3,118	4,424	6,688
B. Total transfer receipts	54,605	59,038	62,753	76,122
5. Pensions and allowances	37,869	40,302	42,310	48,211
6. Stipends	1,482	1,542	1,560	1,695
7. Income from the financial system	9,729	10,906	11,368	17,492
Receipts from state insurance	4,695	4,951	5,508	5,951
New housing loans	309	1,594	857	2,157
Interest on saving deposits	3,381	3,735	4,179	4,753
Sale of bonds	1,015	257	923	4,809
Lottery winning	321	341	371	428
New consumer loans	(77)	(36)	514	(662)
New producers's loan	15	23	(7)	0
Compensation for disabled	40	41	47	50
Compensation for newlyweds	30			
Compensations for repressions			5	4
Other new loans	0			
8. Other Income	5,525	6,288	7,515	8,724
Sale of second hand goods	3,318	4,055	4,730	5,990
Sale of scrap	72	71	58	49
Other income	2,135	2,162	2,727	2,685
C. Total Income (A + B)	264,254	287,259	324,652	383,239
10. Expenditure less income	0			
11. Account balance	264,254	287,259	324,652	383,239

Source: Goskomstat.

Note:

1/ Data for 1989-90 include business travel.

Table 9-2: Household Monetary Outlays (millions of roubles)

	1987	1988	1989	1990
A. Total Purchases	212,682	228,612	249,515	288,417
1. Retail trade purchases	188,451	201,171	221,228	258,001
Retail trade	187,009	199,638	219,346	255,500
Trade cooperatives	51			
Collective farms	1,391	1,533	1,882	2,501
2. Purchased services	24,231	27,441	28,288	30,416
Rent and utilities	7,468	7,786	8,112	8,273
Personal care	1,890	2,377	2,747	3,142
Child care	1,068	1,958	1,100	1,009
Recreation	1,667	1,870	1,928	2,285
Entertainment	1,167	1,225	1,258	1,393
Transportation	8,632	9,043	9,317	9,787
Railroad, sea, & air	4,591	4,909	5,249	5,799
Automotive & urban	4,041	4,133	4,069	3,988
Communications	1,971	2,169	2,377	2,612
Health and other services	333	347	399	472
Cooperatives	35	666	1,050	1,443
B. Transfers and savings	47,893	54,196	64,723	75,622
3. Taxes, fees, dues and other	31,437	34,215	38,567	45,105
Direct taxes and fees	20,587	22,631	26,393	31,242
Insurance Payments	6,642	6,904	7,175	7,886
Membership dues	2,802	2,944	3,098	3,049
Housing cooperative dues	507	525	616	945
Housing loan payments	171	229	360	574
Purchased lottery tickets	625	667	709	922
Interest on consumer loan	95	91	80	56
Accounts N700412	5	224	130	79
Purchases of flats			7	352
Producers' loan payments	3			
4. Savings	14,765	18,095	24,222	28,888
Regular savings	14,228	17,540	22,961	24,460
Interest-free loans				2687
State bank accounts	(5)	0	2	
Purchased Bonds	542	555	655	594
Stocks				165
Certificates of deposit			604	534
Commercial banks				204
Treasury notes				244
5. Money wiring	1,356	1,490	1,392	793
6. Hard currency exchange	335	396	542	836
C. Total Outlays (A + B)	260,575	282,808	314,238	364,039
7. Income less Expenditure	3,678	5,341	10,415	19,198
8. Account balance	264,253	288,149	324,653	383,237

Source: Goskomstat.

320 Statistical Appendix
Table 9-3: Income and Expenditure Balance of Households, 1980-91

	Avg 80-84	1985	1986	1987	1988	1989	1990	1991
	(In percent of GDP)							
Total Income	52.0	49.9	50.8	52.1	53.7	56.6	61.4	73.3
Wages Fund	38.9	36.1	36.7	37.5	38.7	41.3	43.8	40.7
Pensions	6.8	6.9	7.3	7.5	7.5	7.4	7.7	7.1
Deposit Compensation								
Other	6.9	6.9	6.8	7.1	7.5	7.9	10.0	19.1
Total Expenditure	50.0	47.2	47.5	48.2	48.9	50.4	53.6	51.2
Purchases of Goods and Services	44.0	41.3	41.5	42.0	42.5	43.5	46.3	45.2
Obligatory payments (taxes)	6.1	5.9	6.1	6.2	6.4	6.8	7.3	6.0
Other								
Saving	1.9	2.7	3.3	3.9	4.7	6.3	7.8	22.1
Deposit accumulation	1.7	2.4	2.9	3.2	3.7	4.5	4.7	14.4
Cash accumulation	0.3	0.3	0.4	0.7	1.1	1.8	3.1	7.7

Sources: Russian and USSR Goskomstat.

Table 9-4: Domestic Trade Statistics

	1980	1985	1986	1987	1988	1989	1990
Total retail sales (billions of roubles)	158.1	188.2	191.5	196.6	210.6	232.7	269.5
of which: state and cooperative trade	155.1	184.5	187.9	192.9	206.8	228.7	264.1
collective farm market	3.0	3.7	3.6	3.7	3.8	4.0	5.4
Inventory at retail at end year (bln rbls)	30.7	41.9	38.2	35.3	34.8	34.7	29.8
Average annual of workers in trade and catering (thousands of people)	3,985.0	4,121.0	4,120.0	4,086.0	4,205.0	4,164.0	4,097.0
Total retail trade enterprises (thousands)	358.9	361.1	363.9	367.3	370.9	373.0	367.4
Total trade area in shops (million sq.m)	25.4	28.6	29.3	30.1	30.8	31.5	31.8
Total catering enterprises (thousands)	157.0	170.1	173.7	176.6	180.5	183.2	182.0
Total seats in catering enterprises (thousands)	9,251.0	10,795.0	11,055.0	11,316.0	11,595.0	11,810.0	11,844.0

Sources: 1980-89 are Russian Goskomstat, "Statistical Yearbook, National Economy of Russia in 1989"; 1990 estimates are provided by Russian Goskomstat staff.

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Table 10-1: Education, Population, and Employment
(According to data of the censuses taken)

	Population of more 15 years of age				Employed population			
	thousand people		per 1000 people		thousand people		per 1000 employed	
	1979	1989	1979	1989	1979	1989	1979	1989
Total high and secondary education	75,059	91,114	697	806	59,654	70,394	803	915
High education	8,312	12,740	77	113	7,523	11,198	101	146
Unfinished high education	1,782	1,930	17	17	852	1,030	12	13
Secondary special education	13,639	21,714	127	192	12,191	18,653	164	242
Whole secondary education	22,020	30,986	204	274	18,043	25,819	243	336
Incomplete secondary education	29,306	23,744	272	210	21,045	13,694	283	178
Urban high and secondary education	58,169	71,562	770	854	46,099	55,069	855	938
High education	7,408	11,374	98	136	6,683	9,974	124	170
Unfinished high education	1,602	1,730	21	21	717	889	13	15
Secondary special education	11,082	17,795	147	212	9,904	15,289	184	260
Whole secondary education	17,834	24,046	236	287	14,350	19,763	266	337
Incomplete secondary education	20,243	16,617	268	198	14,445	9,147	268	156
Rural high and secondary education	16,890	19,552	525	668	13,555	15,332	666	843
High education	904	1,366	28	47	840	1,224	41	67
Unfinished high education	180	200	6	7	135	141	7	8
Secondary special education	2,557	3,919	79	134	2,287	3,364	112	185
Whole secondary education	4,186	6,940	130	237	3,693	6,056	182	333
Incomplete secondary education	9,063	7,127	282	243	6,600	4,547	324	250

Source: "National economy of Russia in 1989".

Table 10-2: Higher Education and Scientific Institutions

	1980/81	1985/86	1987/88	1988/89	1989/90	1990/91
General Education						
Colleges (number)	494	502	506	507	512	514
Students (in thousands)	3,046	2,966	2,835	2,795	2,861	2,825
Secondary special schools - Students (in thousands)	2,505 2,642	2,566 2,478	2,573 2,441	2,583 2,408	2,595 2,338	2,603 2,270
Universities 1/ (number)	40	40	40	40	40	42
Students 1/ (in thousands)	303.6	294.8	290.1	294.4	309.2	328.1
Admissions 1/ (in thousands)	59.7	61.1	62.3	63.6	65.4	68.3
Graduated 1/ (in thousands)	49.5	50.2	45.3	44.8	44.9	48.0
Total scientific institutes 1/	2,896	2,966	2,994	3,036	2,506	
Academies	6	6	6	6	6	
Academic departments, scientific centers	14	14	14	15	15	
Scientific and research institutes	1,507	1,585	1,639	1,689	1,597	
Educational institutes	494	502	506	507	434	
Other scientific and Research organizations	589	587	559	549	454	
Scientists (in thousands)	938	1,019	1,033	1,032	1,032	
Doctor degree	26	30	32	33	33	
Doctor degree candidates	257	299	311	316	316	

Sources: "National Economy of the USSR in 1990"; pp. 242-243. "National Economy of Russia 1980, 1989".

Note: 1/ Calendar year.

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