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Romania
Restructuring for EU Integration—The Policy Agenda

Country Economic Memorandum

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ACRONYMS AND ABBREVIATIONS

ADNS	Animal Disease Notification System
ALMP	Active Labor Market Policies
APAPS	State Privatization Agency
BCR	Banca Comerciala Romana
CEC	Savings Bank
CEEC	Central Eastern Europe Countries
CEFTA	Central European Free Trade Agreement
Cif	Cost Insurance Freight
CIS	Commonwealth of Independent States
CMO	Common Market Organizations
CNVM	National Securities Commission
COMTRADE	Commodity Trade Database
EAGGF	Guarantee and Guidance Fund
EFTA	European Free Trade Association
EMIMBANK	Export-Import Bank of Romania
ESI	Export Specialization Index
EU	European Union
EU CET	EU Common External Tariff
FDI	Foreign Direct Investment
GSP	Generalized System of Trade Preferences
GVA	Gross Value Added
IACS	Integrated Administration and Control System
IR	Information Revolution
ISC	Insurance Supervisory Commission
ITA	Information Technology Agreement
LFS	
MEBO	Managed Employee Buy-outs
MIG	Minimum Income Guarantee
MLSSF	Ministry of Labor, Social Solidarity and Family
NPAA	National Program for the Adoption of the Acquis
PAYG	Pay-as-you-go
POF	Private Ownership Fund
PSE	Producer Support Estimate
ROL	Romanian Lei
ROW	Rest of the World
SCF	Structural Cohesion Fund
SDA	State Domain Agency
SITC	
SME	Small and Medium Enterprises
SOE	State-owned Enterprise
SOF	State Ownership Fund
TWA	Temporary Employment Agency
ULC	Unit Labor Cost
WIIW	Vienna Institute for International Economic Studies
WTO	World Trade Organization

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Map IBRD 28710R1

1. STABILITY, GROWTH, AND INTEGRATION WITH THE EU

1.1 Until[1] recently, Romania was one of the poorest performing economies among Central Eastern Europe countries (CEEC).[2] Today, Romania is at a crossroads. A decade of transition was marked by limited structural reforms, lack of financial discipline resulted in unsustainable macroeconomic policies which ended in two major economic crises, hyperinflation, and substantial decline in standards of living. In the last three years, however, Romania has made remarkable progress by restoring growth, macroeconomic stability, and poverty has started to decline. Romania would need to build up on these recent improvements in economic performance, strengthen its macroeconomic framework, and accelerate implementation of structural reforms. This chapter examines macroeconomic stability, risks and vulnerabilities, growth, and progress in Romania's integration with the European Union (EU).

1.2 Romania is pursuing a broad reform program, including institutional, governance, and economic restructuring reforms, which are anchored on its process for EU accession. The institutional and governance reforms are being made in the context of negotiations and implementation of the various chapters of the *acquis communautaire* and are being supported by the World Bank's Programmatic Adjustment Loan, currently being developed, and by programs of other development partners (see the Section 1 of the Summary Report of this study). To complement these efforts, this study focuses on selected policies of the real sector as Romania integrates with the EU and the world markets. Indeed, recent progress indicates that reforms are turning a corner—the challenge is to make consistent and sustained progress in the institutional, governance, and economic restructuring reform agendas.

A. MACROECONOMIC STABILITY

A.1. Overview

1.3 The legacy of the socialist years has weighted heavily over the transition years in Romania. Policies in Romania during the 1990s were dominated by entrenched interest groups embedded in state-owned-enterprises (SOE), a pervasive lack of financial discipline in their relations with the financial sector and with public administration which resulted in unsustainable macroeconomic policies. As a result, structural reforms and institutional change were also delayed. Romania experienced two major economic crises one in 1991/1993, and another one in 1997/1998 (see Table 1.1). In the 1991/1993 crisis, annual inflation rate reached 256 percent, debt to Gross Domestic Product (GDP) ratio increased from 3 percent in 1990 to 16 percent in 1993, and accumulated GDP contraction was about 30 percent. In the 1997/1999 crisis, inflation reached above 150 percent per year from a level of about 35 percent per year in 1995/96, debt to

[1] This chapter was prepared by Juan Carlos Ginarte, Stella Ilieva, and Rosalinda Quintanilla (ECSPE).
[2] Central Eastern European Countries (CEEC) is defined here to include Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, Slovenia, Slovak Republic.

GDP ratio reached 40 percent, and accumulated GDP contraction was about 15 percent. These events exacerbated the effects of the collapse of output on broad segments of the population.

Table 1.1 Selected Economic Indicators

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003p
GNI per capita (Atlas method, US$)	1,240	1,190	1,270	1,470	1,590	1,520	1,520	1,580	1,680	1,710	1,850	
						(Percent)						
Total Poverty rate (headcount, %)				25.4	20.1	30.3	30.8	33.2	35.9	30.6	28.9	
Extreme Poverty rate (headcount, %)	..	..		..9.4	6.3	11.2	11.3	12.5	13.8	11.4	10.9	
Unemployment rate	8.2	10.4	10.9	9.5	6.6	8.9	10.4	11.8	10.5	8.8	8.4	7.3
Real GDP growth	-8.8	1.5	3.9	7.1	3.9	-6.1	-4.8	-1.2	2.1	5.7	5.0	4.9
CPI inflation (p.a.)	210.4	256.1	136.7	32.3	38.8	154.8	59.1	45.8	45.7	34.5	22.5	15.1
						(Percent of GDP)						
Investment	31.4	28.9	24.8	24.3	25.9	20.6	17.7	16.1	19.5	22.6	23.1	
Foreign Direct Investment	0.3	0.3	1.1	1.2	0.7	3.5	4.8	2.9	2.8	3.0	2.5	2.7
Gross Domestic Savings	20.8	24.0	22.5	18.6	17.6	13.5	9.7	11.4	14.5	13.9	15.0	
Total revenues and grants	38.7	34.0	32.0	31.4	29.6	28.9	29.9	31.9	31.4	30.5	29.7	30.9
Total expenditure and net lending	43.7	34.4	34.7	34.8	33.9	34.2	35.3	35.5	35.4	33.7	32.4	33.6
Overall fiscal balance	-4.6	-0.4	-2.2	-3.4	-4.8	-5.3	-5.4	-3.6	-4.0	-3.3	-2.6	-2.3
Current account balance	-8.0	-4.5	-1.4	-5.0	-7.3	-6.0	-6.9	-4.0	-3.7	-5.5	-3.4	-5.8
External debt			18.5	18.2	23.5	27.2	23.8	25.9	27.8	29.6	30.7	30.2
Public and publicly-gtd. Debt 1/	..	..	11.8	12.9	19.4	22.9	21.1	24.2	23.6	24.6	25.5	
Interest payment						3.8	4.7	5.3	4.8	3.8	3.0	2.9
Official reserves (mo. of imports)	0.2	0.1	1.1	0.4	0.5	2.1	1.3	1.6	2.1	2.9	3.9	3.5
Broad money/GDP (percent)	30.8	22.3	21.4	25.3	27.9	24.6	24.8	24.6	23.0	23.2	24.7	24.4

Source: World Bank and IMF databases; Romania Public Expenditures Review (2002) and Poverty Assessment (2003)

1.4 In the last three years, however, there has been a remarkable turn around both in terms of the magnitude and quality of macroeconomic adjustment and growth (see Table 1.1). GDP growth has been reestablished to around 5 percent per year, led primarily by investment and exports rather than consumption. Occasionally, thought, aggregate consumption surfaces as a key driver of growth, reflecting sporadic reflationary pressures related to high wage increases in SOEs. The inflation rate has declined faster than expected by the macroeconomic stabilization program to about 14 percent per year in 2003, the lowest level since the start of transition. Fiscal deficits have been cut to about half compared to 1997 levels but the current account gap, estimated at 5.8 percent of GDP in 2003 is high. Budgetary consolidation in 2003 was larger than expected by the program. A stronger than expected external performance contributed to the level of official reserves reaching a record level of over US$7 billion in 2003—an impressive increase of US$3.5 billion since 2000. The banking sector is on firmer footing and direct lending by the central bank has been eliminated. International market sentiment towards Romania has continued to improve— Standard&Poors upgraded Romania's sovereign currency risk from B+ to BB- in February 2003. Improvements in macroeconomic performance and growth have contributed to reductions in poverty levels (Box 1.1).

A.2. Fiscal Policies

1.5 In the last few years, Romania has made important progress in fiscal adjustment and consolidation (see Table 1.2). Monetary financing of quasi-fiscal expenditures via directed credits to agriculture and other loss-making sectors—and main contributors to Romania's two major crises in the 1990s—were halted in 2000. The National Bank of Romania (NBR)direct financing of fiscal deficits ended in 2000. Between 1998 and 2003, Romania implemented a fiscal adjustment of about 3.0 percentage points of GDP—the overall fiscal deficit had reached a peak of 5.4 percent of GDP in 1998 and by 2003, preliminary estimates indicate that the overall fiscal deficit was 2.4 percent of GDP. On the whole there have been important qualitative dimensions in Romania's fiscal consolidation of the last few years. The fiscal adjustment of 1998-2003 resulted mostly by lowering public expenditures to GDP from 35.3 to 32 percent with the strongest expenditure adjustment taking place in 2000-2003. At the same time, public revenues first increased between 1998 and 1999 to address unsustainable macroeconomic imbalances and later declined from 31.8 to 29.6 percent of GDP in 2000-2002. Declines in tax revenues to GDP were supported by important adjustments on the public expenditure side. In addition most of the adjustment on the expenditure was driven by reductions of current public expenditures—from around 32 percent of GDP in 1998-99 to around 29 percent of GDP in 2002—while public capital expenditures remained nearly unchanged.

Box 1.1 Macroeconomic Stability, Growth and Poverty

Poverty and inequality are inextricably linked to macroeconomic stability and economic growth. Countries that experience severe macroeconomic distress tend to suffer steep drops in employment and real incomes, with the burden of economic shocks often falling disproportionately on lower-income groups. Whereas high-income groups generally have diversified sources of income, the poor tend to make a living from employment, thereby making it relatively difficult to hedge against a decline in real wages due to unanticipated inflation. Furthermore, the concentration of spending patterns on basic necessities can severely weaken the ability of the poor to adapt their consumption behavior to changes in relative prices. It is essential, therefore, that governments pursue policies supportive of macroeconomic stability, growth, employment, and low inflation, while maintaining an appropriate safety net to protect the most economically vulnerable segments of society. Key findings of the Poverty Assessment (2003) [a/] include that:

- At 28.9 percent in 2002 total poverty rate has decreased significantly since 2000 due to the remarkable combination of disinflation and strong growth. Extreme poverty has also decreased in recent years declining to nearly 11 percent in 2002.
- Consumption inequality decreased between 1995 and 2002, and then subsequently increased slightly, though primarily in urban areas. However, the level inequality remains comparable to that of other EU accession countries.
- Average consumption per adult equivalent was most volatile between the sub-periods 1995 to 2000 and 2000 to 2002 for self-employed persons outside of agriculture. This was followed by employed wage earners, pensioners, and the unemployed. Most likely due to subsistence living, self-employed persons in agriculture experienced below average contraction and expansion of consumption in these two periods.
- Most of the change in both extreme and total poverty due to recession and economic recovery is associated with intra-sectoral effects (i.e., shifts within occupational activities such as wage employment, self-employment, and pensioners) rather than population shifts across sectors. Population's shifts across occupational categories accounted for respectively 30 percent and 24 percent of extreme and total poverty changes in the sub-period 1995 to 2000, but practically no part of the shifts in 2000 to 2002.
- Changes in extreme urban poverty accounted for 56 percent and 71 percent, respectively, of the total change in extreme poverty in the two sub-periods. Total urban poverty represented 55 and 64 percent of the total changes in poverty rates.

a/ *Romania: Poverty Assessment, Volumes 1 and 2*, Report number 26169-RO, The World Bank, 2003.

1.6 Highest priority on the fiscal side is to enforce financial discipline on the enterprise sector and the banking sector. In the case of Romania, this implies eliminating the widespread practice of nonpayment, arrears, and barter settlement is central together with completing the restructuring of the banking sector. Economic restructuring, including privatization or liquidation of large SOEs, and implementing hard budget constraints on the enterprise sector and strict incomes policy remain as a major challenge to safeguard stability, growth, and integration. Upgrading skills is also needed to secure the benefits of European and global integration. Romania faces important challenges in education reform (Section 5 in Volume 1)—the most recent TMISS international math and science assessment shows that Romania scores are below international average and declined between 1995 and 1999. Public expenditures to GDP in education in Romania is about 3.2 percent, which is low compared to CEECs average of 4.4 percent. In fact, implicit subsidies and tax arrears relative to GDP are each higher than the resources allocated to the education sector. This is indicative of some of the trade-offs in public expenditure policies.

Table 1.2 Consolidated General Government (percentage of GDP)

	1998	1999	2000	2001	2002
Total revenue and grants	29.7	31.9	31.4	30.5	29.7
Current revenues	29.7	31.8	31.2	30.4	29.6
o/w Tax revenues	27.8	30.1	29.4	28.3	27.6
Total expenditure	35.1	35.5	35.4	33.7	32.4
Current expenditure	31.8	32.6	31.9	30.5	29.2
Goods and services	11.4	12.6	12.5	12.1	12.0
Wages and salaries	5.0	4.8	5.5	5.0	4.9
Other (materials and operating exp.)	6.4	10.5	7.1	7.0	7.1
Interest	4.7	5.3	4.9	3.9	3.0
Subsidies and transfers	14.8	14.7	14.5	14.5	14.0
Subsidies	1.7	1.7	2.2	2.1	2.0
Transfers	13.1	13.0	12.3	12.4	12.1
Capital expenditure	3.6	2.8	3.1	3.2	3.2
Lending less repayments	0.6	0.1	0.4	0.1	0.1
Overall balance	-5.4	-3.6	-4.0	-3.3	-2.6
Financing	5.6	3.3	3.5	3.2	2.3
Domestic	3.9	1.6	-0.2	0.9	0.3
External	0.0	0.4	2.8	1.7	1.5
Privatization	1.8	1.3	0.6	0.3	0.4
Bank asset recovery	0.0	0.0	0.3	0.2	0.1
Discrepancy	0.2	-0.3	-0.5	-0.1	-0.3
Memorandum:					
Primary balance (% of GDP)	-0.7	1.7	0.8	0.6	0.4

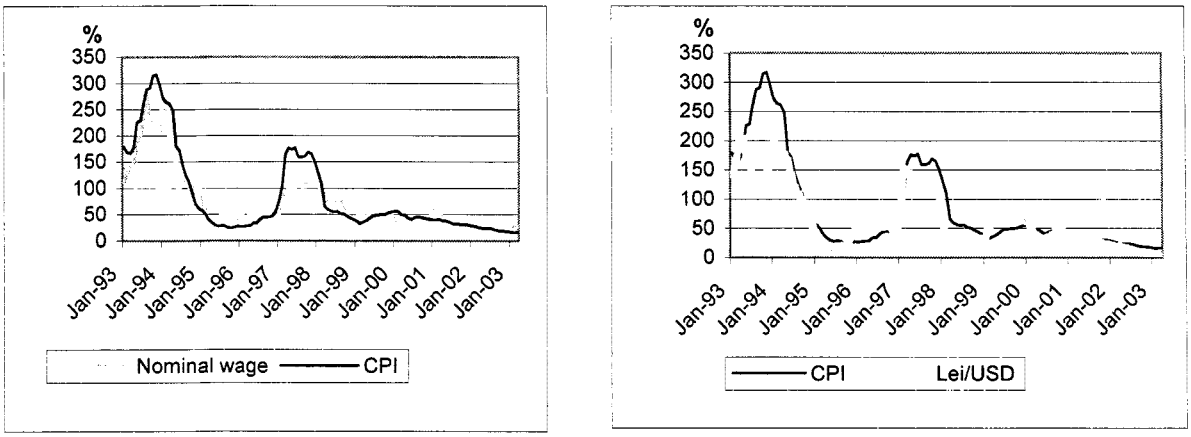
Source: Ministry of Finance.

A.3. Incomes Policy, Exchange Rate, and Prices

1.7 In recent years, incomes policies, and exchange rate and monetary policies have been conducive to reducing Romania's inflation rate—inflation has declined from 46 percent in 1999 to 14.1 percent in 2003. Romania has been exercising greater wage discipline in SOEs which in

turn has contributed to lowering of inflation rate. Though there has been a surge in 2003, generally wage growth has been constrained in recent years to rates that are more in line with productivity improvements, particularly since 2001. In the past, excessive wage growth in SOEs, and the means used to finance it, have been a key source of monetary growth and of inflation.[3] Real wages grew at an average monthly rate of 1.4 percent in 2000 to 2002 compared with 1.8 percent in 1995 to 1999. As shown in Figure 1.1, the ebbs and flows of the growth rate of nominal wages have often presaged changes in inflation. In turn, lower inflation reinforced this trend by reducing the cost-of-living adjustment needed to maintain real wage rates. Adding to this virtuous circle has been the slowdown in exchange rate adjustment that usually has been needed to maintain external competitiveness. The rate of nominal exchange devaluation has decreased steadily from 73 percent in 1999 to 14 percent in 2002.[4] and 9.8 percent in 2003. [5]

Figure 1.1 Wages, Exchange Rate, and Prices (12-month percentage change)



Source: World Bank staff estimates based on SIMA information.

1.8 Substantial progress in privatization of large SOEs, elimination of non-payment practices and corresponding barter settlement of arrears, and stronger foundations of fiscal policies would be needed for Romania to start moving towards a framework of inflation targeting (see section D.3 below).

[3] The dynamics of Romanian inflation are analyzed in detail in David Moore, "Inflation in Romania—Developments and Determinants," in The Road to EU Accession, IMF, 2001. The conclusion of the paper is that increasing unit labor costs and exchange rate depreciation have been the primary determinants of inflation since the early 1990s. Growth of monetary aggregates and credit no doubt were an important sources of inflationary pressure, but ultimately the medium-term path of inflation was determined by policy decisions regarding incomes policy and exchange rate adjustment.

[4] Nikolay Gueorguiev in "Exchange Rate Pass-Through in Romania", IMF Working Paper WP/03/130 of 2003, estimates that historically 27 to 43 percent of the exchange rate change has passed through to consumer prices, and to 59 to 72 percent of producer prices.

[5] Vis-à-vis a 60/40 percent basket of Euro and USD.

A.4. Implications for External Sustainability

1.9 Fiscal consolidation, more supportive incomes policy, lower inflation, and slower real exchange rate appreciation, contributed to the improvements in external sustainability in 1999 to 2002. An improved level of national savings and in the balance between national savings and investment resulted in a decline of the external current account deficit by over 2 percentage points of GDP in 2002, following a deterioration in 2001 (Table 1.3). Most of the improvement in the external current account deficit, over 80 percent, was due to a decline in the trade deficit. This reflected declining import demand due to moderation in the growth of domestic consumption together with relatively strong growth of exports. In dollar terms, export growth more than doubled to 22 percent in 2002 relative to 2001, primarily due to strong performance in manufactures including textiles, footwear, and (see Chapter 2). Exports contributed 5.3 percentage points to the average GDP growth rate of 4.2 percent in 2000 to 2002, while the negative contribution of imports fell from 9 to 5 percent. More recently, large external capital inflows and rapid wage growth have fueled strong demand growth and a widening of the current account balance to over 6 percent of GDP in 2003.

Table 1.3 Balance of Payments, 1999-2002 (% of GDP)

	1999	2000	2001	2002
Current account	-4.1	-3.9	-5.6	-3.4
Trade account	-3.5	-4.6	-7.5	-5.7
Exports	23.8	28.1	28.7	30.3
Imports	27.4	32.7	36.1	36.0
Services account	-2.4	-1.7	-1.0	-1.1
Unrequited transfers, net	1.8	2.3	2.9	3.4
Capital account	6.0	7.4	7.9	8.1
Direct investment and capital transfers	3.1	2.9	3.2	2.6
Portfolio investment	-0.2	0.1	0.2	0.3
Public borrowing, net	..	2.4	2.8	2.8
Private borrowing, net	..	2.0	1.4	1.4
Trade credit, net	..	-0.1	0.4	1.1
o/w short-term, net	..	0.0	0.5	1.0
Net errors and omissions		0.7	2.5	-2.0
Overall balance	1.8	4.2	4.8	2.6
Financing	-1.8	-4.2	-4.8	-2.6
Net foreign assets of National Bank, net	-2.4	-3.0	-4.9	-4.3
Net foreign assets of dep. money bks, net	0.6	-1.3	0.1	1.7

Source: International Monetary Fund.

1.10 The positive trade developments in recent years reflect greater competitiveness and growing export market share in Europe made possible by an improved policy environment and new opportunities associated with EU integration. Better macroeconomic performance, including lower inflation and faster productivity growth in tradeables particularly exports (see Chapter 2), have been critical for containing real exchange rate appreciation. Following the 15 percent devaluation of the real effective exchange rate in 1999, the annual rate of appreciation averaged 4.6 in 2000 to 2002, and just 2.1 percent in the last two years. The latter is less than one-half of

the growth rate of GDP, for which one-half could be a reasonable estimate of the rate of growth of total factor productivity.[6]

1.11 Enhanced budgetary discipline and better trade performance have translated into more favorable savings-investment balances for growth and external current account stability. As shown in Table 1.4, gross domestic savings (GDS) increased from 11.4 percent of GDP in 1999 to 17.3 percent of GDP in 2002, reflecting relatively moderate, though uneven, consumption growth. In 2003, the savings rate is preliminarily estimated to have been 16.9 percent of GDP, a slight decrease resulting mainly to slightly lower non-government savings. The increase in GDS and a rise in net foreign transfers totaling 1.7 percentage points of GDP in 1999 to 2002 have increased national savings by nearly 8 percentage points of GDP over this period. Government savings accounted for about 20 percent of this increase, while the remaining 80 percent is due to greater levels of private saving. Along with foreign savings of about 3.5 percent of GDP, this has made it possible to finance a 7 percentage point of GDP increase in gross domestic investment, over 90 percent of which originated from the private sector.

Table 1.4 Saving and Investment Balances

	1999	2000	2001	2002
Gross domestic savings	11.4	14.2	14.9	17.3
Net transfers from abroad	0.6	1.4	2.1	2.3
National savings	11.9	15.6	17.0	19.7
Government	-0.9	-1.0	-0.1	0.6
Non-government	12.8	16.6	17.1	19.1
Gross domestic investment	16.1	19.4	22.5	23.1
Government	2.8	3.0	3.1	3.2
Non-government	13.3	16.4	19.4	19.9
Foreign savings	4.1	3.9	5.5	3.4

Source: International Monetary Fund.

1.12 The recent downward trend in fiscal and external deficits has helped to contain the rate of increase of external and public indebtedness—total external debt has increased from around 26 to 34 percent of GDP between 1999 and 2002 (Table 1.5). Public and publicly-guaranteed debt shows sustained increase of 1.9 percentage points of GDP since 2000 reaching 26 percent of GDP in 2002. While stocks of external and public debt of Romania compare favorably with debt levels in developing and transition economies [7] this rate of debt accumulation is not likely to be

[6] See section on growth below.

[7] There is no standard set of benchmarks for measuring debt sustainability. However, there have been studies to determine critical values for indebtedness indicators beyond which a country would most likely default. D. Cohen in "Growth and External Debt: A New Perspective on the African and Latin American Tragedies" (CEPR Working Paper No. 1753) estimates critical points that could help to determine the sustainability of both public and total external debt. His benchmarks are net present value of debt service/GDP of 50 percent, NPV/XGS of 200 percent, and NPV/revenue of 290 percent. Countries whose ratios exceed these benchmarks were found to have a risk of rescheduling external debt exceeding 60 percent. The World Bank provides a set of thresholds for classifying middle-income countries by the degree of indebtedness. Countries whose NPV of total external debt service to GNP ratio between 48 and 80 percent and net present value of debt service to export in the range of 132 to 220 percent are considered by the Bank to be moderately indebted. If any one of these two ratios exceeds the top the range, then a country is considered "severely indebted". When both ratios are below the bottom of the benchmark ranges, the

sustainable in the longer term. Further fiscal consolidation and structural reforms are needed to moderate the rate of debt accumulation and preserve low levels of indebtedness.

1.13 Total external debt service is below 20 percent of exports of goods and services, and has been declining. This reflects a lengthening of the maturity structure of the external debt, thereby helping to reduce principal payments as well as stronger export performance. In addition, interest payments have been coming down due to declining global interest rates and a reduction in Romania's country risk premium, which came down from nearly 800 basis points in 1999 to about 300 basis points in 2003. The capital market's increasing confidence in the Romanian economy undoubtedly reflects in part the growing accumulation of foreign exchange reserves. Gross official reserves of the National Bank of Romania have increased from 2.1 months of imports in 1999 to nearly 3.5 months in 2002.8 At the same time, the ratio of official reserves to short-term debt, an indicator of vulnerability to sudden capital flow reversal, has risen from 6 in 1999 to about 14 at the end of 2002 (Figure 1.2).

Table 1.5 Indicators of Public and External Indebtedness, 1999 - 2002

	1999	2000	2001	2002
In % of GDP:				
Public and publicly guaranteed debt 1/	24.2	23.6	24.6	25.5
o/w external	16.1	17.4	18.6	20.0
Total external debt	25.6	28.9	31.1	34.3
In % of exports of goods and services:				
Total external debt	92.5	87.1	92.1	96.8
Total external debt service	29.3	16.2	19.4	21.6
o/w principal	24.3	11.9	15.0	17.7
interest	5.0	4.3	4.4	3.9
In % of general government revenue:				
Public and publicly guaranteed debt	90.5	75.4	80.6	86.2
General govt. interest payments	16.6	15.5	12.7	10.2
Memorandum:				
Variable rate ext. public debt (man US$)	3100	3771	4109	4861
% total public external debt	49.8	54.2	53.2	51.0
Short-term debt (% of total external)	4.2	3.5	3.3	3.0
Gross official res. in mos of imp. of GNFS	2.1	2.5	3.2	3.9
Spread of benchmark bonds (bps, eop)	780	406	421	282
Treasury bill rate (eop)	104.8	59.4	38.4	17.4

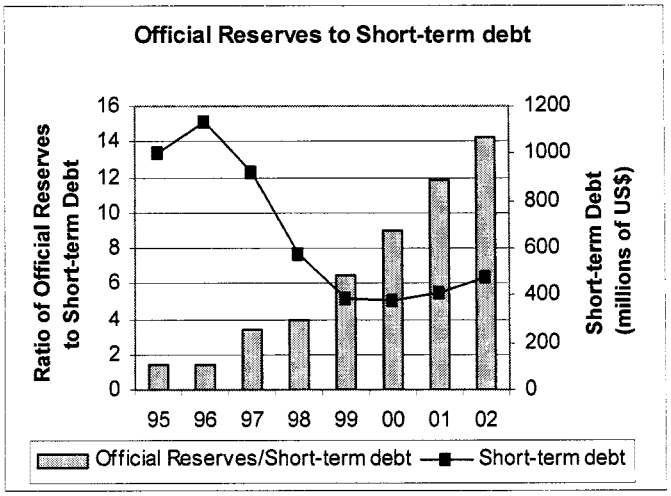
1/ Excludes IMF purchases and temporary borrowing from the State Treasury.

Source: Ministry of Public Finance; International Monetary Fund; World Bank staff calculations.

country is classified as "less indebted". Finally, the Maastrict treaty establishes a public debt benchmark of 60 percent of GDP for participation in European Monetary Union.

[8] The buildup of reserves is accounted for, in part, by trade developments and strong capital inflows discussed below.

Figure 1.2 Official Reserves to Short-term Debt



Source: World Bank databases, SIMA.

B. Romania's Performance in Regional Perspective

1.14 With some exceptions, Central Eastern European Countries (CEEC) have maintained a solid record of performance. Economic growth of Romania compares well with that of other countries in the region. Overall fiscal and external current account deficits also compare favorably with other CEEC. Better macroeconomic management has contributed to these improvements.

1.15 Nevertheless, as illustrated in Table 1.6, challenges remain in Romania if it is to catch up with solid performers in the region. There are weaknesses in the foundations of Romania's macroeconomic and growth performance. While inflation rate in Romania has declined from 45.8 to 14.1 percent between 1999 and 2003, current inflation rates greatly exceed those of other countries in the region whose inflation rates have been in the single digit levels since late 1990s. Although fiscal deficit of Romania does not seem high relative to the other countries, further fiscal adjustment and stricter incomes policy are needed to sustain gradual but sustained reduction of inflation and create fiscal space for priority investments. Similarly, while the external current account deficit does not seem high compared to other countries in the region, unlike these, the financing of the deficit is increasingly provided by relatively mobile capital and less by foreign direct investment (FDI). This exposes the economy to the risk of sudden capital flow reversal and could ultimately hurt growth. Much of this capital represents the borrowings of commercial banks that are on-lent to domestic companies and households in foreign currency at relatively high domestic interest rates. Although the prudential and supervisory framework has been strengthened since the banking crisis challenges remain in the basic infrastructure of the financial sector (see Chapter 6), and transfer of currency mismatch to enterprises and household balance sheets increases the vulnerability of these entities to sudden exchange rate adjustment, and may create large contingent public liabilities.

Table 1.6 Romania and CEECs: Selected Economic Indicators, 2002

	GDP Growth (%)	CPI Inflation (%)	Interest rates (Avg. long term) (%)	Overall Fiscal Balance (% of GDP)	External CAB (% of GDP)	Broad Money (% of GDP)	Private Sector Output (% of GDP)	Average FDI (1995-2002) (% of GDP)
Romania	**5.0**	**22.5**	**35.2 a/**	**-2.8**	**-4.8**	**23.7**	**65**	**2.7**
Bulgaria	4.8	5.8	9.8	-0.6	-4.4	43.3	75	4.3
Croatia	5.2	1.7	12.8	-4.8	-7.1	66.0	60	4.5
Czech Rep.	2.0	1.8	3.6 b/	-0.9	-5.3	75.5	80	7.4
Estonia	5.6	3.6	7.9	1.2	-12.8	42.6	80	5.1
Hungary	3.3	5.3		-9.5	-4.0	47.2	80	4.2
Latvia	6.1	1.8		-2.5	-7.8	36.5	70	5.5
Lithuania	5.9	0.3	6.8	-1.2	-4.4	29.3	75	4.0
Poland	1.3	1.9		-6.6	-3.9	64.6	75	2.9
Slovak Rep.	4.4	3.3	7.7 b/	-7.4	-8.3	65.3	80	5.4
Slovenia	3.2	7.4		-1.9	-1.8	55.5	65	1.9

Notes: a/ Bank lending (weighted average); b/ Interbank rate.
Source: International Financial Statistics, IMF; World Bank database SIMA.

1.16 At 24 percent of GDP, the level of monetization of the Romanian economy is about half the average level of other countries in the region. The banking sector provides most the financial intermediation, holding about 90 percent of the total assets in the financial system. As a result of important reforms in the banking sector since the banking crisis, today the liquidity of banks is high, the banking sector seems to be well capitalized and profitable. However, in contrast to other countries in the region where the banking sector is mostly private—median of state owned banking is 4.6 percent of total assets—state owned banks in Romania hold nearly 40 percent of the bank assets and all deposits, and 32 percent of loans. These assets are, however, concentrated in only two state banks, both earmarked for privatization. The low level of financial intermediation reflects weaknesses in the basic infrastructure needed for financial sector development—the banking sector in particular—the still dominant role of state owned banks, and the heavy reliance on non-payment, accumulation of arrears, and related barter settlement of these as the most important source of financing (see Chapter 6).

1.17 FDI inflows are expected to increase, but linger below potential, reflecting a weak but improving business environment. Foreign direct investment attracted by Romania crossed the $10bn threshold in September 2003, cumulatively from the beginning of the transition. However, at around $430, per capita FDI remains several times lower than in neighboring accession countries. Both the volume and the composition of the FDI inflows are linked with the progress achieved in privatization and the perception of the investors vis-à-vis the attractiveness of the business environment. So far, FDI has been concentrated primarily on the labor-intensive, export-oriented industries, while greenfield investment has been limited.

1.18 The low levels of FDI flows to Romania compared to other countries in the region places Romania at a disadvantage in terms of its development prospects compared to other countries in the region. Solid performers in the region have leveraged economic restructuring, financing needs, and resulting net job creation through FDI—initially a large share of FDI was related to privatization and as the policy framework improved green field FDI increased in importance. The low levels of FDI in Romania reflects the slow progress in economic restructuring of large

SOEs and weaknesses in its policy framework. The share of the private sector in the economy has remained low at 67 percent of GDP compared to an average of other countries in the region of 76 percent of GDP. Implementation of fundamental structural reforms and further fiscal consolidation are needed to improve the size and performance of the private sector and reorient the role of the state towards the provision of basic public goods[9] in a predictable policy framework. Economic restructuring, including privatization of large SOEs, remains as a major challenge in Romania to safeguard macroeconomic stability, and enable the country's growth potential and meaningful net employment opportunities.

1.19 Romania's strong trade performance is resulting in its solid integration with EU, sub-regional and global markets (Table 1.7). Trade integration is progressing faster compared to other economic dimensions of integration discussed above. While total trade relative to GDP is low compared to other CEECs, both the share of imports in total imports and the share of exports in total exports from/to the EU and sub-regional markets are at the higher end of those observed in other CEECs. This indicates that trade integration with the EU is playing a significant role in economic restructuring and productivity gains in the tradable sectors. Romania is establishing strong economic links in this highly competitive market. While FDI levels are low, there is evidence that these flows are having a strong pull effect in Romania's trade performance given the strong links of these flows to small and medium enterprises (see Chapter 2). Limited domestic financing to small and medium enterprises (SMEs) does not seem to be holding back these companies from achieving productivity and quality levels required to compete in EU markets. Which in turn, this implies that the benefits of FDI, and consequently policies that affect FDI flows, of incorporating local producers into global production networks are far more important and have more impact in terms of economic restructuring and productivity gains than other policy dimensions such as limited domestic financing to SMEs. Measures to improve the policy framework that affect FDI flows across the board include securing macroeconomic stability and structural reforms to improve investment climate.

1.20 Romania's impressive trade performance is indicative of the potential of this economy. This potential, however, remains mostly untapped due to the protracted implementation of price liberalization and structural reforms. Figure 1.3 shows two indicators of progress of reforms for CEEC: one for the initial phase and one for the second phase of reforms. Romania's ratings of the initial phase of reforms is good, other CEEC have continued to advance. While Romania had a better rating initial phase of reforms than Bulgaria in 1999, by 2003 Bulgaria's rating surpassed that of Romania. Romania has made some progress in the second phase of reforms between 1999 and 2003. However it is in the second phase of reforms where Romania has lagged behind other CEEC the most. Romania's rating in second phase of reforms in 2003 is only marginally comparable where Bulgaria, Latvia and Lithuania second phase of reforms were back in 1999. If Romania is to catch up with other CEEC in second phase reforms, structural reforms in enterprise restructuring and large scale privatization would need to be implemented decisively.

[9] Basic public goods include education, primary health care services, a social safety net targeted to the poorest segments of its population.

Table 1.7 Romania and CEEC: Selected Indicators of Integration, 2002

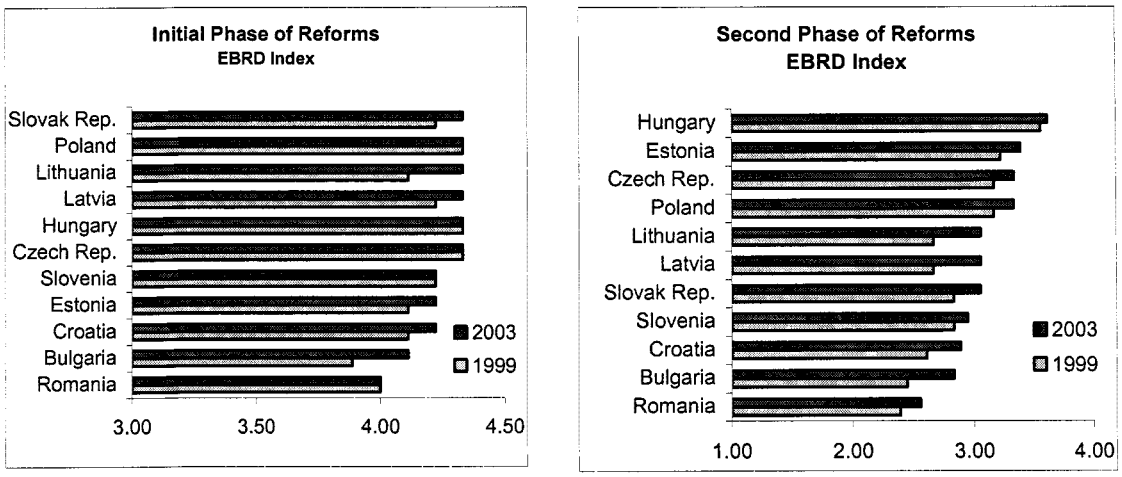
	Imports plus Exports to GDP (%)	Imports from EU (% of Total imports)	Imports from CEEC-10 (% of total imports)	Exports to EU (% of total exports)	Exports to CEEC-10 (% of total exports)	FDI from EU (% of total FDI)
Romania	69.3	61.6	5.1	65.7	11.3	61.1
Bulgaria	83.4	54.3	5.2	55.5	10.5	69.1
Croatia	113.9	56.9		50.6		71.2
Czech Rep.	68.1	57.4	2.4	65.4	1.3	84.1
Estonia	125.2	65.5	2.3	69.4	6.4	
Hungary	108.9	56.2	9.8	72.6	10.0	80.2
Latvia	78.5	51.2	3.1	52.5	21.5	
Lithuania	96.9	42.6	0.3	43.9	0.7	
Poland						
Slovak Rep.						81.3
Slovenia	96.3	67.6	9.3	57.7	5.8	85.6

Note: FDI shares are for 2001; all other indicators are 2002 data.
Source: World Bank staff estimates based on UN COMTRADE and World Bank database SIMA.

1.21 Based on GDP per capita at PPP, Romania is the poorest country with the second largest population among the CEEC. In addition to making progress in poverty reduction—poverty rates have declined from a peak level of 13.8 in 2000 to 10.9 in 2002—Romania's social indicators have also been improving (Table 1.8). Adult illiteracy, infant mortality as well as mortality of under-5 years of age, school enrollment and life expectancy at birth have improved since the start of transition. These improvements are remarkable taking into account that Romania, besides being one of the poorest countries in the region, it seems to have started the transition in a more precarious condition in terms of social indicators and without as an effective social protection system as other CEECs. Direct comparison of social indicators, irrespective of differences in per capita incomes, show that Romania, on the whole, was and remains worse off than other CEECs. Improvements of social indicators over time have been slower in Romania compared to other CEECs—macroeconomic instability, slow progress in structural reforms, and wide fluctuations in economic growth have contributed to the slow pace of improvements in social indicators.

1.22 However, differences in Romania's social indicators to other countries in the region seem to be explained almost entirely by differences in per capita income, except in the case of mortality rates. Thus improvements in per capita income, that is stability and growth, in Romania seem to have a large pay off in the improvement of social indicators. This suggests that the potential impact on social indicators of rising per capita income supported by a fiscally sustainable and well targeted social safety net is likely to be large. Reorienting public expenditures away from fiscal support to the enterprise sector and towards sustainable and well targeted social public expenditures would improve growth prospects and social indicators.

Figure 1.3 Selected Indicators of Progress of Reforms: CEECs



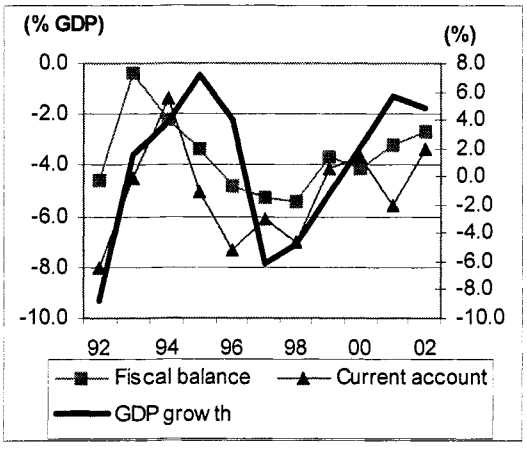
Source: EBRD Transition Indicators; Indicators for initial phase of reforms are calculated as unweighted averages of indicators for: small-scale privatization; price liberalization; trade and foreign exchange system. Indicators for second phase of reforms are calculated as unweighted averages of indicators for: large-scale privatization; governance and enterprise restructuring; competition policy; banking reform and interest rate liberalization; securities markets and nonbank financial institutions; infrastructure reform.

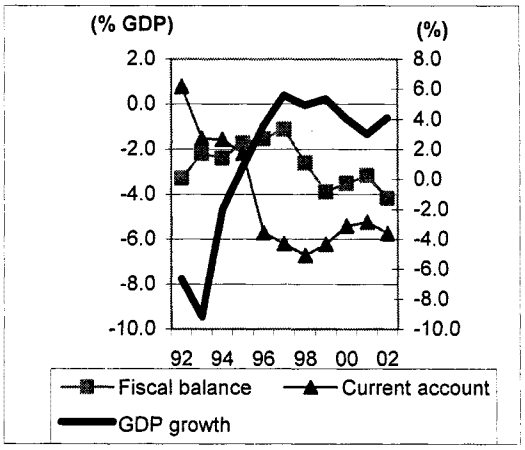
Table 1.8 Selected Social Indicators, CEECs

	GDP per capita, PPP (US$) 2002	Adult Illiteracy (%)		School enrollment, secondary (% net)		Mortality rate, infant (per 1,000)		Mortality rate, under-5 (per 1,000)		Life expectancy at birth, total (years)	
		1990	2002	1990	2000	1990	2001	1990	2001	1990	2002
Bulgaria	6909	2.8	1.4	63.3	87.6	14.8	14	18.7	16.0	71.4	71.8
Croatia	9967	3.1	1.5	63.2	79.0 /b	10.7	7.0	12.5	8.0	72.2	73.8
Czech Republic	15148	..	..	86.1 /a	87.1 /a1	10.8	4.0	12.4	5.0	71.7	75.0
Estonia	11712	0.2	0.2	82.3 /h	82.8	12.4	11	17.2	12	69.5	70.6
Hungary	13129	0.9	0.6	74.8	87.2 /c	14.8	8.0	16.8	9.0	69.3	71.8
Latvia	8965	0.2	0.2	76.8 /d	74.4	13.7	17.0	18.1	21.0	69.3	70.4
Lithuania	10015	0.7	0.4	80.5 /e	88.6	10.3	8.0	13.5	9.0	71.3	72.7
Poland	10187	0.4	0.3	75.8	90.9	19.3	8.0	21.9	9.0	70.9	73.8
Romania	**6326**	**2.9**	**1.7**	**72.8 /f**	**79.6**	**26.9**	**19.0**	**35.7**	**21.0**	**69.7**	**70.0**
Slovak Republic	12426	..	..	..	74.9	11.96	8.0	14.1	9.0	70.9	73.3
Slovenia	17748	0.4	0.3	88.6 /g	..	8.4	4.0	10.2	5.0	73.3	75.9

Source: World Bank database (SIMA). Notes /a data 1993 and /a1 1995; /b 1997; /c 1999; /d 1993; /e 1994; /f 1993; /g 1997;

Figure 1.4 Overall Fiscal Balance, Current Account, and Growth, 1992-2002





Source: World Bank staff estimates based on SIMA.

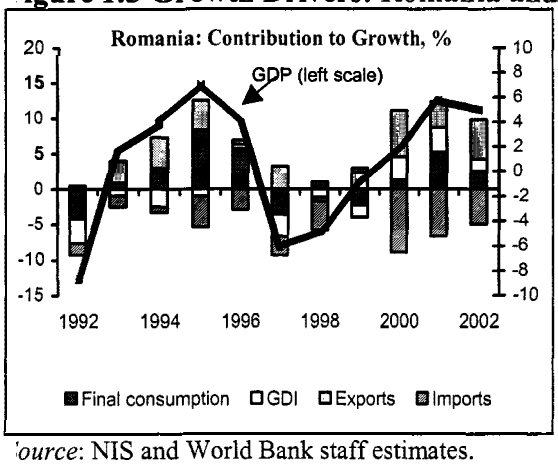
C. Growth and Inter-Sectoral Restructuring

1.23 Structural weaknesses and macroeconomic instability have been very damaging to growth. Figure 1.4 shows the evolution of economic growth and the internal and external imbalances in Romania and the first-wave accession countries. In Romania, these variables have exhibited wide swings reflecting cycles of growth in demand. Before the banking crisis, fiscal and quasi-fiscal stimulus accelerated consumption growth and growth began to recover from the collapse at the start of transition, but with practically no recovery of investment to sustain it. At the same time, the strong increase in demand put considerable pressure on prices and the real exchange rate. As a result, the current account deficit widened to unsustainable levels, necessitating a sharp contraction in demand and output. After the crisis, the renewed reform effort resulted in lower fiscal and external deficits that provided a stronger basis for sustained growth. In the CEECs, by contrast, growth has generally not exhibited a pronounced cyclical pattern despite a sharp deterioration of fiscal and external balances in the second half of the 1990s. These countries have maintained relatively strong investment growth, as well as increasing consumption.

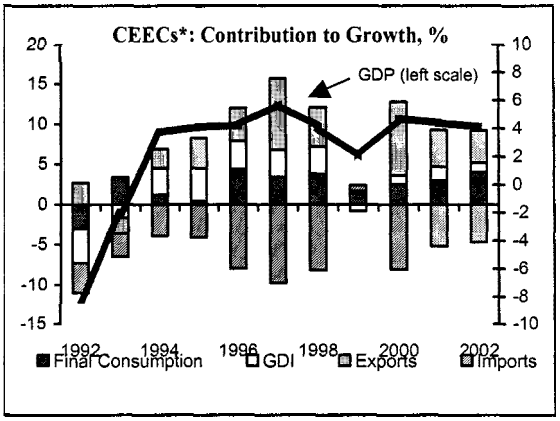
1.24 The implication of output volatility in Romania is that on average growth has been quite low in comparison with the advanced Central European reformers. Between 1990 and 2002 the economy grew at an average rate of about –1 percent. The growth rate in the "first wave" of EU accession countries, by contrast, has averaged around 1.5 percent.[10] As a result, Romania has not fully recovered the output lost in the beginning of the 1990s, while the accession countries have, on average, grown their economies almost one-third in the last 12 years.

[10] This includes all accession countries, except Cyprus and Malta.

Figure 1.5 Growth Drivers: Romania and CEECs



Source: NIS and World Bank staff estimates.



Source: World Development Indicators, Eurostat.

1.25 The decomposition of the growth by its expenditure components in Figure 1.5 shows that Romania's weaker performance in terms of investment growth compared to advanced reformers in CEECs. In the CEECs, the contribution to growth of these variables has nearly always exceeded the contribution from consumption. The advanced reformers in Central Europe experienced an average investment growth of 7.1 percent in 1996 to 2002, while the growth rate in Romania averaged only about 2 percent. This suggests that generally there has been a superior environment for domestic investment and FDI in comparison with Romania and that macroeconomic instability in Romania during this period took a heavy toll.

1.26 Moreover, as a result of their strong external positions they have been able to maintain relatively stable consumption growth and strong import demand. While in Romania arguments in favor of a slow pace for reform often center on the need to protect household consumption, such spending has been unstable, often exhibiting a contraction.

1.27 There are also important differences between Romania and the CEECs in terms of the sectoral transformation of the economy. At first glance, it appears that the economy is evolving towards a modern structure of production similar to patterns in the EU, as have other CEECs. Namely, the shares of agriculture and industry in total production have been declining, while the service economy has become an increasingly important source of income (Table 1.9). To a large extent, this process of transformation has been more pronounced in Romania. Yet, it is important to note that the country emerged from the system of central planning with relatively high shares of agricultural and industrial output, and a small service sector. Agriculture's share of production in the early 1990s, for example, represented over three times the level in first-wave countries.

Table 1.9 Romanian Growth Performance in 1990 - 2002

	A. Average Real GDP Growth (%)		
	1990-2002	1995-2002	Index of Real GDP in 2002 (1990 = 100)
Romania	-0.9	1.3	91.9
Accession Countries 1/	1.4	3.9	127.7
	B. Structure of Production (%) 2/		
	1990	**1995**	**2001**
Romania			
Agric, forestry & fishing	23.7	21.5	14.8
Industry	50.0	42.7	34.6
Services	26.3	35.8	50.6
Accession Countries 3/ 4/			
Agric, forestry & fishing	7.5	6.5	3.7
Industry	45.9	43.6	38.3
Services	46.7	49.9	58.0
	C. Structure of Employment (%)		
	1990	**1995**	**2001**
Romania 5/			
Agric, forestry & fishing	29.0	34.4	41.4
Industry	43.5	33.6	27.2
Services	27.5	32.0	31.3
Accession Countries 3/ 4/			
Agric, forestry & fishing	19.0	18.4	17.6
Industry	35.7	34.0	30.8
Services	45.3	47.6	51.5
Memorandum:			
		Romania	Access. Cts.
Average growth in 2000 - 2002 (%)		4.2	3.0

Notes:

1/ Averages are based on population weights of "first wave" accession countries, excluding Cyprus and Malta.

2/ Share of GDP at factor cost.

3/ Excludes Cyprus, Malta, and the Baltic countries.

4/ Observations for 1990 are weighted average of the earliest available year, which are as follows:
Output data: Romania, Czech Rep., Slovenia - 1990; Hungary - 1991; Poland, Slovakia - 1992.
Employment data: Romania, Slovenia - 1990; Hungary, Poland - 1992; Czech Rep. - 1993; Slovakia - 1994.

5/ Romania's employment data is for 2000.

Source: National statistics reported in the 2002 Handbook of Statistics of the Vienna Institute for International Economic Studies; WB staff calculations.

1.28 In contrast with these countries, however, between the early 1990s and 2001 the agricultural share of total employment increased from around 29 percent to 41 percent, while the share of industrial employment dropped from 50 to 35 percent. In the accession countries, agricultural and industrial employment shares declined, respectively, around 1 and 5 percentage

points, suggesting that a normal process of economic and social development is occurring in these countries.[11]

1.29 The implication of these trends for growth potential cannot be understated. The incentive structure of the economy has been shifting resources towards relatively unproductive sectors. In other CEECs market forces were relatively freer to allocate resources to efficient uses. In Romania, market incentives have been counteracted by persistence of subsidies, price controls, and other factors driving resources in the opposite direction. With more labor being shifted to agricultural activity, national productivity levels could grow too slowly to significantly increase living standards, as the amount of investment in capital (i.e., machinery and other modern equipment) available per worker to produce goods and services is unlikely to increase rapidly over time with such an allocation of labor.

1.30 That resource shifts to agriculture are unlikely to improve labor standards may be seen from the findings of the recent Poverty Assessment. The rise in extreme and total poverty among agricultural workers, respectively, accounted for 14 and 9 percent of the total increase in poverty rates in 1995 to 2000. When poverty rates began to fall in 2000 to 2002, they represented only 12 and 7 percent of the total change. Moreover, most of the poverty change in both sub-periods was due to changes in poverty in urban areas. Extreme and total poverty in rural areas were over 40 percent of the overall increase in poverty until 2000. The subsequent national-level reduction in poverty, rural areas accounting for only 30 to 35 percent of the improvement.

1.31 As shown in Table 1.10, productivity improvements have been crucial for growth.[12] In the 1990s total factor productivity (TFP) growth has accounted for most, if not all of economic expansion.[13] Between 1991 and 2002 the contribution from labor was negative as a result of labor shedding. Due to periods of contracting investment followed by weak capital accumulation, on average there was no contribution from capital. Growth was entirely due to more efficient use of labor and capital, and likely the result of the limited privatization and restructuring that has been achieved.

Table 1.10 Accounting for Economic Growth

	Average annual growth rates			Contributions to growth (percentages)		
	GDP	Labor	Capital	Labor	Capital	Total factor
1991-1998	-0.5	-1.8	-2.4	-1.2	-0.8	1.5
1999-2002	4.1	-0.5	3.5	-0.3	1.2	3.3
1991-2002	0.7	-1.5	-0.8	-1.0	-0.3	2.0

Source: World Bank staff estimates.

[11] This estimate excludes data from Cyprus, Malta, and the Baltic states.

[12] The numbers in Table 1.10 are based on the assumption that the capital share of income is one-third., an assumption commonly made in growth studies. For a brief overview of growth theory and accounting se Appendix [ ]. The appendix also presents the results of a sensitivity analysis of the assumptions underlying the model used to generate the calculate the contributions. This analysis finds the estimates below to be quite robust to changes in the capital share of income.

[13] TFP growth is measured as a residual source of growth once labor and capital contributions have been accounted for. Generally speaking, the size of the physical capital stock is especially difficult to quantify. In the case of Romania there is also a large informal economy which may lead to inaccurate estimates of output and labor and capital input. TFP estimates, therefore, can be highly sensitive to measurement error.

1.32 An important question to address is whether productivity growth can continue so strongly without faster investment growth, particularly that which is linked closely with FDI. In the long-run, efficiency can only increase from the adoption of new technologies, including managerial techniques and advanced capital goods. Hence the conclusion is once more that the incentive structure of the economy needs to be changed to encourage greater domestic and foreign investment. This will also require reforms that encourage more domestic savings and further financial restructuring and a business climate that attracts more long-term foreign capital to improve the intermediation between savers and investors. This will lead to a reallocation of resources to the most productive sectors of the economy.

1.33 The findings of this growth accounting suggest that Romania could grow at least 4.5 percent per annum. However, with a strong structural adjustment program the economy could potentially grow much faster. If investment in more efficient capital increases, the decline in employment stops, and total factor productivity at the pace experienced in recent years, then economy could potentially growth much faster. Assuming that the investment rate rises sufficiently, capital's contribution to growth could increase to 2.0 to 2.5 percent.[14] Employment growth could be at least zero in the next few years as new job creation more strongly offsets new unemployment as a result of industrial restructuring. Furthermore, it may be possible to sustain the 3 percent TFP growth of the last few years due the current low level of capital intensity.[15] Altogether, these suggest that Romania's medium-term growth potential is between 5.0 to 5.5 percent.

D. Risks and Vulnerabilities

1.34 Elimination of heavy reliance of nonpayment for goods and services, taxes, and social security contributions by SOEs, the government, and some entities in the private sector (including recently privatized companies) are at the core of Romania's development prospects. Nonpayment, arrears, and barter settlement undermines stability and growth. Key risks to budgetary stability in the medium term include inflexibility of public expenditures, and changes in interest rates and foreign exchange rates. The social security system is a long term source of fiscal vulnerability.

D.1. Budgetary Stability

1.35 In the medium-term, the budget is exposed to considerable market risk. In particular, spending could increase substantially if there were a sharp rise in interest rates and a strengthening of the dollar. One way to see the interest rate sensitivity of budgetary expenditure is to note that about 2.2 percentage points of the 2.0 percentage point reduction in current spending was a result of interest savings. While total spending declined 3.1 percentage points of

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[14] The estimated change in capital's contribution to growth is taken from Thomas Harjes, "Romania's Growth Potential in the Medium Term", in Romania: Selected Issues and Statistical Appendix, IMF, January 2003.

[15] In a recent growth accounting exercise, it was determined that average total factor productivity growth in the largest first-wave accession countries in 1991 to 1999 varied from less than 1 percent to 2.9 percent. See "Real Convergence to EU Income Levels: Central Europe from 1990 to the Long Term", by P. Doyle, L. Kujis, and G. Jiang, IMF Working Paper WP/01/146 of 2001. Also, the Selected Issues paper referred to above projects a TFP contribution rate of 2 to 3 percent, depending inversely on capital's share of income.

GDP between 1999 and 2002, primary expenditure decreased only 0.9 percentage points during this period.[16] Moreover, the primary surplus, a key determining factor of debt sustainability, actually declined from 1.7 percent of GDP in 1999 to 0.4 percent of GDP in 2002 and turned into a deficit of 0.3 percent of GDP in 2003.

1.36 Much of the decrease in interest payments is due to a shift away from domestic borrowing to relatively inexpensive foreign funding.[17] Payments were also kept low by the pronounced decline in global interest rates in recent years.[18] However, given the historically low level of rates in recent years, it is uncertain whether low interest payments will continue to support low fiscal deficits.19 In 2002, for example, the effective rate of interest on foreign debt paid by Romania was 11.4 percent. Had this been 3 percentage points higher, the additional cost to the budget would have been 0.4 percent of GDP, excluding the impact of higher borrowing to finance the additional expenditure and any effect on domestic rates. This makes it important to maintain the reform drive to reduce domestic interest rates further and to ensure access to cheap foreign savings.[20]

1.37 The social security system is a key long-term source of fiscal risk. The pension system deficits, in particular, are likely to grow further without more reform. Since financing gaps are mainly covered by the State budget, overall government deficits and public indebtedness will tend to rise. In addition, the bigger these programs become, the less the flexibility of the budget to adjust to adverse shocks. Arguably, at least 90 percent of total government expenditure is non-discretionary. This assumes that quick spending cuts would not be easily made to wages and salaries, social transfers, budgetary subsidies to ailing state-owned companies, interest payments. It also assumes that public investment is prioritized and that at least half of non-wage spending on goods and services would not be easily reduced.

1.38 Despite recent reforms, including a two-year increase in the statutory retirement age and a widening of the contribution base to include the self-employed, farmers and the unemployed, the pension system remains unsustainable.[21] The dependency ratio (number of pensioners to number of contributors to the system) is close to 1. As it stands, the deficit of the pension fund is about 1 percent of GDP. Currently, the system does not generate arrears to pensioners, but it is dependent on transfers from the state budget to close financing gaps.

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[16] Primary expenditure equals total expenditure less interest payments.

[17] The share of external public debt in total public debt has increased from 58 percent to 74 percent between 1999 and 2002. Foreign interest costs compare favorably with domestic funding. The effective rate of interest paid on foreign loans, defined as total interest payment denominated in local currency divided by the stock of debt, was 11.4 percent in 2002. This includes the effect of currency depreciation. By contrast, the effective rate on domestic loans was 23.7 percent.

[18] Lower rates have affected the cost of new borrowing and existing obligations, which increasingly are contracted at variable rates. At 51 percent in 2002, the share of floating rate obligations in total external public debt has increased over 5 percentage points since 1995.

[19] Six-month US dollar LIBOR, for example, has decreased from an average rate of 5.6 percent in 1990 to 2000 to about 1 percent in 2003.

[20] Another way in which financing costs have been reduced is through temporary borrowing from the Ministry of Public Finances' treasury account at below market rates.

[21] A comprehensive discussion of the issues is provided the 2002 Romania Public Expenditure and Institutional Review. The fiscal section of the 2001 IMF Selected Issues report provides a summary discussion.

1.39 Without further reform system imbalances will continue to grow and pose a serious threat to macroeconomic sustainability, particularly if the economy grows slowly. The urgency for reform is increasing due to the projected slowdown of population growth and steady aging of the population, which will increase the demands on the system, while contributions tend to decline. In addition, there is a need to reduce high pension contribution rates to support business initiative and employment creation.

D.2. Fiscal Sustainability

1.40 Given the fiscal risks and challenges confronted by Romania, it is important to ask what level of fiscal deficit would be sustainable, what level of adjustment might be required in the face of external shocks or a slowdown in economic growth, and whether macroeconomic adjustment mechanisms follow a *fiscal dominant* or a *monetary dominant* regime. [22]

1.41 A simple, simulation exercise has been conducted for this report to calculate an indicative level of the sustainable primary surplus under alternative conditions (see Annex 1).[23] In this analysis, the primary surplus is said to be sustainable if the initial level of public debt is maintained for given levels of GDP growth, real interest rates on public debt, and monetization.[24]

1.42 Table 1.11 shows the size of the primary surplus needed to keep the debt to GDP ratio at the current level under alternative growth and interest rates. If the growth rate decelerates by 2 percentage points, the primary surplus will have to more than double relative to the current level to stabilize the debt ratio. Similarly, in the event of an increase in interest rates by 200 basis points (i.e., closer to long-run levels), the primary surplus would need to increase about 1 percentage point of GDP so that fiscal sustainability is preserved.

Table 1.11 Implied Primary Surplus (percent of GDP)

	Interest rate (%)					
Real growth rate (%)	**6%**	**8%**	**10%**	**12%**	**14%**	**16%**
0.0%	1.0	1.5	2.0	2.6	3.1	3.6
2.0%	0.3	0.8	1.4	1.9	2.4	2.9
4.0%	-0.3	0.2	0.7	1.2	1.7	2.2
6.0%	-0.8	-0.3	0.2	0.7	1.2	1.6

Source: World Bank staff estimates.

1.43 The base-case simulation is based on the assumption of a strong policy effort that includes faster and deeper structural reform. This, in turn, implies certain levels of GDP growth, inflation and interest rates. Assuming a relatively favorable external environment is reasonable to

[22] For the theoretical underpinnings see Sargent, Thomas J. and Neil Wallace, 1981, "Some Unpleasant Monetarist Arithmetic" *Federal Reserve Bank of Minneapolis Quarterly Review* Fall 1981 (Reprinted in *Rational Expectations and Inflation*, New York: Harper Collins College Publishers, 1993).

[23] For a description of this methodology see R. Anand and S. van Wijnbergen, "Inflation and the Financing of Government Expenditure: an Introductory Analysis with Application to Turkey", *World Bank Economic Review*, March 1989.

[24] Of course, incurring temporarily high deficits and debt levels may be appropriate in some circumstances, and it is unlikely that a country should try and maintain a stable debt-to-GDP ratio at all times. Therefore, this analysis tends to be more useful in guiding policy decision over medium- and long-term horizons.

expect growth of at least 4 percent over the next 3-5 years. The Government's intention to reduce inflation to single digits and lead Romania to economic and monetary union implies medium-term inflation of about 2.0 percent per annum, the European Central Bank's target rate. As the economy becomes more integrated with global capital markets and financial discipline increases, it is reasonable to assume that domestic interest rates and external borrowing costs will decline. In this analysis, average financing costs are reduced conservatively to 8 to 10 percent from the current effective nominal rate of about 14 percent. Finally, the public debt to GDP ratio is held at the current level of about 27 percent, and the monetary base at around 5.0 percent of GDP. Based on these assumptions we estimate seigniorage revenue of about 0.3 percent per annum and a debt-stabilizing primary balance of 0.2 to 0.8 percent of GDP, suggesting that levels between 0.4 and 1 percent of GDP seem to be sustainable provided further strengthening of the adjustment mechanism used to achieve it.

1.44 The choice of macroeconomic adjustment mechanism determines a weak or a robust foundation of fiscal sustainability. Fiscal sustainability analysis presumes fiscal policies can be relied on to balance the government's intertemporal budget and monetary policies can focus on implementing a disinflation strategy. In this context, it is important to examine the extent to which Romania's adjustment mechanism resembles a monetary or a fiscal dominant regime. [25] In a *monetary dominant regime* (or *Ricardian regime*) the primary deficit is the policy adjustment instrument, which is adjusted to variations in the real value of government debt thus ensuring that fiscal policy is used to balance the government's intertemporal budget without subordinating monetary policy to achieve this balance. In this case monetary policy variables—domestic interest rates, the exchange rate, the domestic price level—are not determined by fiscal considerations but by monetary policy objectives. Alternatively in a *fiscal dominant regime* (or *Non-Ricardian regime*) the level of the primary surplus is chosen independently, often due to exogenous political processes, of the level of expected real interest payments and real net public debt, the balance of the government's intertemporal budget is achieved by subordinating monetary policy to fiscal needs.

1.45 As in other emerging market economies, Romania faces the challenge of consolidating disinflation and ensuring financial stability while opening up the capital account. Additionally, it must align its policies with the goals of EU accession and prepare for the eventual adoption of the euro. This will require Romania to have a macroeconomic policy mix that moderates exchange rate swings and lowers inflation rates to single digits. In particular, monetary policy will need to become functionally independent of fiscal needs, i.e. efforts are needed to ensure a *monetary dominant regime* for macroeconomic adjustment, so that the authorities can deliver disinflation securely and provide a stable exchange rate against the euro under an appropriate inflation target.[26]

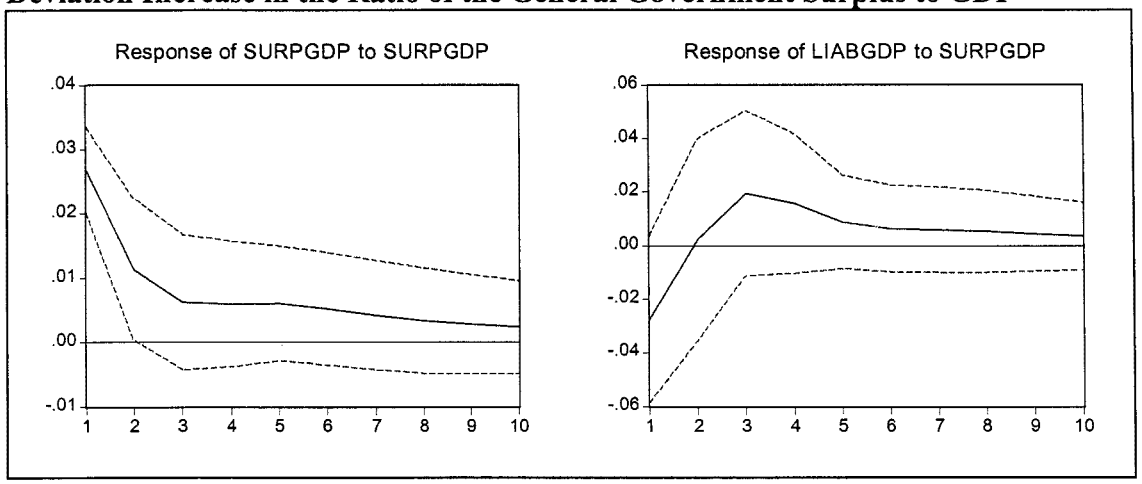
1.46 Figure 1.5 summarizes the result of a test of fiscal dominance over monetary policy

[25] The empirical analysis presented here is based on the tests of fiscal dominance for the United States conducted by M. Canzoneri, R. Cumby, and B. Diba in "Is the Price Level Determined by the Needs of Fiscal Solvency" in *The American Economic Review*, December 2001. The sources of the quarterly data for Romania are the National Bank and the Ministry of Public Finance.

[26] Law 101 of 1998 established the central bank's legal independence. Functional independence refers to the ability to operate effectively irrespective of fiscal policy.

covering the period from the first quarter of 1995 to the second quarter of 2003. It is based on vector autoregression (VAR) analysis, examining the time-series properties of the quarterly ratios to GDP of public liabilities and the consolidated general government primary surplus. As shown by the solid line in the chart, however, even with a tendency for positive increases in the primary surplus to persist over time there is little evidence that the ratio of liabilities to GDP tends to decline over the same period. Thus there is little evidence supporting a view that Romania's macroeconomic adjustment mechanism is monetary dominant.[27] Furthermore, this finding is relatively insensitive to changes in the sample period, the chronological ordering of effects between surpluses and liabilities, and the inclusion of discount factors and nominal GDP in the VARs to examine whether the behavior of liabilities is conditioned by these variables.

Figure 1.5 Response of the Ratio of Public Liabilities to GDP to a One Standard Deviation Increase in the Ratio of the General Government Surplus to GDP



Source: World Bank staff estimates.

1.47 Though officially a managed floating regime is in effect, in practice the NBR implements a crawling peg policy that guides the exchange rate in line with its (pre-announced) inflation target.[28] In the European Monetary Union (EMU), however, exchange rate stability becomes a matter of common interest and members must avoid rates that are inconsistent with economic fundamentals, excessive fluctuation, and competitive devaluation. In the first two years of membership, the ERM2 arrangement must be implemented.[29] This regime is a essentially a managed floating arrangement that allows a maximum of 15 percent fluctuation around a central parity with the Euro, a relationship which must be maintained for two consecutive years before the euro can be adopted. The European Central Bank, acting jointly with national banks, will

[27] The liabilities comprise public debt and the monetary base, while the government surplus is defined to include the primary balance and seigniorage. The dotted lines measures 2 standard deviations from the values predicted by the regression model and indicate the level of statistical significance of these predictions. The right-hand side of the regression equations include the first and second lagged values of the ratios to GDP of surpluses and liabilities, a constant term, and a dummy variable to capture the seasonality of GDP.

[28] Modest real appreciation of the lei consistent with the Balassa-Samuelson effect of lei is permitted under this policy.

[29] A detailed discussion of the implications of EU accession for monetary and exchange rate policies is provided by "Monetary and Exchange Rate Regimes in the Central European Economies on the Road to EU Accession and Monetary Union", in The Road to EU Accession, IMF, 2001.

intervene if necessary to ensure that the 15 percent band is observed.

1.48 Recently, the NBR has had more success in pursuing the disinflation strategy without major detraction from its principal objectives.[30] As indicated in the PEP, the NBR intends to introduce a formal inflation targeting regime in 2005 in transition towards ERM2 provided that durable gains have been achieved in the process of disinflation.[31] The aim is to establish the inflation target as a nominal anchor to guide inflationary expectations. But such a strategy would require that monetary policy to focus on the price stability and ignore fiscal objectives at the moment that capital mobility is likely to be increasing. For this, the NBR will need support from appropriate incomes and fiscal policies, and greater progress in enforcing enterprise financial discipline. Without such support Romania would effectively have no exchange rate policy and the disinflation strategy would not be effective. In effect, the nominal anchor for the economy would be fiscal policy. In addition, it may be premature to adopt inflation targeting unless the macroeconomic adjustment mechanism is driven by a monetary dominant regime since fiscal dominance would undermine sustainability of an inflation targeting strategy.

1.49 In sum, while current levels of fiscal deficits seem sustainable provided external current account conditions improve, Romania's macroeconomic adjustment mechanism is not monetary dominant. Further fiscal consolidation is needed to strengthen the ability of the government to rely on fiscal policies to balance the government's intertemporal budget and secure independence of the monetary policies from fiscal financing requirements. Consistency over time of fiscal discipline would enable Romania to move to inflation targeting which requires that monetary policies not be dominated by fiscal financing requirements.

D.3. Nonpayment, Arrears, and Barter Settlement

1.50 The recent reduction in measured fiscal deficits does not reflect the true level of budgetary commitments and long-term risks to fiscal sustainability. Although Romania has made considerable progress in containing fiscal deficits and improving the allocation of public resources, spending has been controlled in part through nonpayment to suppliers of goods and services (Table 1.12).

1.51 Despite recent improvements in budget formulation and execution, including the reduction in the number of budgetary and off-budget funds to streamline control over expenditure, total budgetary arrears to the economy increased from 0.8 percent of GDP at the

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[30] On several occasions during the past decade, severe pressure for accommodating budgetary liquidity shortages and quasi-fiscal deficits could not be withstood, and the result was exchange rate devaluation and high inflation. With the elimination of subsidies directed sectoral credits and preferential exchange rates in 1997, and the end to central bank financing of the state budget, the dominance of fiscal policy over monetary objectives has decreased. In 1999, the removal of credit subsidies, however, fueled a liquidity crunch, and ultimately a solvency crisis in the country's two largest banks, Banca Agricola and Bancorex. This led to distressed borrowing and a bailout of both institutions. The resulting injection of liquidity had to be sterilized, which resulted in excess monetary contraction and a sharp increase in interest rates (sterilization refers to central bank operations to offset an undesired monetary expansion or contraction).

[31] A detailed discussion of the preconditions for inflation targeting in Romania is provided by S. Rosentuler, E. Iorga, W. Salater, D Sasu, and A. Codirlasu, "Direct Inflation Targeting: A New Monetary Policy Strategy for Romania", National Bank of Romania Occasional Paper No. 1, October 2002.

end of 2001 to 1.0 percent of GDP in 2002.[32] About 70 percent of these debts are owed by the State budget, with the local government and Health Insurance Fund accounting for most of the rest.[33] As it tends to weaken the finances of enterprises and contributes to widespread use of nonpayment, it is clearly not sustainable for the government to continue accumulating payment arrears.

Table 1.12 Government Arrears

	2001	2002	2001	2002
	(billion lei)		(% of GDP)	
State budget	6352	10319	0.5	0.7
Suppliers	6276	10169	0.5	0.7
Other	76	149	0.0	0.0
Local budget	2189	2712	0.2	0.2
Suppliers	2001	2365	0.2	0.2
Other	188	347	0.0	0.0
Social Security Fund	64	16	0.0	0.0
Suppliers	56	6	0.0	0.0
Other	8	10	0.0	0.0
Health Insurance Fund 1/	902	2563	0.1	0.2
Suppliers	902	2563	0.1	0.2
Other	0	0	0.0	0.0
Total	9507	15609	0.8	1.0

Note: 1/ Health Insurance Fund arrears exclude overdue obligation of healthcare providers to their suppliers.
Source: World Bank staff estimates.

[32] Estimates presented may underestimate government arrears due to information constraints, items and entities excluded from consolidated general government accounts. Intra-governmental arrears, such as contributions to social insurance funds, are negligible in size and cancelled in the consolidation of the various government budgets.
[33] The stocks public debt presented in this report exclude budgetary arrears.

2. BUILDING ON TRADE INTEGRATION

A. INTRODUCTION

2.1 In the last four years, Romania has made good progress in stabilization, growth, and poverty reduction.[34] This progress is due, in large part, to its solid performance in trade integration with the EU and global markets. To extend this performance throughout the economy, three areas of reform are central: (i) accelerating private sector development; (ii) transforming the agricultural and food sector; and (iii) increasing labor market flexibility.

2.2 Romania's impressive foreign trade performance, particularly so over the last four years, cannot be attributed to a "catch-up" dynamic triggered by the steep contraction in trade in 1989-92, when the value of exports fell almost 60 percent and that of imports 40 percent (Kaminski 1993). This factor may explain a twofold increase in the value of exports between 1992 and 1995, but it fails to explain the remarkable export performance over the period 2000-02, with an average annual growth rate of almost 18 percent. The double-digit growth in trade over this period has been particularly impressive, as it has taken place in the face of a weak import demand in the EU, by far Romania's most important trading partner. Furthermore, it has taken place against the background of relatively low FDI inflows, which raises questions as to the forces behind the current export expansion.

2.3 Nor can this trade performance be explained by progress in the implementation of second-generation, structural reforms. According to international assessments (e.g., EBRD 2003), these reforms have lagged behind all of the other ten EU candidates. So has FDI, which has contributed to restructuring and increasing the international competitiveness of many industrial sectors in the CEEC-10[35]. Indeed, FDI inflows have been responsible for improvements in the export performance of successful CEEC-10, countries.

2.4 In addition, Romania has the highest applied MFN tariff rates among the CEEC-10. Indeed, Romanian MFN applied tariff rates appear to be a vestige of "import-substitution thinking." An average supplier from an MFN country faces the highest level of reverse discrimination in the pan-European market for industrial products in Romania. Since domestic producers of industrial products face duty-free competition from firms from the EU and other FTA partners, the wisdom of maintaining high MFN tariff protection seems somewhat dubious. But this is not the point.

2.5 Instead, it leads to questions about the gap between allegedly poor policies and undisputedly good outcomes. Why is there such a good performance with so little FDI and,

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[34] This chapter was prepared by Bartlomiej K. Kaminski, University of Maryland, with the assistance of Francis Ng, DECRG of the World Bank, and Manuela Unguru, Institute of World Economics, Romania.

[35] The CEEC-10 includes: Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, Slovenia, and Slovak Republic.

apparently, such a poor investment climate? Why has the combination of regional liberalization and multilateral import-substitution policy not undercut exports and imports? And, more important, can such an export performance be sustained under these circumstances? And what can be done to sustain foreign trade expansion?

2.6 This chapter seeks to provide answers to these questions. It argues that the investment climate has not discouraged foreign investors from establishing firms (admittedly in low tech areas) and that the MFN tariff policy has prevented excessive trade diversion, albeit at a cost to the quality of the investment climate. Yet if the Romanian export performance is to be sustained, the hassle of conducting business and the MFN applied tariff rates should be drastically lowered.

2.7 This chapter discusses these issues in more detail in the six following sections. Section B reviews developments in Romania's foreign trade over 1993-2002. Section C identifies distinctive features of the current wave of strong export performance. In section D, the patterns of Romania's integration into the EU are examined from the point of view of their implications for the sustainability of the country's export performance. Section E traces the distortions and examines the consequences of high reverse discrimination due to the combination of intensive regional liberalization and high MFN tariff rates, while Section F examines the consequences adopting of the EU common external tariff for industrial products. Section G provides a conclusion and outlines policy recommendations.

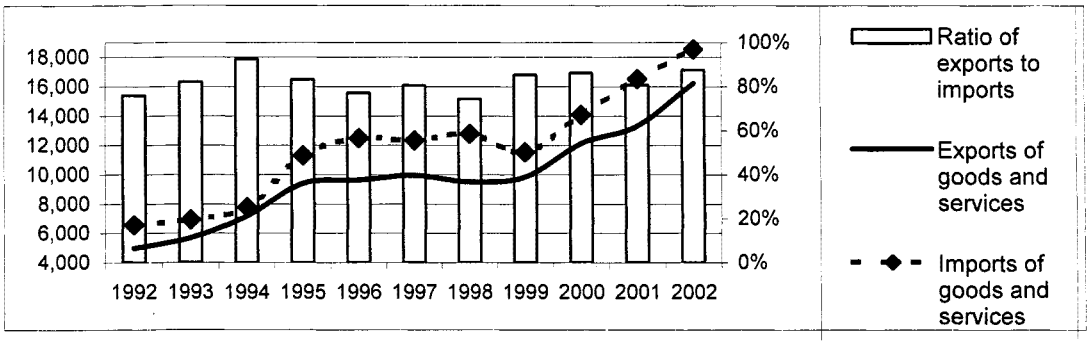
B. Dynamics of Foreign Trade: Critical Role of EU Markets

2.8 Foreign trade performance has been a bright spot in Romania's otherwise bumpy transition from orthodox central planning. After experiencing a significant contraction in its place in the world markets through the 1980s, which was further exacerbated by a steep decline in trade after the collapse of the Ceaucescu regime in December 1989, Romania's foreign trade rebounded beginning in 1993 and has become a major driving force behind the country's growth performance. While the GDP grew, on average, at a negative rate of 0.4 percent over 1990-2001, the volume of exports registered an annual average rate of growth of 8.5 percent and an annual average growth of imports of 6.8 percent (WDI 2003). The value of EU-oriented exports increased fivefold between 1993 and 2002, while the value of total exports almost tripled.

2.9 Since the collapse of communism, the direction of Romania's foreign trade has changed drastically. While some of these changes have merely been the result of the contraction in import demand in former centrally planned economies, others have resulted from successful efforts to reorient trade in line with economic incentives and comparative advantage. Trade with the EU has expanded rapidly, and the EU has rapidly emerged as Romania's dominant trading partner. While there has been a significant reorientation of trade toward the EU, especially on the side of exports, this does not appear to be the result of a trade diversion triggered by the European Association Agreement. A unique feature of this trading relationship has been the uninterrupted growth in Romania's exports to the EU since 1992, offsetting the initial decline in trade with the ROW (Rest of the World). As a consequence, the picture that emerges from eyeballing statistics for total trade is a different one from that derived simply from trade with the EU.

2.10 A cursory examination of Romania's foreign trade performance since the implementation of the first stabilization-cum-transformation program in 1991 suggests the existence of three phases: the phase of expansion in 1992-95; the stagnation phase in 1996-99; and the expansion phase that began in 2000 (Figure 2.1). Imports followed a similar pattern, although they fell more steeply than exports in 1999, and the value of imports continued to grow in 1996 while exports stagnated. Services accounted on average for 14 percent of total exports and 15 percent of total imports of goods and services. Both trade and services balances were in the red, with exports paying for around 80 percent of imports--albeit the ratio improved in 2002, reaching 88 percent, up from 81 percent in 2001.

Figure 2.1 Foreign Trade in Goods and Services, 1992-2002 (in millions of US dollars)



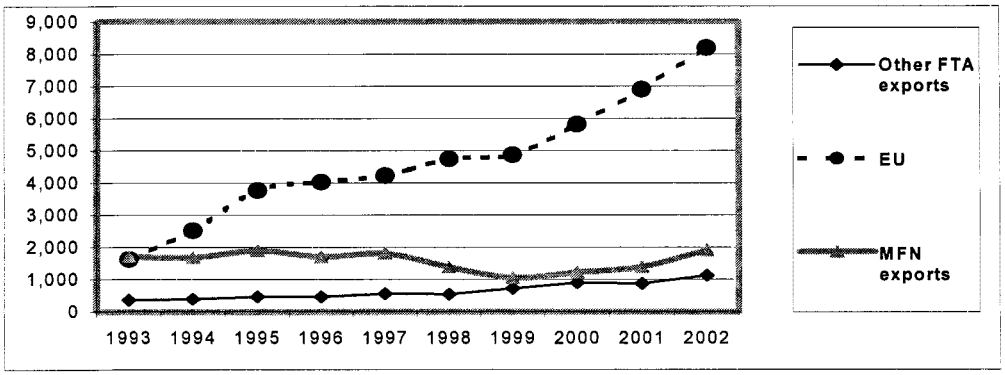
Source: Derived from data of the National Bank of Romania reported in *OECD Economic Assessment. Romania,* June 2002.

2.11 The three-phase breakdown of Romanian's foreign trade performance, however, does not reflect the developments in exports to its main preferential partner—the EU. According to the EU data, except for 1996 (4 percent) and 1999 (6 percent), EU-oriented exports grew at double-digit rates, although there was a deceleration in growth in 1996 and 1997. Simultaneously, exports to other preferential partners (mainly CEFTA) even during the 1996-99 stagnation phase, grew at an annual average rate of 15 percent, which would hardly qualify as stagnant (see Figure 2.2). The combination of weaker growth in EU-oriented exports and falling exports to ROW(quite precipitously over 1998-99) contributed to stagnation in total exports in 1996-99. On the other hand, the combination of unusually strong export growth to the EU and recovery in ROW-oriented exports has been responsible for the current expansion phase. Indeed, the share of ROW in Romanian exports, albeit not in imports, has increased slightly.

2.12 Gains in competitiveness rather than preferential free trade agreements have been responsible for export expansion, simply because the preferential margins enjoyed by Romanian firms have been low and not exclusive. Apart from textiles subject to a special import regime in the EU (until 2005), EU MFN applied tariffs on manufactures have been very low, with an average of about 4 percent. This has not provided much "breathing space" vis-à-vis MFN suppliers from highly competitive countries such as China, Korea, Japan or the United States. Furthermore, Romanian exporters, including exporters of textiles, have had to compete with a large group of producers from countries facing similar conditions in gaining access to EU markets. These countries include not only European transition economies but also a number of developing countries with which the EU has special preferential arrangements. In consequence,

the likelihood that EU importers would shift their purchases from non-preferential suppliers to Romanian firms (i.e., the trade diversion effect) has been low.

Figure 2.2 Exports to the EU, Other Preferential and MFN Markets
(in millions of US dollars)



Source: Derived from the UN COMTRADE database as reported by Romania.

C. Features of the Current Wave of Strong Export Performance

2.13 The export performance that Romania has experienced since 2000 raising questions about its sources and, ultimately, its sustainability. Considering the relatively slow progress in second-generation reforms and the perceived weaknesses in Romania's investment climate, this has surprised most observers. Even more surprising has been the fact that the surge in exports has not been confined to the rather flat EU markets over 2000-02, but that, as has been mentioned, exports to non-preferential partners have grown at a similar pace.

C.1. Outstanding Dynamics of EU-Oriented Exports: The Earlier Phase

2.14 The current expansionary phase of Romania's export performance in EU markets is not a statistical fluke, as some may argue (see, for instance Vosganian 2003). Nor have EU-oriented exports been its sole lever. Euro appreciation vis-à-vis the US dollar was not a statistical factor in the high export performance in 2002 when the US dollar began to depreciate against the euro. Indeed, Romania's share in EU external imports—a measure indifferent to currency fluctuations—increased 33 percent in 2002 alone on top of the 20 percent increase in 2001 over 2000. Furthermore, exports to other markets have strongly rebounded, halting the process of growing reliance on EU markets.

2.15 The acceleration in export growth in 2000-02 was outstanding. Romania recorded the largest increase in the share in EU external imports among the CEEC-10, with its share rising from 0.64 percent in 1999 to 1.05 percent in 2002, or 64 percent (Table 2.1). The share of the Czech Republic, the second best performer among the CEEC-10, increased 43 percent from 1.8 percent to 2.6 percent over the same period.

2.16 This improvement has taken place against a superior past performance that followed the launching of the stabilization-cum-transformation program in April 1991. Romania and with the

Czech Republic are the only countries among the CEEC-10 that had an EU-oriented export growth that exceeded the growth in EU external import demand each year over 1994-2002. All of the other countries experienced a year or more of contraction in their respective shares of EU external imports. Romania's share in total CEEC-10 EU-oriented exports increased each year, except in 1996 and 1998.

Table 2.1 Romania's Performance in EU Markets against CEEC-9[36]; Change in the Share in EU External Imports and the Share in CEEC-10 EU-Oriented Exports, 1993-2002

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Index 2002, 1999=100
CEEC-10	100	117	133	134	141	159	162	162	179	212	131
Bulgaria	100	127	152	133	142	144	131	140	156	142	108
Romania	**100**	**136**	**164**	**163**	**177**	**194**	**199**	**205**	**245**	**326**	**164**
Share of Romania in EU external demand (%)	0.32	0.44	0.53	0.53	0.57	0.63	0.64	0.66	0.79	1.05	164
Share of Romania in EU imports from CEEC-10	6.34	7.34	7.67	*7.64*	7.86	*7.65*	7.67	7.89	8.48	9.43	123

Source: Own calculations on the basis of EU data as reported to the UN COMTRADE.

C.2. Levers of Export Growth

2.17 EU-oriented exports of manufactures were the main driver of Romanian exports throughout 1993-2002, as is still the case during the current expansion-albeit with three important qualifications. First, manufactures have also become the driving force behind the surge in ROW-oriented exports. The value of ROW-oriented exports of manufactures was 70 percent higher in 2002 than in 1999, recording the same increase as exports of manufactures to EU markets.

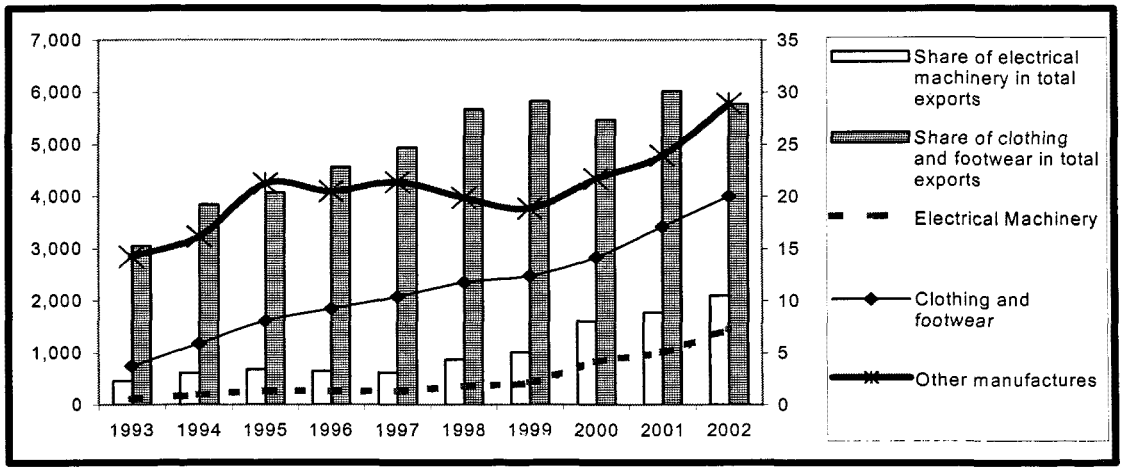
2.18 Second, although textiles and clothing (TC) and footwear have continued their strong export performance, other manufactures—mainly electrical machinery—have made significant contributions to the current expansion. These manufacturers have been consistent top performers, with their aggregate share in total exports doubling from 15 percent in 1993 to almost 30 percent in 2002 (see Figure 2.3). Exports of clothing, accounting now for one-third of EU-oriented exports, and footwear, accounting for around 10 percent of total EU-destined exports, increased fivefold and sevenfold, respectively, between 1993 and 2002, in terms of value. However, in marked contrast to 1993-98, the growth in exports of clothing and footwear was in line with the growth in total exports. Their aggregate share has not seen much change since 1999.

2.19 Third, as an illustration of the progress accomplished in industrial restructuring, other sectors have emerged during this phase as strong performers. Electrical machinery stands out. Its exports more than tripled in terms of value between 1999 and 2002. It is worth noting that electrical machinery emerged as a top performer only in 2000, when its share in total exports rose to 8 percent from 4 percent in 1998. The value of these exports exceeded US$1 billion in 2001 and rose by another 50 percent or US$500 million in 2002, accounting for 10 percent of

[36] The CEEC-9 includes: Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Slovenia, and Slovak Republic.

total Romanian exports. Exports of other manufactures(excluding clothing and footwear) after a prolonged period of stagnation and contraction over 1995-99, recovered strongly increasing to US$5.8 billion up from US$3.6 billion in 1999. In short, there has been a significant increase in the diversity of Romania's export offer of manufactured goods.

Figure 2.3 Exports over 1993-2002 (in millions of US dollars and in percent)



Source: Own calculations based on UN COMTRADE Statistics as reported by Romania.

2.20 The degree of processing embodied in Romanian exports has also been on the increase. Table 2.2, which shows dynamics of Romanian exports in terms of end-use product categories, indicates an increase in level of processing, as captured by changes in the weight of foods and feeds together with industrial raw materials.[37] In contrast to the 1993-99 period, the current expansion phase witnessed a falling trend in significance of exports of traditional production inputs, with their aggregate share falling to 11 percent in 2002, down from 16 percent in 1999.

Table 2.2 Dynamics of Exports by End-use Product Categories, 1993 and 2002

	In million of US dollars		Index, 1995	Index, 2002	Composition in %		Share of EU in %	
	1993	2002	1993=100	1999=100	1993	2002	1993	2002
Food & Feed (0+1+2+4-27-28)	481	880	**163**	99	9.8	6.3	27.4	40.1
Industrial Raw Materials (27+28+68)	152	589	**180**	128	3.1	4.2	48.8	47.6
Machinery, excl auto (7-78)	615	2,598	140	**199**	12.6	18.7	27.2	66.1
Automobiles & Parts (78)	220	344	78	**275**	4.5	2.5	7.2	69.1
Consumer Goods (5+6+8+9-68)	3,423	9,464	**170**	**165**	70.0	68.2	47.8	71.3
Non-Oil Goods (0 to 9 less 3)	4,404	12,775	165	158	90.0	92.1	41.6	69.3
Fuels (3)	488	1,101	129	266	10.0	7.9	39.1	43.3
All Goods (0 to 9)	4,892	13,876	162	163	100.0	100.0	41.4	67.3

Source: Own calculations based on UN COMTRADE Statistics as reported by Romania.

[37] These are regarded as traditional production inputs, that is, they are not processed in their present form (Feenstra 1998). Interestingly, they accounted for 43 percent of total exports in 1989, but only 12.8 percent of total exports in 1993, and subsequently they continued to fall.

2.21 Simultaneously, there has been a slight increase in the geographical diversity of these exports, combined with differences in ROW-oriented and EU-oriented export baskets. The EU's share in purchases of electrical machinery fell to 76 percent in 2002, down from 92 percent in 1999. The share of the EU in Romanian exports of other manufactures (whose value increased 53 percent in 1999-2002) remained relatively low at 57 percent, (which is well below the EU share, of 67 percent and 73 percent, respectively in total or manufactured exports). The EU has remained the dominant market for clothing and footwear taking up 94 percent of these exports, while ROW has remained an important consumer of Romanian traditional production input. Foods and feeds together with industrial raw materials were the only product categories that had a consistently strong growth in ROW-directed exports. Their aggregate share in these exports rose from 15 percent in 1993 to 24 percent in 1996, then slightly contracted in 1997-98, and rebounded in 1999. The share of these inputs in EU-oriented exports fell from 7 percent in 1993 to an average of around 5 percent in 1995-2001 and 4 percent in 2002. ROW markets took around three-fourths of these exports until 1997 and 60 percent thereafter.

2.22 In all, the differences in sources of export growth between the two expansionary phases are significant indicators of progress in industrial restructuring. Although the increase in the value of total exports was the same in both phases, the end-use products that have contributed to the expansion, as measured by their above-average performance, have been different, except for consumer goods, which have displayed a strong performance in both phases. While during the first phase industrial raw materials and foods and feeds registered rapid growth, machinery and automobiles and parts, together with consumer goods, have been the drivers of the current expansion.

C.3. Acceleration in Imports Have Kept up with Export Growth

2.23 The surge in exports discussed above has been accompanied by an acceleration in import growth. Imports of goods have tended to grow at a similar pace as their total exports through 1994-2002. Export growth outstripped import growth in four years: 1994, 1997, 1999, and 2002. On average, total exports amounted to around 80 percent total imports of goods in 1993-2002. Since the current phase began with the contraction of imports (-12) in terms of value and with a slight increase in the value of total exports (1 percent), the import dynamics contain a "catch-up" component exaggerating their growth. With a subsequent expansion in exports, imports rebounded more strongly, registering 4 percentage points and 9 percentage points higher in annual increases in 2000 and 2001 than the increases registered in exports (22 percent and 10 percent, respectively). The value of exports increased 22 percent and the value of imports 15 percent in 2002. In consequence, import coverage by export earnings improved from 73 percent to 78 percent, although (Table 2.3).

2.24 Romania has been a net importer in almost all product categories, classified by end-use during both phases. During the first phase of trade expansion, exports of automobiles and parts as well as exports of consumer goods exceeded their imports, but since 1995 the balance has been reversed for automobiles and parts and for consumer goods in 1998. During the second phase, Romania was a net exporter of industrial raw materials, although the export surplus was on a decline since 2000, and the increase in the value of their imports was much lower than during the first phase. This improvement has been the result of exports of steel to non-EU

markets. Exports of consumer goods remained very close to the value of their imports, although the latter grew more rapidly in 2001-02.

Table 2.3 Developments in Imports and Net Exports during Two Expansionary Phases (in millions of US dollars and in percent)

	Imports in million of US dollars			Change in value of imports			Exports as percent of imports				
	Average	Average		Index, 1995	Index, 2002	Growth	Average	Average			
	1993-95	1999-02	2002	1993=100	1999=100	2002	1993-95	1999-02	2000	2001	2002
Food & Feed (0+1+2+4-27-28)	1,007	1,184	1,360	98	149	-1.1%	64	75	76	61	65
Industrial Raw Matl. (27+28+68)	288	443	463	**158**	141	-4.0%	75	**136**	**155**	**123**	**127**
Machinery, excl. auto (7-78)	1,737	3,406	4,146	**169**	165	14.8%	43	56	53	56	63
Automobiles & Parts (78)	188	564	867	**235**	**385**	20.2%	**119**	42	39	33	40
Consumer Goods (5+6+8+9-68)	2,896	6,962	9,023	**200**	168	22.2%	**140**	97	**100**	95	93
Non-Oil Goods (0 to 9 less 3)	6,115	12,560	15,859	167	170	16.8%	94	82	84	79	81
Fuels (3)	1,854	1,656	2,002	131	190	1.3%	31	44	47	36	55
All Goods (0 to 9)	7,970	14,216	17,862	158	172	14.9%	80	78	79	73	78

Source: Own calculations based on UN COMTRADE Statistics as reported by Romania.

2.25 The poor performance of the agricultural sector contrasts sharply with the industry sector. Despite Romania's favorable climate and soil conditions, the country has remained a net importer of foods and feeds. While the average for exports as a percent of imports in 1993-95 was lower than the average in 1999-02, this is due only to the fall in imports in 1999 (21 percent) combined with the strong growth in exports (19 percent) raising the ratio to 97. With imports expanding and exports stagnating, there has been a subsequent increase in net imports.

C.4. Conclusion

2.26 Romania's export expansion has not involved exporting more of the same products. While many products that were competing in international markets have continued to show export growth, many new competitive products have emerged during the current expansion. A marked shift towards more processed goods and away from low processed industrial raw materials can be seen. Romania's export offer has become more diversified, providing proof of significant industrial restructuring. Another distinctive feature of the current expansion is the recovery and strong growth in exports to ROW, which is mainly due to the growth of exports of machinery (excluding automobiles). The growth in ROW-oriented exports was sufficiently strong to halt the trend of growing reliance on EU markets in overall trade. To evaluate the sustainability of the expansion of exports in Romania, it is important to study the patterns of trade integration into the EU. This is taken up in the next section.

D. Patterns of Integration into the EU: Implications for the Sustainability of Export Performance

2.27 Leaving aside domestic capacity constraints and barring macroeconomic shocks, the patterns of trade integration into the EU, accounting for the bulk of Romanian exports, offer clues as to their sustainability. How potentially stable are the established commercial links? Do Romanian firms participate in the most rapidly expanding components of international trade?

2.28 In contrast to the first surge in EU-directed exports following the initial stabilization-cum-transformation programs of the other CEEC-10 countries, the second expansion was preceded by a four or five year period of FDI inflows, running at around 5 percent of the GDP. Hungary experienced this second export push in EU markets in 1996-99, and other CEEC-10 countries, such as Czech Republic, Poland and the Slovak Republic experienced it, a few years later. Radical changes in the composition of exports and the shift towards capital-intensive and skilled-labor-intensive products have been defining features of this second expansion wave. In contrast to the first expansion, which was dominated by locally owned firms, foreign owned firms have been the main levers of export expansion in the second export surge.

2.29 How do these stylized facts apply to Romania? We begin with a discussion of links between FDI and trade, followed by an analysis of the factor intensities of Romanian EU-oriented exports and the development of trade in parts, networks and traditional value chains.

D.1. FDI Inflows and Trade

2.30 Inadequate progress in the second-generation reforms can provide an explanation of the variation in FDI inflows. A number of empirical studies focusing on transition economies have corroborated this finding. Garibaldi et al. (2002) has shown that the quality of institutions explains the variation in FDI flows to transition economies. In a similar vein, Broadman et al. (2003) plotting the data on FDI per capita and EBRD's governance and restructuring indices for all Balkan countries also finds a very strong positive association between these two variables. The explanation is that countries with a weaker business climate have been less successful in attracting FDI. Ineffective protection of property rights and weaknesses in contract enforcement discourage foreign investors.

2.31 Romania has not scored well in various international assessments, which sheds light on the progress made in second-generation, structural reforms, the quality of governance, and corruption. For example, the value of Romania's Corruption Perception Index, as annually assessed by Transparency International, has been since 1996 consistently well below the average for the CEEC-10.[38]

2.32 Nor has Romania been successful in attracting large FDI inflows, which confirms the findings about the importance of the business climate. On per capita FDI and also in relation to

[38] In 2003 its value was 2.8 (on a scale between 0 and 10), or 35 percent below the average for the CEEC-10 of 4.3. Similar deviations from the average were for such governance quality indicators as government effectiveness and regulatory quality. For more detailed information, see Kaminski and Ng (2004).

total FDI, it scores lowest among the CEEC-10, despite a very significant improvement in 1997-2002 (Table 2.4).

Table 2.4 FDI Inflows in Comparative Perspective in 1991-96, 1997-2002 and 2002 (estimate)

	Average FDI (in millions of US dollars)			Average FDI per capita (in US dollars)			Cumulative FDI over 1990-2002		
	1991-96	1997-2002	2002	1991-96	1997-2002	2002	Total (mln. of US $)	per capita in US$	2001 GNP (percent)
Bulgaria	85	782	647	10	79	48	4,927	587	27
Estonia	135	422	296	90	249	197	3,051	2,034	55
Czech Rep.c	1,089	6,242	9,886	106	520	1,059	39,227	3,808	54
Hungary	2,156	1,890	908	211	179	106	24,484	2,400	40
Latvia	159	323	349	64	142	140	2,926	1,170	38
Lithuania	56	596	744	15	149	201	3,587	969	30
Poland	2,119	6,127	4,371	55	148	113	46,483	1,204	28
Romania	**206**	1,323	1,210	**9**	**56**	**51**	**9,072**	**400**	**20**
Slovenia	111	612	1,950	55	282	989	4,017	2,009	22
Slovak Rep.	175	1,834	4,260	32	325	1,078	10,322	1,911	42
Total/ave.	6,254	20,152	24,621	59	175	257	148,096	1,406	34

Source: Various issues *of Economic Survey for Europe* (UN Economic Commission for Europe), World Development Indicators 2003 (World Bank, 2003) and IMF Balance-of-Payments database.

2.33 Yet Romania has displayed a consistently successful export performance in EU markets since the collapse of communism. There has been no other case among the CEEC-10 of a second export boom without huge FDI inflows into industry and business services. There is no reason to assume that Romanian industries could restructure and be successful in EU markets without FDI. Indeed, changes in Romania's export offer and its dynamics appear to have been triggered by foreign firms either directly or indirectly. Among the top 30 fastest-growing four-digit SITC exports to the EU over 1995-2002, capital and transportation equipment products (SITC. 7) accounted for three-fourths. As can be seen below, the share of capital-intensive products in the growth of sunrise exports, (that is, exports of products with strong import demand) in the EU tripled between 1999 and 2002, from 23 percent to 70 percent. This points to the expansion of processing activities in the automotive industries and in electrical equipment production, which, as the experience of other CEEC-10 countries shows, are mainly conducted by foreign owned firms (Kaminski, Smarzynska, 2001).

2.34 Hence, the question becomes that of why so little FDI has produced so much in terms of export performance. The answer has several components. In the first place, there seems to be a view that Romania's institutions are more business-friendly than is generally assumed.[39] In addition, the cost of doing business also does not seem to be higher than that in other CEEC-10 countries (see chapter on governance). This suggests that the business climate alone would not choke off supply response to export opportunities. Nor would it prevent domestic businesses from learning from foreign firms, provided that they interact.

[39] Murrell (2003a), for example, argues that these institutions are roughly of the same quality as those in other CEEC-9 countries. To illustrate this point in a different context, Murrell (2003) quotes the extensive range of publications pointing to the adequate enforcement of contract and property rights.

2.35 FDI inflows have some important characteristics that may magnify their actual impact on the economy. As in many CEEC-10 countries, the bulk of the FDI has come from firms located in the EU and the United States, and most of this inflow has gone to the industrial sector. There were few, if any, investments that would indicate capital flight or money laundering activity. Services and industries—two sectors crucial to exports—have absorbed 70 percent of the total capital invested in Romania, with the industrial sector accounting for 54 percent of the total FDI inward stock. Investors from highly developed countries, from the EU and the United States, accounted for almost three-thirds of the inward FDI stock as of April 2003.[40]

2.36 What seems to set Romania apart is that the FDI inflows have been dispersed across a large number of relatively small firms with an average capital of US$100,00. The average size of a firm in terms of foreign capital invested as well as the number of varies by sector of the economy. Foreign firms operating in the industrial sector (around 17,500 of them or 19 percent of the total of 93,016 foreign-owned companies, as of April 2003 tend to be much larger than firms opening in the other sectors. However, given their concentration in the clothing and footwear industries, their average size in terms of capital investment does appear particularly low.

2.37 A very large number of foreign firms, combined with a relatively business-friendly environment, may explain Romania's uniqueness in terms of significant knowledge spillovers to domestic firms, as an econometric study of CEEC-8[41] countries (excluding Latvia and Lithuania) has shown (Damijan et al. 2003). Indeed, both the sheer numbers and the small average size of the German and Italian companies are particularly striking in indicating their significant presence in foreign trade related activities. As various publications suggest, 13,000 Italian firms, either fully or partly owned, have probably contributed to making Italy Romania's single most important trading partner, accounting for almost one-fourth of Romania's total trade turnover.[42] Judging by the composition of this exchange, with clothing and footwear accounting for around 60 percent of Romanian exports and textiles and footwear parts accounting for around 40 percent of Romanian imports from Italy, some of these firms have been heavily involved in organizing processing activities. In 2002, 90 percent of footwear parts and 64 percent of yarns (two major inputs of Romanian exports to the EU) imported into Romania from the EU originated in Italy. The presence of many small Italian firms has probably been responsible for the fact that the textile and leather industries have been characterized by much higher foreign penetration than in the case of other CEEC-10 countries (Hunya 2002). Furthermore, a relatively large presence of U.S. and East Asian companies in the downstream sectors may also be a contributing factor to the stronger overall effects of lower FDI. Javorcik, Saggi and Spatareanu (2003) note a positive association between their presence and the productivity of Romanian firms in the supplying

[40] See NTOR 2003, p. 8. The National Trade Registry (NTOR) provides information about statutory or subscribed capital. In contrast to balance of payments data, Trade Registry information includes re-invested profits by foreign companies. The largest investor was the Netherlands, accounting for 18 percent of the total stock of US$ 9.4 billion, followed by Germany with 10 percent and France and the United States, both with a share of above 7 percent.

[41] The CEEC-8 includes: Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Slovenia, and Slovak Republic.

[42] For very interesting insights on Italian firms in Romania, see Cristescu-Voica (2003).

industries. No similar link has been found for European investors operating in the downstream sectors.[43]

2.38 Last but not least, the share of FDI in total capital formation, together with the length of the period, offers some insights into the relative weight in the economy. The average share of FDI in Gross Domestic Investment of around 20 percent in the 1997-2001 period (calculated from data in IMF 2002b) suggests the significant presence of foreign firms.[44] With around one-fifth of domestic investment carried out by foreign firms, the associated influx of management skills and technology has already had a beneficial effect on the entire economy. With foreign firms accounting in 2000 for 44 percent of total Romanian manufacturing exports (Hunya 2002),[45] the increase in the FDI stock in industry from around US$3 billion in 2000 to US$5 billion in 2002 has also unavoidably raised the presence of foreign affiliates in Romania's exports.

2.39 Thus, the answer to the question of "so little FDI producing such strong trade effects" appears to lie in a large number of foreign-owned firms operating in relatively low tech areas and, because of this, having strong ties to domestically owned firms. Under these circumstances, the impact of FDI has been much stronger than the values of FDI inflows might indicate.

D.2. Factor Intensities of EU-oriented Exports: The Gap between Endowments and Factor Intensities

2.40 The available statistical data suggest that the educational level (with 82 percent participation in secondary education) is significantly higher than in countries at a similar level of economic development (see WDI 2003). This is the case despite the fact that Romania's expenditure on education as a percent of GDP in 2000 of 2.3 percent was the lowest among the CEEC-10. the hourly labor costs in industry and services in 2000 were also among the lowest. Only in Bulgaria was the hourly rate lower (EC 2003a). Furthermore, with employment in agriculture accounting for 40 percent of total employment and with its favorable climate and soil, Romania should be a strong performer in agricultural exports.

2.41 Hence, considering Romania's large pool of low-cost skilled labor and its moderate climatic conditions which favor agriculture, skilled-labor-intensive products, together with natural-resource-intensive products, would be expected to dominate its EU-oriented export basket, at least after some adjustment period.

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[43] The logic behind this finding is straightforward. Asian and U.S. firms, with strong home links, have to look for suppliers within the Pan-European trade area to meet the rule-of-origin conditions and to not pay duties on imports. On the other hand, European firms usually have their supply links within the EU.

[44] According to another estimate, the average FDI inflows as a share of gross fixed capital formation over 1996-2000 amounted to 15.4 percent (UNCTAD 2002).

[45] According to the UN, foreign affiliates accounted for 21 percent of total Romanian exports. This is rather a small share by CEEC-10 standards. Consider that their share in total Hungarian exports was 80 percent in 1999, 60 percent in Estonian exports, and 56 percent in Polish exports both in 2000 (UN 2003). It seems, however, that Hunya's estimate is more credible, as it was based on a detailed analysis of database covering all manufacturing enterprises that file an income statement in 1998-2000. He observes: "As of 2000, Romanian penetration indicators are similar to those in the Czech Republic one or two years earlier." (Hunya 2002).

2.42 Developments in Romanian EU-oriented exports do not corroborate these expectations. Even allowing for substitutability between capital-intensive and skilled-labor-intensive products, there are no indications that the closing of the gap between the endowment in a skilled labor force and the EU-directed export basket has begun (Table 2.5). Romania has retained its specialization in unskilled-labor-intensive products, in which it has a strong and recently growing comparative advantage in EU markets. This has been the only product group with a positive strong net export performance. The value of these exports has consistently been almost twice as high as the value of the imports of unskilled-labor-intensive products from the EU. While exports of skilled-labor-intensive products experienced the most rapid growth during the first expansion phase, exports of unskilled-labor-intensive products dominated the stagnation phase, and those of capital-intensive products registered the largest increase in the third expansion phase followed by unskilled–labor-intensive products.

Table 2.5 Factor Intensity of Romania's Trade with the European Union, 1993-2002

Factor Intensity Product	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002 est.
Romania's Exports to EU: ($ million)										
Natural Resource Based	338	641	986	837	985	1,004	1,154	1,278	1,428	1,330
Unskilled Labor	1,295	1,670	2,194	2,476	2,824	3,352	**3,630**	3,887	4,762	6,497
Capital Intensive	200	366	578	644	650	767	842	1,307	1,429	**1,534**
Skilled Labor	214	406	**686**	680	685	763	611	653	807	981
All Above Products	2,045	3,082	4,443	4,637	5,143	5,885	6,238	7,125	8,425	10,343
Composition of Romania's Exports to EU: (%)										
Natural Resource Based	17	21	22	18	19	17	19	18	17	13
Unskilled Labor	63	54	49	53	55	57	58	55	57	63
Capital Intensive	10	12	13	14	13	13	14	18	17	15
Skilled Labor	10	13	15	15	13	13	10	9	10	9
Romania's Export Specialization Index in EU										
Natural Resource Based	0.51	0.65	0.70	0.57	0.62	0.64	0.71	0.61	0.58	0.50
Unskilled Labor	**3.71**	**3.31**	**3.18**	**3.40**	**3.44**	**3.57**	**3.71**	**3.81**	**3.79**	**3.94**
Capital Intensive	0.29	0.34	0.36	0.38	0.34	0.33	0.33	0.46	0.43	0.37
Skilled Labor	0.63	0.79	0.93	0.90	0.81	0.73	0.55	0.57	0.57	0.53
Share in EU's External Imports: (%)										
Natural Resource Based	0.16	0.28	0.37	0.31	0.36	0.41	0.47	0.42	0.48	0.55
Unskilled Labor	1.19	1.45	1.70	1.82	2.02	2.28	2.44	2.58	3.10	4.34
Capital Intensive	0.09	0.15	0.19	0.20	0.20	0.21	0.22	0.31	0.35	0.41
Skilled Labor	0.20	0.35	0.50	0.48	0.48	0.47	0.36	0.38	0.47	0.58
All Above Products	0.32	0.44	0.53	0.54	0.59	0.64	0.66	0.68	0.82	1.10
Romania's Net Exports to EU: ($ million)										
Natural Resource Based	-362	61	7	-311	-59	-103	96	71	-90	-457
Unskilled Labor	654	826	943	1,076	1,215	1,425	1,657	1,717	2,238	3,191
Capital Intensive	-745	-843	-1,118	-1,415	-1,376	-1,742	-1,587	-1,792	-1,777	-2,267
Skilled Labor	-283	-66	-77	-211	-147	-455	-423	-671	-1,037	-1,515
All Above Products	-735	-23	-245	-860	-367	-875	-257	-675	-665	-1,048

Source: Based on EU as reported from UN COMTRADE Statistics.

2.43 Furthermore, Romania's export profile has not moved toward natural resource intensive products.[46] The share of these exports in EU-oriented exports fell significantly during the current expansion phase, mainly because of the poor export performance of the agricultural sector. The value of total agricultural exports (US$880 million) in 2002 was lower than at its peak level of almost US$1 billion in 1996 as well as its level in 1999 (US$ 885 million). This corroborates one of the findings in Chapter 4 of this study, to the effect that the task of creating an agricultural sector capable of producing internationally competitive products has yet to be addressed.

2.44 In all, the Romanian EU-oriented export basket still appears to diverge from Romania's relative endowments in production factors in the following two dimensions—the under-representation of skilled labor products and the lack of natural resource intensive agricultural products. This divergence, which has existed over a relatively long time, is an indication that government policies have prevented the emergence of competitive markets to allocate resources to sectors with a potential comparative advantage. The agricultural sector has not succeeded in exploiting its favorable climatic conditions. As is argued in Chapter 4 of this report government policies favored large-scale farming and prevented the emergence of an internationally competitive agricultural sector. Furthermore, the skilled labor force has participated only marginally participated in EU-oriented export expansion. Assuming that skilled labor was significantly under-represented in Romanian exports in 1993, the "endowment" gap was not closed. This sets Romania apart from many CEEC-9 economies, where this gap was closed mainly through FDI. This does not appear to have happened as yet in Romania.

D.3. Exports to EU Sunrise Markets: Is the Change in Factor Intensities Under Way?

2.45 Sunrise exports, namely, exports of products with strong import demand growth in the EU, suggest a possible change in factor intensities in the near future.[47] Telecommunications equipment (SITC. 7249) and ships and boats (7353) have been star performers. The value of EU-destined exports rose from US$1 million in 1995 to US$34 million in 1999 and US$336 million in 2000. Subsequently, these exports fell to an estimated US$166 million in 2002. Ships and boats saw the value of their EU exports increasing from US$14 million to US$100 million in 1999 and US$108 million in 2002.

2.46 The factor content of sunrise exports has displayed large volatility over 1995-2002, although with a distinct pattern. The share of natural-resource-intensive products as well as that of skilled-labor-intensive products contracted over this period, while the share of capital intensive products increased. Over the last three years (i.e., during the current expansionary phase) the share of capital intensive products increased dramatically from 23 percent in 1999 to 70 percent in 2000, thanks to exports of telecommunications equipment (SITC 7249), and then fell to an estimated 53 percent in 2002.

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[46] Natural resource-based products consist mainly agricultural products and materials and accounts for around 85 percent (agricultural materials—10 percent) of these exports to the EU. After a strong growth during the first phase, their growth was flat over 1996-2002 at an average annual rate of 5 percent.

[47] Sunrise exports are those that meet the following two criteria: (i) the growth in EU-external imports exceeded 10 percent in 1999-2001 and the value of EU imports exceeded US$50 million; (ii) the value of the Romanian exports concerned exceeded US$10,000 in 1999, with average annual growth rates exceeding 3 percent in 1999-2002.

2.47 Romania's performance in the EU dynamic markets, despite the emerging specialization in more processed, capital-intensive products, does not offer empirical support to the claim that the current export expansion, barring macroeconomic shocks, may be sustainable.

D.4 Participation in International Networks of Production and Distribution

2.48 Falling transportation and communication costs have created opportunities for outsourcing just-in-time production and supply chain management, has been altering the competitive landscape of many countries by relocating business activities and providing a new source of entry into international markets. Value chains have become increasing split with the individual production stages being moved to countries with corresponding comparative advantages. This situation has had far-reaching implications for the global division of labor and has led to the fragmentation of the production process within vertically integrated manufacturing industries. Participation in the supply chains of international networks of production and distribution brings outside managerial and technological expertise to a local company, and offers a "cheap way" of marketing products internationally, as the firms do not incur marketing cost which are usually quite significant for newcomers.

D.4.1. Trade in Parts: Impressive Expansion

2.49 Trade in parts, the result of the fragmentation of the production process thanks to falling costs for service links activities, has been the most rapidly expanding component of international trade. It has been the main lever of trade expansion in the East Asian economies over the last decade (Ng and Yeats 2003).

2.50 Following Ng and Yeats (1999), we identify 60 SITC. Rev. 2 items capturing trade in parts. Two observations can be derived from data reported in Table 2.6. First, parts have contributed significantly to Romania's export expansion. While the share of imports of parts in total imports of manufactured goods (excluding chemicals) has remained relatively stable, the share of parts in exports more than doubled between 1998 and 2000 and kept up with the pace of rapidly expanding overall exports.

2.51 Second, the expansion in exports of parts was not limited to the EU, although since 2000 the EU has been taking more than two-thirds of these exports. The share of parts in exports to markets than the EU increased from 11 percent in 1999 to 16 percent in 2002.

2.52 Several parts and components have emerged as significant exports, which suggests a wide export specialization. In 1993 only 4 out of 60 items had comparative advantage (i.e., ESI above unity) in EU markets. Their number increased to 15 in 1996 and to 17 in 2002.

2.53 In sum, the above analysis indicates the growing specialization and competitiveness in EU markets of Romanian exporters of parts not covered by "network" trade. It also suggests a significant industrial restructuring that has not been captured by the network analysis below.

Table 2.6 Trade in Parts and Share of EU (in millions of US dollars and in percent)

World	1993	1996	1997	1998	1999	2000	2001	2002
Total exports of parts	182	298	382	355	495	868	1,008	1,238
Total imports of parts	401	833	819	1,034	845	1,137	1,305	1,427
Exports of parts as percentage of imports of parts	45%	36%	47%	34%	59%	76%	77%	87%
Share of parts in manufactured exports (chemicals excl.)	5.5%	5.5%	6.4%	5.7%	7.9%	11.8%	11.7%	11.7%
Share of parts in manufactures imports	14.0%	13.3%	12.4%	13.8%	12.2%	13.2%	12.8%	11.7%
Share of the EU in								
Total exports of parts	15%	55%	45%	61%	66%	76%	77%	68%
Total imports of parts	63%	51%	61%	58%	64%	67%	61%	62%
Memorandum: Share of parts in EU-oriented manufactured exports (chemicals excl.)	1.8%	4.3%	4.3%	4.7%	6.9%	11.7%	11.5%	10.4%
Share of parts in ROW-oriented manufactured exports excluding chemicals	8.7%	8.3%	10.9%	8.3%	11.1%	12.2%	12.5%	15.6%

Source: UN COMTRADE Statistics.

D.4.2. "Network" Trade: Not Yet a Lever of Trade Growth

2.54 Have Romanian firms become part of this new division of labor based on production fragmentation and sharing? This section seeks to provide an answer by examining the participation of Romanian producers in global production networks operating in EU markets. The focus here is on developments in trade in three major networks—automotive, electronics (referred to as the Information Revolution [IR] network), and furniture (Table 2.7). The automotive and the electronics networks usually involve firms with foreign participation, either as joint ventures or subsidiaries, although there are instances of outsourcing as well. The furniture network operates mainly through marketing organizations that provide suppliers with precise specifications concerning the final product and the parts and components to be used. In contrast to the automotive and IR networks, the furniture network is less capital-intensive and much more unskilled-labor-intensive, although this does not necessarily apply to many parts and components used in the assembly of the final product. For these reasons, furniture has been the first network to emerge in a number of transition economies (Kaminski and Ng 2001).

2.55 Romania fits the pattern for the predominance of the furniture network. In 1993 the furniture network was the only one to generate significant export earnings. It accounted for 95 percent of all exports by networks in 1993-94, and with 65 percent share in 2002 continues to dominate trade in EU-centered production and distribution networks.

2.56 An examination of the data tabulated in Table 2.7 leads to the following observations. First, network trade has yet to become the main lever of Romania's trade, as has been the case with its integration into the EU production centers of the Czech Republic, Estonia, Hungary, Slovakia and, to a lesser extent, Poland. The closer location to EU markets of these countries and their much higher FDI inflows, explain their success in this area. Except for furniture (both final products and parts), the shares of these countries in EU external imports were well below the average presence of Romanian products in EU markets, and the values of ESI were well below unity. Table 2.7 shows that the aggregate share of network exports was falling until 1999; subsequently, it increased from 8 percent to 11 percent in 2000, and to 10 percent in 2001, and then fell back to 8 percent in 2002.

Table 2.7 Developments in Trade with EU in Three Major Networks, 1993-2002

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002 (est)
Export values to EU ($ '000)					**Automotive network**					
Final	9,603	11,162	15,854	16,722	12,363	10,417	7,393	5,147	4,656	3,862
Parts and components	4,763	6,343	29,703	52,389	44,261	52,505	59,401	41,559	92,906	134,914
Total	14,366	17,505	45,557	69,111	56,624	62,922	66,793	46,706	97,562	138,776
Share in network Exports	4%	5%	10%	15%	13%	13%	13%	6%	12%	16%
Exports as % of imports										
Final	7%	9%	11%	11%	7%	3%	3%	1%	1%	1%
Parts and components	18%	22%	63%	82%	78%	85%	112%	45%	74%	61%
As % of EU external imports										
Final motor vehicles	0.04	0.05	0.06	0.06	0.04	0.03	0.02	0.01	0.01	0.01
Parts and components	0.04	0.04	0.16	0.27	0.22	0.23	0.24	0.16	0.33	0.48
Specialization indices										
Final motor vehicles	0.14	0.11	0.11	0.11	0.07	0.04	0.03	0.02	0.02	0.01
Parts and components	0.12	0.10	0.30	0.52	0.38	0.37	0.37	0.24	0.42	0.45
Export values to EU ($ '000)					**Information Revolution network**					
Final	5,408	4,769	4,105	4,379	2,852	4,119	3,738	80,066	50,362	46,070
Parts and components	1,215	871	1,797	2,553	2,586	18,184	31,600	263,035	251,028	129,403
Total	6,623	5,640	5,902	6,932	5,438	22,304	35,338	343,101	301,390	175,474
Exports as % of imports										
Final	39%	32%	14%	13%	3%	2%	3%	55%	37%	30%
Parts and components	2%	1%	1%	2%	1%	**8%**	**11%**	**41%**	**66%**	**54%**
Share in Network Exports	2%	2%	1%	1%	1%	5%	7%	44%	37%	20%
As % of EU external imports										
Final	0.00	0.03	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Parts and components	0.00	0.00	0.00	0.01	0.02	0.02	0.21	0.19	0.21	0.03
Specialization indices										
Final	0.13	0.07	0.05	0.06	0.04	0.04	0.03	0.55	0.28	0.18
Parts	0.02	0.01	0.01	0.01	0.01	0.06	0.10	0.59	0.59	0.29
Export values to EU ($ '000)					**Furniture network**					
Final furniture	290,579	324,043	377,859	364,693	339,890	342,225	342,754	349,169	368,705	490,934
Parts and components	11,079	12,409	17,065	26,017	35,790	44,354	50,274	47,950	55,091	80,407
Total	301,657	336,452	394,924	390,710	375,680	386,579	393,028	397,119	423,796	571,341
Exports as % of imports										
Final	2,547%	1,571%	1,040%	910%	969%	946%	1,259%	1,048%	888%	974%
Parts and components	344%	242%	169%	244%	394%	439%	344%	338%	329%	428%
Share in Network Exports	93%	94%	88%	84%	86%	82%	79%	50%	52%	65%
As % of EU external imports										
Final furniture	5.27	5.25	5.10	4.61	4.35	3.94	3.64	3.64	3.75	4.75
Parts and components	0.62	0.57	0.60	0.82	1.08	1.13	1.16	1.08	1.11	1.42
Specialization indices										
Final furniture	16.32	11.92	9.64	8.74	7.60	6.28	5.67	5.51	4.74	4.52
Parts and components	1.91	1.30	1.14	1.56	1.90	1.80	1.81	1.63	1.40	1.35
Memorandum:										
Total network exports	322,647	359,597	446,383	466,753	437,742	471,805	495,159	786,926	822,748	885,590
Share in exports to EU	15%	11%	10%	10%	8%	8%	8%	11%	10%	8%

Source: Own calculations based on EU data as reported to the UN COMTRADE database.

2.57 Second, in all networks there are clear signs of two-way trade, with growth in the exports of parts and components outstripping that of final products. While (except for the furniture network) Romania is a net importer of both final products and parts and components, significant increases in exports have accompanied imports. These are usually lucrative activities, providing

stability for commercial relations and creating opportunities to supply more than one single producer of a final product.

D.4.3. Participation in Traditional Value Chains: Textiles/Clothing and Footwear

2.58 Clothing and, to a lesser extent, footwear have been the quintessential engines of growth for many CEEC-10 countries during the initial stages of transition. They have accounted for a significant share of value added and manufacturing employment, with significant implications for poverty reduction. With labor costs going up, many of the outward processing operations in the clothing sector moved to other countries in Central and Eastern Europe through the 1990s. However, these products still dominate the exports of some transition economies, including Romania. Textiles and clothing together with footwear play a very large role in Romania's EU-oriented exports, accounting for almost half of the exports to the EU over the last decade (47 percent in 2002) and one-third of the total exports. Both sectors appear to be firmly entrenched in EU clothing and footwear value chains.

2.59 An important question is the extent to which Romania remains solely an assembly shop for EU firms that are taking advantage of an available cheap—often female—labor force. Or has the importance of such inputs for exports as footwear parts and textiles declined over time, indicating progress in the development of backward linkages? Have Romanian clothing producers moved from simple cut-make-trim operations where buyers supply fabrics, to FOB operations with the clothing firm responsible for obtaining the fabrics? Without a survey of firms in the sectors, or access to input-output tables, it is impossible to give an unambiguous answer to these queries. However, an examination of trade data offers some clues. The results are presented in Table 2.8.

2.60 Overall, the importance of imported inputs for final exports declined during the current expansion phase, which appears to indicate the development of backward linkages and the increased sophistication of domestic producers of footwear parts and textiles. This may also point to the declining weight of simple cut-make-trim operations in the garment sector. The common feature of developments in both sectors has been that the expansion in exports has not outstripped the growth in import of inputs in the 1993-2002 period. In fact, the import of parts as a percent of exports of final products and parts—a crude measure of the importance of imported materials for final product exports—has been declining since 1999 for textiles/clothing and since 1998 for footwear[48] This measure is significantly higher for clothing than for footwear.

2.61 Another indication of a possible increase in local outsourcing and of further insertion of firms operating in Romania into the global footwear and clothing markets is the expansion in the exports of parts. Although their shares in the total exports of the respective sectors declined, the value of these exports has significantly increased. Exports of textiles in 2002 increased 87 percent over 1999, and the value of exports of footwear parts was 62 percent higher over the

[48] Similar trends are discernible in terms of imports of parts as a percent of final exports. This index fell from 40 percent in 1996-97 to 30 percent in 2002, displaying a consistent downward trend. The index for textile/clothing declined from the peak level of 72 percent.

same period. Almost all textiles and three-fourths of footwear parts have been shipped to the EU, apparently for further processing.

Table 2.8 Trade in Textiles/Clothing (TC) and Footwear and Parts (FP) in 1993-2004 (in millions of US dollars and in percent)

Textiles and Clothing	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Exports of textiles and clothing	770	1,134	1,541	1,729	1,944	2,173	2,212	2,526	3,023	3,563
Exports of textiles as % of exports of textiles and clothing	17%	12%	12%	10%	10%	9%	8%	8%	8%	9%
Total imports of textiles	481	625	939	1,055	1,258	1,475	1,577	1,720	2,016	2,374
Imports of textiles as % of exports of textiles and clothing	62%	55%	61%	61%	65%	68%	**71%**	68%	67%	67%
Memorandum: share of textiles and clothing in										
Total exports	15.7%	18.4%	19.5%	21.4%	23.1%	26.2%	26.0%	24.4%	26.5%	25.7%
EU-oriented exports	31.5%	33.4%	31.7%	33.8%	36.5%	36.9%	36.5%	34.8%	35.7%	35.1%
Footwear	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Exports of parts and footwear	155	307	423	500	540	603	678	785	976	1,158
Exports of parts as % of exports of footwear	48%	68%	67%	76%	66%	62%	58%	55%	52%	53%
Total imports of parts	25	45	78	103	125	144	154	178	210	231
Imports of parts as % of exports of parts and footwear	16%	15%	18%	21%	23%	**24%**	23%	23%	22%	20%
Memorandum: share of footwear parts and footwear in										
Total exports	3.2%	5.0%	5.3%	6.2%	6.4%	7.3%	8.0%	7.6%	8.6%	8.3%
EU-oriented exports	6.2%	9.4%	9.2%	10.2%	10.9%	11.0%	11.7%	11.6%	12.3%	12.0%

Source: Own calculations based on UN COMTRADE Statistics as reported by Romania.

2.62 Italian firms have been mainly responsible for organizing the insertion of Romanian firms into global networks of production and distribution of footwear and clothing. This is particularly visible in the case of footwear, with Italy taking around 90 percent of Romanian exports of footwear parts. The same share for textiles is around one-fifth of their total exports.

2.63 The large share of Italy in Romanian trade in clothing and footwear and their inputs provides extra credence to our earlier observation on the role played by Italian-owned firms in organizing local networks of production. Not only do these firms provide the necessary links with Italian retailers and producers, but they are themselves an integral part of the global garment and textile value chain. The implication is that these are not footloose investors. They have a stake in maintaining competitiveness in foreign markets in operations conducted from Romania, which bodes well for the survival of the Romanian textile sector following the dismantling of the EU quota regime on clothing imports in 2005 (see below).

2.64 In all, these two sectors are not in fact enclaves but appear to be immersed in the domestic economy. Both sectors have been very competitive in EU markets, which indicates significant progress in industrial restructuring. They have become part of the global value chains, organized mainly by Italian firms.

D.4.4. Concluding Comment

2.65 The picture that emerges from this analysis can be summarized as follows. In comparison to most other CEEC-9 countries, network trade accounts for a relatively small portion of Romanian exports. Except for furniture, trade in the networks appears to be moving from one

transaction to another. However, the expansion in exports of parts and components may indicate that many Romanian firms have established a stable position in EU supply chains within the three networks.

2.66 The rapid expansion in trade in parts and the successful insertion of Romanian producers' global value chains of clothing and footwear appear to indicate that (i) the current expansion is based on a solid foundation, and (ii) there is an ongoing shift toward finding new niches in external markets. Both of these indications may bode well for Romania's capacity to withstand the shock of the change in EU import regime for textiles and clothing.

D.5. The Challenge of the Impeding Change in the Trade Regime for Textiles and Clothing

2.67 The dismantling, on January 1, 2005, of EU quantitative restrictions on textiles and clothing imports under the WTO Agreement on Textiles and Clothing (TC) will bring about a significant change in the regime governing the international trade in these products. Trade in TC, at present subject to quotas restricting competition, will become like trade in other industrial products. With the dismantling of quotas, MFN tariff rates will be the main border measure protecting domestic and preferential suppliers. The average EU MFN tariff rate of 9 percent on TC does not offer sufficient preferential margins that might protect Romanian procedures, or, for that matter, EU producers and other preferential suppliers, from the possible surge in exports from the world's most cost-efficient suppliers.

2.68 The challenge facing Romanian suppliers is that they will have to compete with the most efficient suppliers on an equal footing. China in particular is regarded as the chief competitor, with its huge production capacities and its pool of a cheap labor force. Its performance in EU markets has confirmed these worries. The EU has progressively eliminated quotas on some product categories since China's accession to the WTO in 2001. In all of those liberalized product categories, unit prices have fallen and China's share has exploded (EC 2003b). The adjustments created by Chinese exports for EU domestic and external suppliers are not yet over, as almost half of the Chinese TC exports are still subject to quotas.

2.69 Romania has assets vis-à-vis many TC exporters from non-European developing countries. First, geographical proximity may give Romanian firms a comparative advantage vis-à-vis Asian or African competitors in some production lines. Clothing is a buyer-driven sector in which the ability to respond quickly to new fashion trends is crucial to a firm's survival in global markets. So, also, is the ability to quickly supply an international retailer. Thus, geographical proximity is an important factor. Second, because of the large presence of foreign-owned firms with unique commercial links to EU producers and distributors, Romania may be better positioned than many other countries to withstand the augmented competitive pressures. Italian or German firms operating in Romania are probably less inclined to choose the exit option in the face of increasing pressures. Instead, they may look for innovative ways to respond to new challenges.

2.70 Yet the challenge to the sustainability of the export performance of clothing in EU markets looms large on the horizon. In view of the importance of this sector to the national

welfare, a major study is needed of the TC sector in Romania, and of ways of designing measures that will improve the domestic business climate.[49]

D.6. *Implications for Sustainability*

2.71 The evidence from the developments in Romanian exports suggests that while a 20 percent per year expansion in exports may not be easy to maintain, it appears to be based on healthy fundamentals. The recent export expansion was not the result of a temporary explosion in import demand for a single commodity unique to Romania.. Nor was it solely, in its EU-dimension, restricted to the most recent phase. On the contrary, it encompassed a larger basket of manufactures and included markets other than those of the EU.

2.72 Second, the recent expansion is all the more impressive in that it has occurred against the background of falling import demand in the EU. The implication is that Romanian exporters are not marginal suppliers—who are the first to be penalized by the contraction during a recession—but they have firmly established commercial links to EU markets.

2.73 Third, expansion and diversification in geographical patterns of trade have accompanied the diversification in export offer and the progress in integrating Romanian firms into EU-based networks of production and distribution. Clothing and footwear are no longer the sole levers of Romanian exports to the EU. Other products have also been on the rise.

2.74 Fourth, the developments in the Romanian trade in textiles and clothing and footwear parts and footwear suggest that these two most important export-oriented sectors of the economy, which generate almost half of the EU-oriented exports, are not an enclave but have developed backward links into the domestic economy.

2.75 Whether exports will be sustainable depends to a large extent on developments in the relationship between labor costs and productivity, the emergence of production facilities using the available skilled labor, the capacity of Romanian firms to withstand new competitive pressures caused by the dismantling of MFA quotas, and the restructuring of the agricultural sector. Sustainability depends critically on the relation between labor productivity and wage growth in the low-skilled labor-intensive sectors of the economy.[50] Among the factors responsible for the improved competitiveness of Romanian firms in EU markets have been the progress in achieving macrostability and the stability of the real effective exchange rate. Although the latter has appreciated slightly in CPI terms, it has been stable in terms of ULC (unit labor cost) (IMF 2002a). Most important is the fact that productivity gains "offset real wage increases."[51]

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[49] The European Commission has launched a major study to examine in detail the impact of quota elimination in the EU. The final report will be available in 2004.

[50] While the IMF (2002a) seems quite optimistic about the sustainability of exports, pointing not only to increases in labor productivity but also to the strengthening of the profitability of Romanian domestic producers, the OECD country report (OECD 2003) argues that the business environment discourages both domestic and foreign investment.

[51] Ibidem, p. 10.

2.76 While developments in the factor intensity of Romania's trade suggest that the cost of labor relative to capital is not too high, this cannot be taken for granted. Increases in wage rates that exceed growth in labor productivity may erode the competitive advantage of a significant portion of exports. The opening up of EU markets to the most efficient TC producers in 2005 will present an extra challenge. Cheap labor, combined with geographical proximity, has been critical to Romania's success. However, the gap between the endowment of a highly skilled labor force and an abundance of resources favoring agricultural production and the factor intensity of the EU-oriented export basket has not been closed.

2.77 Another unexplored area of opportunity is agriculture. Romania's moderate climate and availability of land point to the potential for specialization in agricultural production, while the availability of an inexpensive skilled labor force suggests a specialization in skilled-labor-intensive products. On both counts, the export performance has not borne out these expectations: agricultural net exports have remained stagnant and there has been no perceptible shift toward skilled-labor-intensive exports.

2.78 Although export expansion has been a continuing feature of Romania's transition from central planning (despite the uneven progress in the implementation of second-generation reforms), the divergence between the country's export basket and its relative endowments could either smother or stimulate growth in the future. The outcome depends on government policies. Such a divergence over a relatively long period of time is an indication that government policies have prevented the emergence of competitive markets to allocate resources to industrial sectors with a potential comparative advantage. Nor has the agricultural sector succeeded in exploiting its favorable climatic conditions, as government policies favoring large-scale farming appear to have prevented this. In a similar vein, skilled labor has yet to become a factor in Romania's export performance, as the FDI crucial to closing the gap has failed to take advantage of the low cost skilled labor available in Romania. Once the right policy environment is in place, it might contribute to another wave of export expansion in the near future.

2.79 Paradoxically, this combination of unfulfilled potential in agriculture and industrial restructuring may offer unique opportunities that would provide further impetus to foreign trade expansion. However, this would require the implementation of measures that would foster agricultural restructuring, removing the policy and institutional barriers to the allocation of capital to the most competitive activities. These measures would attract FDI inflows, which are discussed in more detail below. As the experience of CEEC economies demonstrates, FDI in activities that close the gap between the endowment of skilled labor and the factor intensity of production has driven export expansion in CEECs that undertook earlier structural reforms.

E. Network of Preferential Trade Agreements: Potential for Distortions

2.80 Accession to the EU, which has shaped Romania's trade policy and institutions, has been mainly responsible for the very rapid liberalization in access to Romanian markets, with most imports (86 percent in 2002) entering these markets on a duty free basis. On February 1, 1993, Romania signed an Association Agreement with the EU and opened EU accession negotiations in December 1999. The EU "associate status" has entailed bilateral trade liberalization not only vis-à-vis the EU but also in trade with other countries enjoying preferential status with the EU. Romania has become a member of CEFTA and an associate member of EFTA; and it has had

FTA with Israel and Turkey. More recently, under commitments made in the "Balkan" Stability Pact, Romania has concluded negotiations and signed bilateral FTAs with Albania, Bosnia and Herzegovina, the FYR of Macedonia, and Serbia and Montenegro. All industrial products originating in Romania's Pan-European preferential partners,[52] i.e., 28 countries including the EU, the EFTA, the CEEC-9, and Turkey that are parties to the Pan-European Cumulation Agreement[53] are not subject to duties as of January 1, 2003. Agricultural products originating in these countries are also subject to preferential treatment, although not as deep and extensive as in the case of industrial products. In addition, all products, agricultural and industrial alike, produced in Moldova have duty-free to Romanian markets. These countries together supply Romania with almost 80 percent of its industrial imports and 84 percent of manufactured imports, which otherwise(given the cascading Romanian MFN tariff schedule, and the specialization in highly processed goods as revealed in their Romanian-oriented exports)would be subject to very steep MFN tariff rates.

2.81 The EU accession-driven liberalization policy has resulted in duty free access to Romanian markets for industrial and most agricultural products for producers from 15 EU member countries, three EFTA countries (Iceland, Switzerland, and Norway), Israel and Turkey, and six CEFTA countries.[54] Furthermore, commitments made in the "Balkan" Stability Pact Memorandum of Understanding on Trade Liberalization and Facilitation signed in June 2001 have led to the negotiations (and completion) of bilateral FTAs with Albania, Bosnia and Herzegovina, FY Republic of Macedonia and Serbia and Montenegro.[55]

2.82 With the EU enlargement in 2004, Romanian exporters and importers will not face a completely different regional trading environment. To be sure, CEFTA will lose five of its eight members: Romania will remain in CEFTA with Bulgaria and Croatia. It will gain duty free access for its industrial exports and improved "double-zero" access for its agricultural products to markets in Cyprus, Estonia, Latvia, Lithuania and Malta.

2.83 Multilateral liberalization within the WTO framework has not been accompanied by vigorously pursued regional liberalization, however. While Romania has participated in WTO agreements, extending duty free treatment to selected products (e.g., Information Technology Agreement) or countries (Generalized System of Preferences for the least developed countries), it has kept relatively high MFN tariff rates, especially on agricultural products. "Developing

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[52] The CEEC-9 includes Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, the Slovak Republic, and Slovenia. The CEEC-10 will denote the inclusion of Romania.

[53] The Pan-European Cumulation Agreement, which went into effect on January 1, 1997, had set the stage for the formation of a single European trading bloc. In addition to extending the rules of origin to all European associates of the EU (i.e., the CEEC-10) it has also standardized trade components of European Association Agreements as well as newly signed agreements in terms of the date of removal of tariffs and non-tariff barriers by the end of 2001. In consequence, a single pan-European trading zone was turned in 2003 into a free trade zone for industrial products encompassing 29 countries.

[54] Except for Croatia with which duty reductions are subject to a separate schedule; duties on 100 percent of industrial products from other CEFTA countries were removed as of January 1, 2003.

[55] Romania has been part of the Trade Initiative of the Stability Pact, which over the last three years has focused on providing support to the seven Southeastern European countries—Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the FYR of Macedonia, Romania, and Serbia and Montenegro.

country" status under the WTO has shielded Romania from external pressures to make stronger commitments to liberalizing access to domestic markets.

E.1. Applied MFN Tariff Rates in Comparative Perspective

2.84 Romania has the highest MFN applied tariff rates among CEEC-10 countries. The simple average tariff rate fell in 2002, yet it was almost 50 percent more than the simple average of 13 percent in Poland, the second most protected economy among the CEEC-10 (Table 2.9). Simple average tariff rates for both agricultural and industrial products are also significantly higher than in Bulgaria, which is scheduled to accede to the EU jointly with Romania.

Table 2.9 Average Applied Tariff Rates in the CEEC-10 and the EU and Implied Preferential Margins vis-à-vis Tariff Rates in the EU

	Average MFN Applied Rate (%) [a/]			Implied preferential margins over the EU [b/]		
Country	All Goods	Agriculture	Industrial Goods	All Goods	Agriculture	Industrial Goods
Romania (2001)	19.8	33.9	16.2	15.4	24.5	12.0
Romania (2002)	18.6	27.3	15.9	14.2	17.9	11.7
Bulgaria (2002)	9.6	16.4	9.6	5.2	7.0	5.4
Czech Republic	5.0	11.7	4.2	0.6	2.3	0.0
Estonia	1.6	11.5	0.1	-2.8	2.1	-4.1
Hungary	9.5	25.7	7.0	5.1	16.3	2.8
Latvia	4.1	11.0	2.9	-0.3	1.6	-1.3
Lithuania	3.4	9.4	2.9	-1.0	0.0	-1.3
Poland	12.6	47.4	10.2	8.2	38.0	6.0
Slovak Republic	5.1	8.1	4.2	0.7	-1.3	0.0
Slovenia	9.6	8.1	9.4	5.2	-1.3	5.2
Memorandum						
European Union	4.4	9.4	4.2	0.0	0.0	0.0

Notes: a/The classifications of all goods, agriculture and industrial goods are based on HS 01-97, HS 01-24 and HS 25-97, respectively. b/ The difference between a country's MFN applied tariff rate and that applied by the EU indicates the level of extra reverse discrimination faced by the MFN supplier in comparison with that faced in EU markets. c/ Based on the WTO CD Rom 2001 file, Romania's MFN applied tariffs are even higher: 40.0 percent for all goods, 117.7 percent for agriculture, and 17.5 percent for industrial goods. Data for 2002 were obtained from the Romanian government.
Source: WTO Members' Tariff Profiles (TN/MA/S/4/Rev.1), 1999, and World Bank staff estimates.

2.85 Nevertheless, the combination of high MFN tariff rates and low preferential rates does not appear to have led to an increase in trade with FTA partners at the expense of the ROW. On the contrary, both preferential and non-preferential trade has dramatically increased since the collapse of central planning. The price of preferential access for Romanian producers to most of Romania's "natural" trading partners' markets has been the strong competition that they have faced from imports from FTA partners, including the EU. Both privileged access and exposure to competition appear to have had a positive impact on the ability of Romanian producers to successfully compete in international markets.

2.86 Thus, if anything, the trade-creating effect of preferential trade agreements appears to have been well above the trade diversion inherent in the combination of high MFN tariff rates and regional FTAs. Setting aside the "natural trading partner arguments" (geographical

proximity and the economic weight of a country or regional bloc), the apparently limited impact of high reverse discrimination on overall trade flows also stems from the high dispersion in tariff rates, with MFN tariff peaks affecting small amounts of trade and with tariff exemptions granted on discretionary basis.

E.2. Preferential Partners: Presence and Conditions in Access to Romanian Markets

2.87 Current preferential partners accounted jointly for 73 percent of total Romanian imports in 2002:69 percent of these total imports, or 94 percent of total preferential imports, entered Romania duty free. The remaining 6 percent were subject to duties because they were agricultural products or because duties on industrial products imported from certain countries (Israel and Turkey) were still in effect. While simple average tariff rates on imports from each prospective free trade partner were positive, except for Lithuanian imports, their levels were very low, with a maximum of 3.3 percent for Israel (for details, see Table 2 in Kaminski, Unguru 2004).

2.88 The averages weighted by imports from a respective partner (a more appropriate measures) are mostly zero except for total imports from Hungary (3.2 percent), EFTA (3.1 percent), Israel (3 percent), and EU (1.5 percent) owing to significant imports of agricultural products, which still enjoy substantial levels of protection in Romanian markets.

2.89 The share of other countries acceding to the EU in 2004(Cyprus and Malta)in Romanian total imports in 2002 was paltry amounting to 0.09 percent, whereas the share of Stability Pact countries was slightly higher at 0.5 percent of total imports. Both simple and weighted average duties on imports from Stability Pact countries and from 2004 EU entrants that do not have FTAs with Romania (that is Cyprus, Estonia, Latvia, Lithuania, and Malta) are very high, at double digit levels. However, while an increase in their exports to Romania may be expected once they have duty free access, this will not have a significant impact on Romania's overall imports. It should be noted also that under the current tariff regime some portion of their imports enter Romania on a duty free basis either because of limited bilateral liberalization (e.g., 0.4 percent of Croatian imports) or because MFN duty rates are zero. For example, the latter applies in particular to Latvia, with 29 percent of imports subject to zero MFN applied rates.

E.3. Tariff Barriers in 2002: The Extent of Reverse Discrimination

2.90 Shortcomings of regional liberalization, unless it is accompanied by the simultaneous liberalization of MFN tariff rates, are threefold: first, it usually suppresses FDI inflows from firms located in non-preferential countries; second, it raises the prices of imports; third, it exacerbates the potential for distortions in production and consumption patterns owing to the fact that variation in the tariff structure seriously distorts price signals.

2.91 The Romanian MFN tariff structure contributes to distortions in production and consumption patterns, which relate to high levels in MFN tariff rates and differences between MFN applied rates and preferential rates on imports from FTA countries (Table 2.10). The latter are significantly higher on industrial products than on agricultural products.

Table 2.10 Characteristics of Tariff Structures Levied on Agricultural and Industrial Products Imported from Non-preferential MFN Partners and FTA Partners in 2002

Agricultural Products (HS 0 through 24)	Average All	From MFN	From FTA Partners
Simple average	20.2	27.9	17.2
Weighted average	23.8	34.8	28.7
Coefficient of variation	1.04	0.72	1.12
Maximum tariff rates	225.5	225.5	225.5
Industrial Products (HS Chapters 25 through 97)			
Simple average	5.2	15.9	0.1
Weighted average	1.2	4.4	0.02
Coefficient of variation	1.82	0.63	0.22
Maximum tariff rate	225.5	225.5	77.5

Note: Calculated on 8-digit Harmonized System items for the 2002 tariff schedule.
Source: World Banks staff estimates based on 2002 tariff schedule.

2.92 Regional preferences applied to agricultural products seem to be less distorting in terms of production and consumption patterns than a simple examination of respective tariff schedules would suggest. While almost 40 percent of tariff items on imports from FTA partners were not subject to duties as compared with 6 percent from non-preferential partners, the value of the MFN weighted average tariff rate is only 6 percentage points or 22 percent higher than the same average on agricultural imports from the EU.[56] This means that preferential concessions have not been granted for products deemed sensitive and, by the same token, they contribute less to trade diversion.[57]

2.93 Tariffs and preferential conditions for access to Romanian markets for industrial rather than agricultural products are a much more important source for creating distortions in the economy and opportunities for rent seeking. Romania's tariff regime for industrial products has the following features. First, although MFN zero tariff rates account for only 11.5 percent of eight-digit HS tariff items, most of the industrial products imported into Romania were duty free in 2002. While "developing country" status has allowed Romania to keep MFN tariff rates at high levels, this has been partly offset by zero tariff rates on a number of raw materials and by Romania's participation in WTO-sponsored arrangements.[58] As a consequence, 71 percent of MFN imports and 63 percent of GSP/P16 imports were subject to MFN zero tariff rates, whereas practically all imports of industrial products from preferential partners entered duty free in 2003 (Table 2.11).

[56] Imports from CEFTA countries (excluding Croatia) are subject to slightly lower tariffs than those from the EU, but the differences are not large. The simple average tariff rate on CEFTA agricultural imports of 16.1 percent was one percentage point lower than that on imports from the EU (16.1 percent). All agricultural exports originating in Moldova are under a duty free regime.

[57] But this should not suggest that high levels of agricultural protection impose costs on the economy. As is argued in Chapter 4 of this study, they have had serious negative consequences for domestic efficiency in sectors producing agro-food products.

[58] Romania is a party to the conventions on Preferential Trade among Developing Countries ("The 16") and the Generalized System of Trade Preferences (GSP). It is also a party to the WTO Information Technology Agreement (ITA), which has led to zeroing of MFN tariff rates on products covered by the ITA.

Table 2.11 Duty-free Imports of Industrial Products under MFN and Preferential Agreements in 2002

Duty regime	Duty-free Imports (in millions of US dollars)	Imports (in millions of US dollars)	Share of duty-free imports under respective duty regime	Share in total industrial imports
MFN imports	2,610	3,702	71%	17%
GSP/P16	423	671	63%	3%
FTA preferential partners	12,109	12,135	100%	80%
Total industrial imports	15,142	16,661	91%	100%

Source: Derived from data provided by the Romanian Customs Administration

2.94 Second, in spite of the dominance of duty free imports in industrial imports from these three groups of partners, preferential margins lead to acute reverse discrimination. The simple MFN average tariff rate implies that an "average" MFN supplier would have to offer prices that were 16 percent lower than those of preferential firms in order to be competitive in Romanian markets. But the average is usually misleading. This may quite effectively cut access for Romanian import users to the most cost-effective sources of supplies for a wide range of products, where, for example, Japanese, Korean or U.S. firms may have a competitive advantage and may offer higher quality products.

2.95 It appears that this indeed may be the case, as Romanian importers of industrial products display interest in MFN suppliers only insofar as preferential margins are relatively low (see Table 2.12). Once one starts to move up the MFN tariff ladder the respective shares dramatically change in favor of FTA partners, whose share in total imports reaches a maximum of 93 percent of these imports, where MFN suppliers face tariff rates of 15 percent or higher. Since differences in specialization profiles of MFN and FTA producers may provide some explanation as to the concentration of MFN imports in products subject to zero MFN tariff rates, this study will exclude them for comparative purposes.[59]

2.96 The exclusion of MFN imports of energy and industrial raw materials produces a striking (though not a counterintuitive) picture. MFN imports subject to rates exceeding 35 percent account for a paltry 0.3 percent of all non-zero MFN imports. The share of MFN imports in total industrial imports of items subject to higher MFN tariff rates rapidly falls from 14 percent for 10-14 percent rates to 6 percent for items subject to rates between 30 and 35 percent. MFN imports account for 5 percent of total imports of items subject to ratio between 38.4 percent and 44.2 percent and to the 64 percent rate, but disappear at higher rates (see Table 2.12).

2.97 Nevertheless, it is surprising that these imports are taking place at all. There are three possible explanations for this situation. One explanation is tariff exemptions, which—judging by customs revenues from tariffs—appear to be widespread. Furthermore, goods imported by firms operating in Romanian Free Trade Zones and economically depressed areas are exempt from duties. So are imports of capital equipment by small and medium enterprises or by larger firms if their value exceeds US$ 1 million. Imports of goods to be exported within 45 days are also

[59] Imports of fuels alone accounted for 28 percent of non-preferential imports, as opposed to 1.4 percent of imports from preferential partners.

exempt. As mentioned earlier, this may have weakened the trade diversion effect usually triggered by high preferential margins.

Table 2.12 MFN Imports at Various MFN Applied Tariff Rate Brackets and Their Share in Imports of These Tariff Items in 2002 (in millions of US dollars and in percent)

MFN applied rate	225	155	77.5-86.5	64	38.4-44.2	30-35	21-25	15-20	10-14	All (excluding 0% tariff imports)	Total
MFN imports (percent of total)	0%	0%	0%	5%	5%	6%	7%	8%	14%	9%	24%
Imports (in millions of US$)	6.8	2.6	13.8	0.2	60.4	1,350	1,846	4,796	1,928	11,411	15,210
As percent of non-zero MFN imports	0.0%	0.0%	0.0%	0.0%	0.3%	8.0%	11.3%	35.7%	25.5%	100.0%	N/A

Source: Derived from data provided by the Romanian Customs Administration.

2.98 Another possible explanation may relate to the unavailability of competitive products in the pan-European industrial free trade area. In this case, there is no choice but to pay high duty rates.

2.99 Last but not least, MFN suppliers may lower export prices to stay competitive in Romanian markets. Chang and Winters (2002) provide empirical evidence showing that firms lowered the export prices that they offered to consumers from MERCOSUR countries, in order to compete with firms from this regional trading bloc. This may explain imports of items subject to 10-20 tariff rates, but it seems unlikely that MFN producers would be willing to slash export prices to internalize the higher double-digit preferential margins of their competitors.

F. Implications of the Alignment of MFN Applied Tariff Rates on Industrial Products with the EU CET

2.100 The exclusion of MFN imports of energy and industrial raw materials produces a striking (though not a counterintuitive) picture. MFN imports subject to rates exceeding 35 percent account for a paltry 0.3 percent of all non-zero MFN imports. The share of MFN imports in total industrial imports of items subject to higher MFN tariff rates rapidly falls from 14 percent for 10-14 percent rates to 6 percent for items subject to rates between 30 and 35 percent. MFN imports account for 5 percent of total imports of items subject to ratio between 38.4 percent and 44.2 percent and to the 64 percent rate, but disappear at higher rates (see Table 2.12).

2.101 No matter which of the above reasons explains the decreasing levels of MFN imports with the increase in rates, the bottom line is that Romanian MFN applied tariff rates are unnecessarily high. High tariff protection is always a bad trade policy. In the absence of extensive regional trade arrangements, tariff protectionism can be defended (or explained) in terms of infant protection argument, government revenue needs, or political economy reasons related to political pressures from powerful interest groups. If, however, the same sectors are open to duty free competition from firms from such highly developed economies as the EU or EFTA, not to mention the internationally competitive imports from other EU entrants, none of the above applies unless a protected product is not manufactured in any of the FTA countries.

This is hardly a plausible occurrence. If this is not the case, then maintaining high MFN tariffs amounts to protecting FTA suppliers from MFN competition.

2.102 Since Romania is on the accession path to the EU, MFN tariff rates on industrial products should be harmonized with those in the EU CET (Common External Tariff). Their alignment would send a signal to the investment community indicating the government's commitment to addressing weaknesses in Romania's domestic business climate. The cost of such a move is negligible. This is clearly a win-win case.

F.1. A "Shadow Customs Union" with the EU Restricted to Industrial Products

2.103 In view of Romania's involvement in the EU accession process, the best option—that of free trade—is not acceptable, as it might trigger demands for compensation from Romania's MFN trading partners once Romania becomes a member of the EU.

2.104 But since Romania's MFN tariff rates on industrial products are significantly higher than those in the EU CET, the harmonization of tariff rates applied on industrial imports with those in the EU would lower the extent of reverse discrimination considerably. The simple average MFN rate is almost 4 times higher, and the maximum tariff rate is almost 15 times higher.[60] Romanian MFN applied tariff rates are lower than those in the EU for 165 six-digit HS tariff lines out of the total of 5,492 lines. The maximum difference for these items is fairly small, amounting to only 10 percent. On all other items, Romanian tariff rates are much higher than rates in the EU. For example, the difference between Romanian and EU applied tariff rates exceeds or is equal to 10 percent for 2,778 lines, or 51 percent of all industrial six-digit tariff lines.

2.105 Hence, the alignment of applied MFN tariffs on industrial products to those of the EU CET would represent a significant improvement in the contestability of Romanian domestic markets. As a result of this, competitive pressures on either preferential suppliers or domestic producers, or both, would significantly increase.

2.106 However, concerns might be raised about the compatibility of the alignment with WTO rules, the negative fiscal impact, and the negative impact on sensitive sectors. None of these concerns appears to be well grounded.

F.1.1. Implications: WTO Is Not an Obstacle

2.107 As regards WTO rules, three comments are worth noting (for details, see Box 2.1). First, these rules impose discipline on the increase of applied tariff rates beyond their bound levels. Member countries may be penalized for erecting barriers to market access, but not for their removal.

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[60] The accuracy of these estimates suffers from a drawback related to the absence of full concordance between Romanian and EU tariff lines. This is mainly the result of the use by the EU of specific and compound tariff rates, which have not been included in the analysis.

Box 2.1 Harmonization of Tariffs and WTO Rules

From the point of view of the WTO rules, accession is simply the shift from a free trade area (FTA already fully operational under Europe Agreements) to a customs union (CU). The only new (in relation to FTA already in place) relevant article that will apply when Romania either joins the EU or signs a CU agreement is Article XXIV:6.

Article XXIV:6 requires WTO members joining a CU and consequently *seeking to increase bound rates of duty* to enter into negotiations—under Article XXVIII (Modification of Schedules)—on compensatory adjustment, netting out reductions in duties on the same tariff lines made by other members of the customs union. If such reductions are regarded as insufficient compensation, the CU will either reduce duties on other tariff lines, or provide compensation. If no agreement is reached on compensatory adjustment within a reasonable period of time, the CU may modify or withdraw the concessions and affected WTO members are free to retaliate. A reasonable period of time, as agreed during the Uruguay Round, is to be no more than 10 years.

This has the following implication: the legal situation vis-à-vis the WTO will remain the same as long as Romania will not insist upon accession that the EU raise its bound rates to higher Romanian ones.

Other issues are unlikely to appear as legal impediments. Reference is occasionally made to Article XXIV, 5 (a), which requires that duties and other regulations of commerce after the establishment be either less restrictive or no more restrictive than prior to the establishment of a CU. If the applied rates are after accession on the whole higher than those applied before accession, the enlarged EU would be in breach of its WTO obligations and any WTO member will be entitled to ask for compensations. This is a misinterpretation. First, as noted above, the trigger for compensation adjustment is the increase in bound rates. Second, an assessment under this Article is based on an overall assessment of weighted average tariff rates and customs duties collected. The WTO Secretariat is responsible for conducting an assessment, which has little practical relevance. It should be noted that, since 1948, out of more than 60 FTAs and preferential trade agreements that have been reviewed under Article XXIV provisions, only 4 agreements (the list includes neither EU CU nor NAFTA) were declared fully compatible with Article XXIV requirements. However, a working group has not censured a single agreement as being incompatible with GATT-WTO rules.

2.108 Second, lowering tariff rates on a unilateral basis does not reduce the government's leverage in tariff negotiations, as such negotiations concern the bound levels, not the actually applied levels. Moreover, this is of little relevance—the Doha round of multilateral trade negotiations may go beyond the date of Romania's scheduled accession to the EU.

2.109 Last but not least, WTO rules pertain to bound tariff rates not actually applied. In other words, problems with WTO members may arise only if Romania persuades the European Commission to raise the WTO bounds to its own levels. Otherwise, Romanian accession to the EU, or more precisely its membership in the EU Customs Union, will not change the overall level of protection in EU industrial markets.

F.1.2. Implications: Tariff Revenues and MFN Imports

2.110 With the expanding share of duty free imports, customs revenues have been on the decline. In relation to the value of imports, they fell from around 6 percent in 1998 to 2 percent in 2002 and may have declined further in 2003, as all tariffs on industrial imports from Pan-European Cumulation Agreement countries have been zeroed. Furthermore, tariff exemptions under various schemes have reduced MFN dutiable imports. The latter seem to be accountable for the difference between the values of a duty collection rate of 2.0 percent and a weighted average tariff rate of 2.8 percent.

2.111 With reductions in preferential tariff rates on industrial products, duty revenues from agricultural imports have been accounting for a dominant share of customs revenues from duties. Assuming that a weighted average tariff rate on agricultural products of 24 percent roughly equals the implicit duty collection rate on these imports, duty revenues generated by agricultural imports amounted to 82 percent of the total in 2002, with only 18 percent coming from MFN industrial imports. The projected value of the duty collection rate of 1.7 percent in 2003 is very close to the weighted average rate on agricultural imports multiplied by their share in total imports, which yields 1.5 percent. The projected collection rates appear to be based on the assumption that duty revenues from agricultural imports will be even more dominant than in the past.

2.112 In consequence, the impact on tariff revenues is unlikely to be significant. But the alignment will nevertheless affect the duty income from MFN imports, as tariff rates would substantially fall. The fall may be offset by increased MFN imports as discrimination levels drop. How large will the change in duty revenues from industrial imports be with the adoption of EU CET on industrial products? To answer this question, we use a very simple standard partial equilibrium trade model to simulate trade creation and assess tariff revenue loss. It is based on the assumption that the percentage change in imports equals the elasticity of import demand multiplied by the change in price (or here, in tariff rate) for this product.[61] It is assumed that preferential imports will not change, since tariff rates for them remain unchanged.

2.113 The results of a partial equilibrium simulation presented in Table 2.13 confirm our expectations. If we assume the full alignment with the EU applied tariff rates, the value of MFN imports would increase 6.2 percent. This would not have a significant impact on the geographic pattern of industrial imports. The share of MFN suppliers would increase 1.4 percentage points (or 5 percent) from the current of 22.0 percent to 23.4 percent of the total. This is clearly not a dramatic change.

2.114 Neither is the change in customs revenues from duties on industrial imports, which came exclusively in 2003 from MFN imports. Although the implicit duty collection rate would fall rather dramatically (70 percent, from 4.8 percent to 1.5 percent), there are two important caveats. First, the actual collection rate, because of the previously mentioned exemptions, was significantly lower than the rate assuming full collection of due duties (implicit collection rate)—4.8 percent as compared with 1.9 percent or almost 70 percent lower. Second, because of the large share of preferential imports, the concentration of MFN imports in products subject to relatively low applied tariff rates and tariff exemptions, the duties from industrial imports would account for a relatively low portion of total customs revenue from duties. In consequence, a 24 percent fall in duty revenues from importers of industrial products would produce only a 4 percent decline in total revenue from duties. Considering that customs revenue from duties accounted for a mere 2.01 percent of the total budget revenue in 2004, this would be a barely perceptible change.

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[61] For the discussion of issues involved in the use of partial equilibrium models, see, for example, Laird and Yeats (1989 and 1990) and Stern (1976). Elasticities used in our calculations were taken from Stern (1975).

Table 2.13 Simulation of Change in MFN Imports and Tariff Revenue under the Scenario of the Full Harmonization of Industrial MFN Rates with the EU CET

	Actual	Full alignment	Change
MFN industrial imports	3,658	3,886	6.2%
Income from duties on industrial products	69	56	-19%
Implied duty income	176	56	-68%
Implicit collection rate	4.8%	1.4%	-70%
Actual collection rate	1.9%	1.4%	-24%
Total duty income	357	344	-3.7%
Memorandum:			
Share of MFN industrial imports in total industrial imports	22.0%	23.4%	6.2%

Source: Own calculations based on data provided by the Customs Administration.

2.115 The results obtained are not counterintuitive. Considering the large proportion of MFN imports entering Romania on a duty free basis and the trade patterns of CEEC-9 with much lower MFN tariff rates, one would not expect a dramatic shift in imports toward non-preferential partners with the drastic cut in tariff margins currently enjoyed by preferential suppliers. The calculations that are aimed to provide a numerical answer to this question are based on three simplifying assumptions. First, we assume that markets are not connected (i.e., the change in demand in one has no impact on another). In the real world, markets are connected and higher imports may ceteris paribus lead to the depreciation of local currency and thereby limit the increase in imports.

2.116 Second, since preferential suppliers enjoy duty free access, we assume that only MFN imports are affected by lower tariffs. This is not necessarily the case, as preferential exporters faced with stiffer competition from MFN producers may seek to maintain their market shares by lowering their offer prices. On the other hand, MFN exports may be higher than predicted, as the model used here does not capture the possibility of the entry of MFN suppliers that were previously crowded out by high preferential margins. Third, calculations may actually underestimate the increase in MFN imports, as they do not take into account the possibility of imports of products that were not imported from MFN suppliers in 2002. For products subject to high MFN applied tariff rates, there were 135 HS eight-digit items that were not imported at all. Furthermore, there were 20 products subject to non-zero preferential rates, 18 of which were imported exclusively from preferential countries (for the list, see Kaminski and Unguru, 2004, Table 3.13). It is quite likely that, once MFN tariffs fall, for example, from 62 percent to 6 percent, competitive offers from MFN producers will appear.

F.1.3. Implications for Domestic Firms: Sensitive Sectors

2.117 Lowering MFN applied tariff rates on industrial products to EU levels may have a negative impact on Romanian producers of a product, subject simultaneously to an MFN tariff peak and a zero-duty rate for preferential partners that is not competitively manufactured in any of 29 countries with which Romania has FTA within the pan-European framework. The indication of such a situation would be the absence of imports of products subject to MFN tariff peaks (30 percent and above) from preferential partners. Out of 996 tariff lines, this applied in 2002 to 103 eight-digit HS items—for these products there were neither preferential nor MFN

imports. With the lowering of tariffs to EU levels,[62] producers of these products may face competitive pressures from MFN imports. The average weighted tariff rate for these imports from MFN countries would fall from 31 percent to around 10 percent after the alignment with the EU CET on industrial imports.

2.118 However, only a few producers may face the challenge of adjusting to higher competition from imports. With few exceptions, products subject to MFN tariff peaks from preferential partners entered Romanian markets duty free in 2002. Since these remaining tariffs were zeroed in 2003, the producers of these products now face duty free competition from preferential partners. For the remaining products, the producers had to compete with preferential duty free imports. Preferential imports of these products amounted to US$ 1.4 billion and MFN imports to US$89 million in 2002.

2.119 One may thus conclude that the majority of Romanian producers of products protected by MFN peaks do not face any significant adjustment problem associated with the harmonization of MFN tariff rates on industrial products. Most of these producers have already been exposed to competition coming from pan-European firms. And most of them have either gone out of business (not being able to withstand the competition) or have successfully adapted to the new competitive conditions.

F.2. Summary: Costs and Benefits of Industrial Tariff Harmonization with EU CET

2.120 The harmonization of industrial MFN tariffs entails several benefits and few, if any, costs. The major benefits stem from the rationalization of the tariff structure and, by the same token, the minimization of the distortions inevitably produced by diversity in tariffs. EU tariffs on industrial products are significantly lower and less diversified and tariff peaks are lower. Romanian users of imports would benefit from lower tariffs, and their bargaining position vis-à-vis preferential suppliers would increase once preferential margins were reduced. Furthermore, with the fall in tariffs, the transaction costs associated with exports and the corresponding tariff rebates on imported inputs would also decrease considerably, as lower amounts of capital would be tied up. In a similar vein, importers of MFN products would be less inclined to actively seek duty exemptions on MFN imports.

2.121 The costs are insignificant. Although the budget will loose customs revenue from duties, the amounts involved are relatively small as most of the imports that would potentially generate tariff revenues come from preferential rather than MFN suppliers. In spite of the significant differences in the respective structures of tariff protection—as captured inter alia by the value of a correlation coefficient of 0.51—the cost of adjustment will be low, simply because most producers have already been exposed to competition. However, this should not suggest that a more detailed analysis of the employment impact of some tariff cuts is not warranted.

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[62] This would imply that the simple average tariff rate would be reduced from 33 percent to 9 percent. The average level of reverse discrimination against MFN suppliers in terms of that situation in EU markets would then fall from the current average of 24 percent to zero.

G. Conclusions and Policy Recommendations

2.122 Empirical analysis supports the conclusion that Romania's foreign trade performance appears to be based on solid ground, and provides reasons for optimism as to its sustainability. This conclusion can be summarized in the following ways. First, the expansion in exports, driven by the import demand for Romanian products in EU markets, has continued unabated since 1993. Regarding a recent expansion in exports to both preferential and non-preferential partners, its sources have nothing to do with a simple redirection of trade following the collapse of central planning. Its sources are the new, internationally competitive, industrial capacities.

2.123 Second, producers located in Romania do not appear to be marginal suppliers, excessively vulnerable to swings in import demand in highly developed markets. The proof of this would seem to be that the dramatic increase in the Romanian presence in EU markets occurred in 2000-02, against a background of falling import demand in the EU.

2.124 Third, Romania is not a "single product" exporter. Although textiles/clothing towers over other products in Romania's export offer, its dominance has recently been undermined. First there was the shift in Romania's exports toward sunrise products. In addition, the share in sunrise exports of capital intensive products (which have been the main drivers of this growth), was four times higher than in total EU-oriented exports. Finally, there has been a healthy shift within the "network trade" toward parts and components. While these exports might be less "photogenic" than exports of final products, they provide for the stability associated with being part of the well-established supply chains of large firms.

2.125 Fourth, the country's export offer has become not only more diversified but also more attractive to non-preferential markets. Capital equipment has driven export expansion, not only to the EU but also to other markets. The combination of product and geographical diversification seems to augur well for the sustainability of exports.

2.126 Fifth, although the FDI inflows in relation to GDP were still well below the average for the CEEC-10 in 1997-2001, they accounted for one-fifth of Gross Domestic Investment in this period. The earlier experience of Hungary or Poland shows that these new firms with foreign participation may soon become major forces behind export growth. In addition, the large presence of Italian firms (almost 13,000 in 2003) with a total capital investment of about US$600 million, appears to indicate that trade with Italy, which accounts for almost one-fourth of Romania's total trade turnover, is on a firm footing. These firms are largely responsible for exporting clothing and footwear that account for around 60 percent of Romanian exports, and for importing textile and footwear parts that account for around 40 percent of Romanian imports from Italy. The implication is that these firms are probably not footloose investors and they may have an interest in maintaining their competitiveness in foreign markets in operations conducted from Romania.

2.127 While these factors point to the potential for sustaining Romania's impressive export performance in the future, the government's policies in staying the course of macroeconomic stability and in undertaking strong measures to improve the business climate are critical. A better business climate is crucial to attracting capital, both domestic and foreign, and is indispensable to address certain disturbing developments in Romania's export performance. The first of these

developments is that low FDI inflows appear to be responsible for Romania's idiosyncrasy in the CEEC-9 context, namely, the very limited (and not expanding) presence of skilled-labor-intensive products in Romanian exports. In fact, the factor intensity of the EU-oriented export basket, after a significant change in 1994-95, reverted to its original composition as it was in 1993, with one caveat. The share of capital-intensive products increased at the expense of natural-resource-intensive products. While the line between capital-intensive and skilled-labor-intensive products is blurry, the continued dominance of unskilled-labor-intensive products defies the experience of most other CEEC-9 countries. In most of these countries, the initial gap between their endowment in relatively high skilled labor and the factor intensities of their exports has been closed fairly rapidly, thanks to foreign investors.

2.128 The second development is that low FDI inflows are also responsible for a relatively underdeveloped trade situation in its most dynamic sector in the contemporary global economy that is associated with the internationalization and fragmentation of production. Trade triggered by fragmentation is referred to as "intra-product" or "network" trade. In comparison with most other CEEC-9 countries (apart from Bulgaria, Latvia and Lithuania), network trade accounts for a relatively small portion of Romanian exports. Except for furniture, trade in the networks appears to be highly volatile and to move from one transaction to another. This may indicate that Romanian firms have yet to establish a stable position in the EU supply chains. Intra-product trade, based on "just-in-time" supplies, requires a very strong trade-facilitating environment.

2.129 The divergence between the export basket and the relative endowments, together with underdeveloped intra-product trade, points to weaknesses in the business climate. Both situations suggest that government policies have prevented the emergence of competitive markets to allocate resources to industrial sectors with a potential comparative advantage. While potential production costs and proximity to the most important markets are the necessary conditions to attract FDI, they are not sufficient to attract MNCs that establish "outside" production blocs. Operations of value-chains are particularly vulnerable to potential delays and disruptions in various stages of the supply chain. Ultimately, these operations determine the location decisions of MNCs. Burdensome customs procedures, transportation delays, or telecommunications problems usually prevent the emergence of border-spanning production networks.

2.130 Measures that are taken to improve the business environment should be extended to agriculture. In view of its soil and climate conditions, Romania should be a net exporter of foods. Instead, it has been a net importer, which clearly suggests that external barriers to trade in agricultural products are not responsible but that domestic policies are to blame. The creation of an agriculture-friendly environment would go a long way toward boosting domestic output, and would contribute to economic growth and to poverty reduction.

2.131 Through the European Association Agreement and the EU Eastern Enlargement Project, Romania has become part of the process of policy and institutional changes that facilitate integration into the global economy. The EU associate status has entailed bilateral trade liberalization not only vis-à-vis the EU but also in trade with other countries—most of them geographically close. As a result of actively pursued regional liberalization within the pan-European framework, Romanian producers of industrial products have duty free access to most

of their partners' markets and are exposed to intense competition from imports-motivating investment decisions.

2.132 Romania has, however, failed miserably on one count: multilateral liberalization has not accompanied regional liberalization. In contrast to exports, where the improved market access to regional partners has been significantly offset by much lower MFN rates than in Romania and by competition from EU producers, the scope for reverse discrimination in Romanian markets has been several times higher.

2.133 A detailed examination of Romania's imports at all ranges of applied MFN and preferential tariff rates shows that maintaining the applied MFN tariff rates on industrial products at levels exceeding those in the EU's CET is a mistake, for three major reasons. First, since producers from 30 countries, including the most advanced economies, presently have duty free access to Romanian markets, high MFN tariff rates serve no protectionist purpose. With the zeroing of all duties on industrial imports from preferential sources in 2003, they are simply redundant.

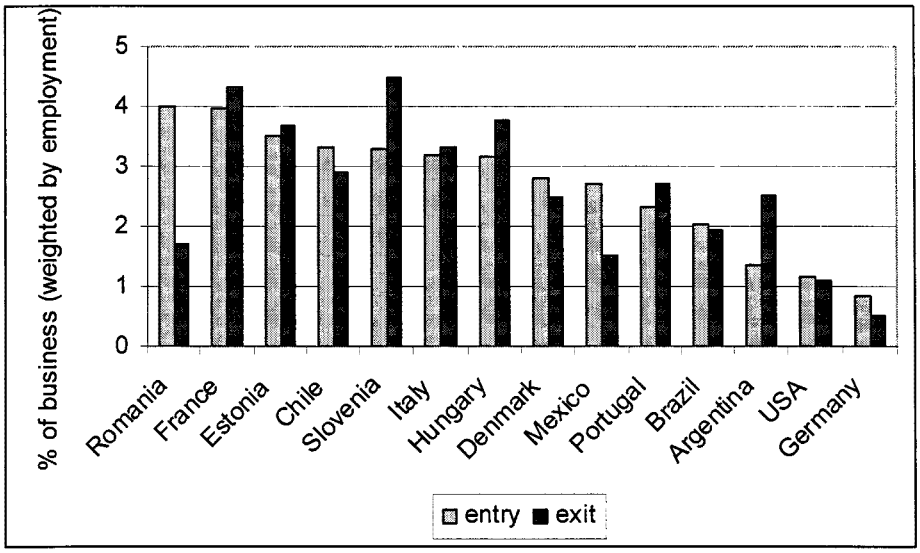
2.134 Second, maintaining high MFN tariff rates on industrial imports, which are now duty free under Pan-European agreements, exacerbates the reliance on less cost-effective sources of supply. Importers are inclined to import from less cost-effective sources even in the presence of duty-drawback or tariff rebate schemes for MFN imports.

2.135 Third, aligning MFN applied tariff rates with the EU CET will reduce the administrative burden associated with running duty-drawback or tariff rebate schemes, which are now prohibited under the Pan-European Cumulation Agreement for exports within the Pan-European market for industrial products. These schemes, as well as special economic zones, are administratively burdensome and also increase the potential for corruption. All such arrangements raise the transaction costs of imports and thereby raise the domestic prices of imported goods as well as domestically produced goods. Lowering tariff rates would increase the level of competition in domestic markets, would reduce the administrative burden and thus would benefit both consumers and users of imports.

3. RESTRUCTURING THE ENTERPRISE SECTOR

3.1 In the last few years, Romania has made some progress in enterprise reform including carrying out privatization to strategic investors.[63] However, in no other area, has the legacy of the socialist years weighted so heavily in Romania as in enterprise reform and private sector development. The slow and inefficient enterprise reform of the past has left Romania with a larger number of enterprises to be privatized or liquidated than in all of the other CEECs combined. Public enterprises are the core of the un-restructured part of the economy. As discussed in the previous chapters, there are also dynamic private businesses, which are leading Romania's solid trade performance in the EU and world markets. Their scope of action, however, is limited to a few activities operating around the un-restructured enterprise sector. Furthermore, the expansion of these internationally competitive private firms is hampered by the sizable un-restructured public enterprises and the soft budget constraints that keep unviable enterprises from exiting. This chapter is divided into three sections. Section A described early transition reform efforts, as compared to those undertaken by other countries. Section B documents their effects on economic growth. Section C suggests some dimensions of the remaining reform agenda.

Figure 3.1: Many new enterprises enter, few exit (1993-2002 average)



Source: Bartelsman et al (2004).

[63] This chapter was prepared by Simeon Djankov (CICMA), the World Bank Group. Juan Carlos Ginarte prepared the section on nonpayment and accumulation of arrears, and Stella Ilieva prepared the analysis of total factor productivity; both Economists ECSPE, the World Bank.

A. Economic Restructuring Reforms: Romania in a Regional Perspective

3.2 The main thesis of this chapter is that the Romanian enterprise sector is characterized by a vibrant and expanding fringe of successful private businesses, which operates around a slowly-shrinking core of non-competitive state owned enterprises. The competitive sector finds opportunities in some domestic markets: services, construction, and light manufacturing; and has accounted for almost all of the recent boom in exports. Many new firms have started operations in the last few years (Figure 2.1) and these entrepreneurs make good use of existing institutions. However, their expansion is hampered by the continued existence of a non-competitive core of enterprises, which crowd out opportunities for external financing and sales. This effect is apparent in the difference in the share of new entries and exits as a share of economic activity. In the typical market economy, these numbers go hand in hand. In Romania, exit rarely happens.

3.3 The result is an unstable business environment in dealings between private and state-owned companies. Market economy institutions are sometimes obviated by non-competitive practices in tolerance of arrears to utilities and the tax office. This sends a signal to entrepreneurs that perhaps they, too, can escape payments to suppliers in the state sector. In contrast, business between private companies is performed on market principles. The significance of this dual system is diminished over time, but the slow progress retards the further development of a business-friendly environment.

3.4 The first ten years of enterprise reform in Romania were characterized by slowly unfolding privatization, with a large number of enterprises – between 1,500 and 2,000 – remaining fully or partially in state hands. Recently, the government has carried out a number of successful privatizations to strategic investors, including Siderurgica Hunedoara, Tractorul, Roman Brasov, and ARO Campulung. Still, no other economy in Central and Eastern Europe has such a large remaining privatization agenda.

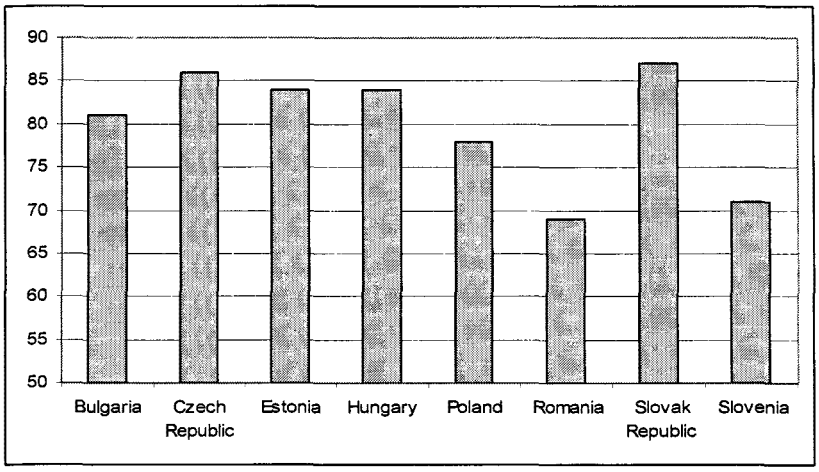
3.5 The prevalent methods of privatization in the 1990s—insider privatization and mass privatization—resulted in weak corporate governance. Only recently have sales to strategic outsiders and hence boosted economic growth. Lackadaisical privatization was accompanied by soft budget constraints, resulting in large arrears to the government, the utilities, and the financial sector. Many unviable enterprises have been kept in operation. Even profitable enterprises benefited from accumulating arrears, reducing their incentives to restructure. Finally, domestic competition and labor reallocation opportunities has been hampered by the slow exit of unviable firms, explained both by the presence of soft budgets, the dysfunctional insolvency system, and labor market rigidities.

A.1. Privatization Unfolds Slowly, Far from Finished

3.6 The 1990s were a period of transformation of ownership in Central and Eastern European Countries (CEECs). In Hungary, companies were sold to outsiders, mainly foreigners, based on the strategy that foreign technology is needed to boost productivity. In the Czech Republic, mass privatization was implemented in 1992-1994, and in the following five years a rapid concentration of shares in the hands of strategic investors took place. By 1998, an estimated 85 percent of companies had a strategic owner. Foreign investors flowed in, buying both the remaining large state owned companies and many already privatized enterprises. By the end of

2003, a third of the enterprise sector has significant foreign ownership. The Slovak Republic also started with mass privatization, but cancelled it in 1994 and instead reverted to direct sales, mainly to domestic investors. However, large enterprises, primarily in the heavy machinery, automotive, and financial sectors, went directly to strategic foreign investors. Since 1999, the Slovak Republic has been the favorite destination of foreign investors in the region, with about 40 percent of value added now produced in foreign-owned companies. Poland initially privatized all small companies and allowed for new entry, while weighing options in the privatization of large enterprises. In 1995, mass privatization started in earnest while banks and other financial institutions attracted foreign investors. Finally, Bulgaria toyed with mass privatization but, like the Slovak Republic and Poland, changed course mid-way and engaged in sales-for-cash that brought in much needed foreign currency. By the end of 2003, more than 80 percent of productive assets in these economies were in private hands (Figure 3.2). More importantly, nearly all had strategic owners.

Figure 3.2 Private Sector Share in GDP, end- 2002



Source: EBRD and World Bank.

3.7 In the meantime, Romania experimented with various alternatives. Those took considerable time to develop, and after 10 years of transition Romania had privatized only 40 percent of its large enterprises, and about two-thirds of its medium-size enterprises (Table 3.1). By end-2003, there were still approximately 1,300 state-owned enterprises in Romania, including in manufacturing and services; and another 600 enterprises that were de facto in state control. This is a larger number than in the rest of CEECs combined.

Table 3.1 Privatization in Romania, 1993-2002

	Companies for privatization	Companies privatized (share of total)	
Large	708	288	(40)
Medium	2549	1582	(62)
Total	3257	1870	(57)

Source: The Romanian Authority for Privatization and Management of State Ownership

3.8 The goal of the isolation program was to bring companies back to health or, if this proved difficult, to privatize or liquidate them. However, managers remained in place, and were reluctant to take drastic measures since they were either elected by the workers or their appointment was approved by the union. Instead, they focused their energies into vying for access to Romania's own "Structural Funds", and giving explanations of their inability to pay various obligations to the government.

3.9 Not surprisingly, little restructuring took place, with most of the funds used instead to maintain employment. At the time of closing the program in February 1997, only four firms graduated into profitability, two were privatized, and two were liquidated, out of the 147 companies that entered the isolation program. Had the government used the resources of the Structural Funds to offer generous separation packages to workers, the amount used during the life of the isolation program would have been sufficient to give 30 monthly wages to every employee. A generous package that would have been difficult to reject. The program instead served to delay privatization and when it became clear that there was no other route, many enterprises were already too troubled to be worth resuscitating.

3.10 *The State Ownership Fund.* The protracted approach to enterprise restructuring was set from the start. In 1991, the government carried out a legal conversion state-owned enterprises (SOEs) were divided into two groups: remaining SOEs and commercial companies. The former group was smaller in number but included all strategic companies, about 400 in total, which accounted for nearly half of productive assets.[64] A number of those were entered the isolation program, others were deemed too strategic to do so. In contrast, the commercial companies were slated for privatization, albeit of an unusual kind. Their shares were placed in a newly established State Ownership Fund (SOF) and one of five Private Ownership Funds (POFs), in a ratio of 70:30 percent. The management of the SOF was identical to that of State Property Funds in every other transition economy. However, unlike privatization funds in any other country, the Romanian POFs remained state-managed, their boards of directors appointed by government and approved by Parliament. Their nominal owners, about 18 million Romanian citizens who received shares through mass privatization, received no control.

3.11 Thus the mass privatization program in Romania was unique in its design. In every other country that distributed vouchers to citizens—Bulgaria, the Czech Republic, Poland, and the Slovak Republic—the privatization funds were privately owned and operated. This created incentives for the new owners to establish profitable operations or liquidate the companies in distress and sell their assets. Also, it resulted in rapid concentration of ownership in the hands of strategic owners, either a privatization fund or another legal entity that bought the controlling package. For example, by the end of 1997, or within 3-4 years after mass privatization, over 70 percent of mass-privatized companies in the Czech Republic had a majority owner.65 In Bulgaria, by 1999 nearly 85 percent of mass-privatized companies has a majority owner.66 In both cases, the concentration took place in secondary-market trading as owners were interested in consolidation of stakes and improved governance. In sharp contrast, by end-1998, the largest

[64] Romanian Development Agency (1997).

[65] Claessens and Djankov (1999).

[66] Djankov (2002).

private owner in mass-privatized companies in Romania had on average a 24 percent stake.[67] This made it difficult to make strategic decisions and commit to long-term restructuring.

3.12 The other major privatization method employed in Romania was management employee buy outs (MEBOs). These started before the mass-privatization program (its heyday in 1995-1996) and developed into 1997, when the practice largely ceased. By the end of 1998, about a third of all industrial firms in the SOF portfolio has insider owners. Two features of the process made it unique.

- First, the ownership share that went to insiders was very large—65 percent on average, with a median of 71 percent.[68] To the extent that there was any outside ownership, mostly through residual mass-privatization shares, it could play no effect in corporate governance; and

- Secondly, usually the entire stake was transferred to employees, so the method should really be deemed employee buy-outs.

3.13 MEBOs also took place in Russia and the countries of former Yugoslavia, especially in Croatia and Slovenia. In Russia, managers of state-owned enterprises provided the backbone of the resurgent Communist party and Yeltsin offered them ownership stakes in exchange for support in the 1996 elections.[69] Employees also gained some shares, but had no power over the decisions of the companies. In effect, these were management buy-outs. By 2001-2001, about three-quarters of these companies had changed ownership (and management), taken over by large conglomerates or being sold to outside (primarily domestic) investors. Similar developments, with much smaller magnitudes, took place in Hungary and later in Poland. In Croatia and Slovenia, the worker councils traditionally had a large role in company management and successfully retained power in the transition period. As a result, restructuring of these companies has been slow and only since 2002 have they experienced any significant interest from foreign investors. Today, many Croatian and Slovenian companies face similar issues as do Romanian companies. However, a major difference is the higher level of competition in the domestic market, as former Yugoslavia had historically been more open to imports from Europe.

3.14 *Privatization to strategic investors.* Since 1998, sales for cash gained momentum in Romania. Some of these companies were too troubled to be of interest to insider owners, other profitable companies were offered to foreign strategic investors following the Hungarian experience of direct sales. By 2002, about two-thirds of GDP was produced in private companies. However, 33 percent was still in state hands, 24 percent was insider-controlled, 19 percent had strategic outsider investors, 13 percent was controlled by shares obtained in the mass-privatization, with the remainder in the hands of privatization funds and dispersed owners (Figure 3.3).

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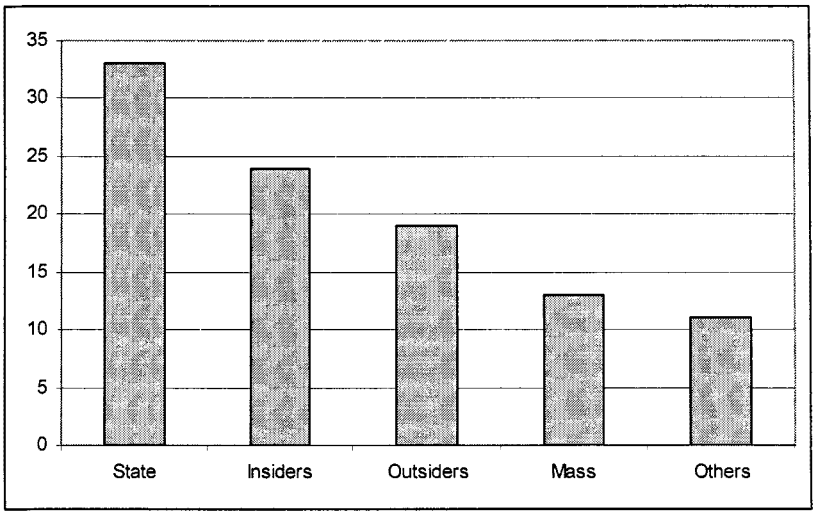
[67] Earle and Telegdy (2002).

[68] Earle and Telegdy (2002).

[69] Shleifer and Treisman (2001).

Figure 3.3 Ownership Types in Romanian Industry, end 2002



Source: World Bank staff estimates.

A.2. Privatization Modes Affect Outcomes

3.15 Transition economies, in Central and Eastern Europe and further east, have privatized over a quarter million enterprises in the last decade. Various privatization methods have been tried, successes varied, and privatization strategies were revised as the evidence accumulated. By now, there is sufficient empirical evidence and analyses that show that:

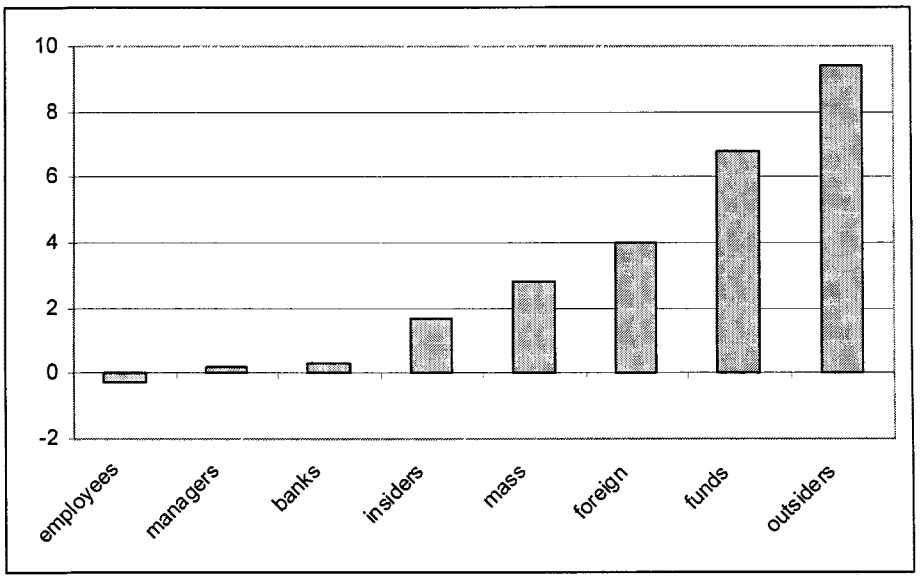
- Privatization in almost any form resulted in better productivity and more employment opportunities than state ownership; and
- There were different effects of different types of new private owners.[70]

3.16 Privatization to strategic outside investors is associated with nearly six times higher productivity growth than privatization to insiders (Figure 3.4). In Central and Eastern Europe, privatization to employees made enterprises worse off than keeping commercialized state ownership. Privatization to managers-insiders also worsen performance. Foreign ownership was particularly beneficial, and this result is supported by the experience in every country.

3.17 Figure 3.4, one can associate the apparent success of various transition economies with the privatization mode. Estonia and Hungary went for outsider privatization, mostly to foreigners. So did Bulgaria, Latvia and the Slovak Republic, after initial delays and hesitation. The Czech Republic, Lithuania, and Poland had a mixed strategy, but in the end ownership quickly concentrated in the hands of outside investors. Unique among its peers, Romania ended up with privatization that often made things worse, not better. Romania today is at par with Georgia and Ukraine, far behind the rest of CEECs. Only recently has Romania carried out privatization to outside investors and subsequent increase in foreign investment.

[70] Djankov and Murrell (2002).

Figure 3.4 The Benefits of Outsider Ownership in Central and Eastern Europe (in percentage average annual productivity growth)



Note: Insiders does not simply add the analyses for employees and managers as some studies do not distinguish among the two groups. Similarly, Outsiders does not simply add the various groups of outsider investors. In some cases, these are reported and analyzed together. The two categories—Insiders and Outsiders—should only be compared to each other.
Source: Djankov and Murrell (2002).

A.3. Hard Budget Constraints, Yet to Come

3.18 Most CEECs have had to deal with loss-making financially unviable enterprises. However, in most cases distressed assets were isolated under state fund management and sold off or liquidated. Unlike most other CEECs, nonpayment and arrears in the state-enterprise transactions in Romania is common—both financially unviable and viable companies rely on nonpayment to finance their operations. In 2002, arrears amounted to nearly 4.5 percent of GDP. For example, tax arrears amounted to a third of total assets of SOEs; excluding payments to utilities. Wages also grew at a very fast pace, at nearly 9 percent in real terms. Energy utilities also continued to tolerate arrears, allowing unviable firms to survive and preventing market exit. In contrast, this practice is nearly absent in private-to-private transactions in Romania. The challenge is to extend hard budget constraints observed in private-to-private transaction interface to the state-private transaction interface.

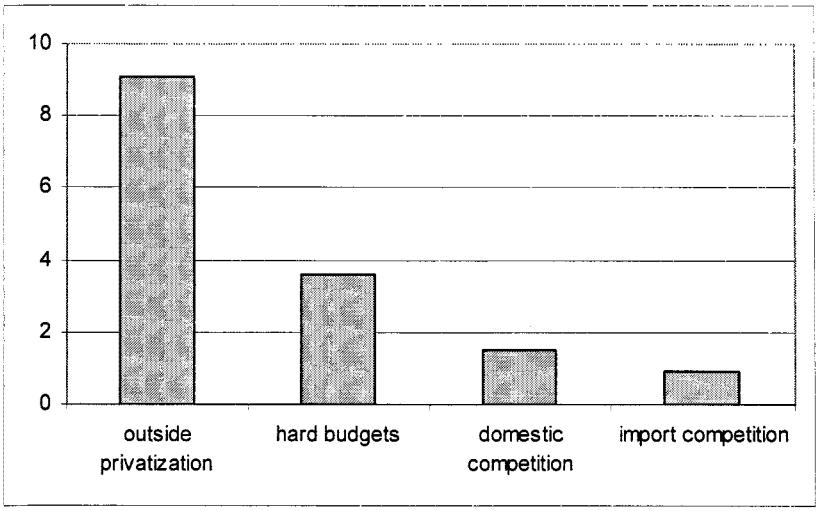
3.19 Other transition economies have faced similar issues but the arrears phenomenon is virtually unknown there. In all cases, distressed assets were isolated under state fund management and sold off or liquidated. With few exceptions, as in Polish mines and shipyards, has this issue resulted in significant budgetary allocations. And as many utilities were privatized early on, non-payment usually resulted in delivery stoppage. Unviable enterprises were forced to cease operations. Also unique in Romania, as the banking sector remained in state hands longer

than in any other Central and Eastern European country,[71] enterprises also continued to receive bank credit to fill the shortfall. In short, through social security and tax arrears, through the banking sector and the utilities, Romania has delayed the sale or liquidation of many unviable companies.

3.20 More worrisome is the fact that many profitable private companies have been allowed to accumulate arrears too.[72] In 2002, profitable tax arrears of private companies as a percentage of their total assets averaged over 10 percent, a share that is similar to the tax arrears share in companies in minority state ownership, at 11.5 percent.

3.21 When both unviable and viable companies face soft budget constraints, there is little incentive for productivity improvements. This behavior of government agencies is particularly puzzling, as the main rationale for the slowness of privatization was declared to be the financial betterment of companies. This would take place in the context of hardened budgets. Indeed, the evidence from other transition economies show that hardened budgets are the second most important determinant of enterprise restructuring (Figure 3.5). Absent that, and in the absence of outsider privatization until recently, without enterprise restructuring, Romania's competitiveness has been limited.

Figure 3.5 Hardened Budgets Increase Productivity Growth in Transition Economies (in percentage average annual productivity growth)



Source: Adapted from Djankov and Murrell (2002).

3.22 Strengthening financial discipline of the enterprise sector is also fundamental to maintaining macroeconomic stability. If enterprises operate profitably without dependence on either direct or implicit government subsidy, their financial difficulties will not significantly affect government budgets. Financial imbalances in the economy will not meaningfully pose a threat to the stability of the fiscal accounts, and the central bank will be able to maintain control

[71] Coricelli and Djankov (2002).
[72] Fennema and Schaffer (2003).

over monetary policy. To the extent that much of the public enterprise sector is unprofitable and un-restructured, however, companies will depend on budgetary assistance and quasi-fiscal subsidies to continue operating. These are a risk to sustaining macroeconomic stability. In addition, subsidization distorts resource allocation, crowds out profitable firms from the credit markets, and limits growth prospects. Large loss-making entities that are subsidized by the government will be able to block the entry of efficient competitors, including foreign companies. Under these circumstances, resources that could have been used to invest in new projects, and which could have led to faster job creation, are instead used to finance wasteful activities.

3.23 Furthermore, without restructuring public enterprises these will remain a source of inflationary pressure and low competitiveness since historically they have been a source of rapid wage increases. The wages of state enterprises are used as reference for wage adjustment throughout the economy, including private enterprises and the state administration, and increases have often not been justified by productivity growth.[73] Rapid real wage growth was partly responsible for the strong real appreciation and consequent sharp exchange rate devaluation of 1998 and 1999 needed to restore current account sustainability.[74]

3.24 Table 3.2 presents estimates of the amount of budgetary subsidization of the enterprise sector. Direct subsidies have declined from 2.6 percent of GDP in 2001 to 2.2 percent of GDP in 2002.[75] This is primarily due to a decline in agricultural subsidies as a result of improved harvests since 2000 and increased opportunity for export. Energy and transport subsidies have remained largely unchanged in 2001 and 2002.

3.25 However, explicit budgetary subsidies are not the only public resources transferred to enterprises. In Romania, there are a variety of implicit subsidies provided to both state-owned and private companies. The transfers include budgetary credits, accumulation of tax arrears, transfers from off-budget funds, and government payment of guaranteed loans. In total, these implicit non-energy subsidies have increased from 4.1 percent of GDP in 2001 to 5.5 percent of GDP in 2002. In addition, there are significant implicit subsidies from the energy sector to non-energy producers and households, of which about two-thirds accrue to firms.[76] In 2002, these subsidies were 1.1 percent of GDP in 2002.

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[73] According to its Pre-Accession Economic Program, the GoR aims to limit wage growth in the budgetary sector to the sum of CPI inflation and growth of GDP. For the public enterprises, wages increases are to be limited to the sum of CPI inflation and productivity growth.

[74] The Russian financial crisis of 1998 also triggered a decline of confidence in Romania and necessitated external adjustment.

[75] Until the late 1990s, state-owned enterprises in Romania depended heavily on directed bank credits to finance losses and inter-enterprise arrears, which often were driven by rapid wage increases. As the loans were seldom repaid, the financial imbalances were effectively "monetized." As a result, monetary policy could not be reconciled with the strategy of using the exchange rate as a nominal anchor to control inflation. After 1997, soft-budget constraints were no longer financed by the central bank. Firms also began to impose hard-budget constraints on each other. Today, because the enterprises remain largely un-restructured, continuing losses have been financed with direct budget subsidy, tax arrears, unserviceable foreign loans that repaid by the government, and cheap sources of energy.

[76] Energy sector subsidies have been estimated by the IMF. See the September 2003 Staff Report for the Fourth Review Under the Stand-By Arrangement and Request for Waivers of Performance Criteria. These estimates exclude the district heating companies that were not spun away from Termoelectrica. The estimate of the allocation

Table 3.2 Subsidization of the Enterprise Sector

	2001	2002	2001	2002
	(billions of lei)		(% of GDP)	
Direct Subsidies 1/	30923	32772	2.6	2.2
Energy	9633	12372	0.8	0.8
o/w local government	3841	4564	0.3	0.3
Transportation	7765	8620	0.7	0.6
o/w local government	2808	2875	0.2	0.2
Agriculture 1/	6280	2581	0.5	0.2
Other	7245	9199	0.6	0.6
Implicit Subsidies	47476	83864	4.1	5.5
Budgetary credits, net	978	1165	0.1	0.1
Tax debt	35417	65033	3.0	4.3
Change in end of year stocks	26901	63423	2.3	4.2
Cancelled interest and penalties	8516	1610	0.7	0.1
Energy fund	3068	4175	0.3	0.3
Loan guarantees paid	8013	13492	0.7	0.9
o/w energy sector	7435	6050	0.6	0.4
Quasi-Fiscal Energy Subsidies 2/	39027	25554	3.3	1.7
Low tariffs	31763	22304	2.7	1.5
Non-payments	7264	3250	0.6	0.2
Memorandum:				
Total tax arrears (eop stock)	126587	190010	10.8	12.6
o/w arrears of 76 large loss makers	46944	68274	4.0	4.5
rescheduled arrears	6259	5019	0.5	0.3

Notes: 1/ Includes items classified in the state budget as transfers to mining and agriculture. 2/1 Based on IMF estimated of the allocation of subsidies between households and firms in 2001.
Source: Ministry of Finance; Ministry of Industry and Resources; WB staff estimates.

3.26 The two principal types of implicit non-energy subsidies are tax arrears and loan guarantees, both strong indicators of widespread weaknesses in corporate financial discipline. In 2002, subsidization via tax arrears, including cancelled interest and penalties, was 4.3 percent of GDP. This includes debt to the state budget, social insurance funds, and local government. It includes 4.2 percent of GDP in new arrears, which itself includes an estimated 2.0 percent of GDP in new interest and penalties on previously overdue obligations, and 0.1 percent of GDP in cancelled interest and penalties.[77] The rate of implicit subsidization from tax debt is 1.4 percentage points of GDP higher in 2002 than in 2001. However, these numbers include cancelled arrears. New arrears actually increased 1.9 percentage points of GDP.

3.27 Activated loan guarantees increased to 0.9 percent of GDP in 2002 from 0.7 percent of GDP the previous year. This form of subsidization, in fact, has become increasingly important. In 1995, outlays were just US$ 1.6 million. Between 1995 and 2000, they grew at an average annual rate of US$ 40 million, while in each of the last two consecutive years the growth has

of subsidies between households and producers is based on the 2003 IMF Policy Discussion Paper (PDP/03/02) by Stephane Cosse.

[77] This is a World Bank staff estimate of the whole economy based on data from 76 large loss-making enterprises being monitored by the Ministry of Public Finance.

nearly doubled. In 2002, outlays for loan guarantees reached US$ 408 million, nearly half of which pertained to energy companies.[78]

3.28 Romania has tried to reduce the financial pressure on the state enterprises by rescheduling and canceling some arrears. Rescheduled arrears totaled 0.5 percent of GDP in 2001 and 0.3 percent of GDP in 2002. Cancellation of interest and penalties were 0.7 percent and 0.1 percent of GDP, respectively. As demonstrated by the rise in new tax arrears, these operations ultimately do not restore financial stability. They can only encourage financial indiscipline and retard the restructuring needed to profitable business operation. As such, they pose a threat to macroeconomic stability and promote wasteful use of scarce resources.

3.29 This type of subsidization is widespread in Romania. Both public and private enterprises use tax arrears to finance themselves. Neither loss-making nor profitable companies are excluded, though the degree of use of tax arrears is inversely related with profitability. As shown in Table 3.3, majority and minority state-owned companies have had the largest tax debts as a percentage of total assets during the last two years, averaging 30 percent and 7 percent, respectively. Of these companies which had losses in both 2001 and 2002, the arrears averaged, respectively, 37 and 11 percent of assets. For private companies, persistent loss-makers averaged more 30 percent of assets in tax debt, while profitable entities owed the equivalent of 2 percent of assets. Furthermore, the distribution by type of arrear tends to be about the same irrespective of the level of profitability, with debts to the state budget, social insurance funds, and local and special fund on average accounting for, respectively, 51 percent, 37 percent, and 12 percent of the total amount owed.

3.30 Eliminating this financing option is key to strengthening the financial discipline of the enterprise sector. In fact, firms largely impose hard-budget constraints on each other: the scale of overdue trade credit among enterprises in Romania is in the range found in western Europe.[79] In terms of overdue debt service to banks, there is indeed a large stock of outstanding liabilities, though mostly specific to state-owned companies. However, this appears to be a stock problem rather than a flow problem, as the outstanding debts were mainly accumulated prior to 2002 and banks now are generally imposing hard-budget constraints on enterprises better than before.

[78] Under the current IMF program, total contracting or guaranteeing of external loans is capped at US$600 million, or 1.3 percent of GDP, for loans with one- to three-year maturities, and US$3.6 billion for loans with a maturity greater than one year.

[79] See Julian Fennema and Mark Schaffer, "Financial and Economic Performance of Romanian Firms 2001–2002", a 2003 background report prepared for the Romania Country Economic Memorandum on the basis of the financial reporting of approximately 49 thousand companies.

Table 3.3 Tax Arrears (% of total assets)

	Large Losses in both 2001 and 2002		Losses in at Least One Year		Profitable in both years		Total	
	2001	2002	2001	2002	2001	2002	2001	2002
Regie Autonomes	..	..	3.7	3.6	1.1	1.1	1.8	1.8
State-owned	69.4	74.6	30.7	6.1	1.1	1.3	6.4	4.3
Majority state	32.6	40.7	25.1	28.8	14.4	17.6	26.7	33.1
Minority state	11.7	10.5	10.3	11.4	1.6	1.0	7.3	7.1
Private	31.1	36.1	7.9	10.4	2.3	2.1	5.7	6.3
Cooperative	44.5	76.9	18.9	18.7	5.7	4.6	9.2	8.8
Total	27.9	32.4	9.5	10.7	2.4	2.2	7.1	7.4
o/w state budget	13.7	14.7	5.2	6.1	1.1	1.0	3.6	3.8
social security	11.2	14.2	3.0	2.7	1.0	0.9	2.6	2.6
local gov. & spec. funds	3.1	3.5	1.3	1.9	0.2	0.2	0.9	1.0

Source: Julian Fennema and Mark Schaffer, "Financial and Economic Performance of Romanian Firms 2001-2002."

A.4. Domestic Competition Slow to Come

3.31 There are examples of countries which have been unwilling to have rapid privatization and still have reaped the benefits of markets. China comes to mind, as well as Poland and the Slovak Republic in the early transition period. In both cases, the main policy was to ensure the entry of new firms and the use of unviable assets in these new operations, through liquidation, leases, or asset stripping. It is more difficult to point to examples where restructuring has taken place in the absence on both strategic privatization and hardened budget constraints. One can perhaps characterize the dual nature of Chinese restructuring in this way, with some sectors and regions being subject to both private (and foreign) ownership and strong competition from new entrants, while other sectors remaining protected and the recipients of state transfers. With the exception of Belarus and several central Asian countries, no one has tried to restructure without the benefits of both hardened budget constraints and increased domestic competition. This is what Romania has tried for some time.

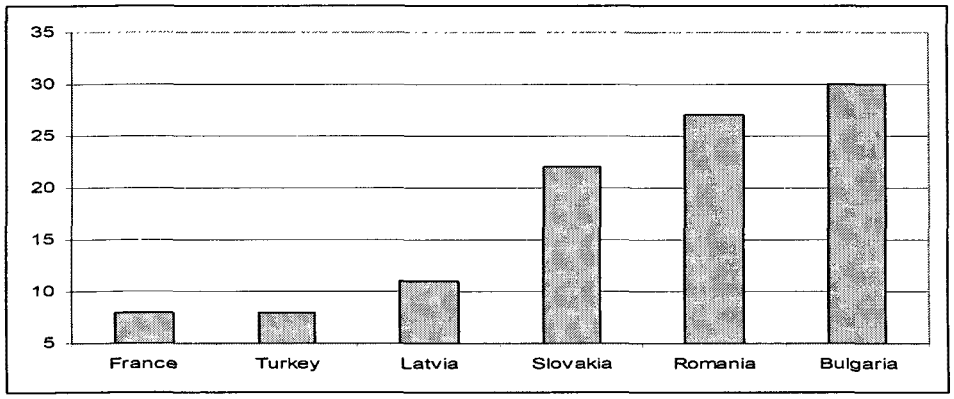
3.32 As shown in Figure 3.6, increased domestic competition is associated, in the context of transition, with faster enterprise restructuring than import competition. The main reason is that new domestic entrants can easily find their comparative advantage and fill these market niches. In contrast, foreign companies typically have global or regional strategies and try to complement their operations abroad. Rarely do they know where the gaps in the local market are.

3.33 Increasing domestic competition is the easiest of all transition reforms. First, allow for the registration of many new firms, by making the process free of administrative burdens. Second, push unviable incumbent companies into liquidation, so that their assets can be used in new ventures. The latter feature is more important in countries with underdeveloped financial markets, like Romania, where buying new assets on credit is nearly impossible and instead entrepreneurs need to recycle second-hand assets.

3.34 Starting a new company in Romania is not too difficult, although a lot can be improved (Figure 3.6). In particular, the commercial registry is one of the least efficient in the region,

taking on average three weeks to issue a company identification number. The use of notaries in the registration process also makes it unnecessarily complex.[80]

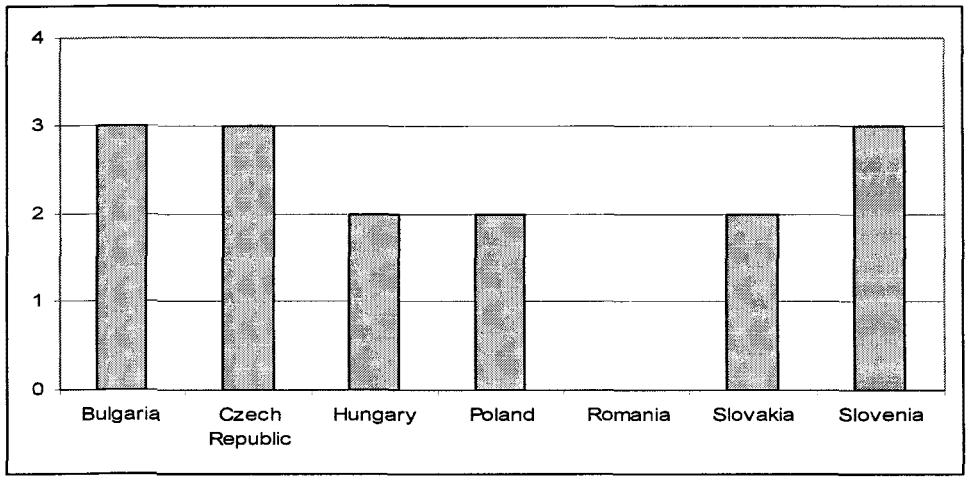
Figure 3.6 Room for Improvement in Entry Regulation, 2004 (number of days to legally start operations of a new business)



Source: Doing Business website, www.worldbank.org/Doingbusiness

3.35 Moreover, exit rarely happens and by the time it does, assets are often obsolete. Romania's bankruptcy law has the weakest protection of creditors of any transition economy (Figure 3.7). Once a company is in distress, its management dictates the terms of the insolvency process. The result is an unwilling use of formal insolvency by creditors, coupled with the general stance of government to allow arrears to accumulate. Assets stay unused for years.

Figure 3.7 Creditor Rights in Insolvency Index (varies from 0 to 4, high is better protection)



Source: Doing Business website, www.worldbank.org/Doingbusiness

[80] World Bank (2004).

3.36 Not only do new companies have trouble getting such assets, but their managers also have trouble distinguishing themselves from other companies. Private banks are unwilling to lend long-term credit, as recovery is difficult. The government has attempted to address this issue with the establishment of a public credit registry in the year 2000. The idea behind it is to provide would-be creditors with sufficient knowledge of the credit histories of companies and their owners so they can distinguish between good and bad risk. As work in progress, the registry has already had some impact, with much to be done.

B. Growth in the Enterprise Sector

B.1. Sales Growth of Enterprises

3.37 The issues summarized here resulted in the shrinking of the Romanian economy in the 1990s, with growth taking place only in the last four years. Table 3.4 compares the sales growth performance of the Romanian enterprise sector with that in other six transition economies. Romania has the sharpest declines in production in 1992-95 and 1996-1999. Bulgaria is the only other country that records declines in both periods. Since the year 2000, Romania has rebounded strongly, with average annual growth of over 5 percent. However, similar growth has been recorded in Bulgaria, and the Slovak Republic, which suggests that transition laggards are in part catching up with early reformers.

Table 3.4 Sales Growth in Enterprises, (%, average over the period)

	Bulgaria	Czech Rep	Hungary	Poland	Romania	Slovakia	Slovenia
1992-1995	-11.1	1.4	0.8	1.1	-13.7	-6.1	3.6
1996-1999	-5.2	1.1	3.6	6.9	-5.8	6.4	3.8
2000-2002	5.1	3.4	4.6	2.4	5.2	4.9	2.7

Source: Private Sector Vice Presidency, World Bank Group.

3.38 Another heartening feature of recent growth in Romanian enterprises is that it is accompanied by some adjustments in the labor force. This has resulted in even higher labor productivity growth, at over 7 percent on average since the year 2000. Only the Slovak Republic rivals this growth.

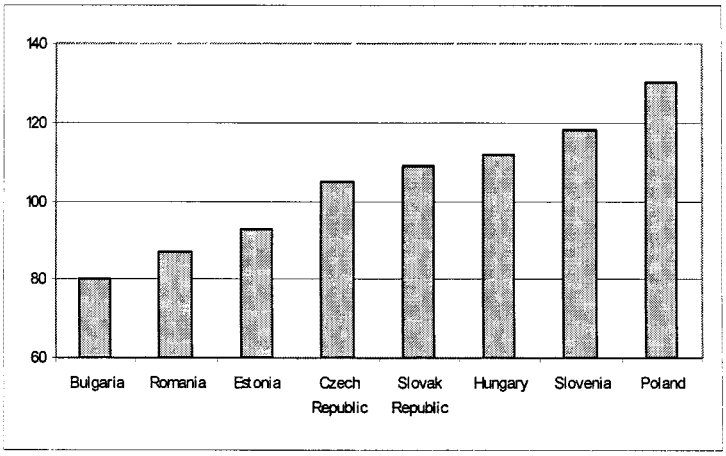
3.39 Still, the missed opportunities in the early transition years put Romania at real GDP equivalent to 87 percent of its 1989 level. This is the lowest level of any central and eastern European economy, bar Bulgaria (Figure 3.9).

3.40 In the 1990s total factor productivity (TFP) growth has accounted for nearly all of economic expansion.[81] Between 1991 and 2002 the contribution from labor was negative as a result of labor shedding. Due to periods of contracting investment followed by weak capital accumulation, on average there was no contribution from capital. Growth was entirely due to more efficient use of labor and capital, with average TFP growth of 2 percent over the whole

[81] TFP growth is measured as a residual source of growth once labor and capital contributions have been accounted for. Generally speaking, the size of the physical capital stock is especially difficult to quantify. In the case of Romania there is also a large informal economy which may lead to inaccurate estimates of output and labor and capital input. TFP estimates, therefore, can be highly sensitive to measurement error.

period. This is less than half of the TFP growth experienced in central Europe: the Czech Republic, Hungary, Poland, and the Slovak Republic recorded TFP growth of close to 4.5 percent over the same period.[82] Again, this growth was largely explained by shedding excess employment but since the mid-1990s new fixed investment started coming in as well.

Figure 3.9 2002 GDP Relative to the 1989 GDP Level



Source: EBRD (2004).

B.2. Total Factor Productivity

3.41 TFP growth in the Romanian enterprise sector has risen to 3.3 percent in more recent times—1999 to 2002—but still trails all transition economies but Croatia and Slovenia (Table 3.5). Whether productivity growth can accelerate depends on faster investment growth, particularly FDI. In the long-run, efficiency can only increase from the adoption of new technologies, including managerial techniques and advanced capital goods. To achieve this, the incentive structure of the economy needs to be changed to encourage greater domestic and foreign investment. This will also require reforms that encourage more domestic savings and further financial restructuring and a business climate that attracts more long-term foreign capital to improve the intermediation between savers and investors. This will lead to a reallocation of resources to the most productive sectors of the economy. The example of other transition economies—first Hungary in 1991-1995, then the Czech Republic in 1994-1998, and recently the Slovak Republic—shows that investment can increase significantly in a very short period, if the business environment improves.

[82] Djankov and Murrell (2002).

Table 3.5 Accounting for Economic Growth

	Average annual growth rates (percentages)			Contributions to growth (percentages)		
	GDP	Labor	Capital	Labor	Capital	Total factor productivity
1999-2002	4.1	-0.5	3.5	-0.3	1.2	3.3
1991-1998	-0.5	-1.8	-2.4	-1.2	-0.8	1.5
1991-2002	0.7	-1.5	-0.8	-1.0	-0.3	2.0

Source: World Bank staff estimates.

C. THE REFORM AGENDA

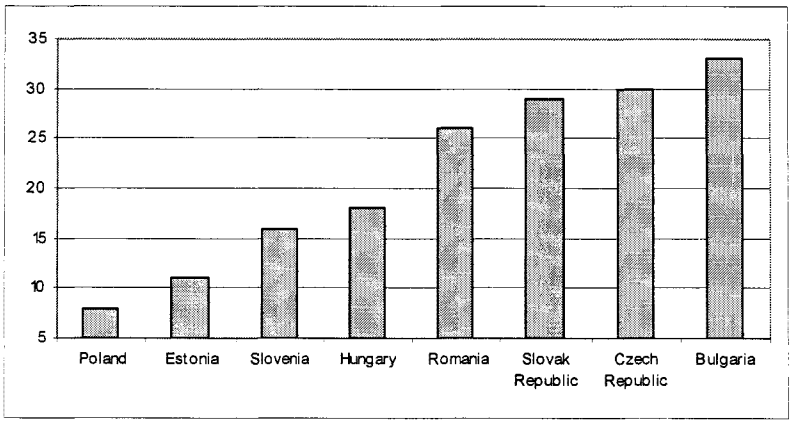
C.1. Privatizing to Outside Strategic Investors

3.42 Privatizing the enterprise sector and imposing hard budget constraints is central to Romania's economic restructuring. The best mode of privatization is to outside strategic investors. Recently, Romania started to move in this direction. Pace of reforms needs to be accelerated since the protracted enterprise reforms and failed privatization methods of the pas have left a legacy of a large reform agenda going forward.. This process needs to be carried out decisively and in a transparent framework.

C.2. Licensing Regimes

3.43 In mid-2003, the government introduced the silent consent rule that had immediate impact on 480 licenses. The new rule allows companies to undertake activities if the relevant government authority ha snot responded within 30 days. Also, new legislation is to be accompanied by a regulatory impact assessment, in line with OECD standards. Finally, statutory limits on the processing of licensing requests have been mandated. All these changes will undoubtedly reduce the administrative burden on business. Much remains to be done. Businesses continue to complain from burdensome regulation (Figure 3.10).

Figure 3.10 A Quarter of Businesses Identify Licenses as a Major Problem (% of businesses that say business licensing is a moderate to major obstacle)



Source: BEEPS 2002 survey.

C.3. Business Entry

3.44 Regulatory reform in this area is not difficult and yet in Romania this regulatory reform is wanting. Several other EU accession countries have recently revised their regulation to allow quick entry, Hungary in 2002, Slovakia in 2004. In 2003, Turkey reduced the number of procedures necessary to start business operations from 13 to 6, and the number of days from 38 to 7. Reform is also taking place in the registration processes of many European Union countries, including Finland, Greece, Italy, Netherlands, and Portugal. Italy, for example, has removed business registration from its courts and placed it in administrative units. In all cases, these reforms have lowered the current and expected time needed to register new businesses.[83] A recent study for the European Commission found that "Considerable progress has been made in improving the process of administering business start-ups." In particular, many EU Member States have:

- Improved the administrative efficiency of current procedures by introducing statutory response times ("silence is consent" rules). This reform has been undertaken in Romania although business surveys do not uniformly register its effects.

- Introduced Internet sites to provide information, improvements in the availability of information for entrepreneurs; the mapping of all procedures and licenses; the provision of information electronically; and consolidation of information into a single source. None of these steps are taken in Romania.

- Reduced the scale and complexity of the documents required to establish new businesses by using single registration numbers, and notification and self-certification rather than authorization. This has been stalled on numerous occasions in Romania, with no results in sight.

3.45 If reform is revitalized and Romania implements these reforms, it should not stop here. Registration should be made into a purely administrative process and available as an electronic service. The current organization of Romania's registration system is low in efficiency. Its location in the courts and involvement by judges in individual registration decisions are contrary to good European practices. This also damages economic growth by reducing the capacities of the commercial courts to deal with legal disputes. A better option is an expert registration agency. The national registry database should be publicly accessible, updated continually, and eventually accessible by Internet. [84]

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[83] European Commission, Enterprise Directorate General (January 2002) *Benchmarking the Administration of Business Start-ups, Final Report.* Prepared by the Centre for Strategy and Evaluation Services (CSES), Brussels, p. 25.

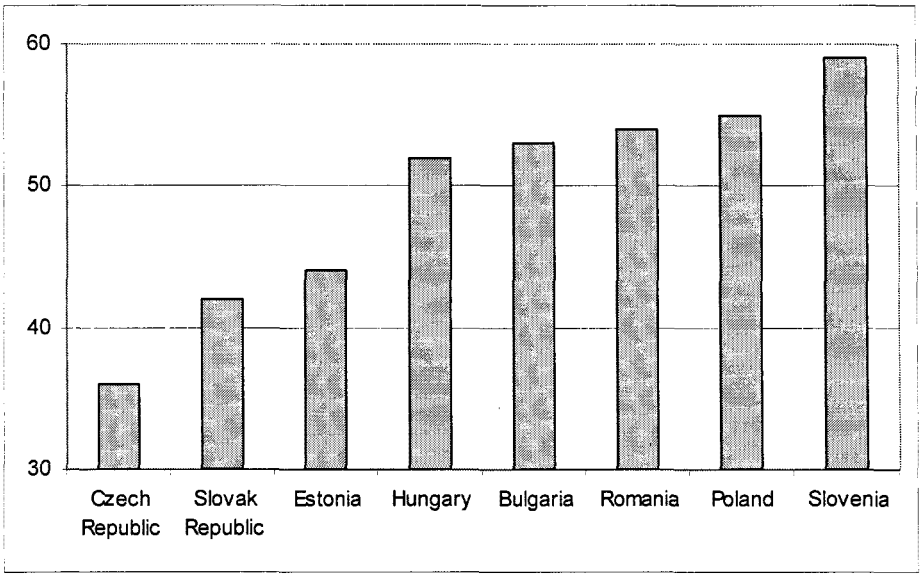
[84] For example, the main recommendations relating to the European Union's First Directive on company law consists partly of the need to accelerate the filing and disclosure of company documents and particulars by the use of modern technology.

3.46 Regulatory reforms are indeed a first step towards a more competitive business environment. However, reforms need to be sustained to provide a business environment of entry and exit.

C.4. Labor Regulations

3.47 Romania has revised its socialist-era Labor Code, making it in many areas more restrictive than the original. Especially burdensome is the area of conditions of employment, where firms in Romania are at a significant disadvantage relative to their peers in eastern Europe (Figure3.11).

Figure 3.11 Employment Regulation Index (varies between 0 and 100, higher values for more rigid regulation)



Source: Doing Business project, www.worldbank.org/Doingbusiness.

3.48 Businesses report that rigid employment laws are a significant obstacle to their performance. In cross country comparisons, Romania has some of the most rigid conditions of employment, with tight restrictions on hours worked, night and holiday work, and a relatively high minimum wage. Several details in the labor regulations create perverse incentives for workers. For example, one business interviewed reported that labor regulations create problems in managing absenteeism.

3.49 Another example is the regulation requiring periodic automatic increases in wages by years worked, so that salaries are in effect based on seniority, not productivity. This is a significant problem in labor-intensive industries like textiles, where a very low turnover of workers and salaries continually creep up.

3.50 Rigid labor regulations encourage informality. A common practice in order to avoid social security payments and taxes is to pay official wages at the minimum wage threshold, and

to pay additional cash wages directly to employees. This practice was prevalent in the late 1990s, when an estimated 50 percent of the workforce in private business was paid in this manner.

C.5. Bankruptcy

3.51 Lenders also face problems with bankruptcy laws. In a good case scenario it takes four years and costs around 8 percent of the value of the estate to close a business through bankruptcy proceedings. Interviews with insolvency practitioners suggest that it takes five years to resolve bankruptcy when the main creditor is a private bank or company. This makes Romania the second least efficient country among all central and eastern European economies, trailing only the Czech Republic (where it takes over eight years). As a result most banks report that they foreclose before bankruptcy—all stated that bankruptcy was rarely used to enforce on default. About 90 percent of the bankruptcy cases that reach the courts—an estimated 4,000 cases a year—are brought forward by the state as a means to collect on overdue taxes.

3.52 Revisions to the bankruptcy law were proposed by the government in early 2003, but have yet to be adopted by Parliament in full. Government Ordinance 38/2003 introduced some minor revisions, most importantly an article that stays management during the insolvency process. This is a setback from a creditor rights perspective as the incumbent managers have more opportunity to strip assets in cases where liquidation is the most likely outcome.

3.53 A draft law has been proposed to parliament and will have significant beneficial effects on improving creditor rights in Romania if passed. Among the most salient features are a reduction of the period of appeals—from 30 to 10 days; the introduction of subpoena for creditors published in newspapers, which will reduce the time of notification; removing the requirement for the presence of a court clerk during the creditors' meeting; and a provision for out-of-court restructuring. All these features would undoubtedly make lending in Romania a less risky proposition.

3.54 Two other areas of judicial reform merit consideration. First, the application fee for entering bankruptcy is the highest of any country in Europe, at 5,000 euro. It is unclear what the rationale for such a fee is. Second, under the current structure of the Romanian judiciary, one can become a bankruptcy judge fresh out of law school, at 23 years of age and with no experience in either insolvency practice or management and accounting. In contrast, Italy and France, the two countries used as the origin of the current judicial system, have both implemented reforms that ensures that judge shave some experience in handling commercial matters prior to taking the bench. Such reform would take time to develop and is likely to have a large positive effect on the quality of judgments.

C.6. Efficiency and Predictability of Commercial Contracts

3.55 Enforcement of contracts in Romania faces more serious challenges than it may first appear. As described in Section 1, judiciary reform is high in the agenda in Romania's process towards EU accession. In late 2003, important initial steps have been taken including adopting Judicial Reform Strategy 2003-2007 and adopting constitutional amendments overhauling the

legal framework for judicial reform. Regulatory and organizational changes have to be fleshed out and more importantly actions need to be taken to develop a functional, transparent, independent judiciary system. These changes will improve enforcement of contracts. There is evidence that deficiencies in the judiciary are significant.[85] A recent World Bank study reports that these deficiencies have for the most part discourage business to resolve disputes through litigation.[86] Only very large enterprises seem to be more litigious compared to medium and small business. In addition, the large and dominant presence of public enterprises combined with the practice of barter settlement further reinforces these findings since firms have these alternative mechanisms to settle disputes. Hence, the low number of days of 240 days to enforce a simple debt contract in Romania, compared with an average of 252 in CEEC reflects deficiencies rather than strengths since only large companies use the courts to settle disputes and the judiciary lacks transparency (Chapter 3). Furthermore, in 2003 the Emergency Ordinance 58/2003 reintroduced two levels of appeals for all types of commercial disputes and hence represents a step backwards in the efficiency of commercial cases. Data of January 2004, indicate that debt collection cases now can take on average one year to resolve. In addition deficiencies in the enforcement of contracts protecting property rights on land in agriculture is a major stumbling block for agricultural transformation discussed in the next section (Section 4).[87]

3.56 Clearly judiciary reform is central. Recognizing these deficiencies, the government has put judiciary reform high on the agenda in Romania's process towards EU accession. In late 2003, important initial steps were taken, including the adoption of Judicial Reform Strategy 2003-2007 and constitutional amendments overhauling the legal framework for judicial reform. Regulatory and organizational changes have to be fleshed out and more importantly actions need to be taken to develop a functional, transparent, independent judiciary system. Implementing these reforms are essential to improve enforcement of contracts, and thus for growth and competitiveness prospects. In addition, further streamlining of contract enforcement is also needed. Four successful reforms in other countries are of particular relevance for Romania:

- Establishing information systems on caseload and judicial statistics, as in the Slovak Republic can help identify the courts primary users and the biggest bottlenecks.

- Taking out of the courts transactions that are not disputes—in particular the registering of new business entities—will free up resources for commercial litigation. Because such reform will require new legislation, in the meantime government can reorganize the workflow in the courts so that clerks, not judges, are responsible for company registration.

- Simplifying procedures. The priority is to reduce opportunities for defendant appeal and delay. Reducing reliance on written procedures and legal justification are also necessary. More extensive reforms include introducing summary proceedings to alleviate court congestion (as has recently been introduced in Mexico). Default

[85] *Romania: A Public Expenditure Review*, 2002, The World Bank and Regular Reports on Romania by the EC, 2002 and 2003

[86] *Building Market Institutions in South Eastern Europe: comparative prospects for investment and private sector development*, forthcoming in 2004, The World Bank.

[87] See Chapter 4 in Volume 2 of this report.

judgments—automatic if the defendant does not appear in court—will also significantly cut delays.

3.57 Reforming the enforcement of judgments. Currently, judicial enforcers in Romania are highly regulated, and the service is an expensive part of the commercial dispute resolution process. The minimum fee is ROL 3 million, and it rises steeply with the amount of the case.

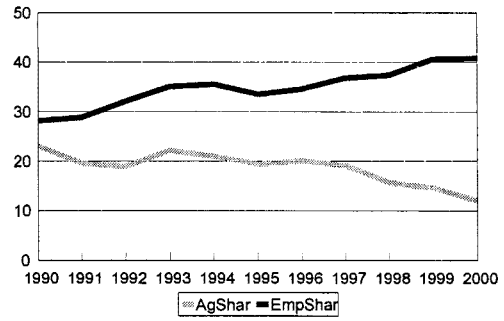
4. IMPLEMENTING AGRICULTURAL TRANSFORMATION

4.1 In the early 1990s, after the first democratic elections, Romania embarked on a process of general economic reform, which also included specific and ambitious reforms in the agriculture and food sector. [88] The reform program envisaged the transformation of agriculture to a sector based on the principles of private ownership of land and other agricultural property. The aim was to create a market-oriented and internationally competitive agriculture. Progress was rather modest until 1997. Since 1997 Romania has made significant, if sometimes erratic progress in implementing and maintaining the sectoral reform program. In 2000, the substance of reform began to shift towards measures aimed at EU accession. The overall process, however, has been slower and the results are less consistent than in other Central European countries in the final phases of the EU accession process. Further substantial reform and changes in agricultural policies are necessary before Romania can proceed with accession to the European Union.

A. AGRICULTURE AND FOOD IN THE ECONOMY AND SECTORAL PERFORMANCE

4.2 Romania is a rural, agrarian country with 45 percent of the population living in rural areas and 36 percent of the labor force employed in agriculture. Agricultural development has followed an unusual trend since 1990: while the share of agriculture in GDP declined from 29 percent in 1990 to 18 percent in 2000, in line with the traditional trends in market economies, the share of agricultural labor paradoxically increased from 30 percent to 40 percent of total employment (Figure 4.1). The 4.8 million people working in Romanian agriculture today constitute an astonishing 72 percent of agricultural labor in all the 15 EU countries.

Figure 4.1 Romania: Share of Agriculture in GDP and Labor Force



Source: NSI and Ministry of Agriculture.

4.3 Romanian agriculture did not suffer a dramatic collapse after 1989: agricultural production went through moderate ups and downs during the transition and in 2001 it was basically at the same level as in 1989-90. Agricultural growth since 1990 has largely paralleled the total growth in domestic product and the growth of industrial product.

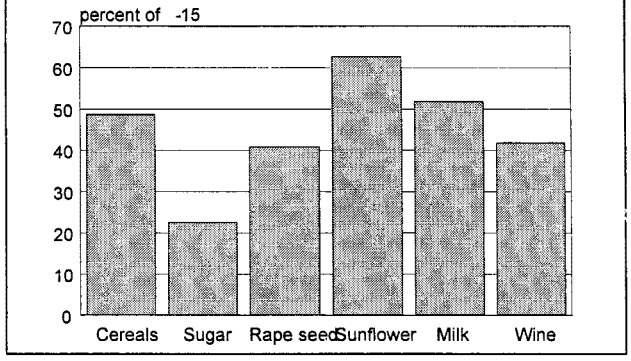
4.4 The product mix has remained fairly stable since 1990 at 60 percent crops and 40 percent livestock. Over the long term the Ministry of Agriculture aims to achieve a more balanced mix, raising the share of livestock to 45-50 percent of agricultural product, as in the late 1980s.

[88] This chapter was prepared by Csaba Csaki, Holger Kray, and Zvi Lerman. Henry Gordon provided useful contributions to the section on rural development.

Among crop enterprises, cereals and legumes consistently account for more than 60 percent of the cropped areas, while technical crops represent over 10 percent. The share of land cropped to cereals and legumes increased by 5 percentage points between 1990 and 2000 (from 62 to 67 percent). The area under technical crops increased by 3 percentage points (from about 10 percent in 1990 to 13 percent in 2000). These increases have been made possible by the decrease in the second largest user of sown land—fodder crops, whose share dropped from 21 percent in 1990 to 13 percent in 2000.

4.5 Agricultural productivity in Romania leaves much to be desired. The low productivity of labor is underscored by the fact that 44 percent of Romania's labor force employed in agriculture contributes only 13 percent of total GDP (2001 data). The low productivity of land is manifested in the generally low yields, which achieve at most 50 percent of the corresponding EU-15 yields (Figure 4.2). In livestock enterprises, milk yields hover around 3,000 liters per cow per year compared with 5,800 in EU-15. Based on the aggregate value of production, Romanian agriculture generates about €500-€600 per hectare, compared with €2,000 per hectare in EU-15, and about €1,500 per worker, compared with €21,000 per worker in EU-15 (1999 data). A weighted ranking of EU-15 and 9 new EU members by the yields of milk, cereals, and sugar puts Romania at the very bottom of the scale (together with Bulgaria).

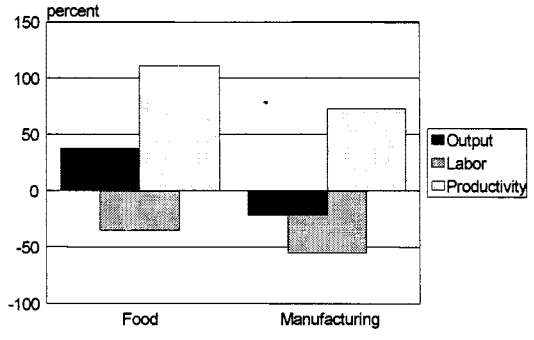
Figure 4.2 Romania's Yields Relative to-15



Source: EU and OECD Statistics.

4.6 The poor performance of Romanian agriculture cannot be blamed entirely on the availability of farm inputs. While application of fertilizers and herbicides literally collapsed between 1989 and 2001, the number of tractors, mechanical ploughs, and cultivators today is greater than it was in 1989 and certainly in the crisis years 1990-91.

Figure 4.3 Change of Output, Labor, and Productivity 1990-2000: Food Industry and Manufacturing Industries



Source: NSI.

4.7 Contrary to stagnating output and low productivity in agriculture, the food industry has achieved significant growth in recent years. The volume of production in 2000 reached about 130 percent of the 1989 level, while the manufacturing industries had shrunk by 2000 to 60-70 percent of their level in

1989 (Figure 4.3). The number of employees in food industry decreased by nearly 40 percent since 1990, roughly in line with the decrease in the national economy and somewhat more than in the manufacturing industries (where the number of employees dropped by 55 percent). The combination of growing output and decreasing labor force naturally has had a strong positive impact on productivity in the food industry, which more than doubled between 1990 and 2000, increasing at a mean annual rate of 7.8 percent. As a sector, the food industry accounts for about 10 percent of total national production and 7 percent of gross value added (averages for 1990-2000)—somewhat less than the share of primary agriculture.

B. Status of Sectoral Reforms

4.8 Reform of the Romanian agriculture and food sector and the evolution of the agricultural policy framework have passed through several phases since the beginning of the transition. During the early years (up to 1997) important sectoral reforms were initiated, but their implementation was slow. The most important landmark of sectoral reforms during this period was the 1991 Land Law, which resulted in the restitution of land ownership and land use rights to private holders and effectively dismantled the cooperative farming system. Policies in that period aimed to minimize the difficulties created by the changing economic environment both inside and outside the country; relatively little attention was paid to the need to reform the basic institutions and enterprise structures and to adjust the policies themselves to the conception. The support program in agriculture was heavily biased toward large agricultural units and almost exclusively benefited state-owned farms. Small household farms could have access to subsidies only via integrators (state marketing intermediaries), and these purchased their output at fixed "state-guaranteed" prices, which could be attractive or not depending on the specific point in time and the specific location. As a result, input and output markets remained highly distorted.

4.9 Driven by economic crisis and a growing consensus that more sustainable reforms had to be put in place, Romania adopted a radical reform package in 1997, which marked a fundamental adjustment of economic policies. The implementation of the 1997 Stabilization Plan accelerated the overall economic reforms, as well as the specific reforms in agriculture. Agricultural price controls were eliminated, tariffs were lowered, directed credits were discontinued, and the privatization process was jump-started. The emphasis on hard budget constraints and increased financial discipline aimed to create the conditions for the development of a sound and sustainable sector. Agricultural reforms resulted in a new form of support—the input voucher system—which was designed to redirect subsidies away from the state farms and to increase farm output through better access to inputs. Reforms also included the privatization of some state input suppliers and Banca Agricola, and more recently, the privatization of state farms.

4.10 The uneven course of agricultural policy development, however, still remained in recent years. The voucher scheme came to be seen more and more as a social welfare scheme and was blamed for the unsatisfactory increases in agricultural production. This led to the adoption of a new policy framework in 2000, which aims to boost production by again redirecting support to larger farms and increased support to agriculture significantly. Nevertheless, under this overall new direction, the policy framework has remained fluid: the system is characterized by frequent changes, annual bargaining, and unpredictability.

B.1. Distortive Agricultural Support Policies with High Levels of Subsidization

4.11 Romania's agricultural policy has continually relied on the application of direct and indirect payments as a measure for supporting the income of primary agricultural producers. However, even though the fundamentals have remained relatively unchanged, the agricultural support policies have undergone repeated changes and adjustments since 1997. The support system in effect was re-written each year, with additional changes sometimes introduced in the course of a given year, as in 2002 and 2003.

4.12 Romania's **agricultural support policy explicitly favors large-scale farming** operations. Government ordinance adopted in June 2001 stipulated that only relatively large farms, e.g., with at least 110 hectares of crop land or 15 dairy cows (legally defined as "commercial" farms), would be entitled to the full range of agricultural subsidies. Farms that did not meet the stipulated size thresholds (legally defined as "family" farms) were not entitled to any subsidies (other than free extension services). Intense public pressure and unfavorable reaction from the European Union led the Parliament to amend this ordinance in April 2002 and to add a provision that allowed (unspecified) support payments to "family" farms willing to increase their market sales. Although the law opened a door for eliminating the large-farm bias in subsidies, no comprehensive implementation regulations have been issued so far and the support to small farms remains very limited (see some details below). Moreover, the Parliament did not intervene to eliminate the complex documentation and formal registration requirements introduced as part of the eligibility criteria, although these requirements cannot be met by the fast majority of Romanian peasant farmers. It should be stressed in this context that the farm size thresholds introduced in Romanian legislation are much higher than those foreseen by CAP eligibility criteria and that the Romanian definition of "farm operation" for the purposes of subsidy payments is not harmonized with the EU definition. Until the end of 2002, less than 15,000 farms were registered by the Ministry of Agriculture in the framework of the new legal requirements, of which 12,918 are commercial farms and 1,721 are family farms. The registered farms cultivate 3.2 million hectares of arable land, which is about one-third of all arable land in Romania (9.4 million hectares).

4.13 The main **support instruments** applied in the last few years (although with changing emphasis) can be divided into direct income support measures and indirect support programs:

1. *Direct income support measures*
   - Price support with price supplements for a number of major commodities.
   - Financial support for inputs in the form of free fertilizer, reduced prices for certified seeds, and price supplements for the use of other inputs such as fuel (this program replaced the former voucher system).
   - Investment grants for up to 55 to 70 percent of the cost of agricultural machinery.
   - Other direct payments or compensation to farmers.
   - Credit subsidies and investment support.

2. *Indirect support programs*
   - Support for general agricultural services, such as animal and crop breeding, water users associations, land reclamation, etc.

- Export subsidies.

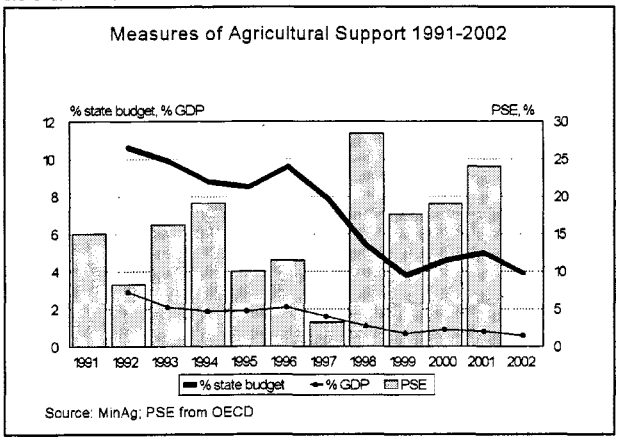
4.14 The 2003 budget of the Ministry of Agriculture projects a total support volume of 14 billion Romanian lei (ROL) (Table 4.1). Most of the sectoral support is earmarked for the crop sector (72 percent) with another 25 percent going to the livestock sector (the remaining 3 percent go to export measures, forestry, and agricultural research). The crop sector thus enjoys a disproportionately high support—more than its share in agricultural product. The relatively small allocation to the livestock sector is a tangible reflection of the large-farm bias, as most of livestock production is in small household farms, not in large legal entities. Of the various support programs in Table 4.1, commodity price supplements and financial support for inputs are the two main categories, accounting for 87 percent of all support programs. The composition of the support programs mainly serves as a conduit for income transfer and social purposes rather than a tool for fostering competitiveness and productivity enhancement.

Table 4.1 Structure of Agricultural Support Program in 2003

	ROL (million)	Percent
Direct Support Measures	**13675.50**	97
Price Support	5101.00	36
Input Support	7140.60	51
Other Direct Payments	685.00	5
Credit and Investment Support	749.90	5
Indirect Support Measures	**328.6**	3
General Ag. Service Support	103.60	1
Export Subsidies	225.00	2
Total	**14005.10**	**100**

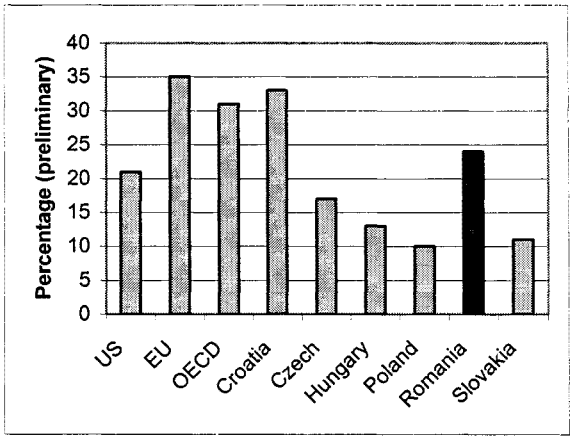
Source: Ministry of Agriculture.

Figure 4.4 Measures of Agricultural Support, 1991-2002



Source: Ministry of Agriculture, PSE from OECD.

Figure 4.5 Producer Support Estimates for Selected Countries, 2001



Source: OECD.

4.15 The 2003 budget and subsidy program envisages a further significant increase in support to agriculture. Expressed in US dollars, the 2003 program is close to US$450 million, up from about $350 million in 2002. This support program represents about 4 percent of the total state budget (down from 10 percent in 1992-93) and less than 1 percent of GDP (down from 3 percent in 1992—see Figure 4.4). Like the modes of intervention, the **level of overall support** to agriculture has fluctuated widely during the transition period. The level of support as expressed by the Producer Support Estimate (PSE) was relatively modest during most of the 1990s, but it

definitely seems to be higher since 1998 than previously (Figure 4.5). The liberal policies introduced in 1997 (when the PSE dropped to a 10-year low of 3 percent) were short-lived and support to agriculture has increased significantly since then. Thus, the average PSE during 1991-96 was 13 percent, whereas after 1998 it rose to 20 percent-25 percent. The level of support varies significantly by commodity. The sugar, milk and poultry sectors receive the highest levels of support at 64 percent, 46 percent, and 34 percent respectively. On the other hand, oilseeds hardly get any support, while the pork sector is actually taxed.

4.16 An international comparison shows that Romania's PSE is close to that of USA and is significantly lower than the OECD and EU averages (Figure 4.6). At the same time, it is significantly higher than for most of the other CEFTA and EU accession countries (with the exception of Croatia and Slovenia). The results of this comparison are somewhat surprising because the total value of Romania's agricultural support program is not excessive when compared to other CEFTA countries. One has to remember, however, the significantly lower productivity and output levels in Romanian agriculture, which result in much higher PSEs.

B.2. Light and Inconsistent Taxation in the Agricultural Sector

4.17 There is no tax on agricultural land and no tax on small farm income in Romania. Farms registered as legal entities, however, pay 25 percent tax on profits. The sweeping tax exemptions for agriculture were introduced in 1990 as a compensation for the farmers' economic difficulties and the government's limited ability to pay direct subsidies. The failure to impose land tax was moreover associated with the uncertainties of land ownership during the "reconstitution" phase in the early 1990s. At that time, the tax-exemption decision had its merits and it played a role in improving the financial situation of farmers.

4.18 There have been some attempts over time to subject agriculture to general taxation principles. Tax on farming was introduced in 1994, but because of difficulties with income reporting by small farmers the tax was assessed on the basis of the area owned or used and was in effect an agricultural land tax. Only the income from especially lucrative farming activities (flowers, vegetables, mushrooms, seedling nurseries) had to be actually reported. Income from livestock remained exempt from tax. The tax rate was initially 15 percent of normative income and it was lowered to 10 percent during 1994-1996. The normative tax assessment and collection never really took off, and taxation of farming activities was suspended in 1997, after the formation of a new coalition government. When general income tax was introduced in 2000, income derived from farming (except flowers, vegetables, and mushrooms) was exempted and has remained so ever since.

4.19 In 2001, the government imposed a land tax on holdings larger than 10 hectares, because the winning party in the 2000 elections had promised not to tax poor small farmers. However, the parliament refused to allow any taxation of agricultural land and annulled the government decision. After the failed attempt to tax farmers and perhaps in view of the next election campaign, the government has announced suspension of the tax until 2005.

B.3. Fluctuating Trade Policies

4.20 Romania's agricultural trade policy has evolved through various stages since the early 1990s. The major determinants of agricultural trade policy developments have been the WTO agreement, commitments made within the framework of the ASAL (Agricultural Sectoral Adjustment Loan) agreement with the World Bank, evolving relations with the EU, and Romania's CEFTA membership.

4.21 **WTO.** Under the WTO agreement Romania was granted "developing country" status. This status is quite unique among Central and Eastern European countries and it permitted negotiating very high tariffs, which became the main instruments for protecting agro-food producers. The high tariff ceilings, however, are very rarely This tariff protection created a wall around Romania and has had negative consequences for domestic efficiency in agro-food products. Developing country status also allowed smaller reduction obligations for average aggregated agricultural tariffs and a higher level of domestic support allowances. If Romania were forced to give up its developing country status before EU accession, the level of domestic support might become an issue, although at current levels it is not excessive when compared to other countries in the region.

4.22 **EU Agreements.** Romania's Association Agreement with the EU became effective in 1995. This agreement provided preferential quotas and tariff reductions for most livestock products, wheat, and vegetables. A special agreement was adopted for wine. In 2000, Romania reached a Double-Zero Agreement with the EU on agricultural trade liberalization. A number of products (poultry, meat, cheese, wine, fruits, grain) received full or significant tariff reductions and a schedule for increasing trade quotas with the EU was approved. Both parties agreed on the elimination of export subsidies for commodities within the framework of the Double-Zero-Agreement in bilateral trade.

4.23 **CEFTA.** In 1997 Romania became a member of CEFTA and adopted preferential treatment of a number of agricultural products in CEFTA-related trade. CEFTA countries are Romania's major trading partners in agricultural products. The limited competitiveness of Romanian food and agricultural products has become most evident in these trade relations, which has resulted in the application of a safeguarding clause and increasing import tariffs temporarily for a number of products during the last few years, especially against Hungary. With the EU enlargement in 2004, CEFTA preferences will be transferred to the Europe Agreement and Romania will continue to receive the benefits it previously had with the five former CEFTA members (now EU members).. The acceding countries will then benefit from all EU concessions to Romania.

4.24 Romania's agricultural trade policy can be characterized by change and considerable volatility throughout the transition period. Temporary exceptions and reductions benefiting particular exporters and importers were a common practice during this time. In recent years, the volatility took the form of frequent use of safeguards and temporary interventions on behalf of domestic producers.

B.4. Incomplete Transition in the Farming Sector

4.25 Land reform and the dismantling of the inefficient large-scale farming structures has been one of the most difficult and complex tasks of transition. Romania has made sweeping changes in land tenure and in farm structure, but the task of creating a farming system able to produce internationally competitive products has yet to be completed.

B.4.1. Land Reform Virtually Completed

4.26 The agrarian transition had to cope with the dual task of reversing the post-1945 expropriations and decollectivizing the cooperatives which had been the dominant farm structure since the 1950s. The first post-communist land law passed in 1991 (Law 18/1991) laid the foundations for a dual land-reform mechanism: (a) the restitution of ownership rights to former owners whose land had been expropriated by the state after March 6, 1945 and (b) the return of use rights to individuals whose land had been managed for years and decades by cooperatives. This dual mechanism is referred to as reconstitution of land ownership rights, and it is complemented by an additional "constitution" mechanism that prescribes distribution of land to landless farm employees and landless young families willing to start farming. The Romanian land reform is thus distinguished by a combination of land restitution and land distribution elements, which sets it apart from the strictly restitution-based and thus less equitable procedures adopted in other Central European and Baltic countries (with Hungary a notable exception).

4.27 Romanian land reform had to deal with reconstitution of 10.5 million hectares out of a total of 14.8 million hectares in use; the process involved 4.7 million claimants, mostly in rural areas but many also among urban residents. This was a huge task, and completion rates of about 97.5 percent as of early 2004 are a important achievement for the country. In the process of reconstitution, cooperative members got their land back in the form of physical plots, whereas ownership rights in state land were initially restituted by allocation of shares in the former state farms. The situation of the "shareholding" restituents was gradually equated to the situation of former cooperative members, and in 1999 it was finally resolved that all land owned by individuals within the holdings of a former state farm should be restituted in physical form and the owners should be free to dispose of it at their discretion.

4.28 The changes in land tenure between 1991 and 2001 are presented in Table 4.2. Most of the land today is in private ownership of individuals. One-quarter of agricultural land is owned by public authorities (the state and local government) and most of it can be ultimately privatized (the "private domain" component). Currently, however, only 1 million hectares of "private-domain" state land is under active consideration for transfer to private use (but not private ownership!) through leasing and concession arrangements with the State Domain Agency.

Table 4.2 Land by Ownership Type 1991-2003

	1991	2000	2003
	thousand ha	thousand ha	percent
Agricultural surface	14,758.4	14832.2	14836.5
Private ownership	1,876.3	14281.5	14307
Judicial persons		4,301.1	3,717.7
Physical persons	1,876.3	9,980.4	10,584.3
Public property	12,882.4	550.6	529.5

Source: Ministry of Agriculture

B.4.2. Shift to Predominantly Individual Farming

4.29 The land restitution and distribution laws were complemented with laws focusing on new organizational forms in agriculture. After more than a decade of transition, Romanian agriculture is characterized by farms of four organizational forms.

- The individual or household sector consists of 4.2 million farms of less than 2.5 hectares on average, which in aggregate control nearly 70 percent of agricultural land (up from 15 percent in 1989). This is the major component of Romania's private agriculture.

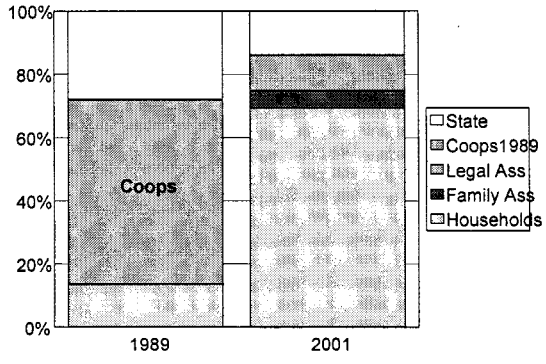
- Private corporate farms, i.e., legal entities that include so-called formal or legal associations created since 1991 as successors of the former cooperatives and also private agricultural companies created more recently by various mechanisms. The legal associations and other companies jointly control around 10 percent of agricultural land (down from 67 percent controlled by cooperatives in 1989). There were somewhat less than 4,500 legal associations in 2001 averaging around 400 hectares each; no detailed statistical data are available on the subgroup of private agricultural companies.

- Family associations or informal associations. These are spontaneously created voluntary associations of individual farmers that are not registered as legal entities. There are about 6,500 such family associations in Romania and they are much smaller than the legal associations, averaging about 120 hectares and cultivating in total 5 percent of agricultural land. Family associations represent a kind of "hybrid farming", as many individuals (about 30 percent according to some estimates) choose to entrust part of their land to the family association while continuing to farm the remainder within the family.

- In addition to these three components of private agriculture, Romania still has a sector of state-controlled agricultural companies—the successors of former state farms—which hold about 15 percent of land, not all of it under active cultivation. The statistics on the state sector is ambiguous.

4.30 The dramatic changes in the land use pattern during the decade of transition are illustrated in Figure 4.7. The changes in land tenure are reflected in the structure of agricultural production as it is observed today. Individual farms control the bulk of agricultural land and accordingly produce 87 percent of agricultural output. Private corporate farms (legal associations and other private companies) contribute 10 percent while the state sector produces only 3 percent of agricultural output. This structure is the end result of an evolutionary process that began in the early 1990s with the onset of land reform in Romania. The share of the state sector in agricultural output is steadily shrinking, while the share of the private sector is increasing—mainly due to the growth of individual farming.

Figure 4.7 Change in Structure of Agricultural Land Use 1989-2001



Source: Ministry of Agriculture, NSI.

B.4.3. Lagging Privatization of Former State Farms

4.31 Back in 1989 Romania had 411 state farms that controlled 2 million hectares of agricultural land—14 percent of total agricultural land and 50 percent of state-owned agricultural land. The strategy for transition to a market-oriented agriculture naturally included privatization of state farms. As a preliminary step to privatization, the state farms were technically transformed in 1990-91 into joint-stock companies. The assets of the former state farms became the property of the new commercial companies and the state continued in the role of the sole shareholder (at least initially). The actual management of the former state farms remained in the hands of state-controlled holding companies—the State Ownership Fund (SOF) and five Private Ownership Funds (POF). The formal reorganization, however necessary from legal considerations, did not convert the former state farms into privately owned, profit-oriented units.

4.32 In December 1999, after years of deliberations and debates, the government finally decided on a policy of selling the state-farm assets to private investors while leasing the state-owned land to the new operators and other interested users. According to this policy, the state land had to be privately farmed, based on a 49-year concession or a long-term lease contract between the administrator of state land and a private investor. This transfer of land use rights may or may not have included the sale of shares in the state farms assets, which may be privatized separately through an auction or another mechanism.

4.33 As part of the new policy, the responsibility for state-farm privatization was transferred from the largely unsuccessful SOF to the State Domain Agency (SDA) in the Ministry of Agriculture. So far SDA has sold to private investors about 280 former state farms (Table 4.3). Another 80 are considered good prospects for privatization in the near future. The remaining 382

former state farms, or more than 50 percent of the original SDA portfolio, are either in the process of liquidation through bankruptcy or are candidates for bankruptcy.

Table 4.3 Status of State Farm Privatization (April 2003)

	Number of farms	Percent
Starting number of state farms in SDA portfolio, Jan. 2000	739	100
In liquidation/reorganization/bankruptcy (Law 64/1995)	382	51
Privatized	279	38
Remain to be privatized	78	11

Source: SDA of Ministry of Agriculture.

B.5. Agroprocessing Industry Unprepared for EU Entry

4.34 A well-functioning and competitive food industry is an essential pre-condition for EU accession. The privatization of Romanian agroprocessing has been almost fully completed. Overall, less than 2 percent of enterprises remain in state ownership, although there are obvious fluctuations between subsectors. While milling, baking, and meat processing are totally in private hands, the state still owns and operates 40 percent of sugar plants and 12 percent of fruit and vegetable processors. Progress with privatization may have been responsible for the growth in output and productivity in agroprocessing since 1990. The options for private ownership have also attracted increasing flows of foreign direct investment, but the level of FDI in the food sector (and primary agriculture) remains low. Moreover, foreign investors generally prefer food retailing and restaurants, while FDI in food processing is limited to breweries and dairies. As a result, the small private owners (which constitute two-thirds of the sector) generally lack financial resources for technological improvements, while the oversized and technologically obsolete state-owned plants work at low capacity and efficiency. Privatization of the remaining state-owned processors (especially in the important sugar and fruit and vegetable subsectors) combined with aggressive promotion of FDI should become a high priority.

4.35 The Romanian **food industry is generally not prepared for the new competitive environment** associated with EU accession. This lack of preparedness is highlighted by NIS survey data regarding ISO 9000 system implementation. More than 40 percent of respondents in the food industry in 2002 indicated that they were not interested in ISO 9000 certification, and this percentage had remained constant since 1999. Only 16 percent of companies had ISO 9000 certificates in 2002 (encouragingly up from 8 percent in 1999) and another 13 percent where in the implementation and design stages (up from 10 percent in 1999). To ensure competitiveness with EU industries, the Romanian agrobusinesses must quickly change their attitude toward ISO 9000 certification and make concerted efforts to ensure system implementation.

B.6. Commodity and Factor Markets Not Adapted to the Needs of Privatized Agriculture

4.36 During the last decade, the structure of agricultural production in Romania has changed dramatically from large-scale collective production to predominantly small-scale individual production. The **changes in the type of farming have not been accompanied by an appropriate change of marketing and supply structures.** Large processors are understandably reluctant to buy their raw materials in small batches from a multitude of small producers: this

arrangement involves high transaction costs and does not guarantee uniform quality standards. Small producers need to rely on assembly markets and integrators for selling their farm products—and such institutions have not yet developed in Romania. As a result, direct sales in town markets are the main outlet for the basic commodities of small producers, such as vegetables, milk, and meat. This naturally involves huge time inefficiencies and leads to high spoilage rates for these commodities. Technical crops, mainly sunflower and sugar beet, are generally produced and sold under advance marketing contracts between processors and producers; the demand for these crops is so high that even small farmers fit within the contract marketing scheme. Cereals, on the other hand, are not produced under advance marketing contracts. Yet the large number of recently established small mills and bakeries is a positive force enabling small producers to sell their grain to the milling and baking industry.

4.37 One of the main characteristics of the CAP is the fact that price and market support is mostly done at the wholesale level and not at the farm gate. It constitutes an indirect support to farmers through wholesale prices and not a direct intervention by buying directly from farmers. Under current market conditions, small Romanian farmers relying on direct sales in the marketplace will not be able to benefit from such interventions. They need a network of wholesalers or, in their absence, they need to organize in marketing cooperatives that allow wholesale-level support. Farmer marketing cooperatives will help small producers overcome the barriers imposed by smallness, and improve their bargaining position vis-à-vis the processors. Moreover, marketing cooperatives will be able to provide sorting and packing services that are essential for meeting uniform quality standards; they will also be able to invest in storage and cooling facilities (e.g., for milk) and ensure efficient collection and shipping.

4.38 At present, private input supply channels seem to be better adapted to small farmers than output marketing channels. Networks of input dealers have emerged in response to the extremely fragmented farm structure. These emergent dealer-operators are trying to supply a full range of inputs to farmers, with the same operator selling pesticides, seeds, growth stimulators, veterinary drugs, and fertilizers (these last only in small quantities). Although no firm figures are available, the number of dealers may exceed several hundred, and has generally been increasing. Foreign companies are entering the farm supply arena, especially in the pesticide and seed markets. Despite the generally competitive nature of the input marketing, domestic production of inputs, especially seeds and pesticide, is done by only a small number of producers. The domestic market thus still has oligopolistic elements, and establishment of input supply cooperatives by associations of farmers will certainly improve their bargaining position and enable them to benefit from volume discounts and other scale economies, as well better access to importers, who private an alternative to domestic producers.

B.6.1. Emerging Land Markets Constrained by Complex Bureaucratic Requirements

4.39 Buying and selling of land became universally possible only with the adoption of the Land Circulation Law in 1998. Legal entities are allowed to buy and sell land, whereas foreign nationals may only lease land. The state has released its land reserves only for leasing, and no privatization of state land is contemplated. During the four years 1999-2002, private landowners sold 312,000 hectares of agricultural land, which is a very respectable 2.7 percent of private

agricultural land in rural areas; more than 4 percent of rural landowners entered into land transactions during this period.

4.40 To this very day Romania has a dual land registration system inherited from before World War II: the "land book" system and the "inscription-transcription" system. In preparation for the transition to the land book system envisaged by the 1996 Law on Cadastre, it is now required to have each plot surveyed by certified surveyors in the process of titling and ownership transfer. Notaries play a central role in transfer of ownership, as they are responsible for validating the title and only a notarized sale contract can serve as a basis for recording ownership transfers. Notary fees and survey fees are thus two unavoidable components of the cost of property transfer. The cost of surveying by private companies may run up to 3 million ROL per hectare. The total titling and registration costs may reach 4-6 million ROL per hectare, which is sometimes higher than the value of the land. The high transaction costs constitute a serious obstacle to completion of cadastral registration and development of land market transactions.

B.7. Urban–Rural Gap: Significant Rural Social Problems

4.41 Romania's rural population of 10.1 million resides in 13,000 villages, which are clustered administratively into 2,700 communes—the traditional seat of local government. Rural incomes per capita in 2001 were 27 percent below urban incomes, and this gap had increased from only 5 percent in 1997. Poverty is thus a significant problem in rural communities. In 2002, the relative risk of poverty in rural areas was more than double the poverty risk in urban areas: 42 percent for rural residents compared with 18 percent for urban residents. **The rural poor account for two-thirds of the total poor in Romania.**

4.42 Agriculture—primarily self-employed agriculture—is the main source of employment in rural areas: nearly 70 percent of the rural employed report agricultural activities (compared with about 40 percent national average). As a result, rural households rely to a much greater extent on in-kind income: 46 percent of total income in rural households is derived from in-kind sources compared with only 12 percent for urban families. Rural residents also achieve significantly better nutritional levels. The caloric intake is 2,600 kcal/day for rural residents compared with 2,380 kcal/day for urban people (1998 data); only 14 percent of the rural population consume less than the minimum caloric requirement compared with 26 percent for urban residents. Yet farming incomes are generally low and the occupational structure of the poor is biased toward self-employment in agriculture. Thus, 25 percent of the poor are self-employed farmers, compared with only 15 percent in the total population. Many of those self-employed in agriculture are semi-subsistence farm households, and many households in this group are headed by pensioners. While the share of farm households in extreme poverty increased in recent years, pensioners have been shielded by relatively well-targeted social security programs.

4.43 Because of the reliance on self-employment in agriculture, the unemployment rate in rural areas is much lower than among the urban population (about 3 percent compared with 10 percent in urban areas in 2001). Moreover, rural unemployment dropped from 5 percent in 1996 to 3 percent in 2001, while urban unemployment hovered around 10 percent with a certain tendency to increase. Long-term unemployment is primarily an urban issue, whereas in rural

areas the major problem is underemployment combined with low productivity in existing farming occupations.

4.44 **The rural population is disadvantaged by both human and social capital indicators.** In terms of educational attainment, only 1 percent of the rural population have higher education compared with 9 percent in urban areas; more than 7 percent of the rural population have not completed any formal schooling compared with less than 2 percent in urban areas. Social capital indicators also show locational disparities: rural inhabitants have less access than urban residents to contacts who can help with problems relating to employment, the health and legal systems, the police, and the banks. Thus, only 25 percent of rural residents "know someone who can help" solve problems with these institutions compared with 35 percent for urban residents.

4.45 There is a large discrepancy between urban and rural Romania in terms of both physical and social infrastructure (Table 4.4). This discrepancy and the state of rural areas in general are a significant challenge for the country and a critical constraint for integrating into an enlarged European Union.

Table 4.4 Urban–Rural Disparities in Household Amenities and Community Services (percentage of Households)

	Urban	Rural
Consumer assets		
no gas stove	4	27
no refrigerator	11	34
no washing machine	28	67
Household amenities		
less than 5 sq. meters per Person	4	10
no bathroom	13	84
no flush toilet	8	68
no hot water system	15	86
Community services		
no post office in the area	0	16
no health service in the area	0	15
no pharmacy in the area	0	40
no cultural/entertainment Center	2	25
no children playground	8	87
poor roads	9	20

Source: World Bank estimations based on Household Budget Survey (ABF 2002) and Living Conditions Survey (ACOVI 2002).

4.46 Rural infrastructure, including rural roads and water supply, has a potentially important impact on rural development in general and on local non-farm investment incentives in particular. Water and sanitation systems additionally affect family health in rural communities. Yet only half the communes (1,355 out of total 2,868) are connected to water supply systems, and more seriously these communes cover only one-quarter of the rural population (2000 data). According to the 1992 population census, only 12 percent of the rural population had access to water supply from public systems or private wells. Because of budget constraints, both rural water supply systems and rural roads suffer from inadequate maintenance.

4.47 Health conditions in rural areas are poor. Infant mortality is 22 per 1000 live births compared with 15 in urban areas. There is one doctor per 1,500 rural residents compared with

one doctor per 350 residents in urban areas. Most of the rural communes provide only the most basic medical services, and for special health needs rural residents have to travel to the nearest town. The quality of the medical services in rural areas is relatively low, mainly because of inadequate infrastructure and equipment. Romania lacks any substantial information and awareness campaigns on environmental health. Resources to implement such campaigns are scarce, and the organization and skills to carry them out are limited.

C. Selecting an Appropriate Course for Agricultural Policy

C.1. Shift in Policies for Increased Competitiveness and for the Introduction of CAP

4.48 Until recently, the completion of the transition to a market-consistent agricultural policy environment and the provision of certain safeguards for farming incomes have been in the focus of the government's attention. Different forms of market interventions have been tried, and the harmonization with the CAP has become an additional, but still not a major, objective. The current agricultural support system mixes heavy government intervention with the principles of a market-based agriculture. However, it does not fully correspond with the level of support and instruments of the CAP. Although there is pressure for immediate increases of support and protection from the farmers' side and the obvious need to converge on EU levels before accession, the level of support and border measures should remain unchanged in order to maintain pressure to complete reforms and to remain within budgetary constraints and WTO commitments. The recommendation is to align the level of support only after the accession.

4.49 In moving toward EU accession, first of all the **emphasis on increasing production needs to be removed**. The focus on increased production has shaped past agricultural policy by promoting intervention in favor of specific commodities and introducing distortions in agricultural markets. Given the open trade environment of our time in general, and the trade goals of EU accession in particular, Romanian agricultural policy makers have to make a mental adjustment away from increasing production and toward competitiveness. Romania suffers from generally low yields in both crop and livestock production, combined with the lowest agricultural labor productivity in the region by far. It is on these issues of agricultural reform that policy makers must concentrate instead of the traditional emphasis on increased production. **Competitiveness requires higher efficiency in agriculture**. This can only be achieved by policies that facilitate the structural reorganization of agriculture by allowing inefficient farms to close down and removing obstacles to the expansion of new and more efficient farming units.

4.50 The recommended agricultural policy framework and support system would need to focus on facilitating the required structural changes and improvement in competitiveness by pursuing the following objectives:

- Quick completion of the most important pending transition tasks, such as farm consolidation, land privatization, creation of functioning land markets.

- Facilitation of the consolidation of the small-scale farming sector through the creation of rural non-agricultural job opportunities resulting in the reduction of the agricultural work force and improvements of labor productivity.

- More effective use of budgetary support to agriculture through refocusing of support programs on efficiency enhancement rather than price support and export subsidies.

- Integration of the various instruments of government intervention in the sector into a more consistent and predictable framework, including provision of a reliable orientation for farmers until the introduction of the CAP.

- Clear separation of rural social measures (e.g., measures to reduce social tensions and provide social protection in the rural areas) from the major instruments of agricultural policy aimed at improving efficiency and competitiveness.

4.51 Efforts should also be concentrated on the **adaptation of the same policy instruments as in the EU**, but not yet necessarily applying them, or applying them at the same level. The current CAP should be used as a benchmark in this process. The so-called SIPS framework (Simplified Implementation of Payments System), which provides opportunities for a simplified implementation of the CAP for new member countries, should also be taken into account. In particular, the following adjustment would need to be considered:

- The market support system needs to be adjusted to a transparent CAP-conforming framework incorporating the potential use of quotas for some products. Changes should be made in the current intervention system, shifting from ex-ante mechanisms (when the intervention is based on short-term forecasts on production and consumption) to an ex-post CAP-type mechanism, when market intervention decisions by the private sector are based on the observed evolution of EU market prices. In addition, to be consistent with the CAP principles, price support would need to be shifted to the wholesale level instead of the farm-gate level for most products.

- The direct payments and other current structural support measures have to be adapted to the EU format. Direct payments for irrigation inputs and for the preservation of selected genetically valuable livestock are not recognized in the EU and should be eliminated. On the other hand, new support measures as envisaged under the EU agro-environmental programs will have to be introduced. Thus, the EU provides direct payments for the rearing of endangered livestock breeds in the context of its rural development measures. The generalized area payment scheme outside of the less-favored areas could be adapted and fitted into the national envelopes proposed for the dairy and beef sectors under Agenda 2000.

- A more integrated regional and rural policy and related support programs have to be developed to be able to utilize the EU structural fund instruments.

- The current credit guarantee scheme should be made fully consistent with EU standards and most credit subsidies will have to be discontinued in their present format. None of the current support measures aiming to improve the access to financing of capital and non-capital expenditures is admissible under the CAP. Credit subsidies may temporarily be replaced with investment grants from national

budgetary sources (or financed by the EU, if possible). Support for modernization and restructuring also needs to be revised in line with EU guidelines. The EU currently allows some grants for structural development measures, but these must meet one or more of the following objectives: reduce production costs; improve product quality; preserve and improve the environment; meet hygiene and animal welfare conditions; encourage diversification in agricultural activities. No support for modernization and restructuring to agroprocessors is admissible in the EU.

- The taxation system and the provided tax concessions need to be harmonized with the EU practices and requirements. No tax preferences for farmers are allowed in the EU and these will have to be eliminated entirely before accession.

C.2. Simulating Future Policy Options for Romania's Agricultural Sector

4.52 The impact of various agricultural policy scenarios on farmer incomes, on consumer real incomes, on poverty levels, and on the national budget has been assessed by a simulation in a partial equilibrium modeling framework (see Annex 2). Nine different policy scenarios have been used, seven of which represent evolving variants of the CAP, one represents the theoretically ideal situation when all distortions are removed, and one is the benchmark scenario corresponding to the current trade and market policy. The list of scenarios is given in Box 4.1 and the detailed simulation results are provided in Annex 3.[89]

Box 4.1 Scenarios for Simulating Future Policy Options

Scenario A: **Romania maintains its current trade and market policy**

Scenario B_1: **Partial adoption of current CAP**. Adoption of Agenda 2000 price policies, but *without* direct payments.

Scenario B_2: **Complete adoption of the agreement on the CAP as applied to first wave accession countries (Copenhagen Agreement)—final levels**. Simulating the final level of direct payments (foreseen for 2013), i.e., 100 percent of those applied to EU farmers.

Scenario B_3: **Complete adoption of the agreement on the CAP as applied to first wave accession countries—initial levels.** Similar to Scenario B_2, but direct payments amounting to 25 percent of those applied to EU farmers (phasing-in or starting level).

Scenario B_4: **Complete adoption of the provision on a "Simplified Implementation of Direct Payments."** Similar to B_3 but opting for SIPS, i.e., granting direct payments in the form of a de-coupled area payment applied to the whole utilized agricultural area (no livestock premia!)

Scenario C_1: **Complete adoption of the future CAP** (Council Compromise), including the full decoupling of CAP-type direct payments (i.e., no compensatory payments granted to individual production activities).

Scenario C_2: **Partial adoption of the future CAP** (Council Compromise). Similar to C_1, but including 100 percent direct payments.

Scenario D: **Implementation of the Romanian negotiation position**. Simulation of the Romanian position for the negotiations on Chapter 7 (Agriculture) with the European Commission.

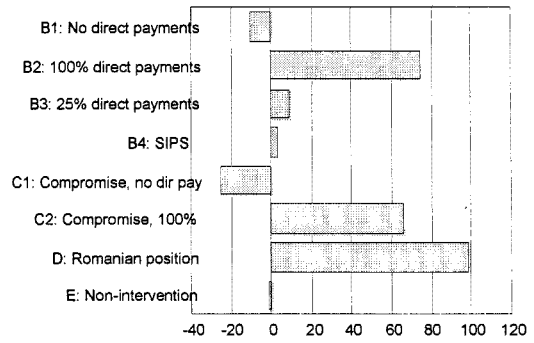
Scenario E: **Complete removal of current divergences** (*'reference scenario'*). Close to a free trade scenario, it provides an order of magnitude of the effects of the current trade regime in Romania.

[89] All scenarios were simulated for ten major agricultural commodities: wheat, barley, maize, sunflower, potatoes, milk, beef, pork, poultry, and eggs. These commodities account for almost 70 percent of gross agricultural production.

C.3. The Welfare Impact of Introducing the EU Common Agricultural Policy

4.53 The overall effect of Romania's integration into the EU will be positive: a preliminary estimate of the expected budgetary transfers from the EU Structural and Cohesion Funds (SCF) indicates that the benefits of EU membership greatly outweigh the costs. Net transfers from the EU budget (direct compensation payments to farmers and SCF transfers net of Romania's expected contribution to the EU budget) can be estimated at between 36 trillion ROL and 81 trillion ROL (3 percent to 7 percent of Romania's 2001 GDP).

Figure 4.8 Change in Farmers' Income under Various Scenarios



Source: World Bank staff estimates.

4.54 However, for the individual groups of producers and consumers of agricultural products and for the agricultural administration in general the impacts of CAP adoption are mixed. Our simulations indicate that the implementation of CAP-type agricultural policies would significantly benefit the farmers, while the population as a whole would be worse off due to higher food prices and the number of the poor would actually increase. Compared to current policies, an implementation of CAP-type policies would lead to a doubling of farmers' income (equivalent to a national farmers' income gain of 131 trillion ROL), but an overall real income loss of about 3 percent for consumers (equivalent to a national consumers' real income loss of 244 trillion ROL). Combined with the positive effect on the budget, these oppositely directed effects produce a net welfare loss of about 2 percent of GDP. The negative impact on Romanian consumers is further emphasized by the estimated growth of poverty under the CAP-type price regime: in the long term, the number of poor people would increase from 2,442,500 (10.9 percent of the population) to 2,845,600 (12.7 percent). In the short run, this effect would even be even more severe as poverty might increase to 13.7 percent. The actual magnitude of these effects depends on the specific scenario, but paradoxically they are especially pronounced under the assumption of full adoption of the Romanian negotiating position.

4.55 The exact **increase in farmers' incomes** (approximated by aggregating commodity-specific value added from the analyzed activities) depends on the amount of direct payments granted to Romanian farmers. The highest increase in farmers' income would be achieved by a full adoption of the Romanian negotiation position (Figure 4.8). The other CAP-type scenarios would also induce significant increases in farmers' income as long as they involve direct payments. Introduction of CAP-type price policies without direct payments (Scenarios B1, C1) would actually lead to a reduction in farmers' income (by 2 percent or 16 percent in the short run, much more in the long run—see Figure 4.8); this effect is determined by the livestock production activities which suffer from higher input costs (grain price policies!) combined with a more restrictive price policy and quota application.[90]

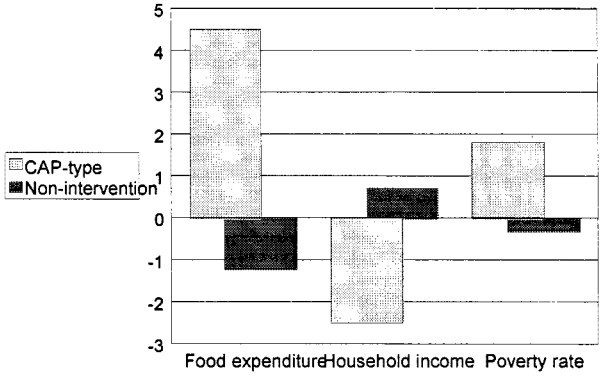
[90] The more pronounced effect for the Council Compromise scenario C_1 appears to be due to the fact that our simulation only takes activity-based (commodity-specific) direct payments into account. Under a full decoupling of

4.56 The impacts of different agricultural policy regimes vary across agricultural activities and regions. As a result of the changes in relative protection, different farm types and different regions will be affected in very different ways, with some of the farmers gaining and others losing out from the reforms. Broadly, crops would expand, but livestock production might contract depending on the specific reforms. The new policies create a clear incentive to modify the land production mix in favor of directly supported crops. As a result, the output of all major crops is projected to expand with the extent of the increase depending on the individual scenarios. Milk, beef, and eggs production also might expand; however, the change in the production of other livestock activities depends entirely on the individual scenarios and would not necessarily increase.

4.57 The implementation of CAP-type agricultural policies implies an increase in agricultural prices in Romania, leading to an increase in food prices. On average, CAP-type changes in agricultural policies would induce an **increase in food expenditures** of 3 percent to 7 percent compared to the current base-period conditions (Figure 4.9). The highest increases in food expenditure would occur under the Romanian negotiating position and under the agricultural policy currently implemented in the first wave of accession countries. Expenditures are projected to increase for all food product groups, with the highest increases projected for milk, meat, and eggs.

4.58 Since Romanian households on average spend more than half their disposable income on food, policy reforms that raise food prices would produce a **decrease in consumers' real income**. As a consequence of higher food expenditure, the introduction of CAP-type agricultural policies would reduce real household incomes by 2 percent to 4 percent (Figure 4.9). The model estimates that the real income loss would be highest under the conditions of the current Romanian negotiation position and the Agenda 2000-type policies. The real income loss from an introduction of the current Council Compromise is more moderate but still significant. The population at large stands to loose from the introduction of CAP-type policies. Households that do not produce food on their own plots and spend a greater share of their cash expenditures on food will be hit hardest.

Figure 4.9 Impact of CAP-type policies versus intervention



Source: World Bank staff estimates.

direct payments, these eventually would be paid to the farm and not to the (analyzed) commodities. Our commodity-coupled results therefore underestimate the positiveimpactr and overestimate the negative impacts on **total** farm income.

4.59 **CAP-type policies would have a negative impact on the poorest**. In the short run, the introduction of CAP-type policies would **increase poverty** from 10.9 percent in the current situation to 13.7 percent under the Romanian negotiating position, which corresponds to an absolute increase of about 626,500 people. Once consumers adjust, the medium- to long-term effects would still be significant with poverty levels at 12.7 percent of the population (Figure 4.9). The government should introduce policies to counter the adverse effects of CAP adoption on the poorest people.

4.60 **Net transfers from the EU budget** would be between 36 trillion ROL and 219 trillion ROL, depending on the imposition of EU restrictions. Without any restrictions on transfers from SCF, net transfers from the EU budget would be between 173 trillion ROL and 219 trillion ROL (€5.5 to 7.0 billion), corresponding to about 15 percent to 19 percent of Romania's 2001 GDP. However, Agenda 2000 currently limits the maximum annual receipts from SCF to 4 percent of national GDP of any Member State. Therefore, the actual SCF transfers would not exceed 46 trillion ROL and net transfers from the EU budget would range between 36 trillion ROL and 81 trillion ROL (3 percent to 7 percent of Romania's 2001 GDP).

4.61 Projects receiving EU structural funding require **co-financing** by the recipient country, and the amount estimated as the EU share in project funding will have to be accompanied by funds from the Romanian budget. Assuming that Romania qualifies for assistance under Objective 1, and assuming a EU participation rate of 75 percent, the maximum EU contribution of 46 trillion ROL would have to be matched by Romanian co-financing of about 15 trillion ROL from the budget.

C.4. The Impact of Romania's Current Agricultural Policy

4.62 The simulation of the introduction of CAP-type policies has been discussed relative to the benchmark of Romania's current policies. Analysts and policy makers may be interested in evaluating the effects of these current policies against a completely non-distorted, free-trade environment. A scenario has been run to assess the impact of current policies relative to the theoretically ideal situation involving **removal of all government policy interventions** and assuming no EU transfers (Scenario E). Some of the comparative results are shown in Figure 4.9.

4.63 The simulations show that the removal of all policy distortions in agriculture would slightly reduce farm incomes and significantly improve the real consumer incomes due to a reduction in food prices.

4.64 The removal of farmers' support would result in a reduction of 0.2 percent (short-term) or 1.4 percent (medium- to long-term) in the aggregate value added for the sector as a whole (see Figure 4.8 above). This is less than the estimated reduction in gross agricultural output (5.0 percent or 9.3 percent, respectively), because the scenario also assumes liberalization of input prices (removal of protection on fertilizers and energy), mitigating the negative impact on farmers' income.

4.65 A significant positive effect of the removal of all current distortions is observed on the consumer side. Here, such a policy reform would lead to an immediate increase of 1.0 percent in household incomes. The positive effect would persist in the long run, with household incomes rising by 0.7 percent (Figure 4.9).

4.66 The removal of all current market distortions would reduce the number of poor by 66,822 to 100,335 people. Assuming no demand response, the share of poverty would decrease from 10.9 percent under the current conditions to 10.5 percent, corresponding to the aforementioned headcount. The results again emphasize that the poor are negatively affected by distortive agricultural policies, and they would benefit from a removal of market distortions.

D. Consolidation in the Farming Sector and Reducing Excess Agricultural Labor

4.67 Creating a more efficient and competitive farming sector is probably the most important task in preparing for EU accession. This is extremely complicated and requires several specific actions.

D.1. Completion of Farm Restructuring and Farm Privatization

4.68 Romania has made significant progress toward the establishment of a genuine private agriculture characterized by a mix of organizational types spanning the entire spectrum of individual and corporate farms. Yet some important tasks remain to be completed. he first and foremost among them concerns the responsibilities of the State Domain Agency, i.e., completing the privatization of state farms and ensuring that the bulk of state-owned land is privatized by auction or, failing that, expeditiously entrusted to private operators. More than 50 percent of the original number of state farms in the SDA portfolio are judged to be insolvent and are slanted for liquidation rather than privatization (see Table 4.3). The liquidation procedures must be completed without further delays. Large areas of agricultural land will thus be released from their currently locked status of pre-emptive concession and become available for free leasing to private operators. **Every possible priority must be given to disposing of these large reserves of state land and returning them to productive cultivation by private farmers.**

4.69 The bankrupt state farms have been allowed to exist and accumulate losses for more than a decade due to the traditional regime of soft budgets that encouraged financial irresponsibility. A preliminary analysis of the financial data for some 10,000 legal entities provided by NIS suggests that more than half of these corporate farms report losses during the last 4-5 years. Not all of these farms have reached a state of true insolvency, but the frequency of unprofitable farms is alarming. **The government should** avoid the potential financial disaster that may evolve from this situation and **take immediate measures to impose hard-budget constraints and strict financial discipline on all farms**. Bankruptcy procedures, however painful, should be enforced for all farms that are seen to be chronically unprofitable.

4.70 One of the original goals of transition involved the elimination of the large-farm bias built into the Romanian agricultural mentality since 1948. Unfortunately, recent policies only strengthen the feeling that large-farm bias persists in Romania; the most recent manifestation of this bias is the curious classification into "commercial" and "family" farms, which allows

subsidies to be paid mainly on the basis of pure size criteria. Commercial farming should definitely be supported and encouraged, but this should be done based on measures of commercial activity, not size. The objective should be to help small farmers increase their level of commercialization, and this cannot be achieved by cutting them off from subsidies because of their smallness. **Successful development of the farm sector requires abolishing the traditional preferential treatment of large farms** and establishing a level playing field for farms of all organizational types and sizes.

D.2. Consolidation of Small-Scale Farming Sector and Reducing Labor in Agriculture

4.71 Romanian policy makers are preoccupied with the fact that their country has 4.2 million farming units, of which 60 percent are smaller than 2 hectares. For comparison, the 15 countries of the European Union in aggregate have 6.8 million farming units and 60 percent of the EU-15 farms extend in size up to 5 hectares. The average farm size in Romania is 2.9 hectares (including all individual and corporate farms), while EU-15 farms average 19 hectares. These phenomena have led to heated discussions of fragmentation and consolidation.

4.72 Consolidation of small farms should be encouraged because, based on empirical evidence from farm surveys in Romania and other countries, more land is at least a partial guarantee for a better standard of living in rural households. Consolidation will occur naturally if farming is a profitable business: farmers will seek ways to increase their holdings in a supportive environment, where they can earn enough money from agriculture. The government should accordingly implement policies that will enable farmers to improve their financial performance. These policies include

- Development of marketing and supply channels for agriculture, including encouragement of service cooperatives for small farmers;
- Provision of market information, extension, and farm management training for small farmers (all these are public goods, and thus the responsibility of the government);
- Attention to the establishment of rural credit systems accessible to farms of all profiles; and
- Targeted grants and subsidies intended specifically for development of commercial activities and introduction of high value added commodities with a significant export potential.

4.73 One conclusion regarding farm consolidation emerges very clearly from the international experience: formal government-initiated land-swapping programs (either directly between small landowners or through a state-owned pool) are never very successful. Consolidation must be left to market forces, with the government standing ready to provide budget support to successful and sufficiently motivated farmers willing to enlarge their farms in a market-driven environment.

4.74 Consolidation of fragmented farms naturally requires that some people give up the use (if not the ownership) of their land in favor or more efficient and more productive farmers. There are at least three market mechanisms that may effectively act in this direction:

- development of markets for land transactions;
- provision of adequate pensions to elderly rural landowners; and
- development of non-agricultural employment opportunities in rural areas.

4.75 **Land markets provide a mechanism for retiring elderly and non-productive landowners.** The development of land market transactions, including land leasing, is particularly important for Romania where restitution and reconstitution transferred ownership and use rights to 4.2 million rural beneficiaries, of which 40 percent are older than 60 and nearly 30 percent are pensioners. According to certain estimates, pensioners own 65 percent of land in rural areas. These elderly people are obviously not the most productive among farmers and they are probably on the verge of becoming passive landowners. Another 500,000 restituents are urban residents with alternative careers who have no interest in resuming active farming. In this setting, land markets have an important role in providing a medium for the flow of land resources from less active to more active and more efficient producers and thus generating potential productivity improvements through consolidation. To exploit land markets as a tool of land consolidation, the government should adopt policies that simplify registration and titling procedures, minimize transaction costs, and ensure security for both lessors and lessees through effective contract enforcement.

4.76 **Targeted income support can reduce the reliance of elderly and poor households on farming and release land for consolidation.** Households of pensioners derive only 30 percent of their income from pensions and fully 58 percent from the household farm (50 percent in kind and 8 percent in cash from product sales). The only way to encourage elderly people to stop subsistence farming and release their land resources to more productive users is by targeted income support, and by strengthening contracts to enable deriving income from land leasing.

4.77 **Non-agricultural rural employment will release farm labor and facilitate consolidation.** In a country with 4.2 million farm units on 10 million hectares of arable land, any significant consolidation of farm sizes would force large numbers of workers out of agriculture and may lead to a massive migration of rural unemployment to urban areas. Development of non-agricultural rural employment opportunities in services, construction, and manufacturing is essential in this situation, especially for people of pre-retirement age. This can be achieved through policies that encourage establishment of various small- and medium-sized enterprises in rural areas. However, this is a very long process, and the government should initiate appropriate policies as soon as possible to ensure successful development of non-agricultural jobs a few years down the road.

4.78 **Factors other than land consolidation have a strong positive impact on rural incomes.** Attention to education, rural infrastructure, and development of market channels has a beneficial effect both on farming incomes and on non-agricultural jobs. Empirical evidence suggests that land is not always the most important factor for increasing the standard of living of rural families. Access to machinery, human capital (i.e., education), and willingness to engage in

commercial sales have an even greater impact on household well-being than land. Emphasis on physical and human capital and development of market channels for commercial sales are probably the priority policy directions that the government should explore, in addition to land market development, in its efforts to counteract the impacts of fragmentation. These measures may definitely produce additional synergies, as they will enhance the motivation and capacity for the development of non-agricultural activities in rural areas.

E. Accelerating the Necessary Reforms in Agroprocessing, Input Supply, and Marketing

4.79 Two main tasks face policy makers in the agroprocessing sector. First, second-wave privatization should be launched without further delay, especially in state-dominated subsectors, such as sugar and fruit and vegetables. Second, every effort must be made at the government level to promote and attract FDI into agroprocessing (and primary agriculture). The government should study the experience of other European countries—and especially Ireland—in encouraging foreign investment. No special measures are needed for further encouragement of FDI in food retail and restaurant business, but **it is imperative to attract foreign capital for modernization and upgrading of privatized agroprocessing.**

4.80 In parallel with encouragement of foreign investors, the government should develop policies for the encouragement of domestic investment in small and medium size processing enterprises in rural areas. Food processing is an ideal complement to the agricultural activities of the rural population and it can be set up in villages with a minimum of effort and investment. In addition to augmenting the income of entrepreneur families, this activity will generate local jobs and thus contribute to agricultural labor reduction and non-agricultural rural development in a broad sense. These policies should be part of a general forward-looking rural development strategy that must not remain limited to the traditional course of providing subsidies for the purchase of agricultural machinery and equipment.

4.81 **The marketing system appears to be incompatible with the needs of the new privatized agriculture in Romania.** Farmers should not be forced to rely on the inefficient and time-consuming method of conducting their sales face-to-face with the end consumer in the town market. The government should facilitate the entry of wholesalers and other trade intermediaries into the food chain. Marketing farmer cooperatives should be established to overcome the problems of smallness and in particular to alleviate the concerns that processors and supermarkets have in dealing with small producers.

4.82 Farmer cooperatives will also improve the bargaining position of small producers in the semi-oligopolistic input supply system that prevails in Romania, despite the encouraging emergence of many relatively small diversified suppliers. As part of its FDI promoting policy, the government should also focus on the entry of foreign input suppliers into the Romanian market with the aim of increasing competition.

4.83 **Romania must expeditiously complete its efforts to meet the quality and standards requirements of the European Community relating to food industry.** Considerable progress has been achieved in harmonizing the local standards and regulations with the EU, yet much

remains to be done. This is not so much the task of the Ministry of Agriculture in Bucharest as the responsibility of the regional field offices, which much spearhead an extensive educational program aimed at producers and processors in all parts of the country. It seems that the Romanian producers are still not fully aware of the crucial importance of meeting the EU quality standards for their future access to European markets. The Ministry of Agriculture should deploy its regional forces so as to overcome these behavioral barriers and persuade all actors in the food industry to take the necessary steps toward gaining EU approval.

F. Creating EU Conforming Institutions and Regulatory Systems

4.84 Romania will have to implement the full acquis communautaire by the time of its accession to the EU. This involves two main prerequisites: (a) creation of a competitive market with private and public institutions capable of meeting common market requirements; and (b) establishment of EU-compatible institutions capable of administering the CAP.

4.85 The implementation of CAP-conforming institutions and the training of qualified staff has proven to be one of the main challenges on Romania's road to accession. Romania has lagged in this area and remains well behind the level of its neighboring second-wave accession country, Bulgaria. Acknowledging the need for accelerated progress, the Romanian Government in July 2002 took several initial steps: it passed a revised National Program for the Adoption of the Acquis (NPAA); and it opened the agricultural chapter for negotiations in October 2002. These are indeed steps toward acceleration of institutional development in the agricultural and rural spheres, but to become reality they require sustained political will and timely budgetary support.[91]

4.86 While significant progress has been made in some areas (e.g., veterinary and phytosanitary acquis, including food safety chapters), concern remains about Romania's ability to comply with the complex administration requirements of the CAP. Further institutional development should focus on the following issues.

- **Efforts to set up institutions and horizontal structures related to the administration of Common Market Organizations (CMOs) need substantial acceleration.** The legal basis for the administration of many CMO-related instruments, Law 73/2002 on the Organization and Operation of Agricultural and Food Markets, still needs substantial adjustment. Specifically, the implementation rules should be clarified and concrete market mechanisms for state intervention should be assigned to each production subsector. Insufficient progress has been achieved in developing administrative structures for the management of CMOs for specialized crops and for animal products. According to an EU assessment, satisfactory progress has been achieved only in the sugar and wine subsectors.

[91] According to a Ministry of Agriculture estimate (November 2002) a budgetary effort of around €220 million is needed for the implementation of the acquis on Common Market Organizations, of which 87 percent is the cost of acquis implementation and 13 percent is operational costs. Of the total amount, 54 percent is meant for institutional capacity building, 36 percent for acquis adoption and staff training, and 10 percent for investments.

- **Institutional and legislative arrangements regarding the administration of EU Funds still remain to be implemented.** Insufficient progress has been made in the implementation of the acquis regarding EAGGF (Guarantee and Guidance Fund). The attempt to establish a Romanian EAGGF (composed of 50 percent customs duties for agricultural imports, 20 percent excise taxes for alcohol and cigarettes, and 10 percent VAT for foodstuffs) has failed and the fund is not expected to be functional until 2007.

- **The establishment of a Paying Agency is a prerequisite for the implementation of CAP-like arrangements.** The Agricultural Intervention Agency's main purpose would be to manage operation of the agricultural support regimes and their transition towards the CAP. The Payment Agency would disburse direct payments and other subsidies to farmers, and according to plans, the paying agency will start activities in 2004 and will be fully operational in 2007. With the accreditation of the SAPARD Agency for the implementation of three approved SAPARD measures, Romania has taken the first step towards the establishment of mechanisms for the absorption of rural development funds (and ultimately EU structural funds). However, SAPARD implementation is still at a very early stage, and only a small portion of the available funds have actually been spent. Two frequently mentioned problems are complex application forms and lack of assistance to farmers and other potential beneficiaries in preparing project proposals.

- **The introduction of the Integrated Administration and Control System (IACS) is a prerequisite for the functioning of the CAP.** The development of the IACS centralized database is particularly challenging because the current system in Romania is entirely different from the EU-style IACS, and because the data required for the IACS system are not readily available. Little progress has been made to date on this front. The design, building and implementation of the IACS system needs considerable investment (estimated at over €18 million). The absence of IACS accreditation upon EU accession would lead to the loss of EU support funds.

- **Promotion and facilitation of voluntary professional associations.** Agricultural growth will be enhanced if a broad range of farmers and processors associate to provide services and seek representation in the market and at the policy table. The current pattern is for such organizations to represent narrow vested interests, to the detriment of public policy. The current legislation allows farmers and processors to establish farm organizations and to have their interests represented in CMO management. Seven inter-branch organizations have emerged (e.g., in the sugar industry), and nine additional ones are being formed. Preparation of an administrative structures for CMO operation is also slowly taking shape.

- **Modernization of the sanitary-veterinary laboratories requires attention.** Romania has joined the Animal Disease Notification System (ADNS), a key step in designing the animal health infrastructure necessary to implement the acquis

regarding livestock. Efforts are being made to improve the infrastructure and accredit laboratories.

- **Enforcement capacities in the veterinary and phytosanitary field have to be strengthened.** According to the EC Regular Report for 2002, significant progress has been made in adjusting the legislation to the EC veterinary and phytosanitary acquis, but an appropriate legal basis is still missing for effective operation in these areas. By 2004, a suitable legal basis in the phytosanitary area was created but an appropriate legal basis for veterinary controls is yet to be developed and adopted. Additional human and financial resources must be allocated to strengthen the currently limited implementation and enforcement capacities of the veterinary and phytosanitary administration.

- **Adoption of EU food-safety standards requires a radical reorganization of administrative bodies.** In order to increase their effectiveness, a reorganization of supervising and surveillance bodies in the field of food safety (i.e., the national food laboratory and the plant hygiene laboratory) is a further crucial area for meeting the acquis. This relates to both the complex numerousness of super-ordinated ministries and agencies assigned to regulating the food security field, as well as to deficiencies in internal organization and sharing of capacities and information among the responsible laboratories. No system has yet become operational to trace non-compliant products domestically, although a system for registration of producers is operational. In order to meet acquis requirements, this monitoring must equally cover domestic production.

- **A system for monitoring compliance with pesticide residue regulations must be put in place.** A system for registration of pesticide manufacturers has been operational since February 2002. A national monitoring program has been established and residue controls have been initiated for imported fruits and vegetables. Residue monitoring should now be launched for domestic production in line with the acquis.

G. Overcoming Obstacles to Rural Development—Reducing Rural Poverty

4.87 Reduction of rural poverty requires attention to a number of rural development issues. First, non-farm employment will become increasingly important in absorbing the labor that will be shed from the farm economy as farms consolidate and become more efficient in response to competitive pressures. International experience shows that creation of a vibrant rural non-farm economy depends upon a number of factors that are relevant to Romania:

- maintenance of a market-friendly policy environment for small- and medium-size businesses (with specific technical or financial supports for rural SMEs in certain cases);

- public investments in physical infrastructure, including roads, water, communications, and energy; and

- investment in human development in terms of basic education and training, to better prepare the rural population for off-farm work.

4.88 Second, increasing productivity on small- and medium-sized farms will require sustained attention. The areas of support for these farms should include:

- measures to stimulate agro-processing and agri-business, including a conducive business environment, and access to term finance via private lenders on commercial terms;
- improved agricultural extension for small- and medium-sized farmers;
- upgraded marketing infrastructure, including simple standard contracts and enforceable contracting mechanisms;
- support for development of marketing associations; and
- an improved environment for land transactions, including less complex administrative procedures and adequate contract enforcement.

4.89 Third, maintenance of the social security of rural pensioners requires continued attention, particularly given budgetary constraints. As it now stands, land holdings and the income received from them, in the form of food and rental income, are crucial to maintaining the precarious standard of living for most pensioners. Since increasing pension payments is not an option due to fiscal constraints, a number of indirect measures can be proposed to assist the vulnerable elderly:

- encourage elderly landowners to engage in land rental transactions by preparing standard rental contracts and providing assistance in explaining and enforcing the legal options;
- increase the demand for land rentals from elderly people by increasing the number of productive farmers through improved credit schemes that could be used for the purchase of farm equipment;
- expand the range of annuities attractive to elderly investors, so that rural residents have an alternative investment option if they make the irrevocable decision to sell their land; and
- reduce the isolation of the rural elderly through selective investments in transport and communications in remote villages to help them maintain access to social services and to the outside community.

5. ENHANCING LABOR MARKET ADJUSTMENT

5.1 Romania's development prospects and its efforts to catch up with other countries in the region in integrating with the EU are determined by the ability to reallocate resources from low to higher productivity activities across the economy. Success depends to a large extent on the functioning of three factor markets: labor, financial, and land markets. This chapter discusses policies to enhance labor market adjustment.[92] It first describes the recent labor market trends in participation, employment and non-employment. It further analyzes sectoral employment imbalances and job creation and destruction. The chapter then turns to discussing wages and productivity. Following an assessment of the effectiveness of the labor market policies, the chapter concludes by proposing a set of measures to increase labor market flexibility.

5.2 The chapter acknowledges there has been efforts in recent years to modernize some of the institutional framework of labor market. At the same time, the research demonstrates that the constraints imposed by the slow pace of reforms in the enterprise sector throughout the nineties, compounded by shortsighted sectoral policies, to a large extent have undermined labor market flexibility. These policies have destroyed a large number of jobs and have created few sustainable ones, have pushed workers out of the labor force and into low productivity activities, and have facilitated and supported the preservation of a distorted sectoral distribution of employment. Wage policy rigidity, especially in the SOE sector, has hampered reallocation, and has increased labor mismatch and labor market segmentation.

5.3 The analysis identifies three perverse labor market trends of high magnitude which are largely specific to Romania, namely: (i) the migration of active workers into subsistence agriculture and other low productivity/low earnings activities; (ii) the large number of drop-outs from the labor force, mainly through retirement and early retirement and through labor market discouragement; and, (iii) flows out of employment and into long-term unemployment. These trends have been driven primarily by the collapse of output and by short-term constraints which require reversal, and should be the focus of labor market policies in the near future. These large scale labor market trends have not only affected labor market flexibility, but have also distorted the balance between the occupied and the working age population and have affected the competitiveness of the Romanian economy.

5.4 The chapter shows that these trends are not sustainable and are bound to be reversed. Signs of change can be seen in the chapter. The number of workers in agriculture appears to have started to contract. Employment in the private sector and SMEs is growing robustly. Wage distribution is widening and the correlation with productivity is improving. Nevertheless, addressing the existing distortions requires, apart from significant labor reallocation and labor policy reforms, a broader spectrum of policy corrections, including changes in education, agriculture, the enterprise sector, and the taxation system.

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[92] This chapter was prepared by Catalin Pauna (ECSPE).

5.5 The liberalization of trade with the EU in industrial goods has placed important pressures on Romanian companies to cut costs and restructure internally. However, the solid exports performance is limited to a relatively small number of activities and is dominated by unskilled, low technological products (see Chapter 2). This contrasts sharply with the poor performance of the largely unrestructured inward-oriented industries, where large scale productivity-driven labor adjustments are yet to occur.

5.6 In this context, the chapter is aimed at addressing two inter-related policy issues. First, it evaluates the extent to which labor policies support labor market adjustment. Second, it identifies the challenges to labor market policy arising from integration with the EU and from meeting the European Employment Strategy objectives. The central question that the chapter attempts to address is the extent to which Romania has succeeded in reallocating labor toward more efficient uses.

5.7 The study argues that the current labor market framework fails to provide the necessary relief by obstructing the reallocation of labor from the declining enterprises and sectors to the growing ones. In particular, the newly adopted Labor Code discourages labor mobility and complicates further progress in structural reforms by imposing large transactions costs on companies. This risks affecting the speed and the direction of the reforms and slowing down the process of EU convergence. The Code introduces new impediments to enterprise restructuring and, thereby, adversely affects the overall competitiveness of the Romanian economy. The chapter concludes that from a labor market perspective additional effort is needed to reduce the existing legal and institutional rigidities.

A. Participation, Employment, and Non-Employment

5.8 . Following the collapse in output at the beginning of the transition, labor force participation and employment rates are decreasing, while non-employment continues to expand. Romania began the transition with high labor participation rates in comparison with countries with similar GDP levels.[93] These higher rates were due to the extensive use of labor resources, and an especially high female participation, to compensate for low productivity and labor mobility. The country inherited no open unemployment but an abundance of hidden unemployment, a distorted sectoral allocation of labor, and a compressed wage distribution which bore little, if any, relationship to productivity.

5.9 The collapse in output at the beginning of the 1990s prompted a gradual reduction in both participation and employment. The main policy response to the sharp output contraction was, however, the adjustment of real wages, with a view to limiting job destruction. This was complemented by a series of early retirement programs. While this policy approach succeeded in containing the increase in open unemployment, it concomitantly pushed workers out of the labor force and into low productivity jobs, primarily in agriculture. This route was eventually abandoned in the late 1990s and some of the initial imbalances are in the process of being corrected.

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[93] Barr, N. (1994), *Labor Markets and Social Policy in Central and Eastern Europe,* Oxford University Press.

5.10 Table 5.1 shows the changes in output relative to the changes in employment and real wages[94] between 1989 and 1994[95], and between 2001[96] and 1989. In many respects, the table synthesizes the reform strategies pursued by Romania and other transitional economies in adjusting to market conditions. If the initial output collapse was accepted as inevitable, owing to increased external competition and the abolition of CMEA, the table shows that while some countries responded with sharp adjustments in employment where job cuts exceeded output fall, Romania resisted making painful reductions in employment to match the contraction in GDP. Although by 1994 the Romanian economy had contracted more than 20 percent relative to 1989, its employment had shrunk by only 9 percent, with the adjustments mostly taking place in real wages, which had fallen by around 37 percent, and in hours of work.[97]

Table 5.1 Output, Employment and Wage Adjustment
(percent change relative to initial levels)

Country	ΔGDP		ΔEmployment		ΔWage	
	1994/1989	2001/1989	1994/1989	2001/1989	1994/1989	2001/1989
Bulgaria	-23	-17	-24	-31	-48	-57
Czech Republic*	-10	6	-10	-12	-24	1
Hungary	-16	12	-26	-23	7	14
Poland	-18	15	-14	-16	-18	32
Romania	**-21**	**-14**	**-9**	**-22**	**-37**	**-37**
Slovak Republic	-21	9	-16	-15	-34	-25

* For the Czech Republic GDP changes are computed between 1994 and 1990, and 2001 and 1990.
Source: Staff computations using OECD, ILO and NIS data.

5.11 The delay in the employment adjustment failed, however, to yield long-term positive results. Comparisons of the changes between 2001 and 1989 prove the unsustainability of the employment preservation policies promoted in the early phases of the transition. By 2001, in all CEECs the adjustment in employment was significantly larger than that in output. In Romania, between 1989 and 2001, employment contracted by 22 percent while GDP shrank by only 14 percent. Furthermore, the decline in employment was not matched by a proportional rise in registered unemployment, as many workers chose to respond to the adverse shock by leaving the labor force.

5.12 Table 5.1 also shows the divergence in the dynamics of real wages between the countries that by 2001 had recovered and surpassed the GDP level of 1989, and slower reformers. In the case of the former, output recovery was accompanied by an increase in real wages relative to 1989, reflecting substantial productivity gains. By contrast, wages in Romania, Bulgaria and the Slovak Republic were at levels visibly inferior to those of 1989. In Romania, the real consumption wage[98] was, in 2001, 37 percent lower than in 1989.

[94] Consumption wages, CPI deflated.
[95] Considered the mid-point in the analysis for the purposes of the work.
[96] The last year for which comparative statistics for the selected transitional countries are available.
[97] The average annual number of hours effectively worked in industry was 1588.2 in 1994, down from 1759.2 in 1990 (NIS data).
[98] CPI-deflated real wage.

5.13 The substantial increase in non-participation, especially in the early years of the transition, seriously affected the balance between the contributors to and the beneficiaries of public transfers, principally between wage earners and pensioners. The large-scale introduction of early retirement programs, with the false hope of vacating jobs for new entrants, has proved a main factor in the deterioration of the balance of the pension scheme and the subsequent perverse employment dynamics. It has placed significant pressure on the public budget, and has generated a fiscal gap that is difficult to correct in the medium term, owing to the rigidity it induces in public expenditure. Between 1995 and 2001, the PAYG pension system posted annual deficits estimated at 0.8-1.6% of GDP.[99]

5.14 As Table 5.2 reveals, both participation and employment, although still declining, remain above the average for CEE and countries with a comparable GDP per capita, and slightly below the EU average. Moreover, Romania exhibits higher participation rates than some current EU members, such as Italy or Greece. The participation of women remains lower than that of men, with the gap, on average, inferior to that in the EU.

Table 5.2 Employment Rate, 15-64 Years, 1997-2002 (in percent)

	1997		1998		1999		2000		2001	
Country	**Total**	**Women**	**Total**	**Women**	**Total**	**Women**	**Total**	**Women**	**Total**	**Women**
Czech Republic	68.7	59.9	67.5	58.7	65.9	57.4	65.2	56.9	65.3	57.0
Hungary	52.7	45.5	53.8	47.3	55.7	49.0	56.4	49.7	56.6	49.8
Poland	58.8	51.8	58.9	52.2	57.5	51.6	55.5	48.9	53.5	47.8
Romania	**65.8**	**53.3**	**64.3**	**52.5**	**63.5**	**52.2**	**63.2**	**52.0**	**62.6**	**51.9**
urban	**59.8**				**56.4**		**55.6**		**55.1**	
Slovak Rep.	61.1	54.0	60.5	53.5	58.1	52.1	56.8	51.5	56.9	51.8
Greece	54.8	39.1	55.6	40.3	55.4	40.7	55.9	41.3	55.6	41.2
Italy	51.6	36.4	52.2	37.3	52.9	38.3	53.9	39.6	54.9	41.1
EU	**60.9**	**50.9**	**61.7**	**51.8**	**62.6**	**52.9**	**63.8**	**54.1**	**64.1**	**54.9**

Source: OECD, INS, and World Bank staff estimates.

5.15 Focusing on the aggregate figures for labor participation and employment is deceptive in the case of Romania, owing to the high share of employment in subsistence agriculture and the existence of borderline employment categories. With the exception of Bulgaria and Poland, the share of employment in agriculture is much lower in the CEEs and the EU than in Romania. As evidence we have computed participation and employment rates for the urban labor markets, as involvement in agricultural activities occurs primarily in the rural areas. As the table reveals, urban employment rates are lower, on average, by 5-6 percent, more in line with the CEE average.

5.16 Furthermore, the existence of large borderline employment categories in Romania substantially influences key indicators of labor market performance, such as the employment to population ratio. To illustrate this aspect, this section provides alternative measures for the employment to population ratio, by excluding some labor categories which, under different interpretations, can also be classified as out-of-the-labor force, such as the unpaid family helpers, some involuntary part-timers or people in "technical" unemployment (Table 5.3). With these adjustments, the employment ratios decline substantially. The importance of these categories

[99] *Romania Public Expenditure and Institutional Review* (2002).

goes beyond their impact on the aggregate statistics. They suggest that many are ready to work but that the limited job opportunities prevent them from doing so. Identifying the means of bringing these groups into standard jobs would boost employment and result in important benefits in terms of higher output, improved budget revenues, and reduced poverty.

Table 5.3 Alternative Measures of the Employment Population Ratio, 1994–2002
(percent of population aged 15-72)

Employment ratio	1994	1996	2000	2001	2002
Standard	62.4	57.5	58.3	58.7	53.4
Excluding subsistence farmers (both own account workers and unpaid family helpers)	n.a.	47.8	46.3	46.3	n.a.[2]
Excluding other own account workers and unpaid family helpers in agriculture	43.4	43.4	40.4	40.1	37.4
Excluding half of involuntary part-timers	43.3	43.2	40.2	39.9	37.3
Excluding laid-off persons with a formal attachment to the job	43.0	42.9	40.0	39.8	37.2

Notes: Subsistence farmers include own account workers and unpaid family helpers who work in their own agricultural household for their own consumption only. Involuntary part-timers are persons who declared having a part-time program, were actively looking for work and available, and whose actual total hours of work at all jobs were fewer than 30. Laid-off persons with a formal attachment to the job are persons who worked zero hours due to technical unemployment or unpaid leave initiated by the employer. 2002 data is preliminary.
Source: CEU Labor Project, "Measuring Nonstandard Forms of Employment and Unemployment in Romania, Working Paper, 2003.

5.17 Employment rates also differ substantially between age groups. Compared with the average, these rates are particularly low for youth (age 15-24), at between 30-40 percent, and older persons (age 50-64), at 40-60 percent, suggesting limited labor opportunities for these labor categories and probably the segmentation of the labor market in favor of the prime-age working population. Indeed, unemployment is high among young persons, and a large share of older persons choose to withdraw from the labor force, through early retirement or simply out of discouragement.[100]

5.18 One source of concern is that Romania started the transition with a distorted employment composition, and the initial imbalance has been exacerbated through the transition, leaving the economy with a remaining heavy burden. One of the most conspicuous features of the Romanian pre-reform labor market, even when compared to that of its neighbors, was the different structure of employment across broad industrial sectors, involving an especially large number of workers in (heavy) industry and agriculture, and a very low employment in services.

5.19 Table 5.4 shows the employment structure of Romania with that of other CEECs and Western European comparator[101] economies at the beginning of the transition. In comparison with

[100] Discouraged workers are persons not working, available for work and not searching for a job for the following reasons: believe there are no available jobs or do not know where to seek work; believe that they do not have suitable skills; believe they will not find a job because of age; have sought for a job, but did not find one.

[101] For purposes of comparability we divided Western European countries into a Northern group (Denmark, Germany, the Netherlands, the United Kingdom) and Southern group (Greece, Italy, Portugal and Spain), to allow for the

the market economies, there was excessive employment in agriculture, mining and the manufacturing industries. Services were underdeveloped, most obviously in finance (which covers business and professional services in addition to banking, insurance, etc.), but also in trade and community services (which include health and education, as well as public administration). Construction and transport were much in line with a market economy profile. As Table 5.4 shows, Romania had the largest share of agricultural employment (27.9 percent), one of the largest manufacturing sectors (33 percent), and the smallest community services (15.3 percent) and trade (5.9 percent) sectors.

Table 5.4 Structure of Employment by Main Sector in 1989 (percent of total)

Sector	Bulgaria	Czech Republic	Hungary	Poland	Romania	Slovakia	EU South	EU North
Agriculture	19.0	11.7	16.6	26.8	**27.9**	13.8	10.7	4.1
Mining	2.6	3.6	2.0	3.4	**2.3**	1.0	0.4	1.0
Manufacturing	34.9	34.0	28.6	24.5	**33.0**	32.1	22.0	26.3
Electricity, gas, water	0.8	1.4	2.6	1.1	**1.2**	1.6	0.9	1.1
Construction	7.8	7.3	7.0	7.8	**7.0**	11.6	8.1	6.4
Trade	9.2	11.5	11.3	8.9	**5.9**	11.1	19.3	17.4
Transportation	6.8	6.5	7.7	7.2	**6.9**	6.4	6.0	6.0
Finance	0.6	0.5	0.8	1.0	**0.3**	0.4	6.1	8.6
Community services	18.4	23.5	23.4	19.3	**15.3**	22.0	26.5	28.7
DI-South	24.2	17.2	16.5	23.0	**31.3**	18.4	-	10.0
DI-North	27.3	19.6	19.6	27.7	**33.4**	21.6	10.0	-

Note: DI is a coefficient of departure, defined as the overall excess employment in the sectors where employment in the Eastern European country exceeds mean employment in the comparator countries. EU North includes Denmark, Germany, the Netherlands, and the United Kingdom; EU South includes Greece, Italy, Portugal, and Spain.
Source: OECD-Labor Force Statistics (1998), ILO, country statistics and staff computations.

5.20 It is evident from the table that the extent of structural imbalance differs considerably among countries. To capture this irregularity, the final rows of the table shows an "index of departure" which measures the proportion of the workforce in each country that would need to change sector to enable the country to attain the same structure of employment as that of a comparable Western European economy in 1989. As an approximation, the index of departure measures the inherited "distortion" of former centrally planned economies at the beginning of the reform, in the sense of departures from the average Western European economy. The larger the index, the higher the distortion is, and most likely the required adjustment and restructuring costs will be.

5.21 Among the CEECs, Romania inherited the most distorted employment structure, even in relation to Southern Europe. As compared to the structure of employment in Southern Europe, the extent of reallocation required in Romania, at 31.3 percent of the workforce, was, at the outset, the largest. In other words, in order to attain a Southern European employment structure in Romania in 1989, on average 31.3 workers out of 100 in Romania would have had to change their broad sector, and presumably occupation, skills and even work area. The discrepancy is even larger if we

considerable differences in employment in agriculture, the average for the North being 4.1 percent, while for the South it is 10.7 percent. These differences may be attributable in part to permanent features of the economic landscape such as climate and population densities, and in part to historical and institutional considerations.

compare Romania with Northern Europe (33.4 percent), with most of the difference coming from the large employment share in agriculture, and, to some extent, in manufacturing.

5.22 In the context of the labor markets in Romania, restructuring therefore becomes an issue of industrial composition. Employment in the private sector can grow simply because of changes in the ownership of enterprises, with no change in any worker's place of employment. The privatization of state manufacturing enterprises and the introduction of new technology may raise efficiency, but will not remove the need to shed labor, and thus are not an alternative to labor mobility. A shift in industrial composition will in general be associated with a decline in the state sector and a growth in private sector employment, but in the context of labor reallocation the fundamental issue is the change in the composition of employment by industrial sector.

5.23 Fundamentally, labor reallocation is necessary because the Romanian companies have to adapt to a new environment. The gradual integration of the country into the EU economic structures and the liberalization of trade in industrial goods with the EU in 2002 have resulted in increased external competition, forcing enterprises to restructure and inevitably to shed workers. At the same time, sectors that received little attention in the past, mostly in services, are expected to grow, and their demand for labor should pick up. Accelerating the removal of barriers to the movement of labor toward services, away from the declining industrial sectors and agriculture—experienced not only by the CEECs, but also by the later entrants into the EU such as Greece, Portugal and Spain—could speed up real convergence and, consequently, could be felt in real incomes and productivity.

Table 5.5 Structure of Employment by Main Sector in 2001 (percent of total)

Sector	Bulgaria	Czech Republic	Hungary	Poland	Romania	Slovak Republic	EU South	EU North
Agriculture	26.3	4.7	6.2	19.1	**42.3**	6.1	7.3	2.2
Mining	1.2	1.4	0.3	1.9	**1.4**	1.0	0.3	0.4
Manufacturing	20.1	27.7	24.8	19.9	**18.9**	26.1	20.5	19.6
Electricity, gas, water	2.0	1.9	2.1	1.9	**1.9**	2.5	0.7	0.7
Construction	4.3	9.1	7.1	6.7	**4.0**	8.0	9.5	7.5
Trade	15.3	16.1	17.9	15.9	**10.1**	15.4	21.0	18.4
Transportation	7.3	7.7	8.1	6.0	**4.9**	7.6	5.6	6.3
Finance	5.6	7.6	7.7	6.8	**1.9**	6.7	9.6	13.7
Community services	17.8	23.9	25.9	21.7	**14.6**	26.5	25.4	31.3
DI-South	22.9	11.6	8.7	15.0	**37.3**	11.2	-	10.6
DI-North	27.7	15.8	12.4	19.9	**42.3**	14.6	10.7	-

Source: Staff computations using ILO and OECD statistics.

5.24 Turning to the issue of the amount of restructuring achieved, an indicative measure can be estimated by replicating the previous table for the most recent year for which comparative statistics are available, namely, 2001, and contrast the structural imbalances with those that existed at the outset. These estimates are shown in Table 5.5. The significant feature here is that the imbalances appear as great now as they were in 1989, while the proportion of the workforce employed in manufacturing has fallen everywhere, including by a remarkable 14 percent in Romania, the proportion employed in trade and finance has increased, and employment in agriculture has also risen. Most remarkably, the departure index has actually slipped back. This suggests that the gap with Western Europe appears to have widened, at 37 percent relative to the South, and as much as 42 percent relative to the North.

5.25 The apparent lack of progress in restructuring despite substantial job losses reflects that progress in other countries is faster than in Romania. Market economies are themselves adjusting faster to the pace of market changes. Transition economies need a faster pace of employment reallocation simply to avoid falling further behind.

5.26 The depth of employment adjustment has varied significantly across economic sectors. Probably a part of the observed change in sectoral employment is not attributable to the reallocation of labor across sectors, but simply reflects the uneven incidence of macroeconomic recession and sectoral shocks. A sector with excess employment at the outset may be shedding labor, but if its rate of employment decline is slower than average, its share of employment will be increasing.

5.27 In Romania, for example, the share of employment in utilities such as electricity and water has risen even though the initial shares in these sectors were already too high, presumably because they are less vulnerable to recession. At the same time, the share of employment in manufacturing severely declined, from 33 percent to 19 percent. On the other hand, one expects the highly unionized industries, such as mining, to be more difficult to reform, and to continue to maintain some of their privileges, including subsidies, and hence to have higher levels of employment for a longer time. The slow growth of the services, where some sectors, such as hotels and restaurants, have actually contracted, suggests the limited progress achieved in creating the conditions for expansion, and hints at a potentially large informal sector.

5.28 Another important reason for the slow sectoral reallocation of labor is related to the role of the agricultural sector in Romania as an "employer of last resort." In some transitional countries, particularly those in which employment in agriculture was initially high, the collapse of regular, urban employment in industry has led to a reversion to small-scale farming. There is a vicious tendency for those countries that had the greatest surplus of employment in agriculture in 1989 to experience the slowest declines, or even, as in the case of Romania, an actual increase in agricultural employment.

5.29 Romania is in fact the only country among the EU candidates in which the workforce in agriculture increased. A large agricultural sector in terms of employment suggests the existence of a two tier system, consisting of a large number of people involved in low productivity jobs, small farming, and subsistence agriculture coexisting with large, potentially profitable but unreformed farms (see Chapter 4). The case of Poland shows, a country with a large inherited agricultural sector (27 percent of employment in 1989), where employment in agriculture declined by almost 1.8 million people between 1989 and 2001 (reaching a share of 19 percent).

5.30 The task of labor reallocation across sectors in Romania must therefore fall on the external labor market. This can be achieved only through the physical mobility of workers leaving one enterprise, likely in a declining sector, and finding work in another enterprise. It is thus the dimension of restructuring in which any deficiencies in the labor market—such as impediments to labor mobility, poorly developed employment exchange facilities, excessive specific training on the previous job which is of limited use in alternative employment, or industry rents -- are likely to have the most severe effects.

B. Job Destruction, Job Creation, and Joblessness

5.31 As Romania becomes increasingly integrated into the EU, trade barriers are removed, trade flows are liberalized, and competition increases. People are pushed into changing their jobs, companies, sectors and even occupations. Romania shows a high degree of job destruction occurring not only in Romania, but throughout the region. It is therefore crucial that a successful reform must entail enhanced labor flexibility that facilitates job creation so labor cohorts released by over-manned companies are absorbed quickly by the growing sectors and firms in order to avoid high levels and long spells of costly non-employment.

Table 5.6. Change in Employment, 2001/1989 (millions)

	Bulgaria	Czech Republic	Hungary	Poland	Romania	Slovak Republic	Southern Europe
Agriculture	-0.040	-0.406	-0.581	-1.837	1.471	-0.214	-1.082
Mining	-0.079	-0.129	-0.087	-0.304	-0.109	-0.003	-0.021
Manufacturing	-0.904	-0.524	-0.452	-1.343	-1.588	-0.247	0.085
Electricity, gas, water	0.023	0.010	-0.051	0.087	0.066	0.012	0.010
Construction	-0.206	0.038	-0.072	-0.363	-0.337	-0.120	0.959
Trade	0.055	0.147	0.136	0.745	0.434	0.049	1.716
Transportation	-0.076	0.013	-0.069	-0.370	-0.238	0.001	0.277
Finance	0.140	0.335	0.261	0.795	0.165	0.134	1.300
Community	-0.265	-0.110	-0.154	-0.205	-0.113	0.014	1.313
Total Change	-1.35	-0.63	-1.07	-2.80	-0.25	-0.37	4.56
Job Creation:	0.22	0.54	0.40	1.6	2.1	0.2	5.7
% change	5.1	10.1	8.1	9.6	19.5	8.4	27.9
% of labor force	4.0	7.5	5.7	6.0	13.6	5.3	
Job Destruction:	-1.57	-1.17	-1.47	-4.4	-2.4	-0.6	-1.1
% change	-36.6	-21.7	-29.7	-26.0	-21.8	-23.4	-5.4
% of labor force	-28.5	-16.3	-21.0	-16.4	-15.6	-15.8	
Memo items:							
Labor force (2001)	5.5	7.2	7.0	26.8	15.4	3.8	
Population (2001)	8.0	10.2	10.1	38.6	22.3	5.4	

Source: World Bank staff estimates based on ILO, OECD and NIS statistics.

5.32 As Table 5.6 shows, in Romania and in the countries covered by the analysis, millions of jobs have been destroyed over the transition period. In Romania, during the period of investigation, job destruction exceeded 2 million jobs, a figure surpassed only by Poland, with 4.4 million, although the labor force there is significantly larger. Job destruction relative to the labor force is, however, 15.6 percent, which is at the low end of the CEECs. In the declining industrial sectors, especially in manufacturing but also in construction and transportation, more than one in three workers employed in 1989 had lost their jobs by the end of 2001.

5.33 Job creation on the other hand has been low. It appears high at first glance only because of the expansion of employment in agriculture. However, the job creation to labor force ratio excluding agriculture, is about 4 percent, which, together with Bulgaria, is the lowest ratio of job creation among the CEECs.

5.34 Not surprisingly, the probability of an unemployed person's staying in the pool for more than one year are higher than 50 percent, and the likelihood of that person's finding a job is one in three (see Table 5.7). Around 15 percent of the unemployed withdraw from the labor force.

For a recent graduate, the chances of entering directly into unemployment are almost half those of finding a job. An employed person is far more likely (the probability ratio is 4.5:1) to move out of the labor force than into unemployment, most likely through discouragement. The figures also suggest a surprisingly high number (one in five) of homemakers that choose to enter (or reenter) the labor market. This indicates a strong *added worker* effect, presumably to compensate for loss of income due to the disappearance of the main job(s) in the household. While this might capture some seasonal effects as well, its magnitude requires more detailed research.

Table 5.7 Transition Probability Matrix, Q4 2000 - Q4 1999 (percent)

	Employed	Unemployed	Out of labor force	Total
Employed	91.2	1.6	7.2	100
Unemployed	32.3	52.2	15.5	100
Out of labor force, of which:	12	2.5	85.5	100
Student	7.6	3.4		
Homemaker	19	2.2		

Note: The first column refers to the state in Q4 1999. The first row refers to the state in Q4 2000.
Source: World Bank staff estimates based on LFS data.

5.35 As a result, a particularly large portion of the population in Romania is represented by the workers displaced in the restructuring of the industrial sector and by new entrants and re-entrants into the labor market, some directly into unemployment, who became discouraged and stopped searching. As Table 5.8 reveals, the discouraged population is high. The vast majority, around 90 percent, have become discouraged because there are no jobs available. Particularly worrying is the fact that more than half of the discouraged population is below 35 years old.

Table 5.8 Discouraged People, by Reason and Age Category, 1996-2001

	1996	1997	1998	1999	2000	2001
Discouraged persons (total)	279,358	249,875	263,988	304,908	305,163	340,720
Reasons for discouragement						
believe there are no available jobs or do not know where to seek work	46%	39%	41%	41%	33%	27%
believe do not have suitable skills	3%	2%	2%	2%	1%	1%
believe will not find a job because of age	4%	5%	5%	5%	7%	8%
sought for a job before, but did not find one	47%	55%	52%	52%	59%	64%
Distribution of the discouraged by age						
15-24 years	50%	43%	41%	50%	33%	30%
25-34 years	21%	27%	27%	21%	25%	25%
35-49 years	22%	23%	26%	23%	31%	33%
50-64 years	7%	7%	6%	6%	11%	12%

Source: World Bank staff estimates based on NSI.

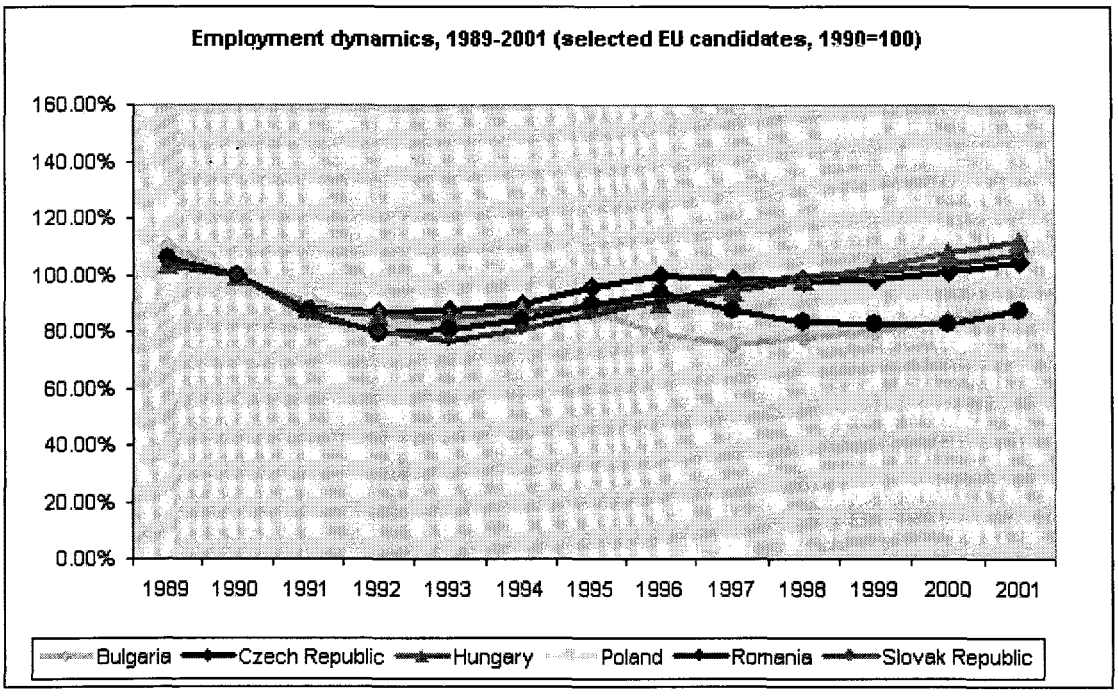
5.36 The characteristics and behavior of the discouraged, such as their labor supply elasticity, are largely unknown. Identifying measures and incentives to attract this large group into standard employment should help ease their current situation considerably. Treating the discouraged as unemployed would also significantly influence the official statistics. For example, the alternative

measure of the unemployment rate[102] in 2002 would become 15.3 percent, up from the official 11.1 percent.

C. EMPLOYMENT DISTRIBUTION AND CHARACTERISTICS

5.37 Aggregate employment appears to be on a gradual recovery path, but sectoral imbalances persists suggesting that substantial labor reallocation might follow. Throughout the transition, the employment dynamics in Romania have been correlated with the fluctuations in output and characterized by periods of growth alternating with intervals of contraction (Figure 5.1). Benefiting from a protracted upturn in economic activity, employment in Romania, as in CEECs, is currently on a slow recovery trend, following the initial collapse. While in the case of the EU frontrunners employment recovery has been sustained since 1994, in Romania (and also in Bulgaria) an employment upturn has recently begun. In this context, the main question concerns the sustainability of the current dynamics.

Figure 5.1 Employment Dynamics, 1989-2001, Selected CEECs (1990=100)

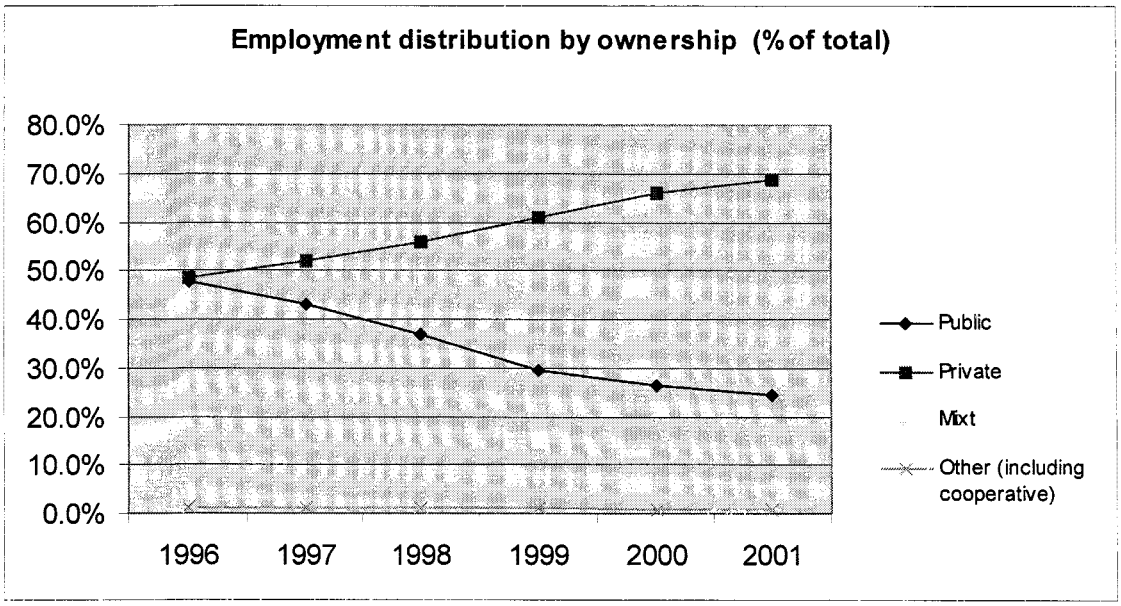


5.38 One of the most conspicuous reflections of the structural transformations that took place in the Romanian economy in recent years is the significant increase in employment in the private sector (Figure 5.2). Between 1996 and 2001, employment in enterprises having a private entity as majority shareholder has expanded from 50 to 70 percent of total employment. At the same time,

[102] Defined as total unemployed plus discouraged workers, as a percent of total labor force plus discouraged workers.

employment in the broad public sector has decreased continuously. In 2001 it contributed around 25 percent to total employment.

Figure 5.2 Employment Distribution by Enterprise Ownership (percent of total)



Source: NIS.

5.39 As privatization advances, with most of the companies in the energy sector—a large employer, earmarked for privatization—employment in the private sector is likely to expand. The share of employment in the SME sector has also increased constantly since the inception of the transition, reaching almost 50 percent at the end of 2001. The figure exceeds the 40 percent threshold, considered the minimum share below which economies are unlikely to take off in terms of growth.[103] However, some of the growth in the SME sector was attributable to the favorable fiscal treatment received at the expense of the larger firms. The removal of most of the fiscal facilities for the SMEs in 2001, through the introduction of a new non-discriminatory profit tax and VAT legislation, might explain the slowdown in employment growth in the SMEs that year.

5.40 By sector, employment in SMEs is concentrated primarily in retail services, trade, construction, and hotels and restaurants, and has a low participation in industry. Surprisingly, the number of employees in services suffered a decline between 2000 and 2001. The expansion of the large companies, such as the entry into the retail trade market of the international chains, appears to have contributed to this effect in spite of the improved access of the SMEs to financing sources.

[103] *Transition –the First Ten Years –Analysis and Lessons for Eastern Europe and the Former Soviet Union*, World Bank, 2002.

5.41 Two features of the employment structure cause some concern. First, the share of employment for those with primary education only remains high in Romania, even by regional standards (Table 5.9). Together with Poland, Romania is the country with the highest share of employment for those with primary education only, at 14.8 percent of the total. Bulgaria, the Czech Republic, Hungary and the Slovak Republic all have a significantly lower level of primary education employment. At the same time, the contribution of a highly educated labor force to total employment is comparable with that in CEECs, with only Hungary and Poland exhibiting higher shares.

Table 5.9 Structure of Employment by Education Level

	Tertiary	Secondary	Primary
Bulgaria	11.6%	86.3%	2.1%
Czech Republic	12.2%	87.7%	0.1%
Hungary	16.4%	82.7%	0.9%
Poland	14.7%	67.8%	17.5%
Romania	**12.9%**	**72.2%**	**14.8%**
Slovak Republic	12.3%	81.0%	6.7%

Source: ILO. Bulgaria and Czech Republic in 2001, the rest in 2000.

5.42 Improving the average level of education for the labor force requires further reforms in the education system, including more emphasis on quality education oriented towards the poor and low-skilled, and the adaptation of curricula to the needs of the labor market. Limited spending on education, at around 3.4 percent of GDP, presents risks of the de-skilling of the human capital and has a negative impact on productivity and labor market flexibility. In the long run, this translates into an irrecoverable output loss.

5.43 The second cause for concern is the fact that the share of part-time non-agricultural employment is low. As Table 5.10 shows, although part-time employment in Romania is high by CEE standards, the vast majority of this employment is concentrated in agriculture. Taking agriculture out, the share of part-time employment is lower than anywhere else in Eastern Europe.

Table 5.10 Part-time Employment in Selected Countries
(percent of total employment)

Country	1996	1997	1998	1999	2000	2001
Czech Republic	6.1	5.9	5.7	5.6	5.3	4.8
Hungary	5.5	5.8	3.5	3.5	3.2	2.8
Poland	10.6	10.5	10.4	10.9	10.8	10.3
Romania, of which:	**13.8**	**14.7**	**15.4**	**15.7**	**16.3**	**16.4**
non-agriculture	**1.9**	**1.8**	**1.8**	**1.7**	**2.0**	**2.0**
Slovak Republic	2.7	2.3	2.3	2.1	2.1	2.3
Italy	6.5	6.9	7.4	8.0	8.5	8.5
Netherlands	36.5	37.1	37.9	38.3	39.5	
United Kingdom	24.6	24.9	24.9	24.8	24.9	24.8

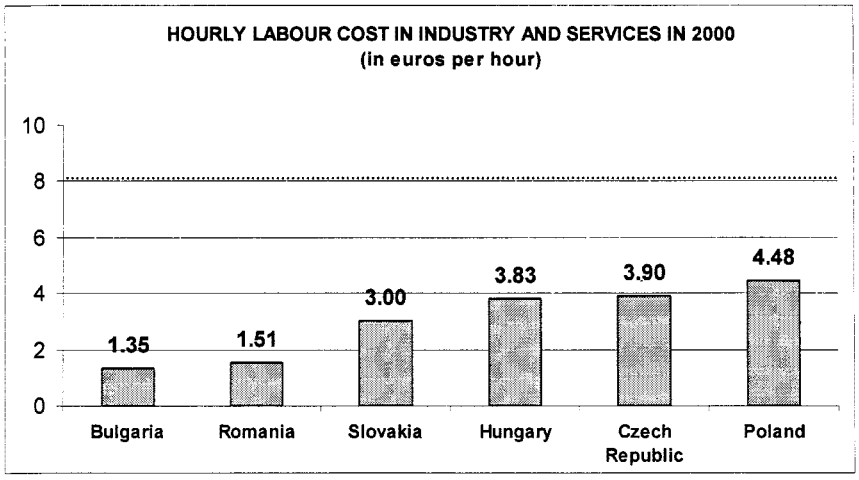
Note: Employment by full-time/part time distinction based on national definitions.
Source: World Bank staff estimates based on OECD and NIS.

5.44 The future dynamics of part-time employment in Romania will depend on the net effect of two factors. First, the adoption of a new Labor Code at the beginning of 2003 allows for the establishment of standard part-time and temporary employment agency (TWA) types of contracts, which did not exist until recently. This should encourage part-time employment, as out-of-the-labor-force individuals for whom full time employment is not an option might be tempted in this way to reenter the labor force. Second, the elimination of the civil contracts,[104] coupled with the high statutory taxes on labor, is likely to push workers to enter the informal sector, rather than registering as part-time workers (and paying the appropriate social insurance contributions). If the latter were to prevail in the short run, in the medium term the recent legislative changes should benefit the labor market, judging from the experience of other European countries, and part-time employment would be expected to increase.

D. Wages and Productivity

5.45 Wage distribution has widened and the linkage between wages and productivity has improved, but occasional slippages occur and rigidities (and rents) remain. Wages have yet to become the main mechanism for the allocation of labor resources. In terms of wages, the big losers appear to be agriculture, (where in 2001 wages were 71 percent of the average, down from 106 percent in 1990) and construction (at 85 percent in 2001, relative to 111 percent in 1990). The big gainers are the sectors in services, and primarily the financial services, where salaries in 2001 were more than two times higher than the average, up from below the average in 1990, and transport and storage. Overall, wages in industry have fared better than the average, thanks to male wages, which were 21 percent higher than the average. In general, male wages are higher than female wages, with the exception of agriculture and construction.

Figure 5.3 Hourly Labor Cost in Industry and Services in 2000 (in euros per hour)



Source: Vienna Institute for International Economic Studies (WIIW), research report no. 293, 2003.

[104] Casual evidence suggests that in the past most of the non-agriculture part-time contracts took the form of civil conventions, where holders did not pay social insurance and related contributions.

5.46 Despite the existing rigidities, unit labor costs remain attractive relative to the EU area and CEECs. Although unit labor costs have increased (in euro terms), Romania remains, together with Bulgaria, the country with the cheapest labor among the EU candidates. Romania's labor cost, measured in euro-equivalent, increased by 48 percent between 1995 and 2002. However, as illustrated in Figure 5.3, at around 1.5 euros per hour in industry and services, it remains well below that in the acceding countries and over five times lower than in Portugal, the EU member state with the lowest labor cost (at around 8 euros per hour). Following in the steps of the countries which joined the EU this year, Romania is likely to face further real exchange appreciation as the inflation differential with the Eurozone will not lessen fully (owing to price catch-up) and the labor costs, expressed in euro-terms, is likely to increase.

5.47 If the wage increases match the productivity gain differentials, external competitiveness would not deteriorate. Hence, in the short run the departure of real wage growth from productivity advances, which we are currently witnessing, constitutes more of a threat for the external balances, and we can already see a widening of the current account gap. However, recurrent unsustainable wage expansions represent not only a source of inflationary pressures and external balances deterioration, but can constitute a bad signal for the attractiveness of the business environment, with an adverse impact on FDI inflows.

5.48 A substantial burden is placed on labor by high social insurance contributions (see Table 5.11). At 49.5 percent of the gross wage, these contributions are the highest among the selected CEECs, representing a disincentive for job creation and pushing labor into the informal sector. The bulk of this burden is made up of the contributions to the pension system, at 31.5 percent. At the same time, the effective collection of the contributions is among the lowest in Europe, with only Albania displaying a poorer performance.

Table 5.11 Non-wage Components of Labor Costs in Selected Selected CEECs [1/]

	Social security contributions			Health care contributions			Contributions to unemployment fund			Total
	Employer's	Employee's	Total	Employer's	Employee's	Total	Employer's	Employee's	Total	
Bulgaria[2/]	0.37	0.02	0.39	0.00	0.00	0.00	0.04	0.01	0.05	0.44
Czech Republic	0.20	0.07	0.26	0.09	0.05	0.14	0.03	0.00	0.04	0.43
Hungary	0.22	0.05	0.27	0.11	0.03	0.14	0.00	0.00	0.00	0.41
Poland	0.10	0.10	0.20	0.07	0.09	0.16	0.04	0.00	0.04	0.39
Romania[3/]	**0.22**	**0.095**	**0.315**	**0.07**	**0.065**	**0.135**	**0.03**	**0.01**	**0.04**	**0.495**
EU			0.24						0.13	0.37

1/ Contributions are based on the gross salary received by the worker. Data refer to July 1999.
2/ Data refer to the third category of labor.
3/ Romania –data refer to 2003.
Source: IMF, Country Reports (various issues), Romanian Ministry of Public Finance.

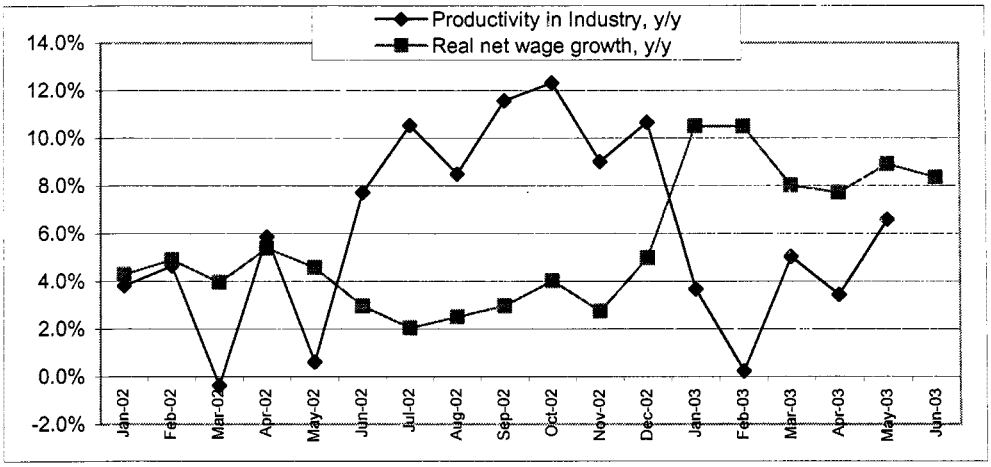
5.49 Despite several successive reductions in recent years, taxes on labor remain well above the EU average. Owing to a chronic imbalance between the number of contributors to the PAYG pension system and the number of pensioners, and the inadequate collection of the social security contributions, the high rates will not solve the problem of the social assistance budget, which has been in an endemic deficit in the last years. This deficit was estimated at around 1 percent of GDP

in 2002 alone, and declined slightly in 2003. Lowering labor taxation should make a major contribution to bringing informal employment into the formal sector.

5.50 The informal sector is sizable in Romania. Estimated at over 24 percent of the labor force, informal employment is higher only in Bulgaria, among the comparator countries. The large increase in poverty[105] during the transition, following the sharp decline in output and incomes and coupled with limited opportunities for finding employment in the formal sector, has contributed to a significant expansion in informal economic activities, not only in Romania but throughout the CEECs.

5.51 The evidence suggests that the relationship between poverty and the underground economic sector is strong.[106] This indicates that informal economic activities are used as a survival strategy for the poor to cushion negative income shocks during the transition. Informal economic activities thus decrease poverty and contribute to reducing inequality in Romania. However, a systematic diagnostic of the size, determinants and effects of a seemingly significant underground economic sector in Romania has yet to be undertaken.

Figure 5.4 Real Net Growth and Productivity



Source: World Bank staff computations using NIS data.

5.52 To contain unjustified wage growth in the SOE sector, wage bill ceilings have been imposed as part of successive Stand-By Agreements[107] with the IMF. In addition, the government has promoted a series of legislative acts that attempt to link wages to performance, such as by connecting management salaries in enterprises with key performance indicators,[108] by including the reduction in the level of payment arrears and claims, and by observing wage bill ceilings. In addition, company performance monitoring has been strengthened.

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[105] See *Romania Poverty Assessment*, World Bank, 2003.

[106] Kim, B.-Y. (2001), "*Poverty and Informal Economy Participation in Transition Countries: Evidence from Romania*", Essex University Working Papers, UK.

[107] The most recent Stand-by Agreement was successfully completed in October 2003.

[108] For example, Emergency Ordinance 79/2001.

5.53 Despite these attempts, the policies pursued to date have achieved limited success and overspending has often occurred in the monitored SOEs, suggesting that the problems are rather of a corporate governance nature. The EU Joint Assessment of Employment Policy Priorities (2002) recommends that Romania "develops together with the social partners a wage setting system that can be supportive of economic and labor market reforms and able to guide skill formation, mobility and reallocation of labor and ensure that wage developments are employment friendly."

5.54 In recent months real wage growth has exceeded productivity gains, as Figure 5.4 shows. This comes after a period of sustained productivity growth. The sharp increase in real wages occurred at the beginning of 2003 and appears to continue in 2004. This trend is primarily attributable to a rise in the minimum wage of around 43 percent in January 2003. The increase has brought the minimum wage to around 40 percent of the gross average wage, in line with figures for other CEECs. A further substantial hike in the minimum wage in the future, pursued by the trade unions, would complicate the situation even more and would reduce employment opportunities for those at the lower end of the wage distribution.

5.55 Evidence suggests[109] that around 9 percent of the employees receive the minimum wage[110] and a further 24 percent are just above this level, including many young and low skilled workers, most of them located in retail trade, construction, manufacturing, transport and public administration. In Romania the private sector pays less than the SOEs. In the private sector, 17 percent of workers receive the minimum wage[111] and a further 32 percent are paid just above the minimum wage. By contrast, less than 1 percent of workers in the SOEs are at the minimum wage (Table 5.12).

Table 5.12 Employee Distribution by Monthly Wage and Ownership, October 2002

	Less than US$52.6	US$52.6*	US$52.6 - US$90.2	US$90.2 - US$150.4	US$150.4 - US$210.5	US$210.5 - US$300.8	US$300.8 - US$451.2	US$451.2 - US$601.6	Over US$601.6
State	0.05	0.07	6.01	26.38	27.42	21.35	13.55	3.33	1.84
Majority state	0.13	0.63	9.86	22.99	20.94	22.71	13.09	4.70	4.96
Majority private	0.56	1.50	20.46	33.25	20.76	12.52	6.18	2.31	2.46
Private	0.37	17.24	32.29	27.64	11.51	6.03	2.78	0.97	1.18
Foreign	0.14	6.28	31.87	27.48	13.24	7.83	4.75	2.66	5.75

Note: * Minimum gross monthly wage in October 2002.
Source: World Bank staff estimates using NIS data.

5.56 Furthermore, considerable segmentation persists in the labor market, reflecting the protection afforded by the companies enjoying soft budget constraints. Earning functions analyses[112] suggest that wages of otherwise identical individuals from a labor market perspective differ significantly across industries, occupations, firm sizes and locations, after controlling for

[109] Staff computations using NIS data of October 2002.
[110] US$ 52.6 per month in October 2002, at the October average exchange rate (ROL/US$).
[111] Anecdotal evidence also suggests that many private employers understate the salaries of their employees to avoid paying high payroll taxes and social contributions. This might explain some of the figures.
[112] Using data from the Integrated Household Survey we highlight the main determinants of wages. The detailed results are presented in Annex 4.

other relevant variables such as general human capital characteristics or for compensating differentials. Jobs and industries do pay rents, and they range from 41 percent in mining to 18 percent in the energy sector above manufacturing wages, ceteris paribus. At the other end, wages in education are on average 26 percent, and in health 15 percent, lower than in manufacturing. Unskilled workers are paid on average between 20 and 26 percent less than skilled workers, with the difference lower for females.

5.57 Exposed to competition, private companies pay less than state firms, by 6 percent in the case of males while in the case of females the difference is statistically insignificant. The regression further shows that Roma workers are not paid less than others. In general, wages increase with the size of the locality, suggesting better job opportunities in larger cities. Wages in the Northeastern region, Moldova, are the lowest. The returns to education, at around 4 to 5 percent for an additional year of schooling, are relatively similar for men and women and lower than in mature market economies, although they show a gradual increase.113

Table 5.13 Estimated Male-Female Wage Differentials in 2000

	Males equation coefficients		Females equation coefficients	
		Percent		Percent
Wage difference	0.232	100	0.232	100
Controlling for differences in characteristics:				
Experience	0.040	17.0	0.040	17.2
Education	-0.008	-3.3	-0.007	-2.9
Marital status	0.008	3.3	-0.002	-0.7
Industry	0.047	20.1	0.031	13.4
Occupation	0.029	12.6	0.026	11.0
Legal form of the company	0.007	2.8	0.003	1.3
Nationality	0.000	0.1	-0.001	-0.2
Population	-0.001	-0.5	-0.001	-0.6
Region	0.002	0.9	0.001	0.4
ln(D+1)	0.109	46.9	0.182	61.2
D*	0.115		0.200	

D*= coefficient of discrimination (Oaxaca).
Source: World Bank staff estimates using Integrated Household Survey data.

5.58 Concerning male-female wage differentials and labor market discrimination, the analysis shows that the wage gap between men and women is around 23 percent114 (Table 5.13). The average value of the Oaxaca[115] discrimination coefficient is around 15 percent, lower than in most of the market economies, where it ranges between 20 and 30 percent. Under the specification presented in Annex 4, differences in education, experience, marital status, legal form of the company, and industrial and occupational segregation explain around half of the

[113] Returns on education were around 3 to 3.3 percent for an extra year of school in 1995.
[114] Widening from around 15 percent in 1995.
[115] Oaxaca, R., 1973, "Male-Female Wage Differentials in Urban Labor Markets," *International Economic Review*, vol. 14, no. 1, pp. 693-709.

wage differentials between males and females (see Table 5.13). The rest can be attributable to discrimination in the labor market.

5.59 The investigation points to the existence of considerable occupational segregation, with women concentrated mostly in low paying light manufacturing industries, such as textiles or clothing, while males dominate numerically in the heavy, and better paying, sectors such as mining and heavy industry.

E. Labor Market Policies

5.60 Employment protection legislation and the passive labor market policies promoted by the Romanian government did not substantially hinder labor market flexibility, as is evidenced by the high job destruction and creation before the adoption of the new Labor Code (Box 5.1). This might change with the introduction of the new Code, which many employers fear would increase hiring and firing costs and adversely affect job creation and company competitiveness.

5.61 The Code increases transactions costs for companies and thus risks having a negative impact on the perception of the investors, both domestic and foreign, about the business environment. Romania has the potential to draw levels of FDI that are well superior to the current figures, and this requires the establishment of an attractive business climate, including the existence of progressive labor legislation.

5.62 The World Bank PAL program, currently under preparation, supports the government's amending of the Labor Code in order to enhance growth and job creation, to stimulate investment, and to improve the competitiveness of the Romanian economy.

5.63 The Ministry of Labor, Social Solidarity and Family (MLSSF) and its agencies, primarily the National Employment Agency, are responsible for drafting and implementing labor policies. In recent years the institutional capacity of these agencies has been consolidated and their responsibilities have received further clarification. The Employment Agency administers, apart from the Unemployment Fund, the Active Labor Market Policies (ALMPs). Guided by the Strategy for Employment for 2002-04, [116] the Agency employs a spectrum of active measures, including public works, employment and business start-up subsidies, training, job counseling and brokerage, etc.

5.64 The framework for labor market policies has been strengthened in recent years. Overall expenditure on labor policies is comparable with that in other CEECs, but is lower than that in the EU-15. Expenditure on ALMPs, increased starting with 2001 and stands at around 15 percent of the total[117] (Table 5.14).

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[116] Adopted in October 2001.

[117] Recent information provided by MLSSF shows that expenditure on ALMPs has increased to 20.8 percent in 2003, and expected to reach 23.6 percent of the total in 2004.

Box 5.1 The Labor Code

A new Labor Code was approved in February 2003, and came into force on March 1 of the same year. The Labor Code defines the legal framework for the labor market and regulates aspects related to collective and individual contracts, working and leisure time, remuneration, health and working conditions, training, social dialogue, and conflict resolution. Although the Labor Code has only recently been enacted, it has already triggered numerous complaints from employers, both domestic and foreign. The Code is widely criticized for introducing significant rigidities in the labor market, with adverse consequences on job creation and labor costs.

Among the positive changes proposed by the Code, the elimination of labor booklets should simplify recording procedures and limit the opportunities for abuse and corruption. The Code also stipulates that the payment of the social assistance, unemployment and health insurance contributions is mandatory, and failure to pay on time constitutes a criminal offense, punishable by fine or even imprisonment. The effectiveness of these stipulations will, however, crucially hinge on their vigorous enforcement. The introduction of part-time employment and temporary work, which boosted employment in several EU countries (e.g. the United Kingdom and the Netherlands) is another positive aspect of the Code.

At the same time, some existing stipulations in the Labor Code require revision if they are to enhance the needed labor market flexibility and the competitiveness of the Romanian economy. These include:

a) The relaxation of restrictions on the use of term contracts. The current regulations of fixed-term contracts are restrictive by international standards. They can be made only on an exceptional basis (Arts. 80 and 81), with no possibility of renewals (Art. 84 (1)). Admittedly, these stringent provisions are partly offset by the introduction of the institution of a temporary work agency, but the Code does not allow for the existence of fixed-term contracts, in the standard sense. In addition, the probation period stipulated by the Code is too short to be a substitute for fixed-term, as a means to assess one's aptitudes to occupy a position, especially a highly skilled one.
b) The introduction of employer rights for labor retrenchment for economic reasons. The flexibility in the area of labor and labor relations includes a possibility to employ, adjust, distribute and dismiss work force based on the job requirements, to ensure the ability to adjust to the external market criteria, primarily the demands of customers and changes in the economic environment, to maintain competitiveness by means of cost control and to guarantee steady increases in the quality of products and services. Economic reasons (e.g. increasing productivity and profitability) should be added to a list of a valid reasons for dismissal. Currently, Art 65 (1) mentions only economic hardship, which is not sufficient. Firms may need to lay labor off even if they do not suffer from economic hardship but want to improve their market competitiveness.
c) The elimination of the application of branch contract agreements to all contracts in the sector. Mandatory extension of industry-wide collective labor agreements to non-participating employers should be discouraged (Art. 241 [2]). Or, there should at least be an "opt-out" option for employers, for whom complying with the industry level agreement is too costly. Evidence shows that these are usually small firms who are, as a rule, not well represented at the bargaining table. An industry level agreement negotiated by large employers, who can afford higher wages and benefits, may push small employers out of business.

In addition, critics noted several other issues of importance for the labor market which need further clarification and refinement, such as the provision for the establishment of the wage guarantee funds, the elimination of the use of civil contracts by converting them into regular contracts, the adoption of a 48 hour ceiling on overtime, and the requirement for employers to provide training for employees.

Table 5.14 Public Expenditure on Labor Market Programs in Selected Countries, 1991-2002 (percent of GDP)

		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Czech Rep	Total, *of which*:	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5		
	active (%)	43.6	62.2	53.3	48.4	51.9	46.2	34.4	36.1	36.7	43.1		
Hungary	Total, *of which*:		2.8	2.8	1.8	1.3	1.1	1.1	1.0	1.0	0.9		
	active (%)		21.5	23.6	33.5	31.8	33.0	41.1	38.6	41.2	45.3		
Poland	Total, *of which*:		2.5	2.5	2.2	2.2	2.2	1.1	0.6	0.6	0.8		
	active (%)		0.0	23.7	21.9	18.6	22.4	0.0	0.0	0.0	0.0		
Romania	**Total, *of which*:**					0.9	0.7	1.2	1.4	1.5	1.0	0.7	0.7
	active (%)					15.7	11.7	2.3	2.5	2.7	2.5	12.9	14.8
Netherlands	Total, *of which*:	3.7	4.0	4.3	4.5	4.2	4.8	4.5	4.1	3.9	3.6		
	active (%)	34.9	36.7	35.0	32.5	32.2	29.0	32.7	38.5	41.6	43.1		
Spain	Total, *of which*:	2.6	4.0	5.0	3.5	2.9	2.5	2.3	2.1	2.1	2.2		
	active (%)	27.4	18.0	10.9	14.9	18.7	18.0	21.2	28.0	33.3	37.7		
Sweden	Total, *of which*:	4.0	5.6	5.7	5.5	6.8		4.1	3.9	3.5	2.7		
	active (%)	59.9	53.0	51.9	54.1	51.0		49.2	50.4	51.9	50.7		
United	Total, *of which*:	1.91	2.18	2.14	1.91	1.69	1.43	1.15	0.96	0.92			
Kingdom	active (%)	28.8	26.6	26.2	27.7	26.6	28.7	33.0	34.4	39.1			

Source: World Bank staff estimates based on OECD and NIS.

5.65 Public works programs did not have a significant impact on employment and earnings, although they obviously reduced the duration of unemployment. As expected, the measures had different effects on various sub-groups. For example, the public works program did have a positive impact on older participants, but not on other categories.

5.66 The evidence suggests that the Employment Agency should improve the targeting of its programs, which is defined too broadly, as well as revising some of the instruments used. Linking outcomes with program expenditure should improve allocation efficiency and should be considered by the MLSSF as a useful policy choice. Defining clear performance indicators, measuring the extent to which policies achieve their desired objectives, and, in the longer term, introducing budget programming, should enhance the capacity of the MLSSF to design and implement coherent labor market programs.

F. Conclusions and Recommendations

5.67 The process of EU accession is becoming the main driver for the productivity-driven labor reallocation and labor market reforms in Romania. While in the short run the unfinished enterprise sector restructuring agenda constitutes the main determinant of the labor market dynamics, in the medium term the speed and depth of the integration with the EU will set the trends and the magnitude of labor market adjustments.

5.68 The liberalization of trade in industrial goods with the EU, starting from January 2002, and the implementation of the core of the EU legislation and regulations under the acquis communautaire are gradually opening the markets to competition and increasing the pressure on the Romanian enterprise sector to restructure internally and diversify its product range and quality. This trend is visible primarily in the tradable sector and has already resulted in important productivity gains. Enterprises are responding to increased competition with cost cuts, which are likely to entail further labor retrenchment. In the sectors less exposed to competition in the past, and especially in the network industries such as the energy sector, efficiency-driven reforms,

through privatization, restructuring and liquidations, are likely to result in large job losses. Consequently, one should expect additional inflows into unemployment and a further increase in the unemployment rate. Determined by the skill mismatch between the labor supply and demand, this unemployment is of a structural, long-term nature.

5.69 Against this background of significant economic restructuring, which, given the complexity of the processes entailed, is expected to continue well after accession, this research has identified several priorities for labor market reforms. These come under several headings, as listed below.

5.70 **Revisit the legal and institutional framework for the labor markets and address the rigidities imposed by the new Labor Code.** The new Labor Code includes aspects that threatens to reduce labor mobility. By discouraging labor mobility, the Code complicates further progress in structural reforms and introduces unnecessary rigidities in the labor market, which could affect the speed and the direction of the reforms and could slow down the process of EU convergence. In particular, the Code will create new impediments to enterprise restructuring and will thereby adversely affect the competitiveness of the Romanian economy. The Code increases the risk that Romania will repeat the experience of many EU countries that paid with high and persistent natural unemployment rates for their reluctance to increase labor market flexibility.

5.71 Substantial changes to the current draft are required if the Code is to support an efficient labor market which will eventually benefit all citizens. Particular attention should be paid to the most critical areas, which are the justification and procedural costs of dismissals, the limited use of fixed-term contracts, working time flexibility, and the role of labor unions in corporate governance. Strengthening the institutional capacity of the agencies involved in the design and implementation of labor market policies should continue as the country prepares for substantial European structural funds inflows after accession. This is especially needed, given the increased delegation of responsibilities and resources from the central agencies to the local labor offices.

5.72 **Encourage labor participation by bringing the working-age population back into the labor market.** Identifying ways to increase employment rates, especially for women, constitutes a key condition for achieving sustainable economic growth and real convergence in incomes with the EU. Raising employment rates will help restore fiscal sustainability by broadening the taxation base and increasing the resources allocated for public programs, such as the PAYG pension system. In this context there is a need for tailor-made programs focusing on increasing the employability of the labor categories adversely affected by this transition. Among these categories one can single out discouraged workers, early retirees, unpaid family workers and the long-term unemployed. A combination is needed of targeted measures that will enhance the flexibility of employment by encouraging temporary and part-time job creation, and the use of TWAs and active labor market policies focusing on specific disadvantaged labor groups.

5.73 Introducing incentives for those who wish to continue to work beyond the retirement age would not only result in higher levels of output and higher tax revenues, but would also have a positive impact on poverty reduction, as these groups are vulnerable to or are already in poverty.[118] Relaxing the provisions of the Labor Code to address this obstacle, principally by

[118] See the World Bank, 2003, Romania *Poverty Assessment.*

easing hiring and dismissal conditions, is likely to result in important added-worker inflows which would boost participation.

5.74 **Encourage employment mobility to support a more rapid reallocation of labor across sectors.** Labor reallocation is fundamental for a successful transition in Romania. Throughout the transition, employment trends have been determined by a combination of conjectural and permanent factors, with the weight unbalanced towards the former. The sectoral employment structure differs significantly between Romania and the EU economies in spite of important changes that have taken place in the last several years. Employment in agriculture and in the heavy and network industries remains unsustainably high. At the same time, employment in services is half of that in the EU.

5.75 Some of the current labor market trends are likely to be reversed through the liberalization of the markets and the removal of the existing constraints, such as the high transaction costs that restrict entry into some sectors and jobs. Employment reallocation is therefore a task that must fall upon the "external" labor market. It can be achieved only by the physical mobility of workers who leave one enterprise, probably in a declining sector, and find work in another. Reallocation in the context of Romania will have to be multidimensional, with workers changing not only their companies and sectors, but also their occupations and probably their job locations. It is thus the dimension of restructuring in which any deficiencies in the labor market—such as impediments to labor mobility, poorly developed employment exchange facilities, excessive specific training on the previous job which is not transferable to alternative employment, or industry rents—are likely to have the most severe effects.

5.76 **Active Labor Market Policies (ALMPs) can only be useful if these complement flexible labor market rules.** ALMPs are expensive and their effects are not sustainable unless there are flexible market rules. Recent legislative changes, and primarily the adoption in 2002 of the Law on Employment Promotion, have led to the establishment of a framework for ALM programs. Public works schemes, employment and business start-up subsidies, and job brokerage have been introduced, and access for the unemployed has been widened to cover non-recipients of benefits. This has resulted in a larger participation of the unemployed in the programs, and has stimulated job creation. Their costs, benefits and sustainability, however, is not known. These need to be monitored closely and their net benefits assessed before expanding them further. To facilitate employment of youth and low-skilled and displaced workers, as well as the long term unemployed, policies should continue to reduce the costs of hiring these categories.

5.77 **Continue the reforms of the tax and benefits systems, in terms of policy and administration, to further reduce labor costs.** High taxes represent important barriers to job creation, affect the competitiveness of Romanian enterprises and push firms into the informal sector. The simplification of the tax system and the recent adoption of a new Fiscal Code should stimulate job creation and give a boost to the SMEs, with a positive impact on employment and productivity in this sector. The unification of the collection and administration of social assistance, health and unemployment contributions under a single agency coordinated by the Ministry of Finance is expected to improve collection rates. However, the statutory rates of labor taxation remain high, despite the recent reductions in social assistance contributions, and effective collection as a percentage of GDP remains low.

5.78 **Develop a wage setting system where wage increases correlate with productivity growth at the firm level, so that it can be supportive of employment-friendly economic and labor market reforms and able to guide skill formation, mobility and the reallocation of labor.** Romania should adhere more closely to discipline in incomes policy and hence better control on wages in the public sector is needed. Wages in the private sector should be set at the firm level in line with productivity. Benefits of growth can not be more broadly shared unless wage income is set according to performance and productivity gains at the firm level.

5.79 To further lower labor costs, the government should contemplate more moderate increases in the minimum wage in the future, eventually by linking it to the expected inflation. Since many low-skilled and young persons are clustered around the minimum wage, they will be among the first to benefit from increased **employment** opportunities if the minimum wage stays at a moderate level relative to the average wage.

5.80 **Accelerate the restructuring of agriculture and design programs to assist the redeployment of labor released from this sector.** Agriculture necessitates special attention in Romania because of its high contribution to employment. While its share in GDP is around 13-15 percent, agriculture continues to be the largest employer in Romania, with more than 30 percent of the labor force.[119] These numbers are unsustainable, as the experience of the EU cohesion countries suggests, and we should expect a sharp decline in agricultural employment in the coming years. Encouraging alternative employment opportunities and supporting income-generating activities in the rural areas, away from agriculture, should reduce the restructuring costs for the sector and facilitate integration with the CAP.

5.81 The high average age of the population working in agriculture and its reduced skill levels limit the transferability of workers to alternative jobs. We can thus expect the productivity-driven reforms of the agricultural sector and the adoption of the CAP regulations to trigger a strong push effect, sending labor from agriculture out of the labor force. Mitigating the anticipated adverse consequences of this phenomenon would require paying attention to the social **assistance** needs of those with a high chance of being displaced from agriculture. The success in reducing extreme poverty exhibited by the Minimum Income Guarantee program introduced in 2002, set a good example of effective instruments of this type of assistance.

5.82 **Increase investment in human capital and address the skill mismatch gap.** Investment in education in Romania, at 3.4 percent of GDP, is low by regional standards. As the country is undergoing significant economic restructuring, and as economic growth takes off, the demand for labor could become the reality check for the relevance of education. Present unemployment features such as high and long-term unemployment among new graduates and low level educated youth indicate a mismatch between the skills that the education system provides and the labor market demand. Policies designed to assist recent graduates and inexperienced workers have contributed substantially to the improvement of the employment chances of these categories. Notwithstanding these successes, more is needed to reduce labor mismatch. Educational institutions (VET, post-secondary and higher education) should conduct

[119] The 2002 census data indicate a recent decline in the number of people working in agriculture.

tracer studies to identify both match and mismatch situations and reorient the profiles, study streams and curricula accordingly.

5.83 The education system is undergoing a comprehensive reform that has already produced significant changes, especially in compulsory education. Reform measures were piloted in the vocational education and training (VET) system, with support from the EU. These measures need to be scaled up to the level of the entire system. Improvements are still needed, mostly with regard to the relevance of secondary and tertiary education. Universities were also included in a modernization process, which entailed improvements in management and financing, accreditation, and curricula. These reforms were carried out more in an anticipatory manner than in response to economic and social pressures.

5.84 In sum, EU accession is becoming the main driver of labor market reforms in Romania. In the medium term, labor market reforms are needed to accelerate and deepen integrating with the EU in order to alter the trends and magnitude of labor market adjustment. The urgency of the above reforms is highlighted by the worrisome trends of an expanding share of the labor force in agriculture. Without enhancing labor market adjustment, Romania's economic potential can remain largely untapped.

6. FROM QUASI-FISCAL FINANCING TO EFFICIENT FINANCIAL INTERMEDIATION

6.1 In addition to labor markets, financial sector development is the factor market that plays a critical role in economic restructuring. [120] A sound and efficient financial sector is essential if Romania's efforts to restructure its economy from low to higher productivity activities are to succeed.[121] Without a financial sector that efficiently mobilizes and directs finances toward the most productive investment opportunities, the accumulation of savings is limited and these resources are not channeled to the most productive investments.[122] The 2003 Joint Bank-Fund Financial Sector Assessment Program for Romania[123] includes a comprehensive analysis of, and policy recommendations for, the challenges of financial sector development. This study is based on this work and builds on it from the perspectives of stability, growth, and integration with the EU.

A. INTRODUCTION

6.2 Romania has made important progress in consolidating the financial sector since 1999, when bank restructuring took hold. The regulatory and supervisory environments have improved, which will provide the foundation for a stronger financial sector. However, the basic financial infrastructure needs to be further developed to ensure an efficient and secure financial market that will help stabilize the economy and will set it on a higher growth path by mobilizing and directing finance toward more productive economic projects.[124] In view of these facts, this chapter provides a rationale for a public policy that is aimed at improving the fundamentals of financial markets in Romania, presents a summary of the structure and performance of these markets, and suggests policy recommendations to achieve these objectives.

B. THE STRUCTURE OF THE FINANCIAL SYSTEM

6.3 Romania's financial system has undergone a major transformation since the start of the transition. Like to most of its peers, Romania had to fundamentally reform the mechanism of the financial sector, as the monobank structure needed to be replaced with a banking system, and equity and corporate debt markets had to be created from scratch. In the past, poor macroeconomic management and the failure to establish financial discipline in both the financial and the corporate sectors made the development of a financial sector a difficult undertaking in Romania. The financial sector is dominated by the banking sector (Table 6.1).

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[120] This chapter was prepared by Stella Ilieva (ECSPE), Economist, World Bank. The chapter builds on the Joint Bank-Fund Financial Sector Assessment Program, World Bank and International Monetary Fund, 2003.

[121] *Finance for Growth: Policy Choices in a Volatile World*, World Bank.

[122] Financial infrastructure refers to legal and regulatory structures, supervisory rules and practices, accounting and auditing rules and practices, credit bureaus and registries, payments systems, and exchange systems.

[123] Joint Bank-Fund Financial Sector Assessment Program, 2003.

[124] *Finance and the Sources of Growth*, Beck, Levine, and Loayza, 1999.

6.4 Bank restructuring got off to a comparatively late start in Romania and still remains high on the agenda, whereas it has been largely completed in other CEECs. As shown in Table 6.2, the state has largely withdrawn from the banking sector in most of the CEECs, with its asset shares at the single digit levels. State ownership in Romania, however, continues to be high—at around 40 percent.[125] End-2002, state ownership of the banking sector was close to the median share of its peers seven years ago. Foreign ownership of banks in Romania is also substantially lower, compared to more than 80 percent in the other CEECs.

Table 6.1 Structure of the Financial System, 2002

	As of end-2002		
		Assets	
	Number of Institutions	In ROL Billions	In percent of GDP
Commercial banks	39	469,712	31.1
Credit cooperatives	1 network	2,687	0.18
Credit unions	3,895	5,079	0.34
Financial investment companies (SIFs)	5	21,969	1.45
Financial investment service companies	77	723	0.05
Investment funds	26	1,288	0.09
Of which:	23	999	0.07
Open-ended investment funds	3	289	0.02
Venture capital funds			
Insurance companies 1/	49	22,841	1.51

1/ The pension scheme authorities and Fund estimates is a state-organized "pay as you go" system and there are no private pension funds.
Source: NBR.

Table 6.2 Asset Share of State-Owned Banks in CEECs, 1996-2002

	1996	1997	1998	1999	2000	2001	2002
Lithuania	54.0	48.8	44.4	41.9	38.9	12.2	0.0
Estonia	6.6	0.0	7.8	7.9	0.0	0.0	0.0
Slovak Rep.	54.2	48.7	50.0	50.7	49.1	4.9	2.9
Latvia	6.9	6.8	8.5	2.6	2.9	3.2	4.0
Czech Rep.	16.6	17.5	18.6	23.1	28.2	3.8	4.6
Hungary	15.3	3.5	9.8	7.8	7.7	9.1	10.8
Bulgaria	82.2	66.0	56.4	50.5	19.8	19.9	14.1
Poland	69.8	51.6	48.0	24.9	23.9	24.4	26.6
Romania	**75.9**	**73.0**	**71.0**	**46.8**	**46.1**	**40.4**	**40.4**
Slovenia	40.7	40.1	41.3	42.2	42.5	48.9	48.6
Median (exc. Romania)	*40.7*	*40.1*	*41.3*	*24.9*	*23.9*	*9.1*	*4.6*

Source: EBRD Transition Report, 2003, and NBR for Romanian data.

6.5 Indeed, Romania made important progress in changing the ownership structure of its banking system in 1999 and 2001. State ownership in banks declined from over 70 percent of banking system assets in the mid-1990s to 47 percent in 1999. Bank restructuring became

[125] In May 2004, the government privatized 33 percent of the shares of BCR.

inevitable after the crisis in 1998-99 which was triggered by the dire condition of two large state-owned banks—Bancorex and Banca Agricola. Several years of directed lending to nonviable SOEs and to agriculture, and massive mismanagement of funds, led to the accumulation of large amounts of bad loans in both banks. In 1999, Bancorex (accounting for one-fourth of the banking system's assets) was liquidated after several failed attempts at its restructuring, including through recapitalization.[126] Its bad assets were transferred to the Asset Recovery Agency (AVAB), and the rest were transferred to Banca Comerciala Romana (BCR). In contrast, Banca Agricola was recapitalized, its bad assets were removed, and it was prepared for privatization. The same year saw the privatization of two state-owned banks (the Romanian Bank for Development and Banc Post), which were sold to foreign investors, and in 2001 Banca Agricola was finally privatized.

6.6 Presently the state continues to be one of the major players in the banking sector. Out of the 39 banks operating in Romania in 2002, three are state owned—BCR[127], the Savings Bank (CEC), and the Export-Import Bank of Romania (EXIMBANK). They account for nearly 40 percent of bank assets and deposits, and 32 percent of loans (Table 6.3). BCR is by far the most important bank in the market, accounting for about 31 percent of the banking system's assets, while the Savings Bank enjoys a full state guarantee on deposits. Domestic banks also include a small number of privately owned banks, which constitute a very small share of the market (4 percent of assets and 3 percent of deposits). The remaining 32 banks account for 56 percent of the system's assets. These banks include subsidiaries of large multi-national banks, subsidiaries of other smaller foreign banks, or branches of foreign banks. All these banks hold 57 percent of the deposits and extend 64 percent of the loans in the country.

6.7 While the sale of 33 percent of BCR in May 2004 is a step forward, the continuing strong presence of state-owned banks places Romania at a disadvantage compared to other EU accession countries, where the benefits of private sector ownership are already visible. These benefits include deeper financial intermediation, diversification and innovation of the financial services provided, and increased competition, which leads to better and less costly services for supporting a stronger corporate sector.

6.8 Non-banking financial institutions are underdeveloped and consist mainly of insurance companies and financial investment companies (SIFs). Capital market capitalization accounted for 11 percent at end-2002.[128] Annex 5 provides a brief summary of the non-banking financial institutional sector in Romania extracted from the Joint Bank-Fund Financial Sector Assessment Program of 2003.

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[126] Estimated at an equivalent of US$600 million in government bonds (2 percent of GDP).

[127] In May 2004, the government privatized 33 percent of the shares of BCR.

[128] The insurance sector is very small, despite the large number of insurance companies. Its assets are estimated at only 1.5 percent of GDP. There are also five financial investment companies of a similar size. Credit unions and credit cooperatives together hold assets of about US$230 million.

Table 6.3 Composition of the Romanian Banking Sector, 1996-2003

	1996	1997	1998	1999	2000	2001	2002	H1-2003
Number of commercial banks	40	43	45	41	41	41	39	38
Romanian incorporated banks	31	33	36	34	33	33	31	30
State-owned	7	7	7	4	4	3	3	3
Private	24	26	29	30	29	30	28	27
of which, joint venture with foreign	10	13	16	19	21	24	24	23
Branches of foreign banks	9	10	9	7	8	8	8	8
Share of total banking sector assets (%)								
All commercial banks	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Romanian incorporated banks	96.2	92.7	94.3	92.9	92.2	92.1	92.6	92.7
State-owned	75.9	73.0	71.0	46.8	46.1	41.8	40.4	40.4
Private	20.3	19.7	23.3	46.1	46.1	50.3	52.2	52.3
of which, joint venture with foreign	7.5	10.5	14.3	40.4	43.0	47.3	49.0	48.6
Branches of foreign banks	3.8	7.3	5.7	7.1	7.8	7.9	7.4	7.3
Share of total banking sector loans %								
All commercial banks	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Romanian incorporated banks	97.7	93.7	92.8	90.0	88.5	88.9	89.5	90.3
State-owned	79.9	73.0	72.1	38.8	30.4	31.8	31.4	31.7
Private	17.8	20.7	20.7	51.2	58.1	57.1	58.1	58.6
of which, joint venture with foreign	5.9	8.7	11.6	45.1	54.7	53.5	54.5	54.5
Branches of foreign banks	2.3	6.3	7.2	10.0	11.5	11.1	10.5	9.7

Source: National Bank of Romania.

C. The Role of the Banking Sector

6.9 The level and quality of financial intermediation in Romania has improved substantially over the last four years. At present the banks are liquid, well capitalized, and relatively profitable, and the systemic risk appears low. However, compared to other CEECs, financial intermediation and monetization in Romania remain shallow, reflecting a difficult macroeconomic environment, delayed structural reforms, and an uncertain and insecure legal framework (Figures 6.1 and 6.2). The slow pace of the restructuring of the corporate and financial sectors in Romania has encouraged the persistence of non-payment in the economy, and this has significantly constrained the deepening of the financial sector in the country. Thus, the banking sector in Romania has not been provided with the incentives to effectively mobilize the resources to finance investment and growth.

6.10 Monetization as measured in terms of the ratio of broad money to GDP has been slowly recovering to pre-crisis levels and accounted for about one-fourth of GDP in 2002, which is two to three times lower than in the Czech Republic, Hungary and Poland. High levels of inflation and negative real interest rates, coupled with a low level of confidence in the banking system and a dynamic informal sector, have discouraged savings in Romania. Nevertheless, with the improvement of the macroeconomic environment, deposits have been gradually increasing since 2000.

Figure 6.1 Broad Money to GDP, 2002 (percent)

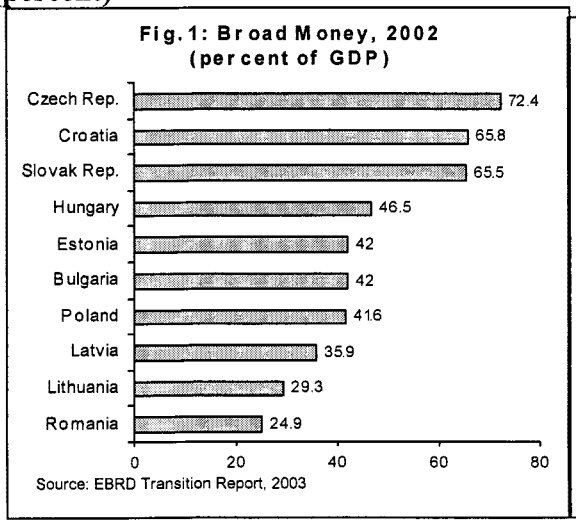
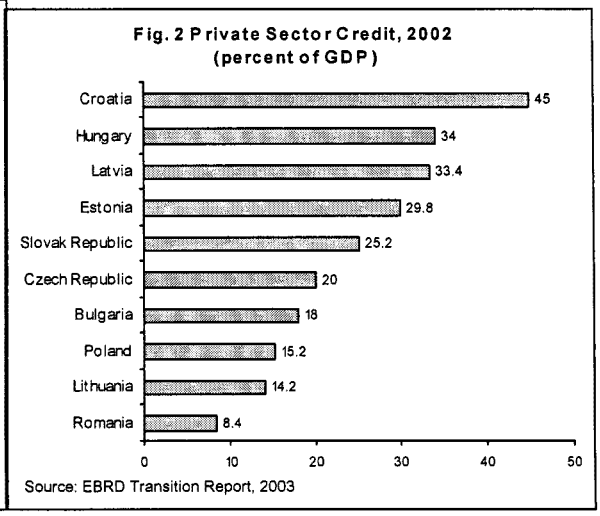


Figure 6.2 Private Sector Credit, 2002 (percent)



6.11 Domestic credit has been low in Romania compared to other countries in the region, and this was the case even before the banking crisis that Romania experienced in 1999. The distorted macroeconomic environment, particularly the high interest rates and volatile exchange rates, presented to obstacles and perverse incentives for the activities of the commercial banks and also shortened the horizon of credits. In addition, bank access to long-term funding was limited, and thus banks were not able to provide medium term and long-term credit to finance long-term investments. The prevalence of state ownership in the banking system led to weak internal governance and poor lending decisions. This caused a dramatic deterioration in the banks portfolios, which was further exacerbated by the weak legal and institutional capacity for debt collection and contract enforcement. Sound banking under these conditions meant mainly investing in T-bills: the rates of return on this safe asset were higher than on riskier alternatives.

6.12 Apart from the legacy of the banking crisis of 1999, the low intermediation and investment levels may be explained by: (i) the liquidity preferences of banks; (ii) the high cost of bank lending; (iii) the lack of growth opportunities; and, (iv) the structural deficiencies of the credit market.

6.13 Banks prefer to keep high liquid positions rather than involving themselves in risky lending, as most of the companies are incurring losses and also maintain high stocks of arrears and lack growth opportunities. Moreover, the interest rates offered by the NBR on non-reserve deposits have often been a better alternative than loans. Compared to other countries in the region, inter-bank activity in Romania is low. The limited inter-bank market in Romania contributes to banks holding additional liquid assets in order to self-insure against a higher than usual demand for liquidity.

6.14 Similarly, the combined effects of non-payment and accumulation of arrears by enterprises and high cost of capital have depressed the demand for bank credit. Non-payment is common not only among companies that are facing soft budget constraints, but also among

healthy enterprises that chose to delay tax payments because they are encouraged by a long history of tax arrears and forgiveness and by the comparatively low penalties for outstanding tax debts.

6.15 As shown in Table 6.4, bank credit represents only 8 percent of the total financing of the corporate sector, and firms are predominantly financed by equity[129] and arrears to the state.[130] The latter constitute more than on-third of the liabilities, with tax arrears accounting for about half of the total. The amount of overdue bank debt is small relative to total debt, and both the percentage of firms with overdue credit and the share of overdue credit in total debt have fallen since 1999. There is also evidence that private domestic and foreign-owned companies tend to rely more on bank debt as opposed to state-owned companies, which have higher tax and social security arrears. Trade credits provide for about 16 percent of firms' financing, with more than one-third of the trade credit being overdue. The bond market is virtually non-existent.

Table 6.4 Sources of Funds for Romanian Firms in 2001
(Percent of total financing)

Stocks	1999	2000	2001
Number of firms	1,155	932	726
Internal Financing	7.4	10.0	12.8
Retained earnings	6.8	8.9	11.9
Reserves	0.6	1.1	0.9
External Financing	58.8	51.8	52.5
Share capital	35.6	29.2	28.3
Bonds	0	0	0
Bank debt	10.1	7.6	8.3
Trade credit	13.1	15.0	15.9
Arrears	33.6	38.2	34.6
Taxes	19.2	22.6	15.2
Social security	6	5.7	7.2

Sources: Ministry of Finance and staff estimates, Financial Sector Assessment Program, 2003.

6.16 Banks are reluctant to lend to enterprises, either because they are perceived to be especially risky or because they are unprofitable and lack growth opportunities. Only a few enterprises are profitable, and are sufficiently liquid to commit an acceptable amount of their own equity to a new investment project. Moreover, only a few enterprises are able to establish their creditworthiness, given the quality of their financial statements and the lack of audited reports. Despite the fact that since 1999 the corporate sector has shown improvements in profitability, about one-third of the firms are still unprofitable and do not generate the cash flow to service their debt. Large state-owned manufacturing firms with high tax and inter-enterprise arrears have less than half of the bank credit that is given to private firms with high tax arrears.

6.17 Bank lending decisions are influenced to a large extent by the reliability of the borrowers' financial statements. Moreover, banks find it difficult to monitor managers and to exert corporate control after the financing has been made. Poor financial reporting, accounting and auditing

[129]Which includes mainly share capital and revaluations as, equity issues are limited.
[130] The firms in Table 6.4 are BSE and RASDAQ traded firms with more than 50 employees.

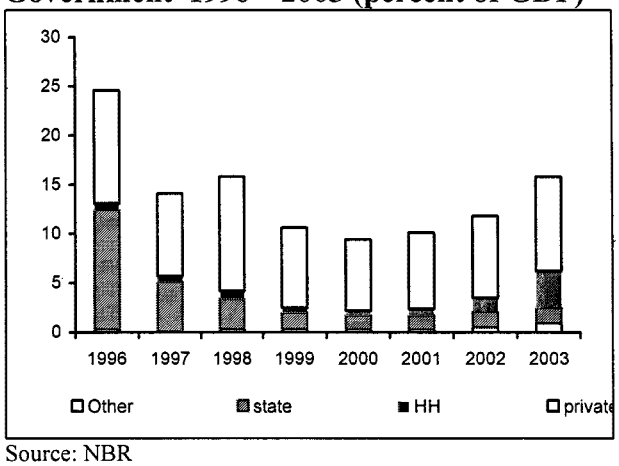
norms and practices prevent banks from effectively allocating resources to productive investments and thus influencing capital accumulation and long-term growth. The recent introduction of international accounting standards (IAS) is important for improving the quality of firms' financial statements and building confidence among market players. Their full implementation is central to strengthening Romania's basic financial infrastructure. The adoption of the inflation accounting principles (IAS-29) is especially important because most Romanian companies have not revalued their assets since 1994 despite the high inflation during the period. As a result, most of the current balance sheets underestimate the value of assets.

6.18 Another important factor in the development of efficient financial intermediation is the availability and transparency of information about borrowers. A reliable and widely accessible credit registry would not only allow banks and other intermediaries to better assess potential borrowers, but it would also contribute to greater competition between lenders, and, last but not least, might have a disciplining effect on borrowers.[131] Currently, the Credit Information Bureau at the NBR includes only those financial institutions regulated by the NBR and does not take account of small commercial or most consumer loans. It is important to make the credit history of entrepreneurs, which is generally used to grant loans to SMEs, readily accessible to creditors.

6.19 Romanian banks have limited operational capacity for providing credit to profitable entrepreneurs, new businesses, and SMEs. There is a need to improve credit skills, financial statements, and develop credit history information in the credit bureau. The technologies used by the banks need to be modernized. Improvements are being carried out mainly by foreign banks.

6.20 Credit growth, especially credit to the non-government sector, has accelerated with improved macroeconomic performance (Figure 6.3). Domestic credit grew from 14 percent of GDP in 2000 to close to 15 percent in 2003. As shown in Figure 6.3, credit to households, mainly in the form of consumer credit, was the fastest growing component of credit to the non-government sector. It more than doubled in 2000-02 and in 2003 was close to 4 percent of GDP, or one-fourth of credit to the non-government sector. Credit to private enterprises experienced a growth of close to 2.5 percent of GDP between 2000 and 2003. Claims on the SOE's have steadied at around 1.5 percent of GDP since 2000. However, these developments are taking place in an environment in which the fundamentals for lending are of still developing, thus making reforms to strengthen basic financial infrastructure of critical importance.

Figure 6.3 Domestic Credit to Non-Government 1996 – 2003 (percent of GDP)



Source: NBR

[131] Beck, T, 2000, *Impediments to the Development and Efficiency of Financial Intermediation in Brazil.*

6.21 While the expansion of lending over the last couple of years is not uncommon among most of the CEECs, and is even stronger in these CEECs than in Romania.[132] credit growth in Romania has been associated with a lower degree of restructuring of the financial sector.[133] poorer financial discipline and a weaker corporate sector. Thus, while the fact that banks are providing more of their core services to the private sector is a welcome development, there are some macro and financial stability implications that have to be considered.

6.22 From a macroeconomic point of view, the expansion of consumer credit has already negatively affected the external current account deficit, which widened to a projected 4.8 percent of GDP in 2003. Moreover, as most of the domestic banks have limited access to international funding, the demand for credit by households and firms has to be offset by a comparable increase in the savings rate, yet the dynamics of household deposits in Romania is far below the growth rate of credits. Another significant risk could materialize in the case of lei devaluation on the part of un-hedged borrowers, as they may have difficulties in servicing their debt.

6.23 In view of the recent developments in financial intermediation, bank supervision needs to be significantly strengthened and underpinned by an effective regulatory framework to limit the incentives for undue risk-taking by banks. This entails ensuring timely and accurate information from both the financial sector and the corporate sector, and improving contract enforcement. The importance of a good regulatory and supervisory infrastructure for lending is evident especially with a dynamic bank lending environment and a comparatively weak corporate sector.

D. The Soundness of the Banking Sector

6.24 The dominance of the state in the banking system, and the lack of effective supervision and regulation, led to weak internal governance and poor lending decisions prior to 1999, which caused a dramatic deterioration in banks' portfolios. Non-performing loans soared to more than 70 percent of gross loans. Sound banking under these conditions meant mainly investing in T-bills as the rates of return on this safe asset were higher than riskier alternatives.

6.25 With start of the restructuring of state-owned banks and the introduction of stricter rules and regulations for bank supervision, the soundness of the banking sector in Romania has improved significantly. The closure of Bancorex in 1999 and the transfer of the bad assets in the system to AVAB[134] improved the overall health of the banking system (Table 6.5). Since then, banks appear to be well capitalized, liquid, profitable and they have limited market and credit exposure. Capital adequacy ratios improved from 18 percent in 1999 to 23 percent in June, 2003. Non-performing loans declined from 53 percent in 1999 to close to 2 percent in 2002 and are now on a par with those reported by other CEECs. Return on assets has more than doubled over the same period, while liquidity ratios have been much higher than required.

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[132] For more details, see *Early Birds, Late Risers and Sleeping Beauties: Bank Credit Growth to the Private Sector in Central and Eastern Europe and the Balkans*, IMF Working Paper, Carlo Cottarelli, Giovanni Dell'Ariccia, and Ivana Vladkova-Hollar, November 2003.

[133] The EBRD Index of Bank Reform for Romania is the lowest among the CEECs.

[134] Close to US$2.3 billion in bad assets from Bancorex and Banca Agricola were transferred at that time to the Asset Recovery Agency.

6.26 However, with the recent expansion of credit a slight worsening of prudential indicators has taken place, which raises concerns about the sustainability of rapid credit growth in a system that is still dominated by large state-owned banks that lacks comprehensive credit information and reliable financial statements, and that follows inefficient debt enforcement practices.

6.27 The capital adequacy ratios show that banks in Romania are well capitalized: reported capital adequacy ratios have been consistently higher than the required 12 percent,[135] although they have been declining lately. The challenge is now to implement the new accounting rules by fully implementing IAS, particularly IAS-29. Similarly, it is central to implement the requirements, introduced in 2004, to report on a consolidated basis, as a number of banks have subsidiaries outside the banking sector.

Table 6.5 Financial Soundness Indicators, 1998-2003

	1998	1999	2000	2001	2002	2003[1]
Capital Adequacy Ratio[2]	10.25	17.90	23.79	28.80	25.04	22.82
Tier 1 / Risk Weighted Assets[2]	na	15.82	18.90	26.21	22.93	21.15
NPLs/ Gross Loans[2]	71.7	52.6	5.2	3.3	2.3	9.1
Return on Average Assets	0.06	1.47	1.49	3.10	2.64	2.43
Interest Margin/Gross Income	na	na	-0.21	5.17	7.77	9.09
Liquid Assets/Total Assets[2]	na	na	na	77.10	78.59	70.88
Liquidity Ratio (actual/required liquidity)				1.30	1.37	3.48
Loans / Deposits	56.93	43.92	43.91	44.69	48.03	58.22

Notes:1. Data as of June 2003, with the exception of NPLs/Gross Loans (as of November 2003), and liquid assets/total assets (as of May 2003). 2. Foreign banks branches are not included.
Source: NBR.

6.28 Another factor behind the current liquid position of the industry relates to the monetary policy of the NBR, which is aimed at absorbing liquidity associated with capital inflows by issuing deposits. Government securities and NBR deposits have been attractive investments for banks since the beginning of transition. Banks also maintain high liquidity because of the underdeveloped inter-bank market as a result, to some extent, of the perceived risks in the system. The planned implementation in 2004 of the new electronic inter-bank Real Time Gross Settlement System (RTGS) would improve the infrastructure for an efficient inter-bank market and would allow banks to better manage their liquidity.

6.29 Liquidity differs across the different bank groups. The subsidiaries of large international banks have a large liquid position, which to some extent is a result of recent changes in their lending strategy. They were actually the only banks that decreased their lending to the private sector in 2002. Small foreign banks are less liquid, while the liquidity of state-owned banks, although comparatively high, has been declining over time.

6.30 The quality of loan portfolios in Romania has improved substantially since 1999 and compares favorably with good CEEC performers (Table 6.6), although some worsening has been seen lately. Non-performing loans have declined from more than 50 percent before 1999 to about 2-3 percent of the loan portfolio. However, as a result of the rapid growth of lending and the

[135] The minimum capital adequacy ratio was raised from 8 to 12 percent in 1999.

introduction of stricter rules[136] for loan classification and provisioning, the share of non-performing loans has quadrupled in a year's time and at end-November 2003 stood at 9 percent of total loans.

Table 6.6 Non-Performing Loans, 1996-2002 (percent)

	1996	1997	1998	1999	2000	2001	2002
Bulgaria	15.2	13	11.8	17.5	10.9	7.9	10.4
Czech Rep.	21.8	19.9	20.3	21.5	19.3	13.7	9.4
Estonia	2	2.1	4	2.9	1.3	1.2	0.8
Hungary	na	6.6	7.9	4.4	3.1	2.9	4.6
Latvia	20	10	6.8	6.8	5	3.1	2.1
Lithuania	32.2	28.3	12.5	11.9	10.8	7.4	5.8
Poland	14.7	11.5	11.8	14.5	16.8	20.1	24.6
Romania	**48**	**56.5**	**58.5**	**35.4**	**3.8**	**3.4**	**2.3**
Slovak Rep.	31.8	33.4	44.3	32.9	26.2	24.3	11.2
Slovenia	10.1	10	9.5	9.3	9.3	10	na

Source: EBRD Transition Report, 2003.

6.31 Despite a good start, the Credit Information Bureau at the NBR could still be improved in terms of the coverage of institutions and loans. Currently, it includes only financial institutions regulated by the NBR and does not take account of small commercial loans or most consumer loans. The credit history of entrepreneurs, which is generally used for the granting of loans to SMEs, is not accessible.

6.32 The regulatory framework guiding the activities of NBFIs is still incomplete, and the supervision of NBFI activities is weaker. As a consequence, the non-bank financial market is small and underdeveloped. Current regulations do not define the funding options for non-bank lenders or the rights of these institutions in case of debtor's default. Their tax regime is less favorable than that or the banks: borrowers are not eligible to deduct interest payments made to NBFIs and amortization of the VAT over the lifetime of the lease is not permitted.

6.33 Stress tests performed for the Joint World Bank-IMF Financial Sector Assessment Program suggest that currently banks in Romania do not face significant market and credit risk shocks, partly owing to the low level of intermediation. Systemic risk appears to be low as well, which, however, reflects the low level of the inter-bank market. Nevertheless, the credit risk arising from loans to the corporate sector is important, as the corporate sector is vulnerable to an exchange rate depreciation due to its large share of borrowing in foreign currency. A hypothetical sharp outflow of capital is estimated to result in a 20 percentage point depreciation of the lei and a 10 percentage point rise in lei interest rates. Another source of risk to the banking sector that could be catalyzed when competition among banks grows is the impact on return on equity (ROE) of a sharp narrowing of lending margins. The enhanced supervisory and regulatory rules, especially in terms of interest rate risk management, stress testing, accounting for country risks, and transfer and operational risks, would provide incentives for banks to remain sound despite market vulnerabilities.

[136] The old loan classification rules disregarded the borrower's financial condition and thus led to an underestimation of the non-performing loans in the banks' loan portfolio.

E. Regulatory and Supervisory Issues

6.34 Important progress has been made in improving the regulatory and supervisory environment in order to quickly adapt it to the demands of Romania's economic restructuring. A large number of new laws and substantial amendments to the existing financial legislation have been adopted` since 1998 in an effort to harmonize the legislation with international and EU requirements. A broad range of measures has targeted all stages of the prudential supervision of banks, from licensing to exit proceedings. Appropriate licensing and sanctioning mechanisms were set in place, a modern early warning bank-rating system is being implemented, and the frequency and coverage of on- and off-site supervision has increased. At the same time, some of the instruments necessary to support supervision have been created or streamlined, namely, the Credit Risk Bureau and the Payment Incidence Bureau.

6.35 Nevertheless, important challenges remain for the development of a strong financial sector infrastructure that ensures that the right incentives for financial market participants are in place. These challenges include improvements in the following areas: (i) assessment of bank capital; (ii) access and coverage of credit registry; iv) capacity to assess and manage risk.

6.36 *Assessment of bank capital.* While the capital adequacy regulation is largely compliant with the Basel Core Principle, legislation in the area of supervision on a consolidated basis has needs to be fully implemented. Similarly, full implementation of IAS will improve valuation of capital, and national accounting standards and practices. Without supervision on a consolidated basis, capital figures, compliance monitoring with prudential standards, and asset quality assessment can become meaningless in light of the ease with which weak assets can be hidden in subsidiaries, and double gearing can take place. To address this concern, the government adopted the Law 485/2003 which introduces principles of consolidated supervision in 2004. In addition the government is developing regulations and norms to further strengthen the legal framework for supervision on a consolidated basis. In addition, the supervision capacity is being strengthened to exercise supervision on a consolidated basis, including through a mechanism for consultations with non-bank financial supervisors or supervisory bodies in other countries.[137] In 2002, the NBR signed a Memorandum of Understanding with the National Securities Commission and the Insurance Supervision with a view to improving the supervision of the financial sector as a whole.

6.37 In spite of a well-functioning collateral registry, the ability of banks to mitigate risks through collateral remains limited. Ordinance 61, introduce in 2002 and effective in 2003, permitted the authorities to seize any collateral pledged to a bank in order to collect tax arrears, which presented a significant impediment to secured lending by banks, in part owing to inefficiencies in the courts and difficulties in selling reclaimed assets on secondary markets. The government however has now repealed Ordinance 61 and this is an important set forward. Further efforts, however, are needed to strengthen the regulatory and institutional framework, as discussed in Chapter 2, the bankruptcy framework and processes need to improve.

[137] The government has already signed agreements with the authorities of Germany, Italy, Greece, Turkey, Cyprus, and Moldova.

Table 6.7 Coverage of Public and Private Credit Registries in Europe (number of borrowers with credit records per 1,000 capita)

Country	Public Credit Registry	Private Credit Bureau	Country	Public Credit Registry	Private Credit Bureau
Austria	9	308	Bulgaria	5	-
Belgium	68	42	Croatia	-	-
Denmark	-	58	Czech Republic	10	136
Finland	-	96	Hungary	-	15
France	12	-	Latvia	-	-
Germany	5	693	Lithuania	7	-
Greece	-	86	Poland	-	543
Ireland	-	730	Romania	1	-
Italy	55	416	Russian Federation	-	-
Netherlands	-	530	Slovak Republic	2	-
Portugal	496	24	Slovenia	14	-
Spain	305	48	Turkey	7	204
Sweden	-	489			
United Kingdom	-	652			

Source: Doing Business in 2004.

6.38 *Access and coverage of credit registry.* To increase the transparency of the financial market and reduce financial risk, the credit register should be expanded and made easily available. Currently, the credit history of loan applicants is neither complete nor widely accessible. The public Credit Information Bureau includes only financial institutions regulated by the NBR and does not take account of small commercial loans or consumer loans. In addition, there is no available credit history of individuals, which is generally required for lending to new and small firms. To accelerate the expansion of the credit bureau, NBR may encourage a private bureau to operate and distribute credit information to banks. Such private credit bureaus exist in many EU countries and have also been established in some EU acceding countries (Table 6.8.) A major obstacle to the establishment of a private bureau in Romania is Banking Law 58/1998 and law no. 677/2001 on protecting personal data, which restrict the sharing of credit information among banks. The National Bank of Romania has encouraged the large commercial banks to establish a bureau to share positive information on the creditworthiness of borrowers and to be open to non-bank financial institutions as well. An outstanding issue is the sharing of information on existing loans. Under the current law on personal data, such information cannot be shared without the prior consent of individuals. In practice, this means that historical and outstanding loans may not be included in the credit bureau unless a dedicated law is passed or the current personal data protection law is amended.

6.39 *Capacity to assess and manage risk.* To safeguard the health of the banking sector, the bank supervision needs to develop a methodology to stress test banks' portfolios for various risks—credit, foreign exchange, interest rate, and systemic inter-bank risks, and the combination of shocks in these areas. Banks need a comprehensive risk management process that will identify, measure, monitor, and control all material risks and hold capital against these risks. It is especially important that banks manage interest rate risk so as to mitigate risks arising from loans extended in foreign currency to non-foreign currency earners. With the adoption of the Law 485/2003, in 2003, more power is given to off-site supervision to receive information on risk management. This is a very important step forward considering that until 2003, some of the information was provided by banks only during on-site examination, while there were limitations to acquiring this information for off-site surveillance purposes.

G. CONCLUSIONS

6.40 The Joint Bank-Fund Financial Sector Assessment Program for Romania includes a comprehensive analysis and policy recommendations to address the challenges of financial sector development. This study is based on this work and builds on it from the perspective of stability, growth and integration with the EU. In this context, this study highlights the following recommendations to support the development of a sound banking sector.

- *Privatizing state-owned banks.* The continuing strong presence of state-owned banks, representing about 40 percent of the bank assets and deposits and 32 percent of loans, places Romania at a disadvantage compared to other EU accession countries, where the benefits of private sector ownership are already visible: deeper financial intermediation, diversification and innovation of the financial services provided, and increased competition leading to better and less costly services to support a stronger corporate sector.

- *Improving banking regulations and supervision.* In 2003 and first-half of 2004, important progress has been made in improving the regulatory and supervisory environment that are necessary to quickly adapt to the demands of Romania's economic restructuring. Key challenges going forward include to fully implement the recent regulatory changes, further strengthen supervision capacity on a consolidated basis, to focus on adopting and enforcing risk assessment and management rules, and to improve the valuation of capital adequacy. Progress in these areas is a cornerstone of deepening financial intermediation.

- *Eliminating the practice of nonpayment, arrears and barter settlement.* Reliance of firms on nonpayment as an important means of financing is crowding out regular banking credit and contributes to the country's low level of financial intermediation. In this context, the government is commended for having abolished Emergency Ordinance 61/2002, which permitted the authorities to seize any collateral pledged to a bank in order to collect tax arrears. There is a need, however, to abolish the legal framework that allows compensation without cash of the bilateral obligations stipulated in the Government Ordinance No. 77/1999. Romania should rely on revenue collection and administration reform, particularly prompt cash payments of tax obligations, as an appropriate and effective approach to eliminating the practice of nonpayment.

- *Introducing and enforcing international accounting and auditing standards and practices*. The government plans full implementation of international accounting standards as a key step toward improving both the level and the quality of financial intermediation. These efforts will improve financial reporting, accounting and auditing norms and practices enabling banks to move to a more effective allocating resources to productive investments and thereby improve capital accumulation and long-term growth. The adoption of the inflation accounting principles (IAS-29) is especially important because most Romanian

companies have not revalued their assets since 1994, despite high inflation during the period. As a result, most of the current balance sheets may underestimate the value of assets.

- *Improving credit risk information by expanding the coverage of and access to the Credit Information Bureau.* Despite a good start, the Credit Information Bureau at the NBR could still be improved in terms of the coverage of institutions and loans. Currently, it includes only financial institutions regulated by the NBR and does not take account of small commercial or most consumer loans. The credit history of entrepreneurs, which is generally used to grant loans to SMEs; is not accessible. As has been mentioned, an efficient and widely accessible credit registry, in addition to enabling banks and other intermediaries to better assess potential borrowers, would encourage higher competition between lenders, and, in particular, might have a disciplining effect on borrowers.

7. THE QUASI-FISCAL CHALLENGE: ENERGY SECTOR REFORM

7.1 As in many transition economies, the energy sector in Romania has played a central quasi-fiscal role.[138] Cheap energy has simultaneously been used to support loss-making public enterprises and to provide an implicit subsidy to consumers. Inefficiencies in the sector are not only costly in terms of direct resources used, but inefficiencies permeate the economy. Broad subsidization, particularly the practice of nonpayment and arrears, is related to costly quasi-fiscal financing that takes away limited public resources from priority public investment, such as education (Section 5) and undermines macroeconomic stability (Section 1). Not surprisingly, operating costs in the sector remain high since the incentives to restructure have been lacking. In sum, reform that will develop an efficient energy sector in Romania is critical to Romania's stability, economic restructuring, competitiveness, and integration with EU and global markets.

7.2 Romania faces a triple inter-related challenge: (i) eliminating quasi-fiscal financing related to energy; (ii) aligning policy with EU directives; and (iii) integrating with the South East Europe (SEE) market.[139] Reforms and progress in any of these three areas support progress in the other two, given their complementarities. This chapter discusses key reforms in each of the these areas.

A. THE ENERGY SECTOR AND STATE SUPPORT [140]

7.3 Energy subsidization has been provided implicitly through tolerance of low bill collection rates and low pricing of electricity, gas, and district heating below their full cost-recovery tariffs.[141] As early as mid-2002, natural gas prices were about one-third lower than those in OECD countries and one-half of those in EU accession countries.[142] For electricity prices, the disparity was about 50 percent in relation to the EU and 20 percent with respect to accession countries. Though close to the level of several accession countries, district heating prices have been about half of the average price in the EU. Under the current Stand-By Arrangement with the IMF, energy prices have risen since 2001, however reforms are yet to be completed. In electricity, there is wide variance in operating costs with some units operating with some efficiency, yet others are very inefficient. This in turn, poses important challenges to implementing full cost recovery reform. Owing to reforms, collection rates in the power sector

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[138]This chapter was prepared by David Kennedy (ECSIE). Juan Carlos Ginarte prepared the section on the energy sector and state support.

[139] Annex 6 provides a brief description of the Athens Memorandum signed in November 2002 by Albania, Bosnia and Herzegovina, Bulgaria, Croatia Former Yugoslav Republic of Macedonia, Greece, Kosovo, Romania, Turkey, and Serbia and Montenegro.

[140] This section was prepared by Juan Carlos Ginarte, Economist, ECSPE, The World Bank.

[141] The pricing structure of the oil sector is considered undistorted.

[142] A detailed discussion of the pricing structure and financial performance of the sector in recent years is provided by the 2002 IMF Policy Discussion Paper "The Energy Sector Reform and Macroeconomic Adjustment in a Transition Economy: The Case of Romania."

also have improved in recent years, but monthly rates can vary significantly and on average need to rise substantially more.[143] Furthermore, despite improvements in collection, enforcement of payment discipline on customers has been weaker than in the rest of the industrial sector. For example, in 2002 the average payments period of electricity companies was over five months, and less than two months for other firms.[144] The district heating companies also confront significant collection problems, and they often fail to meet their obligations to gas distributors. As a result, the collection rates of Distrigaz Sud and Distrigaz Nord have at times been low and volatile.

Table 7.2 Resource Transfers To and From the Energy Sector

	2001	2002	2001	2002
0. Total Subsidization of energy (1+2+3)	28865	31267	2.5	2.1
1. Direct subsidies to energy	4250	5166	0.4	0.3
Electricity	1052	1344	0.1	0.1
Mining	3198	3822	0.3	0.3
Gas	0	0	0.0	0.0
2. Other resource transfers	371	561	0.0	0.0
3. Hidden subsidies	24244	25540	2.1	1.7
Energy Fund (electr.)	3068	4175	0.3	0.3
Foreign loan guarantees paid	7435	6050	0.6	0.4
Tax debt	5186	13856	0.4	0.9
Change in end of year stock 1/	-3330	13550	-0.3	0.9
o/w social insurance	2547	2484	0.2	0.2
Cancelled interest and penalties	8516	306	0.7	0.0
Bank payments overdue (domestic)	951	-187	0.1	0.0
Supplier arrears	7604	1647	0.7	0.1
4. Energy sector losses 2/	56165	37220	4.8	2.5
Low tariffs	45792	32527	3.9	2.2
Non-payment	10373	4694	0.9	0.3
5. Net transfers to the energy sector (0 + 4)	-10162	5714	-2.3	-0.4
Memorandum:				
Rescheduled arrears	6259	4947	0.5	0.3

Note: 1/ Excludes accumulated penalties. 2/ comprises implicit subsidies to both households and firms. Excludes district heating companies which were not formerly units of Termoelectrica.
Source: Ministry of Industry and Resources.

7.4 The resulting operating losses have been financed with arrears and various budget and off-budget funds (Table 7.1). These losses have resulted in under-investment in modern machinery and equipment and have reduced primary production of oil, coal, and gas. The lack of investment has left many facilities obsolete and highly inefficient, leading to increased import dependency.[145] Because energy is a critical component of production, energy subsidies have distorted relative prices and reduced efficiency throughout the economy. As prices are kept artificially low, there is over-consumption and waste of scarce energy resources. Furthermore,

[143] For example, in September 2002 the collection rate of Termoelectrica's heating unit was 98.5 percent, which included both payments due that month and overdue bills. According to the Ministry of Industry and Resources, this was followed by a steady drop to a 22 percent rate in December, then the rate increased to 52 percent in February 2003. The average for the year ended February was 76 percent.
[144] See Fennema and Schaffer, 2003.
[145] The inefficiency of electricity production is partly due to considerable excess capacity.

since energy company losses are often financed with tax arrears and unpaid loans, they have added to a rising stock of public debt.

7.5 Recognizing the importance of eliminating these losses for macroeconomic stability, the authorities have been adjusting the prices of electricity, gas, and heating upward since 2001 and have redoubled their efforts to increase bill collection rates.[146] This has helped to reduce total losses from 4.8 percent of GDP in 2001 to 2.5 percent in 2002 (Table 7.1).[147] This improvement reflects a reduction in losses due to low prices of 1.8 percentage points of GDP, and a 0.6 percentage point reduction due to improved collection. However, this excludes about 500 small district heating companies that were not previously a part of Termoelectrica. Arrears to these companies have been growing in the form of unmet "subsidies" that the state and local governments are required to pay to close the gap between the administered prices they receive and their production costs. At the end of 2002, these companies had received only 63 percent of the amount due from both levels of government.[148]

7.6 Given the state of financial indiscipline in the enterprise sector, the increase in prices may have accounted for much of the growth in tax arrears, and possibly also for the greater rate of activation of loan guarantees. In fact, the 2.1 percentage points of GDP increase in tax arrears and loan payments in 2001-02, for the economy, mirrors the 2.3 percentage point decline in energy losses. The elimination of losses in the energy sector, therefore, is by itself unlikely to improve the prospects for long-run macroeconomic stability without the enforcement of tax payment discipline.[149] Smaller losses in the energy sector will give way to larger losses elsewhere and to increasing public indebtedness.

7.7 More recently, particularly in 2003, the Government of Romania has acted to reduce energy sector subsidy. Specifically, power tariffs have been increased to cost recovery levels, and there have also been significant increases in gas tariffs. In addition, payments discipline has improved in the residential power sector.

7.8 Notwithstanding this progress, further power tariff increases will be required to finance investments going forward, and further gas price increases will be required to meet parity with border prices. District heat prices remain below cost recovery levels, and significant price increases are required in this sector. Regarding payments discipline, further improvement in power collections from state-owned enterprises (SOEs) is required, as are reductions in power

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[146] There is also an intention to accelerate privatization throughout the energy sector to raise investment and boost efficiency, but this plan is proceeding slowly. See the Ministry of Industry and Resources draft "Road Map for Energy Field in Romania" of March, 2003.

[147] Other than Termoelectrica's "externalized units," district heating is excluded. However, the losses from low pricing may be estimated by the arrears of the state and local budgets to the heating companies to cover the difference between the national reference price and production costs. In 2002 these arrears totaled 0.2 percent of GDP, up from 0.01 percent of GDP in 2001.

[148] The district heating companies were due 7.3 billion lei in 2002. Of this amount, local governments were responsible for 55 percent required by law, and the state had the obligation to pay the remaining 45 percent. In the end, the state met over 90 percent of its obligation, while municipalities paid less than 40 percent of the amount due. This is down from 99 percent and 92 percent, respectively, in 2001.

[149] Disinflation may put further financial stress on loss-makers, as the erosion of the real value of arrears will tend to slow.

sector commercial losses. Furthermore, improved collections in the gas sector, and significantly improved collections in district heating, will be required for financial viability.

B. Power Pricing and Payments Discipline in Romania

B.1. Pricing and Payments Discipline

7.9 The methodology used in Romania to set power prices is designed to allow power companies sufficient revenue to cover operating costs plus depreciation and – abstracting from payments discipline – should fulfill both economic and financial pricing criteria.

7.10 In practice, application of the methodology resulted in an average price of 5.6 cents / kWh at the distribution company (end user) level; time series tariff data are presented in Table 7.2. This represents a 40 percent real increase in tariffs relative to 1999 (above 90 percent in nominal terms), when the average price was 4.0 cents / kWh. It is reasonably high relative to other countries in SEE, where the average price is 3.5 cents / kWh.

7.11 In terms of economic and financial viability, current tariffs in Romania are sufficient on average to cover SRMC and to provide positive cash flow. More specifically:

- Tariffs for thermal power generation provide for cost recovery, including cost of debt, and also provide for the recovery of "general" liabilities carried over from the past.
- Tariffs for cogeneration (combined heat and power) plants are cost reflective (i.e., there are no cross subsidies between power and heat).
- Tariffs for hydro power are low compared to thermal power, but they do cover operating costs. They do not provide for rehabilitation, but do provide for recovery of losses incurred during the drought of 2003.
- Tariffs for nuclear power cover operating costs plus provision for decommissioning.
- Tariffs are sufficient to cover both transmission and distribution margins, though not investments in these industry components.
- Cross-subsidies within the power sector have been eroded, and tariffs now reflect costs by customer categories (e.g., residential / business / industry).

7.12 Going forward, and as investments are required, tariffs should be increased to cover the long run marginal cost (LRMC), in the range 7-9 cents / kWh in SEE; Romanian prices would then be comparable with those in the accession countries, together with Western Europe. This, of course, presumes significant restructuring of the energy companies with the result that their operating costs are as efficient as those in accession countries and Western Europe. Both tariffs and operating costs need adjustment and restructuring.

Table 7.3 Romanian Distribution Company Tariffs and Payments, 1999-2003

	1999	2000	2001	2002	2003
Average revenue (cents / kWh [excluding tax])	4	3.9	3.5	4.1	5.3
Collections to billings (%)	89.6	94.8	94.1	93.2	98
Ratio of cash to non cash transaction (%)	60.5	60.9	60.6	65.1	
Technical and commercial losses (%)	12.1	12.8	12.8	12.8	

Source: Ministry of Economy and Commerce.

7.13 The fact that a major price correction may not be required in the short term does not mean, however, that the industry is financially viable (Box 7.1). Indeed, though operating cash flow for the sector may be positive, receivables/payables are increasing, and ongoing state support is required in the form of transfers from the budget and deferred tax payments; the current situation is not sustainable from a financial point of view if the industry is to operate on a stand alone basis (i.e., without state support) in the context of a well-functioning economy where payments are made in full and on time.

Box 7.1 Power Sector Financial Viability and Affordability: Basic Pricing

From an economic perspective, and at a minimum, prices should cover Short Run Marginal Cost (SRMC), approximated by average operating cost. Over time, and as investments are undertaken, prices should increase to cover Long Run Marginal Cost (LRMC), that is, SRMC plus capital cost.

From a general economic perspective, and as a practical consideration in the context of a liberalizing power market, the pricing rules above should apply for each category of consumers, so that there is no cross-subsidy, for example, between industrial and residential consumers. Given the cost structure of the power industry, specifically the fact that the cost of serving large customers is lower than the cost of serving residential consumers, prices for the former group should be lower than those for the latter.

In the context of regional power market development, prices in countries signatory to the Athens Memorandum should converge over time as the market is liberalized. Where there is regional excess capacity, the regional price should converge to SRMC. Where capacity constraints are binding, the regional price should move to LRMC.

Regarding payments discipline, this should be fully enforced from an economic point of view in order that price signals are effective in supporting beneficial levels of consumption; where consumers do not pay they will over-consume from an economic point of view.

From a financial point of view, to ensure short-term financial viability, power prices should be set so as to provide a positive operating cash flow, that is, to cover operating costs, debt service, and any costs related to new investment.

For sustained financial viability, power payments discipline should be fully enforced. For companies with increasing receivables, though this may be bearable in the short term, it will quickly result in cash flow/financing problems.

Economic and financial principles, while not synonymous, may be reconciled. Where SRMC pricing does not provide a positive cash flow, then the price may be marked up to cover the shortfall. In cases where payments discipline is a problem, prices should not be marked up; rather, and in order to avoid further distortion of price

signals, cash shortfalls should be reduced through the undertaking of measures to improve cash collections relative to billings, and to reduce non-billed consumption.

7.14 Financial problems for the sector arise from three main areas:

- Poor payments discipline in the power sector
- Inefficiency in the power sector
- Tariffs and collections in the heat sector.

7.15 Focusing first on payments discipline, it is useful to start by defining categories of non-payment: (i) *collections* are defined as revenue collected over revenue billed and measure non-payment by billed customers; (ii) *cash collections* are cash collected over revenue billed and measure non-payment by billed customers together with barter transactions; and (iii) *commercial losses* relate to non-billed consumption (theft from the system). Payments discipline in Romania is now assessed from these three perspectives (Table 7.2).

7.16 Regarding collections, there has been substantial improvement in recent years, with current average distribution collections at 98.1 percent in 2002 (Table 7.2). Though this level is comparable with other SEE countries, further progress is required in order to meet standards in Western Europe.

7.17 At a minimum, gains made through 2003 should be sustained going forward to secure the ongoing financial viability of distribution companies, particularly since the tariff methodology for the sector does not allow for failure to fully collect.

B.2. Rules for allocating sector revenues between generation, transmission, and distribution.

7.18 One short-term measure for sustaining improved payments discipline would be to change the algorithm for allocating sector revenues between generation, transmission and distribution companies, which currently shares cash shortfalls between these companies. Changing the algorithm so as to require that distribution companies bear more of the burden of non-payment would create incentives for distribution companies to maintain and improve payments discipline, and to more actively implement the disconnection programs currently in place.

7.19 While modification of the algorithm may yield positive results, it is unlikely to alone provide a full solution to the payments discipline problem. Currently, the bulk of non-payment stems from large SOEs. In order that these entities will start to pay, government action is required, with the need to adopt and implement an industrial policy vis-a-vis restructuring and privatization / liquidation of large enterprises.

7.20 The evidence suggests that the introduction of the private sector in power distribution can help to strengthen payment discipline; this has been successful to varying degrees in Albania,

Georgia, Kazakhstan, Moldova and Latin America.[150] Ideally, in Romania the private sector should be introduced in the distribution through sale of assets to strategic investors, though this might be difficult under current market circumstances; this is discussed in more detail in Section 3. As an alternative, there may be scope for introducing the private sector under incentive-based management contracts, although incentives here would be weaker than under asset divestment.

7.21 Equally problematic to non-payments is the high level of non-cash payments in the sector, as shown in Table 7.2. These are high by SEE standards, and use on a level with non - cash payments in Montenegro and Republika Srpska (the highest non-cash systems in the region). Barter payments are problematic because they are non-transparent and are typically valued at non-market (inflated) prices.

7.22 Possible solutions to the problem here would be to cap the maximum percentage of barter payments in the energy sector and to restrict the number of companies allowed to engage in barter. In any event, if investment finance is to be secured, collections should be improved and barter reduced.

7.23 Distribution losses – including commercial losses - in Romania at around 12 percent are not high compared to other countries in SEE, but are high compared to Western Europe. Though losses do not currently jeopardize cash flows because they are allowed for in the tariff calculation by the regulator, there is a question about how long this practice will continue given the scope for improved performance. In order to achieve improved performance, investments in network rehabilitation and metering, together with more active disconnection, are likely to be required. As with collections, experience shows that the introduction of the private sector in distribution can help to reduce commercial losses.

7.24 Turning to other potential sources of financial problems, the sector does not currently perform efficiently. Indeed, high cost thermal generation has been responsible in the past for part of the financial losses related to the power sector. As noted above, tariffs now cover costs for this part of the industry. Nevertheless, high cost power generation, with costs as high as 5 cents/kwh for some units, does represent a potential liability going forward. Two key areas in which there is scope for efficiency improvement are in retiring / rehabilitation of old plants with low thermal efficiency, and – given the current over-manning, particularly in power generation—in labor restructuring. Measures to achieve performance improvement include further industry restructuring (discussed in Section E) and investment (discussed in Section H).

7.25 Power sector financial viability is also strained through effective price distortions in the district heat sector, given the cross-ownership of district heat cogeneration assets. Effective price distortions in heat are manifest in a 2003 collection level of only 80 percent for cogeneration plants.

7.26 The end user price for district heating is called the National Reference Price (NRP), and is set on the basis of what is thought to be reasonable in affordability terms. The shortfall between the NRP and the allowable cost is financed by government transfers, formerly 45 percent from central government and 55 percent from local governments, although following

[150] For a discussion, see *Transition Report 2001*, London: EBRD.

recent changes, the central government will now pay a larger share. Problems as regards district heating financial viability ensue because the allowable costs are less than the actual costs, and government transfers have not been paid in full, particularly the component due from the municipalities. In addition, end user collections in the district heating sector which currently average around 70 percent are a major problem.

7.27 The key reform required to improve the financial viability of district heating – and, indirectly, of the power sector (to the extent that CHP assets remain under the ownership of the national power generation company) - is to increase the NRP in a phased manner towards full cost recovery, and to take measures for offsetting adverse affordability consequences (discussed in more detail below in the context of gas price increases and affordability). In addition to mitigating affordability concerns, strengthening the social safety net should also facilitate increased collections, although this would also require that a more commercial approach be adopted by district heating companies.

B.3. The Power Sector Social Safety Net

7.28 Returning to the message mentioned above that power prices have increased and will have to continue to increase over time as investments are undertaken, it is important from the perspectives of social acceptability and political feasibility that power remains affordable for all groups in the population, through support provided by a social safety net.

7.29 The social safety net in the Romanian power sector consists of an optional tariff, whereby customers can choose to pay a low marginal rate for a first consumption block, and a higher marginal rate for additional consumption. Alternative optional tariffs are based on constant marginal tariffs somewhere between the two rates under the block tariff structure. Tariff levels under alternative options are set in such a way that the block tariff is attractive to customers who consume only to cover basic needs and no more. For other customers with higher consumption, alternative options to the block tariff are more attractive.

7.30 The social safety net for power can be judged by three criteria: (i) targeting—the extent to which it is focused on the poor as opposed to all consumers; (ii) coverage—the extent to which the poor are supported by the safety net; and (iii) incentives—any distortions to consumption decisions related to the safety net. [151]

7.31 The Romanian power sector's social safety net would target the poor assuming that consumption is related to income (then the block tariff supports low consumption / low income customers). Under the same assumption, the subsidy covers the poor effectively but less so for the poor consuming in the second block. The block tariff is not ideal from an incentive point of view, given that the marginal tariff for the second consumption block is relatively high in relation to marginal cost and encourages under-consumption for a class of customers. For this reason, the current social safety net provides good interim support, although in the medium term the target should be to replace this with a targeted subsidy (voucher or cash payment) for low income consumers.

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[151] See L. Lovei et al. (2002), "Maintaining Utility Services for the Poor," Washington , D.C: World Bank.

C. Gas Sector Financial Viability and Affordability

C.1. Gas Pricing and Affordability

7.32 As a SEE regional gas market evolves, trade opportunities for Romania will increase. Thus, the opportunity cost of gas consumption related to potential exports will be the border price. As demand grows and Romanian reserves are imported, the actual cost of gas consumption in Romania will be the border price. On both counts, in the context of regional market development, gas prices in Romania should reflect border prices.

7.33 Current gas prices in the region are set by Gazprom and are in the order of US$140 - 150 / tcm. Caspian gas imports to SEE via Turkey are likely to commence in 2007, at which point there will be the potential for shipping 7 bcm annually to the region, providing scope for competition with Russian gas and price reduction. Turkey has entered into off-take agreements for Caspian gas at a price believed in the order of US$100-110 / tcm. Depending on the necessary infrastructure investments and on transit fees, this might allow a slightly reduced gas price at the Romanian border. It is unlikely, however, that the border price would fall below US$120 / tcm in the foreseeable future.

7.34 The January 2003 , the end user gas price in Romania was around US$90/tcm for captive customers, including all residential consumers. Working back from this price and deducting margins for distribution, transmission and storage gives a well head gas price averaging around US$40 / tcm in 2002, falling to US$15 / tcm in the first six months of 2003. Comparing the well head price and the border price, it can be seen that from an economic point of view, and based on a regional perspective, large price increases for all customer categories (both residential and industrial customers pay a price well below economic cost) are required in the Romanian gas industry; the associated subsidy to gas consumers is worth around 2 percent of GDP.

7.35 A gas tariff increase would bolster fiscal revenues and provide additional funds for investment in the upstream gas industry. It would also provide the correct signals for decision making by residential consumers vis-a-vis the use of gas for heating rather than district heating. The current price of gas is low relative to that of district heating (US$11 / Gcal for gas compared to US$20 / Gcal for district heating) thus encouraging direct consumption of gas as opposed to district heating even though this may not be desirable from an economic point of view.

7.36 Recognizing this, the Government of Romania has increased gas prices significantly in recent years; most recently, there was a 10 percent price increase in July 2003 and 20 percent increase in September 2003. By end of 2003, residential gas prices had reached $125 per tcm whilst other distribution customers paid $115 per tcm, and large industrial customers paid $99 per tcm. Though these prices increases are to be welcomed, further increases will be required going forward to ensure gas industry sustainability. The government has made a commitment in the Road Map to increase the domestic gas price to the border price by 2007, and proposes quarterly increases of 5 percent through 2004 in order to help meet this objective. The challenge now is to implement tariff increases according to this schedule.

C.2. The Direct Affordability Impact of Gas Price Increases[152]

7.37 Significant gas price increases could potentially have an adverse effect on the affordability of gas for residential consumers. This would not be desirable either socially or politically. Inspection of data suggests that there could be adverse affordability impacts for low and middle income consumers using gas-fired central heating and gas burners. This is not an argument against tariff increases, but is rather argument that these increase should be implemented in a context in which there is a social safety net based on properties outlined in the above discussion of the power sector (the subsidy should have good coverage, should be targeted, etc.). Finance for the targeted subsidy could come from increased fiscal revenues ensuing from tariff increases.

7.38 In the case of Romania, a targeted subsidy for residential gas consumers is in place. It was not possible for the purposes of this chapter to assess the proposed subsidy for next winter. If the proposed subsidy is to be effective, then it should be increased in line with tariffs to ensure that affordability ratios remain below critical levels. As regards a benchmark for the critical affordability ratio, the World Health Organization (WHO) defines fuel poverty as a situation in which a household spends more than 10 percent of its income on heating.

C.3. The Gas Price Impact on District Heating

7.39 Given that much of district heating generation is gas fired, an increase in the gas price would result in an increase in the price of district heating with associated affordability impacts. The indirect impact of gas price increases – through the district heating sector – could be more wide-ranging than the direct impact – on residential gas consumers – given that 60 percent of the total heat demand is met by district heating, with 2.8 million households supplied by district heating compared to 900,000 households supplied by gas. In addition to affordability impacts, an increase in the gas price would have a fiscal impact, since district heating is currently heavily subsidized.

7.40 District heating consumers are protected by the NRP, as discussed above. In addition, a subsidy is paid to end users on a means-tested basis under Emergency Ordinance No. 6/2003 as shown in Table 7.4. Notwithstanding this subsidy framework, the household budget data, together with data on non-payments, suggest that affordability remains a problem for low income groups in Romania.

7.41 If the gas price were to be increased while a constant NRP is maintained, then the impact would be purely fiscal, with increased subsidy from central/local government.[153] This would represent a transfer from the government to the gas industry which, while it would provide cash flows for investment, would not be desirable given the fiscal constraints. It would also not be desirable from the perspective of providing incentives for good performance in district heating

[152] This discussion draws on the report "Study on Gas Pricing and on the Fiscal System Applicable to Gas Production," carried out for the World Bank by HIS Energy, together with data from Household Budget Surveys and calculations provided to the Bank by the government of Romania.

[153] This assumes that all subsidy is paid. In practice, local government contributions are not always forthcoming. In this situation, the tariff increase would further strain the cash flow of district heating companies.

and of providing the correct price signals for consumers, so that they will behave in an energy efficient manner. This is not an argument against raising the gas price rather, it highlights the shortcomings of the current district heating subsidy system.

Table 7.4 Householder District Heating Support, 2003

Income (ROL per person), up to		Support against actual bill (ROL per person), up to		
Monthly	**Annual**	**Monthly**		**Annual**
		Over 5 months	*Over 12 months*	
750,000	9,000,000	1,680,000	700,000	8,400,000
1,250,000	15,000,000	720,000	300,000	3,600,000
1,500,000	18,000,000	480,000	200,000	2,400,000
2,106,000	25,727,000	360,000	150,000	1,800,000

Source: Report by HIS Energy.

7.42 A better alternative from an economic perspective would be to increase district heating tariffs in line with gas prices, and to increase end user subsidies as necessary to maintain affordability ratios below the WHO threshold. The fiscal impact here could be reduced by rationalizing the existing subsidy system, and by phasing out subsidies paid directly to district heating companies and replacing these with targeted subsidies at the end user level.

7.43 A preliminary assessment carried out by the World Bank,[154] shows that rationalization of the subsidy system could reduce government support to district heating by around US$50 million per year. This would provide a good basis for increased targeted support following end user price increases. It should be stressed that phasing is important, given that the relative price increases for district heating could lead consumers to switch to gas when this is not desirable from an economic point of view (because the gas price is distorted).

7.44 The work done by the World Bank is a first step towards reform of the district heating subsidy system. The next step would be for the government to undertake a full review of district heating subsidy, using household budget data to assess the affordability impacts of removing the subsidy to district heating companies and costing the targeted subsidy to maintain affordability for all income groups. As part of this step the impact of gas price increases and of offsetting government support could be evaluated. To reiterate, increasing district heating prices together with the end user subsidy would tighten budget constraints for district heating companies and would encourage consumers to behave in a more energy efficient manner.

[154] Daniel Aizic, "Analysis of the District Heating Sector in Romania 2000-2002," Washington, D.C.: World Bank.

C.4. Payments in the Gas Sector

7.45 Collections in the gas sector are currently around 90 percent, a figure that is low by industry best practice standards. As in the power sector, non-payment stems from large state-owned industrial enterprises, including district heating generation companies. As in the power sector, the solution here could be to introduce the private sector in gas distribution. As in the power sector, any solution will require the government's commitment to allow the disconnection of non-payers, supported by industrial policy for the restructuring of large SOEs, and will also require measures to improve the financial situation of the district heating sector.

D. Regional Energy Market: Challenges and Opportunities for Romania

7.46 Regional energy market development poses three key sets of challenges for Romania: (i) the need to move to energy industry economic and financial viability without government support; (ii) the need to provide institutional reform through industry commercialization / restructuring and regulatory development; and (iii) the need to mobilize finance for investments.

7.47 These challenges overlap with those deriving from a macroeconomic perspective: industry financial viability would reduce the energy sector's quasi-fiscal deficit and would support increased macroeconomic stability; institutional reform should lead to increased efficiency in the energy industry, which in turn would support the increased competitiveness of Romanian industry; the securing of finance and the undertaking of investments would improve the security of the energy supply-- a pre-condition for GDP growth.

7.48 As recently as 2000 the energy sector was largely unreformed and contributed around 5 percent of GDP to the quasi-fiscal deficit through power and heat prices that were below cost recovery, domestic gas prices that were well below the import price, and collections problems in power, heat, and gas. Since that time, the energy-related quasi-fiscal deficit has been reduced owing to increased power, heat and gas prices, in tandem with institutional reform through the passage and implementation of an Energy Law. Notwithstanding this progress, a number of challenges remain if a commercially oriented energy sector is to ensue.

7.49 On the institutional reform side, Romania has made good progress. The outstanding challenges are to further commercialize both the gas and power sectors through private sector participation where this is feasible.

7.50 Regarding investments, a major rehabilitation of power generation assets is required in the medium term. Failure to secure investments could see Romania go from its current status as a net exporter of power to SEE, to a country dependent on imports and suffering from an insecure supply.

E. Energy Industry Institutional Reform

E.1 Industry Restructuring

7.51 The formerly monolithic power utility has been vertically unbundled, first through the establishment of subsidiaries in 1998, and then by the full separation of the different industry components in 1999-2000. The industry now comprises a transmission company (Transelectrica), a company owning thermal generation assets (Termoelectrica), a hydro generation company (Hidroelectrica), and a distribution company (Electrica). This structure is consistent with requirements under the Athens Memorandum.

7.52 Labor productivity in Romanian power generation is currently low, partly because of over-manning. Though this may not be a problem now, as wages increase and as competition in the regional market intensifies, low labor productivity could lead to the stranding of generation assets. One way to avoid this would be to introduce a generation industry structure to promote increased productivity. Experience other countries elsewhere suggests that restructuring generation into a number of competing companies leads to performance improvements.[155]

7.53 The Government of Romania has recognized the importance of restructuring power generation and has unbundled Termoelectrica into a holding company with five subsidiaries: Electrocentrale Rovinari and Electrocentrale Turceni (owning lignite fired power generation assets); Electrocentrale Deva (owning hard coal fired power generation assets); Thermal power branches and Electrocentral Bucuresti (owning Combined Heat and Power [CHP] assets).

7.54 Such a structure would seem to provide a basis for the promotion of competition in generation, given an adequate number of companies for the installed capacity in Romania, and such a structure would be consistent with promoting competition in generation. The next step should be the commercialization of subsidiaries, so that each subsidiary is able to operate in a regional market context on a stand-alone basis. It is likely that commercialization of this nature would require spinning off subsidiaries from Termoelectrica and introducing of private management where this is feasible.

7.55 In the gas industry, the formerly integrated gas company was unbundled in 1998 in a manner consistent with requirements under the Athens Memorandum to an exploration/ production/storage company (Romgaz), a transport company (Transgaz), and two distribution companies (Distirgaz Nord and Distirgaz Sud) In order to consolidate the reform progress made in this case, the introduction of the private sector in this unbundled structure is likely to lead to improved performance. To this end, a privatization adviser for the sale of gas distribution companies has been hired, and the privatization process is proceeding.

E.2 Private Sector Participation

7.56 As noted above, the private sector has a potential role in energy sector performance improvement, particularly as regards the enforcement of payments discipline, but also more

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[155] See D. Kennedy, "Liberalization of the Russian Power Sector," *Energy Policy* 31 (2003) for a discussion.

generally, for example, to unlock efficiency gains in power generation and power gas / distribution.

7.57 However, there is the a question of whether the private sector will be interested in buying / rehabilitating assets in Romania. More generally, the appetite of the private sector for the purchase of assets in the power sectors of transition economies has declined recently for the following reasons:

- The collapse of ENRON has led energy traders to focus on balance sheet strengthening rather than on international expansion.
- Investors have lost money in the United States and the United Kingdom.
- U.S. and European companies lost money in Latin America following currency devaluation.
- Political / regulatory risk perceptions have increase following problems with PPAs in Indonesia, the Philippines, and Pakistan and following regulatory problems in Hungary, Kazakhstan and Moldova.

7.58 Currently, there is no interest in increased equity in transition economy power sectors on the past of U.S., English, Spanish and Swedish companies that were formerly interested in these markets. There is only limited interest from French, German and Italian companies. However, there is firm interest from one investor in two Romanian power distribution companies, and the government is in discussion with investors interested in power generation projects.

7.59 The successful closing of these deals and other privatization projects will require the development of a strong institutional framework to support investment and to stimulate private sector interest. Even if the private sector were not to enter in Romania, the development of the institutional framework would help to mobilize finance for public projects, possibly undertaken with private sector participation under incentive-based management contracts. One key aspect of the institutional framework in the context of private sector participation is regulation.

F. INDEPENDENT REGULATION

7.60 Private sector entry and, more generally, ongoing industry financial viability, will depend on the energy sector's regulatory framework. The development of an independent regulatory framework can encourage private sector participation and mobilize investment finance by demonstrating the government's commitment to sustained cost recovery tariffs.

7.61 Romania has made significant progress in establishing an independent regulatory framework for the energy sector, establishing an independent power sector regulator – the National Agency for Electricity (ANRE) - in 1998, and a gas sector regulator – the National Regulatory Authority for Gas (ANGRN) – in 2001. Both regulators may be deemed independent under standard definitions: regulators are appointed for fixed terms; circumstances for dismissal are clearly specified in the primary legislation; funding for regulators comes from the energy industry through license fees; and regulators have full tariff-setting power. For both industries, Romania is in compliance with the requirements for independent regulation under the Athens Memorandum.

7.62 In terms of the regulatory tariff methodology for the power sector, as discussed above, this provides adequate revenues to cover costs, including depreciation, and to allow for losses, but it does not allow for non-payment by billed customers. The methodology provides *some* security for potential private investors/financiers, together with incentives to improve collections. The evidence from the power sector suggests, however, that a long-term tariff methodology (sometimes called *Price Cap* or *RPI-X* regulation) can *best* provide investor security and incentives for efficient performance.[156]

7.63 Under a long-term methodology, tariffs are set on a forward looking basis over a period typically between five and seven years. Adjustments can be made for changes in key variables such as inflation, the exchange rate, demand, and input prices. The benefit of a long-term methodology is that it gives regulated companies security over medium-term cash flows, something that is not necessarily true of tariff methodologies which reset tariffs on an annual basis. Recognizing the advantage of a long-term methodology, the Romanian power sector regulator has made a commitment to introduce a long-term (price cap) methodology from 2005, although there would be benefits in moving this date forward.

7.64 In the gas sector, prices are set in conformance with the objective stated in the Road Map to move to import parity by 2007. The challenge for the regulator is to continue to implement tariffs increases in the face of potential political resistance. The regulator has started to build a track record in this respect with the two tariff increases in 2003, and should now build on these achievements. Regarding the time frame for tariff setting, the gas regulator has recognized the benefits of adopting a long-term methodology and will move towards adopting such a methodology in the medium term.

G. Market Rules

7.65 There are a number of important questions in the context of power market liberalization as regards institutional design. These questions include the market base -- whether the market should be based on bilateral contracts or on a pool model; the role of balancing markets: the real time clearing of demand and supply: the role of a market operator: investment support mechanisms: and generation price regulation. These questions will be discussed in turn below.

7.66 Evidence from transition economies (Georgia, Kazakhstan, Ukraine) suggests that power markets based on bilateral contracts between generators and large consumers are the most appropriate in a setting in which payments discipline is a problem and institutional capacity constraints may be binding.[157] This model is widespread in Europe and was recently adopted in England and Wales to replace the former power pool. It is envisaged that the SEE REM will be based on a bilateral contracts model.

7.67 A bilateral contracts market typically does not cater for the whole of the demand (customers in the market aim to avoid over contracting, that is, the purchase under contract of capacity which they may not use). In order to meet residual (i.e., non-contracted) demand, and to

[156] See *Transition Report 2001.*
[157] See *Transition Report 2001.*

allow trade of contracts, an additional mechanism is required. One such mechanism is a day ahead spot market where generators and customers can buy and sell power.

7.68 A day ahead spot market requires a *market operator*, responsible for clearing demand and supply, and subsequent financial clearing (i.e., overseeing the flow of funds from purchasers to sellers). A regional spot market is likely to perform better than a set of subregional markets in SEE, particularly given the small size of some of the countries involved. The market operator would also be responsible for overseeing the contract market and ensuring the consistency of transactions with the commercial code governing the market.

7.69 Since the power demand in Romania is not responsive to price in real time.[158] it is not possible to operate a real time market (where price clears demand and supply). To meet the differences between real time and forecast demand, the best that can be achieved is to purchase power efficiently, for example, through the tendering of contracts by the system operator for spinning / other reserves. In Romania, tendering would ideally take place on a regional basis to allow the full sharing of reserve between countries.

7.70 Since price signals do not function in power markets as in other markets (i.e., they cannot fully clear demand and supply), and in view of un-hedged price volatility, free entry in generation is not a sufficient condition to guarantee that the optimal level of capacity will be provided[159]. Given that this is the case, countries in which power markets have been liberalized rarely rely on free entry to provide an adequate system reserve margin.

7.71 Examples of wage in which countries have dealt with this problem include the following: (i) transmission system operators in Australia and Scandinavia have contracted in reserve capacity to meet target reserve margins; (ii) large consumers (e.g., in the United States and Canada) are required to purchase to cover demand plus a reserve margin; and (iii) capacity payments are made, (for example, in Chile and (before reform of the pool) in England and Wales.

7.72 In the case of Romania, the following additional considerations will be important: (i) the market rules will be untested; (ii) the regulatory rules will be untested; and (iii) the creditworthiness of participants in the market will be untested. Under circumstances, and in light of significant risks for investors, an investment support mechanism is likely to be required if an adequate reserve margin is to be maintained.

7.73 In view of these considerations, the proposal by the Government of Romania in the Road Map to require forward contracting would seem reasonable on the basis of international experience and the Romanian context. As regards trading, the government's proposal for a day ahead market together with a simple arrangement for the efficient purchase of power in real time by the system operator would seem appropriate. Although detailed market design in the context of the SEE REM has not yet been developed, it is likely that market rules will involve bilateral contracts with day ahead trading and simple arrangements for real time power purchase.

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[158] This will be the case for the foreseeable future given the installed technology for metering and data communication in Romania and SEE.

[159] See R. Turvey, "Ensuring Adequate Generating Capacity," *Utilities Policy* 11(2003), for a discussion.

7.74 Whether the SEE REM will comprise a regional market operator or a set of national operators is not yet determined. Ideally, a regional market operator would probably result in more efficient plant dispatch. As a second best, coordinated national markets would result in benefits from international trade. The proposed power exchange in Bucharest will have a role to play in the regional market (this to be determined as SEE REM market rules and institutions are agreed between participating countries).

7.75 The experience from Canada and the United States shows that reliance on price as the sole means of rationing capacity can result in sustained high prices, which may be undesirable from an economic viewpoint and may be socially and politically unacceptable. This could be a problem in Romania and in the SEE REM more generally, given the possibility of national and regional supply deficits.

7.76 One way to avoid unduly high prices is through contracts between generators and residential consumers (e.g., distribution companies). In the case of Romania, long-term contracts between distribution companies and hydro companies might be considered as a way of providing consumer protection. Alternatively, market design might include generator price caps and/or supply obligations (e.g., to tariff consumers).

7.77 On network access, zonal transmission pricing in Romania is consistent with the basic principal that tariffs should reflect locational costs so that dispatch and entry in a liberalized market may be efficient. It is important in a regional context that transmission tariffs support imports where these are the most economically efficient means of meeting demand. Romania is working together with other SEE REM countries to develop a cross-border pricing mechanism that will support efficient trade.

7.78 Going forward, the challenge for Romania is to build on the broad principles which it has endorsed, elaborating detailed implementation proposals, particularly in the following areas:

- Defining the inter-relationship between contracts and day ahead markets
- Developing a (real time demand–supply) balancing mechanism
- Developing a capacity obligation – or other investment support – mechanism
- Defining the relationship between the Romanian and SEE REM market operators
- Developing a mechanism for the protection of residential consumers in a liberalized power market context
- Working with other SEE REM countries in developing a common cross-border transmission tariff methodology.

H. Investment in the Power Sector

7.79 From a technical point of view, Romania is currently connected to the regional power network, operating synchronously and in parallel with other SEE REM countries (excepting Turkey) that together comprise the second zone of the Union for Coordination of Transmission of Electricity (UCTE). It is envisaged that in the medium term, following network rehabilitation investments in Bosnia and Herzegovina and Croatia, the second UCTE zone will be connected to

the main UCTE European network. At this time, trade between Romania and other countries in SEE and Europe will be technically feasible.

7.80 In recent years Romania has been a major player as regards power trade in SEE. In 2001, for example, of 14 TWh total power trade in the region, 3.4 TWh of this trade was due to Romanian exports. Whether Romania continues to be a major power exporter will depend on the performance of Romanian power generation relative to other generation in the region. This poses a major challenge for Romania given the profile of the current installed generation capacity.

7.81 Installed capacity in Romania is roughly 19,000 MW, comprising 32 percent hydro, 64 percent thermal, and 4 percent nuclear. Regarding the thermal capacity, 32 percent of this is over 30 years old, and 50 percent is between 20 and 30 years old. Following the planned decommissioning to 2008, the available capacity will fall to around 10,000 MW, Which will leave Romania with an inadequate reserve margin. Without investment in power generation, Romania would have to forgo economically viable power rehabilitation projects, and would have no alternative but to increasingly import power from the regional market. Investments on the order of US$7 billion to 2010 would provide Romania with adequate capacity,[160] allowing continued exploitation of indigenous natural resources (such as lignite from the Oltenia surface mines) and export of power to SEE.

H.1. The Framework for Investment

7.82 Large investments will be required if Romania is to compete in the SEE REM, and mobilizing finance for investments represents a major challenge for the country. Small investments may be self-financed by the industry or financed commercially without the need for long-term contracts as security. For larger investments (such as major rehabilitation), given the current financial market conditions, some long-term contracts between generators and consumers/intermediaries are likely to be required for finance to be secured. The reason for this is the risk aversity of investors (particularly financial investors as opposed to strategic investors) together with the high degree of uncertainty in SEE over market rules (as regards both design and implementation).

7.83 There is a problem with long-term contracts that are signed before effective competition sets in: these contracts may support investments that would not be selected in a competitive market. In addition, generators with contracts are insulated from competitive pressure. Furthermore, reducing the number of buyers in the market through locking into long-term contracts can undermine incentives for new entry in generation. Under these circumstances, long -term contracts may result in higher prices for consumers.

7.84 Long-term contracts have proved to be an obstacle to power sector liberalization around the world, (for example, in the United States and Spain) and, closer to Romania, in Hungary and Poland. In the latter two countries, long-term Power Purchase Agreements (PPAs) signed between power generators and national transmission companies would not be sustainable in a market context: prices in PPAs are high relative to forecast market prices. The authorities in

[160] This figure comes from the Road Map and has not been subjected to independent assessment by the Bank.

Hungary and Poland are moving to buy out PPAs through a stranded cost resolution mechanism prior to full market liberalization. Stranded cost resolution mechanisms are typically financed by consumers through a power system levy.

7.85 Long-term contracts can slow down the process of liberalization until the issue of stranded costs is resolved, and they can also undermine benefits that would ensue from competition. Thus, the need to provide security for investors should be balanced by the objective of promoting sector competition.

7.86 In order to strike the appropriate balance, standard policy advice is that all but the most urgent investments should be postponed until after sector liberalization takes place. In the case of Romania, this may not be feasible: investments are required in the medium term before markets are to be liberalized in the context of the SEE REM. Given that investments are required, and that these would not be delivered on a merchant basis (i.e., without long-term contracts), the objective should be to minimize the scope of the long-term contracts required to support necessary investments.

7.87 One way to reduce the scope of contracts is to design these contracts to cover capacity but not to contain off-take obligations. For example, a distribution company with a capacity contract would agree to pay the capital cost associated with power generation covered under the contract, and would have an option to purchase power at a specified price or according to a specified formula, but would not have to purchase power from the plant. The advantage of such a contract over a PPA is that it allows efficient dispatch, whereas under PPAs plants with relatively high marginal costs may continue to generate even though this is not economically desirable. Efficient dispatch would ensue through the trading of capacity contracts in Romania's proposed forward contract markets and the day ahead market.

7.88 Other dimensions for reducing the scope of long-term contracts are the related capacity covered by the contract and the contract's duration. For green-field investments, experience elsewhere in SEE (e.g., in Bulgaria) suggests that financiers require contracts covering the whole of capacity (i.e., debt and equity financed) for a period extending beyond loan tenors for debt. In the case of Romania, medium-term investments are likely to be brown-field, with only some units in the existing plant requiring rehabilitation. This could provide scope for reducing contract coverage.

7.89 Where assets requiring rehabilitation are bundled together with operating assets, cash flows from the latter can provide extra security for investors. In other words, the bundling of assets would facilitate *corporate* as opposed to *project* finance of investments. Under these circumstances, long-term contracts might only relate to a level of capacity required to meet debt service, while equity returns would be derived from capacity competing in the market. Depending on the level of cash flows from operating assets, there may be scope to further reduce the coverage of long term contracts so that they cover only a part of debt service (in any given year, or beyond a certain date). The duration of contracts will probably have to be longer than the proposed five-year vesting contracts in the Road Map if debt finance is to be secured.

7.90 One possibility would be to further enhance the cash flows of project companies by bundling thermal assets together with hydro assets. Rents to hydro assets deriving from low marginal costs could provide further support for rehabilitation with reduced coverage of long - term contracts. The question is whether project companies would be sufficiently creditworthy without hydro assets. If this is the case, then the bundling of hydro assets with thermal assets would risk reducing future privatization revenues. The alternatives of keeping hydro assets under public control, or of privatizing on a stand alone basis, would probably yield greater benefits to taxpayers and power consumers.

7.91 It is likely that some of the proposed thermal generation companies will have adequate cash flows to support investments with limited scope long-term contracts. In particular, Rovinar and Turceni – two candidates identified by the government for privatization - are both of adequate scale and comprise a mixture of units of different ages -- some newly rehabilitated and some with a number of years of design life left. In Rovinar, two units are mothballed and there are plans to add a new 300 MW unit, while four units of Turceni require rehabilitation. The thermal efficiency of these plants is comparable to that of other plants in the region, and both plants are located close to reasonably low cost lignite mines, thus continued dispatch in a regional market would be likely.

H.2. Contracting Parties

7.92 In principle, generators could have long-term contracts with Transelectrica or with distribution companies. Since distribution companies have stronger incentives to enter into contracts that would be viable in a competitive market (they would have to bear any contract-related stranded costs, whereas a transmission company might pass on stranded costs to consumers) the latter is preferable. This assumes that distribution companies act in a commercial manner, which would seem to be a reasonable assumption for at least some of the Romanian distribution companies, particularly as these are privatized.

7.93 Commercial distribution companies might enter into contracts to realize attractive purchase prices, to hedge price volatility, or because of license obligations. Indeed, the proposal by the Government of Romania in the Road Map is that distribution companies will be required to forward contract of sufficient capacity to cover the expected demand plus a reserve margin. To the extent that distribution companies are not commercial, the danger is that contract-related costs could at some future time become stranded. In order to mitigate this risk, investments in power generation might be demonstrated to be least cost from a regional perspective as part of project feasibility and development.

I. CONCLUSION

7.94 The analysis in this chapter finds that effective tariffs—reflecting tariffs and payments discipline—are still below cost recovery levels in the Romanian energy sector. In the power sector, power tariffs will have to increase over time to support the financing of investments. Collections remain a problem in the power sector, owing to failure to pay on the part of large SOEs and a high degree of non-cash settlement. In the gas sector, the main challenge is to

increase tariffs to reflect border prices. Though some progress has been made here, further increases are necessary.

7.95 This chapter has argued that while good progress has been made in power tariff reform, further price adjustment and restructuring will be required as investments are undertaken. In the gas sector, while there have been significant price increases, further large increases are required in order to meet import parity. The challenge for the government is make good on its commitment in the Road Map to move to import parity in the medium term.

7.96 Regarding the affordability consequences of tariff increases, these are unlikely to be problematic in the power sector where expenditure is small relative to income and where an effective social safety net is in place. Gas price increases, on the other hand, are likely to strain affordability in the gas and heat sectors. Targeted social safety nets for gas and heat will require additional financing if affordability risks are to be mitigated; part of the increased finance could be unlocked through the rationalization of the current blanket subsidy to the district heating sector.

7.97 Payments discipline remains a problem in power and gas, notwithstanding increased collections in recent years. For collections to be increased to levels which would permit energy industry financial viability on a sustained basis, government action is required, through allowing the disconnection of large SOEs and through developing an industrial policy for their restructuring / privatization.

7.98 On institutional reform, Romania has progressed further than all SEE REM countries bar Croatia in regulatory development, and further than all countries bar Bulgaria on industry restructuring. In terms of power market development and gas industry regulation / restructuring, Romania has outperformed all SEE REM countries. Outstanding challenges are to build on the track record in regulation through continuing to implement price increases as necessary in power and gas, and to move towards the introduction of tariff setting on a long-term basis. Regarding industry restructuring, the challenges include the need to commercialize the of generation subsidiaries and the need to introduce of the private sector in the unbundled gas structure. On market design, where proposals are consistent with those for the SEE REM, the challenges relate to detailed implementation issues.

7.99 As regards investment, Romania's continued status as a net power exporter to SEE will require large-scale generation rehabilitation. The challenge here is to develop a framework to secure investment that is consistent with the objective of liberalizing the power market. The chapter argues that capacity contracts could provide a solution here, and that these contracts would be consistent with proposed market design in Romania.

7.100 In summary, if Romania is able to meet the challenges in effective energy tariffs and operating efficiency, through applying hard budget constraints, closing unviable thermal generation units, and implementing institutional reforms, together with undertaking the necessary investments, this should bring about a domestic competitively priced energy as well as export opportunities. Such an outcome would result in economic benefits in a sub-regional energy market context and, more generally, in a regional market context.

8. ENVIRONMENTAL STANDARDS: UPGRADING AND CONTAINING THE COSTS

A. INTRODUCTION

8.1 The experience of countries that joined the EU on May 1 of this year shows that estimates of investment costs cover a wide range, depending on the their respective initial conditions, and depending also on the choice of the types of investments, which also cover a wide range of possibilities. [161] Similarly, timetables vary across countries, with earlier reformers having more generous timetables than other selected CEECs. The experience to date of acceding countries also shows that there may be important differences between planned and actual investments. However, the total investment costs do not stop with the accession date, since compliance with environmental standards, while it offers a range of technology choices, must function in a single market. The estimates of total investment costs used in this study are, therefore, only indicative and can vary within a wide range depending on the investment type and the sequencing of investments.

Table 8.1 Key Environmental-Related Indicators: a regional perspective

Country	% Population with access to sanitation	% Population With access to improved water source	GDP/unit of energy (PPP$/Kgoe)	CO_2 emissions/ unit of GDP Kg/PPP$GDP	Under 5 Mortality Rate/1000 live births
Bulgaria	100	100	2.8	0.9	16
Cyprus	100	100	6.3	0.4	6
Czech Rep.	-	-	3.6	0.8	5
Estonia	-	-	2.9	1.4	12
Hungary	99	99	4.9	0.5	9
Latvia	-	-	4.6	0.4	21
Lithuania	67	67	3.9	0.5	9
Malta	100	100	6.7	0.7	5
Poland	-	-	4.0	0.9	9
Romania	**58**	**53**	**3.4**	**0.7**	**21**
SlovakRep.	100	100	3.6	0.7	9
Slovenia	100	100	5.0	0.5	5
Turkey	82	90	5.3	0.5	43

Source: World Development Indicators, 2003, the World Bank. Countries without data on sanitation and improved water generally have very high levels of provision.

8.2 This situation presents opportunities and challenges for Romania in the area of the environment. Of all these countries, including Turkey, Romania has, in environmental terms, the greatest ground to cover to reach the standards required of member states. Table 8.1 provides some of the key indicators, which show Romania as having the lowest level of access to improved water and sanitation, the third poorest energy efficiency measured in terms of GDP

[161] This chapter was prepared by Anil Markandya (ECSSD) of the World Bank.

produced per KG of oil used, and the second highest under 5 mortality rate (after Turkey). In terms of CO_2 emissions per unit of GDP, Romania is exceeded only by Bulgaria, the Czech Republic, Estonia and Poland.[162]

8.3 In view of the size of the problem facing the country, and given that Romania's per capita GDP is the lowest among the selected countries except for Turkey, it is not surprising to find the burden of environmental improvements is considerable. One measure of this is provided in the early European Commission (EC) study of the environmental costs of meeting the environmental part of the *acquis communautaire,* covering 10 of the 13 countries in Table 8.1 (excluding Cyprus, Malta and Turkey). Romania's costs of meeting EU environmental standards amount to 56 percent of its 2001 GDP, compared to an average of 29 percent across the ten countries.[163] The total cost for Romania was estimated at around €21 billion. More recent figures actually come up with an even higher number (over €29 billion, see below). While this type of exercise remains somewhat imprecise, the conclusion that the environmental component of the *acquis* presents the country with a formidable challenge is uncontested.

8.4 This chapter focuses on how Romania will meet this challenge. Although the government has now closed the environment chapter, there are many issues that remain to be discussed. Prominent among these issues are how the required public funds for meeting the targets will be generated and whether those programs that depend on non-budgetary contributions will in fact be able to be funded at the level that is expected in the agreements with the Commission. There are also concerns about the government's administrative capacity for managing the implementation of the *acquis* in this area,[164] and about the impacts of the programs on the affordability of the services (especially water supply and sanitation) for the population.

8.5 The discussion in this chapter is structured as follows. Section B looks at the potential benefits, of meeting the environmental targets of the *acquis,* drawing on a major EC study of the benefits that included Romania. Based on this and on the financing gaps referred to above, the section puts forth some recommendations for the sequencing of the environmental investments. It should be understood that even within the agreements reached with the Commission on the environmental chapter, there is some choice regarding the phasing and sequencing of investments. This will be driven largely by the available funds but should also be responsive to the potential benefits of making the investments.

8.6 Section C looks at the costs of the environmental *acquis* in more detail, by directive and by sector (budgetary versus non-budgetary, and, within the latter, local government, state enterprises and the private sector). The Section compares, to the extent possible, these estimated costs with past expenditure on the environment by each of these groups. Where funding sources

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[162] Not all important environmental indicators are included, as comparable data are not available. One other indicator for which Romania also has a poor record is air pollution in terms of suspended particulates. In major cities this is well above the recommended maximum WHO levels.

[163] Only Bulgaria had higher costs as a percent of GDP. The study being referred to is EDC (1997), "Compliance Costing for Approximation of EU Legislation in the CEEC,". European Commission, DG Environment, Brussels.

[164] This was expressed quite forcefully by the Commission itself in "Commission of the European Communities, 2002: "Regular Report on Romania's Progress Toward Accession," COM (2002) 700 Final," EC, Brussels.

have been identified these are noted and from this a 'financing gap' is estimated. Such a gap is, of course, not set in stone. It can be reduced by taking measures that shift spending from one category to another (e.g., from the public to the private sector), or that reduce the required level of spending in total (e.g., by reducing demand for services where it is at present too high). These options are reviewed and discussed qualitatively. Mobilizing additional resources, such as through the proposed environmental charges can also fill the financing gap and the potential for these is also evaluated.

8.7 Section D examines some of key aspects of the *acquis* program in more detail. It looks at the following (i) ways in which the budgetary burden can be reduced: (ii) the potential for mobilizing additional resources internally and externally for the environment: (iii) the administrative capacity constraints that have to be addressed: and (iv) the affordability of the tariff increases and the constraints that they pose in terms of implementing the program. In each case the chapter offers some suggestions and recommendations for action. Finally, Section E provides the conclusions to the chapter.

B. Benefits of Meeting the Environmental Part of the Acquis in Romania

8.8 In view of the high costs of meeting the environmental directives, it is important to identify the benefits of compliance. The EC has recently quantified the expected benefits for the CEECs.[165] The results of this exercise are given in Table 8.2.[166] The benefits covered in this exercise include health, resource, and ecosystem protection, and the directives covered include all those with an impact on air, water, and solid waste. The results are reported as the net present value of benefits, discounted at a real rate of 4 percent.

8.9 The expected benefits arising from the meeting air standards are generally the highest, followed by those arising from stricter water standards, especially if the upper estimates are taken (the exceptions are Bulgaria and the Czech Republic). However, estimates range widely across categories and countries.[167] The greatest uncertainties are associated with the potential benefits of EU waste treatment standards, followed by the benefits of air and water standards. Some of the variations across countries, on the other hand, result from differences in the baseline environmental conditions. The Czech Republic has the greatest river length of all the CEECs (76,000 km). At the same time, not a single river is of "good" quality (by EU standards); that is, 10 percent are of "fair" quality, 10 percent are of "very bad" quality, and the remaining 80 percent are of either "poor"' (40 percent) or "bad" (40 percent) quality. Compliance with EU water directives will improve this situation considerably: 10 percent are expected to be of "good" quality, and all rivers of "poor," "bad," or "very bad" quality are expected to improve to fair quality after successful implementation. This yields substantial benefits to the Czech Republic, giving it much higher figures than those for some of the other countries.

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[165] The study covers all 13 countries: Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, the Slovak Republic, Slovenia, and Turkey.

[166] In actual practice, countries may use higher discount rates, if only to ensure that they prioritize those investments that will yield earlier benefits for the populations.

[167] The high estimates vary by as much as an order of magnitude as the low estimates, reflecting the substantial uncertainties surrounding environmental benefit estimation in general.

Table 8.2. Total Benefits over the Period 2005–2020 (€ Billion)

	Water		Air		Waste		Total Benefits		Per capita Euro 000
	Low	High	Low	High	Low	High	Low	High	
Bulgaria	1.58	4.20	1.07	11.00	0.20	6.62	2.85	21.82	3.01
Czech Republic	15.23	24.05	7.10	35.10	0.93	11.20	23.26	70.35	9.09
Hungary	2.72	10.49	5.74	39.92	1.12	18.50	9.58	68.91	7.77
Poland	13.59	31.96	25.80	149.90	1.60	26.30	40.99	208.16	6.44
Romania	3.96	12.15	7.59	56.95	0.83	26.30	12.38	95.40	4.79
Slovak Republic	3.00	6.61	3.40	21.90	0.29	4.28	6.69	32.79	7.31
Slovenia	1.47	3.44	0.68	4.62	0.24	2.82	2.39	10.88	6.64
Baltics									
Estonia	0.26	0.99	0.39	2.05	0.09	1.75	0.74	4.79	3.95
Latvia	0.38	1.34	0.49	3.12	0.05	1.07	0.92	5.53	2.69
Lithuania	1.23	2.75	1.56	7.98	0.06	2.00	2.85	12.73	4.21
Total	43.42	97.98	53.82	332.54	5.41	100.84	102.65	531.36	6.06
As percent of total	42.00	18.00	52.00	63.00	5.00	19.00	100.00	100.00	

Note: Net present value at a 4 percent discount rate.
Source: Ecotech, 2001, *The Benefits of Compliance with the Environmental Acquis for the CEECs*. Brussels: European Commission.

8.10 For Romania, Table 8.2 shows that the benefits of upgrading air quality are the highest, followed by water and waste. Taking the lower bound estimates, the air benefits have a present value of €7.6 billion against an estimated investment cost of €2.8 billion. The lower bound of the water benefits, however, is about €4.0 billion against a capital cost of €7.2 billion, and the waste benefits come out at a minimum of €825 million against an investment cost of €8 billion. Overall, the distribution of benefits between the media does not depend on whether one takes the lower or higher benefits figures. Within the water category, however, the breakdown among drinking water, bathing water, and river quality improvements does depend on whether one takes the lower or higher values. With the lower values, bathing water improvements account for about two-thirds of the total, whereas with the higher values, drinking water accounts for about 72 percent of the total and bathing water for only 22 percent.[168] In other words, there is much uncertainty about the drinking water benefits, because it is difficult to ascertain exactly how much households are willing to pay for these improvements.

8.11 The main implications of the benefit analysis are the following:

- Greater care is needed in the phasing of the water and waste investments than in the following of the air investments
- Further analysis is needed in the areas of solid waste and drinking water.

[168] The breakdown within the water sector is not shown in the table.

C. Costs of Upgrading Environmental Standards

C.1. Estimates of Total Costs and Costs by Year

8.12 Table 8.3 provides the latest estimates of the costs of the main environmental directives, the time period of compliance, and an estimate of the shares of the investments that will have to come from the different sectors. The data are based on detailed Romanian studies carried out for the directives, where these were available, and on detailed estimates from Poland and other countries where these were not available. The total investment cost comes to nearly €30 billion, which is about €8.7 billion or 29 percent more than the 1997 EC estimate. Calculations have also been made for the additional operating costs, and these come to between €80 and €120 per person per annum, or about €2.2 billion in total.

8.13 How much of this investment expenditure can Romania expect to meet from EU funds? The best estimate indicates that from 2004 to 2006, PHARE and ISPA funds, which are dedicated to supporting the environmental directives, will provide about €2.8 billion. This is based on the EC 2002 communication covering Bulgaria and Romania.[169] which details the total allocation of PHARE, SAPARD and ISPA funds and the division between SAPARD and other funds obtained by direct communication with the EC. After 2006, the Cohesion Funds will take over, and the estimated amount available to 2015 is about €4.1 billion, based on similar calculations for Bulgaria. Thus, in total, Romania can expect about €6.9 billion, which leaves €22.8 billion to be funded from other sources, principally domestic, over about 18 years (the longest negotiated period is 2022). It is often not fully appreciated how much the environmental upgrading will cost the candidate states, and the view that EU funds will take care of most of the additional expenditure is clearly false[170].

8.14 These expenses are, of course, spread out over several years, as Table 8.3 indicates, and the expectation is that economic growth will make it easier to implement the program in the later years. Also the said expenses are provided by the line ministries, hence they are presumed to be in line with commitments made during negotiations. Since it is particularly interesting to see the annual expenditure implications of the environmental chapter, some year by year breakdown is provided in Table 8.4, which shows annual expenditure plans of the government where available. In other cases, which because of data the limitations cover most of the directives, the annual sequencing has been assumed to be similar to that of the 2004 entrants (for examples Poland).[171] The resulting figures show annual investment starting at €1.6 billion in 2004, increasing to as high as €4.0 billion in 2007, and then declining slowly to €1.4 billion by 2015 and to around €400 million in 2022 (not shown in table).

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[169] "Communication from the Commission to the Council and the European Parliament: Roadmaps for Bulgaria and Romania," COM (2002) 624 final, Brussels.

[170] The amount available to Poland for the environment is about the same as that for Romania (€5 billion) in spite of its population being about 75 percent higher. Bulgaria, on the other hand, will get about €3 billion, with less than half of Romania's population.

[171] The only directive for which sequencing information was provided was 2001/80 (air quality). For the others, the annual shares of the total are assumed to be the same as for Poland.

Table 8.3 Estimates of the Investment Costs of the Environmental Directives

Directive	Number	Cost €Mn.	Period for Compliance	Sectors	Source of Data
Water Quality	76/474	933	2015	Enterprises	1/
	91/271	8,000	2022	State: Central/Local	2/
	91/676	1,200	2014	State and Enterprises	2/
	2001/80	1,402	2011	Mainly Enterprises	2/
Air Quality	93/12	140	2007	Enterprises	2/
	94/63	363	2009	Mainly Enterprises	2/
	96/62	42	2007	Central State Budget	2/
	98/70	380	2007	Enterprises	2/
	99/13	474	2015	Enterprises	2/
Waste Management	94/62	243	2010	State and Enterprises	2/
	99/31	8,196	2020	State and Enterprises	2/
IPPC	96/61	4,147	2015	Mainly Enterprises	1/
Other	79/409	10	2006	State Budget	2/
	92/43	10	2006	State Budget	2/
	96/29	19	2007	State Budget	2/
	97/43	2,500	2007	State Budget	2/
	2003/54	903	2015	State and Enterprises	2/
TOTAL		**29,726**			

Notes: 1/ Based on more recent studies for countries joining in 2004, adjusted for Romania. 2/ Based on primary studies carried out in Romania.
Source: See Annex 7 for details of the directives.

Table 8.4 Estimates of Annual Investments Needed to Fulfill Environmental Directives , 2004-15 (€Mn.)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Water	820	669	546	675	731	731	812	852	569	592	512	512	8,022
Air	51	131	528	609	370	439	368	284	0	0	0	0	2,780
Waste	119	97	226	362	790	871	871	872	905	704	671	671	7,157
IPPC	520	282	255	255	349	396	438	459	374	342	243	235	4,147
Other	106	109	548	2134	73	73	73	44	44	44	44	44	3,337
Total	1,615	1,288	2,103	4,035	2,313	2,509	2,562	2,510	1,893	1,682	1,470	1,462	25,444

Source: See Annex 7 for details of the assumptions made in the calculations. The actual program runs to 2022 where approximately €4.2 billion is spent in the last seven years.

8.15 Although these figures are rough estimates, they are sufficient to provide a clear indication that the level of spending on the environment will have to increase very substantially with respect to past levels. The OECD database has information on Romania's environmental expenditures to 1998 (as well as for other CEECs). Investment expenditures are reported in euros from 1993 to 2001 in Table 8.5. They show a steady increase over this period, from €79 million to €238 million, but even at that level they are considerably below the levels required in the future as given in Table 8.4. The "gap" in national spending is also evident from the comparison with per capita expenditures in Poland and the Czech Republic, which were higher in 1993 than Romania's expenditures in 2001.[172] In addition, as shown in Table 8.5 there is the decline in expenditure in the public sector (both central and local) over this period. The 2001 figures for both are about 70 percent lower than the 1993 figures, during a period in which investment expenditures should have been increasing in anticipation of EU accession.

[172] The OECD database excludes investment expenditures on natural resource management. In most cases these figures are a relatively small part of total investment. A similar table drawn up for total environment-related expenditure comes up with much the same conclusions – levels of spending in Romania as much as an order of magnitude lower in per capita terms than in such countries as the Czech Republic.

Table 8.5. Total Environmental Investment Expenditures, 1993-2001
(€'000)

	1993	1994	1995	1996	1997	1998	2001
Public	45,116	38,707	57,210	51,711	75,919	107,029	13,297
Central	*8,121*	*6,967*	*10,298*	*9,308*	*13,666*	*19,265*	*2,393*
Local	*36,995*	*31,740*	*46,912*	*42,403*	*62,254*	*87,764*	*10,904*
Private	33,928	35,170	49,147	57,689	65,419	86,188	224,677
Total	79,044	73,877	106,357	109,400	141,338	193,217	237,974
Per capita (euros)							
Romania	3.47	3.25	4.69	4.84	6.27	8.59	10.62
Poland	18.54	20.43	25.82	46.32	51.16	59.46	
Czech Rep.	54.91	79.64	88.93	102.35	111.18	90.93	

Note: Only the investment expenditures in 2001 include expenditures for nature/environmental protection. From 1993-98, "investment expenditures" = end-of-pipe investments + process integrated investments.
Source: OECD (1993-98 data), Environmental Statistics of Romania (2001 data). See Annex 7 for some assumptions made in the calculation of central and local government spending during 1993-98.

C.2. The Financing Gap after EU Grants Have Been Taken into Account

8.16 Before an analysis of the likely financing gap can be undertakes, the investments have to be broken down into the following sectors: state budget, local budget, and non-budgetary. The last of these includes state and private sector enterprises, where investments in the former are not subsidized from the budget. This breakdown has been carried out based on the present institutional arrangements. It has also been carried out by allocating EU funds to the different directives according to plans prepared by the Government of Romania (where available). Where no such plans existed, the EU funds (ISPA and Cohesion) have been allocated to the different directives in the same proportions as was applied in the 2004 selected countries (notably Poland). The resulting figures are given in Table 8.6 and show the required expenditures from the state government, local government and non-public sources by year. The state investment is expected to remain at around €130-150 million a year, except in 2006 and 2007, when Directive 97/43 (human health security against ionizing radiation) has to be implemented and the costs will rise considerably. Given the extraordinary nature of this investment, some additional funds may be available from the EU for this purpose. Net annual local government investment spending will have to be in the range of €400-500 million to 2007, after which it will rise to around €700-800 million. Finally, non-budgetary expenditures will be €700-1,300 million to 2007, rising to €1.4-1.6 billion over the next four years and then declining to €700-1000 million for the rest of the period.

8.17 How feasible is such an investment plan? The analysis of this question is divided into two periods: the short term (2004-06) and the longer term (2006-15). In the short term the average annual net investment needs are as follows: state (€133 million), local government (€448 million) and non-budgetary (€936 million).[173] The highest corresponding levels of spending by these groups in recent years (between 1997 and 2001) for which data are available were in the

[173] For the state expenditure, investment for Directive 97/43 has been excluded on the assumption that this extraordinary item will be funded separately from external sources.

following range: state (€20 million), local government (€90 million), and non-budgetary (€225 million).

Table 8.6 Summary of Expenditures to Meet the Directives, by Sector, 2004-15 (€Mn.)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total State Investment	182	169	624	2238	174	185	199	178	25	25	25	25
of which EU Funded	49	40	33	40	44	44	48	51	0	0	0	0
Net State Investment	133	129	592	2198	131	141	151	127	25	25	25	25
Total Local Gov. Inv.	669	539	510	665	907	946	1007	1037	1,053	984	888	888
of which EU Funded	145	118	112	147	200	209	222	228	233	217	197	197
Net Local Gov. Inv.	524	421	398	519	707	738	785	808	820	766	691	691
Total Non-Public Inv.	1,074	841	1,227	1,470	1,710	1,879	1,884	1,837	1,160	965	835	827
of which EU Funded	178	154	154	203	289	304	319	327	177	142	139	139
Net Non-Public Inv.	896	687	1,072	1,268	1,420	1,575	1,565	1,510	983	823	696	688
Total Net Investment	1,553	1,238	2,062	3,984	2,258	2,454	2,501	2,446	1,828	1,615	1,412	1,404
Total EU Funds	371	312	299	389	533	556	589	606	410	359	336	336

Source: See Annex 7 regarding assumptions made in the calculations.

8.18 For the state budget, the financing gap relative to past investment levels will be on the order of €130 million and hence some increase in budgetary allocations would be required to fill the gap. The allocation of central budgetary expenditures to "environment and waters" is around 0.4 percent of the budget, but this has to cover current spending as well as investment. Since around half of this allocation is for current expenditures the "baseline" allocation for 2004-06 for environmental investment will be approximately €30 million every year. This will have to be increased by €100 million if the state financing gap is to be closed, which would make environmental spending closer to 1 percent of government expenditures. Table 8.7 provides some of the detailed numbers for this estimate.

8.19 Local government spending net of the EU grants will have to be on the order of €450 million a year for the period 2004 to 2006, which represents an increase of €360 million over the levels in the last decade. Most of the investment is in the water supply and sewerage sector (see Table 8.3), but some of it is also needed for waste management. There are some indications that substantial increases have been made in recent years. The World Bank's upgrading of the Bucharest water supply system is one ongoing project amounting to about €16.17 million, and the EBRD has made loans available for water projects in 15 municipalities, worth approximately €98.3 million. Repayment of any borrowing is the responsibility of the companies operating the municipal services, which have provided the guarantees for the loans.[174] The SAMTID[175] program is being initiated to cover the small and medium-size municipalities. The program has a total value of around €400 million, of which €200 million will come from the EIB and EBRD. The rest will be raised from the PHARE ESC Fund and Romania's state budget through the National Fund. The program may take ten years to reach most of the targeted towns (i.e., 2003 to 2013). The pilot phase starts in 2003, where the duration of each project is stipulated not to

[174] Local authorities can provide guarantees for local investments up to 20 percent of their revenues. They can also issue bonds and borrow commercially and a couple of them have done so.

[175] Small and Medium Towns Infrastructure Development Program.

extend beyond 20 months. Contracts must be signed by the end of November 2004 and must be disbursed by end of the same month in 2006.

Table 8.7 Estimates of the Financing Gap for State Environmental Expenditures, 2001-06(€Mn.)

	2001	2002	2003	2004	2005	2006
Total Gov. Exp.	14,192	14,176	12,818	14,190	15,200	15920
Total Env. Exp	57	53	54	58	60	63
Env. Investment	2	27	27	29	30	32
Env. Inv. Gap				104	99	105
Memorandum						
Exc. Rate: Lei/ Euro	26027	31,255	40,054	50,954	55,030	58,882

Note: Environmental Investment is assumed to be half of expenditure, based on figures from 1996 to -2001.
Source: ROMLDB Projections for Romania and Annual Statistics for Romania

8.20 These programs clearly increase investment by local authorities relative to the past levels, but it is unlikely that they will reach the target value of €450 million a year for the next three years. An enhanced role for the private sector may help fill the gap in the medium term, but is unlikely to do so in such a short time frame.[176] Hence some change in the sequencing will be needed for the water sector investments. For the waste sector, additional funds have been mobilized through the Environmental Fund, which is discussed in more detail below.

8.21 Finally, there are the investments by the private sector and by state enterprises operating without budgetary support. In 2001 the private sector invested around €225 million for environmental protection and this has now to increase to about €885 million.[177] The increase of €600 million is very substantial by any standards. The government can mandate the investment through changes in the environmental laws and regulations, and indeed it has been doing this quite diligently. However, such regulatory changes do not guarantee that the industry will be able to make the changes required. A lack of funds will continue to be a major constraint. To put these investments in perspective, the total private sector fixed investment in the period 2004-2006 is estimated to be around €10 billion, or €3.3 billion a year. Of this, the environmental expenditures will take about 27 percent, which is much higher than usual (typical values of the environmental share are around 3-4 percent). There is no obvious answer to this difficulty except to say that the target is ambitious, it is likely that it will not be met, and some of the required investment will have to be postponed to later in the accession period.

8.22 Having looked at the short term financing gap, we now turn to the medium term. For the state sector the required level of investment remains more or less the same until 2011, after which it declines. Given the anticipated growth in the economy, this suggests that the state sector will find it increasingly easy to fulfill its investment obligations vis-à-vis the environmental *acquis*.

[176] In the medium to long term, however, an enhanced role for the private sector, through public/private partnerships ,is vital. Operating the operate on a commercialized footing can increase access to capital markets and reduce the demand for investment funds from central and local budgets. Progress in these areas has been slow in Romania but, since we are looking over a relatively long time horizon, an increased role for non-budgetary financing should not be ruled out.

[177] See Table 8.5, average of 2004-2006 net of non-budgetary investment.

8.23 For local government, however, the picture is not quite as good. Investments will have to increase sharply in 2007/ 08, after which they will increase more or less in line with income growth until 2012 and then will decline slightly to 2015. Here, an enhanced role for the private sector will be critical if the targets are to be met. There is a concern, however about the affordability of these investments in terms of the implied tariff increases. While this will attenuate as growth takes place, it will remain a major factor that will have to be addressed (see Section D).

8.24 For non-budgetary investments a major increase is also predicted from 2006 to 2011, after which the figures decline. Again, growth will help, but some external funding will also be needed in addition, of course ,to what the EU will provide in the way of grants.

C.3. The Environment Fund

8.25 One new source of investment resources is the Environment Fund, established in 2002, which raises revenues from environmental fees and charges, environment authorization taxes and environment impact assessment taxes.[178] As of February 2004, revenues from the fund had reached about US$29 million (€24.6 million) in 2004. However, no firm basis has been provided for this figure which may be optimistic. The intention is to use these revenues to finance the priority investments required to comply with the *acquis communitaire* covering, in principle, investment in local government and the private sector. Funds will be made available partly on a grant basis and partly on a soft loan basis, depending on what financial benefits the investments generate. In the first year (a pilot year) the focus will be on projects involving waste management and recycling (covering Directives 94/62 and 99/31). At present, about 100 projects have been accepted, with a total value of about €9 million.

8.26 As in other CEECs, the Environment Fund can play an important role in financing investments but there are also some possible pitfalls. The experience with similar funds in the CEEC and NIS countries has been mixed. While such funds be a useful source for the financing of environmental investments, there have been questions about the transparency of the procedures and the efficiency the allocation of the funds. They have been responsible for large levels of investments, but the use of state-of-the-art techniques to assess the cost effectiveness and to estimate the social benefits of different investments is often lacking. At a less sophisticated level, for virtually no country is there comprehensive information on the extent to which different projects are subsidized. The instruments used include direct grants, soft loans, "green equity" investments, interest rate subsidies on semi-commercial loans, etc. The "subsidy equivalent" to each party is rarely calculated, which makes any cost effectiveness exercise very difficult to achieve. The Romanian Environment Fund should do its best to avoid these problems by ensuring that the procedures for evaluating environmental projects do indeed meet the standards expected of all public sector investments.

8.27 As established, the Environment Fund will not be extrabudgetary but will have access to earmarked sources of revenue. The inclusion of the Fund in the consolidated budget is desirable

[178] Charges are levied on ferrous and non-ferrous wastes, air emissions, packaging, and sales of dangerous chemicals, and timber sales. A small tobacco excise tax also goes to the Fund. The environment authorization taxes are collected by the One-stop-shop Office within the Trade Register Office (GD-573/2002).

from a fiscal viewpoint and, while earmarking is generally not favored, in this case it be may justified, given the urgent need for investment funds and the lack of any other public sources for these funds. Finally, it should be noted that at around €85 million euros in 2004 the Fund can make an important contribution to the financing gap but it will by no means close that gap. Other sources will also be needed. Indeed, there is a case for looking at other economic instruments that could generate revenues for environmental investments while at the same time providing incentives to reduce the environmental burdens that are the reason for the investments in the first place.

D. KEY ISSUES IN THE ENVIRONMENTAL SECTOR

8.28 This section looks at some of measures that can be taken to address the challenges of meeting the environmental component of the *acquis*. These are: the following:

1. Ways in which the budgetary burden can be reduced and more internal resources mobilized;
2. Institutional Reforms and Administrative capacity constraints that have to be addressed
3. Affordability constraints to implementation.

D.1. Ways in Which the Budgetary Burden Can Be Reduced and More Internal Resources Mobilized

8.29 Based on the experience of the other CEECs, costs can be reduced substantially by following a least cost investment plan for energy-related investments and by under taking making reforms in the energy sector, especially in energy-related investments. In Romania the Ministry of Industry regulates this sector and the national strategy is one of reform in the direction of competition and privatization. Broadly speaking, the more rapid the reforms are, the lower the required investments and the environmental costs will be.

8.30 The costs of meeting the environmental objectives will also be lower in line with the rapidity of the rate of implementation of the economic based instruments to that will provide polluters with incentives to reduce emissions. Such measures, which provide fiscal incentives to polluters to reduce the volume of wastes, can have two impacts. The first impact is to reduce the amount of investment and expenditure in cleanup and the second impact is to provide some resources for to enable the public sector to pay for the cleanup. In Romania, some progress has been made in this regard but there is scope for the more rapid implementation of some instruments of the kind used in the EU. These instruments include taxes on solid waste and wastewater that reflect the full social cost of their disposal, as well as taxes on carbon to discourage the use of fossil fuels.[179]

8.31 Table 8.8 provides a description of the main environmental market-based instruments in use in the EU, the potential role that they play there, and the scope for their use in Romania. As

[179] Article 8 of Law no. 73/2000 (amended and republished) specifies a number of economic charges (see Section D on the Environment Fund), but more charges could be considered.

the table shows, there is considerable potential for the use of such instruments, but there are also important issues of design and application that have to be addressed, and not all environmental charges have worked well. The key areas in which charges have a serious potential and are feasible are the carbon tax, expanded hazardous waste charges, and product charges. There are issues of design and economic impact with regard to these as well but with access to experience in the EU and elsewhere it should be possible to introduce a charge that functions effectively to reduce the relevant emissions and to provide revenues to the government that can be allocated to investments that satisfy the key EU environmental directives.

8.32 Finally, there are a number of administrative measures that can be taken to increase efficiency and reduce investment costs, as discussed below

- Costs are also sensitive to the efficiency with which municipalities take investment decisions. Opening up procurement to international tender and undertaking careful project appraisal in evaluating the design of the schemes will reduce costs significantly.[180]

- In designing the investments, account should be taken of the lower demand for some services when future service charges will have to recover capital and operating costs. The World Bank has had experience with this in the wastewater projects that it funded in the Baltic States, where the level of capacity is turning out to be substantially in excess of demand as a result of the large increase in volume-based charges. A related issue is economies of scale and the need to take advantage of them. The financing arrangements for these investments often militate against the adoption of economies of scale, as soft loans from suppliers and ISPA grants support the status quo service delivery arrangements. Direct pressure from the central government is needed to overcome this bias and to resist the loss of political patronage that it will imply.

- The impact that new investments will have on total operating costs will be to reduce those costs, as the operations and maintenance needs of new equipment are lower than those of the old equipment. In addition, operations costs can be reduced through increased efficiency, the scope for which is considerable, through outsourcing and through reductions in over-manning in the state controlled power and water utilities.

- The present value of the costs will fall if the more expensive items are delayed. Taking this into account in the sequencing of investment is all the more justified when the ensuing benefits are low. As the discussion in Section C shows, a careful assessment of the benefits against the costs supports the adoption of most of the directions related to air pollution,, but it supports being more selective of the directives on waste management and wastewater treatment. Finally, it should be noted that delaying investments not only reduces the present value of the costs, but it also reduces the burden of investments on the poor.

[180] Another factor is discrimination. Subsidies available to public utilities are not given to private operators. Numerous experts and commercial banks have reported cases where city authorities are unwilling to accept private financing because of a loss of subsidy for the utility if it is operated as a private entity.

Table 8.8. Main Market-Based Instruments in the EU and the Scope for Their Use in Romania

Instrument	Use in EU	Impacts in EU	Use in Romania	Issues in Application
Waste water charge	DK, NL, D.	Reduces volumes of waste and is based on pollution loading of water. Helps reduce need for investment in treatment.	Many CEECs, including Romania, have such charges but rates are too low to be effective as incentives (Poland is an exception).	Can be an important source of revenue but even more important than taxing emissions is to ensure full cost recovery for wastewater treatment.
Carbon tax	DK, FI, FR, GE, IT, NL, NO, SW, UK	Incentives to reduce fossil fuel based energy and develop renewable sources.	A tax would play an important part in achieving Kyoto targets. Revenues would be an important source of funds for environmental programs and reduce investment for air directives.	Impact on energy intensive industry mitigated by some exemptions. Rates need to be harmonized with EU countries.
Differential taxes on oil products	All for leaded gasoline. DK, SW for sulfur content of oil	Helped speed up phase out of lead use. Reduces ambient sulfur concentrations.	Differential tax on leaded gasoline helps phase out of use but preferential tax on diesel encourages more polluting emissions from transport. A sulfur oil tax would raise revenue to support switching to low sulfur fuels as required under *acquis*.	Removing subsidy to diesel would increase revenue. Reduced demand for high sulfur fuels will imply more investment in low sulfur production.
Differential car tax	GE, SW	Tax is based on emissions potential of vehicles.	Excise taxes exist on used cars, which reduce demand relative to new vehicles and thereby have a beneficial environmental effect. But more sophisticated systems are feasible.	Increases costs of transport for low income households
Congestion charge	Several at city level	Improves traffic flow and reduces emissions.	None at present. Not critical for *acquis*.	Important at city level and can provide revenue to support mass transit.
Hazardous waste	FI, GE	All EU countries charge for proper disposal of such waste but few charge for generation of waste	Present system imposes charge for generation of some hazardous waste but could be extended.	Some rebate for proper own disposal will need to be included. Monitoring is key, as is issue of illegal disposal.

Table 8.8. Main Market-Based Instruments in the EU and the Scope for Their Use in Romania (contd.)

Instruments:	Use in EU	Impacts in EU	Use in Romania	Issues in Application
Taxes or charges on:				
Tires	A, DK, FI	The primary objective is to raise revenue for ultimate handling of the used product. Can also provide an incentive for recycling and re-use in some cases (e.g., packaging and bags).	Taxes are being implemented on packaging in Romania but could be extended to other products.	Relatively easy to collect (from producer or importer).
Disposal razors	B			
Disposal cameras	B			
Packaging	A, IT			
Bags	DK, IT			
Disposal tableware	DK			
Batteries	A, B, DK, IT, SW			
Light bulbs	DK			
Pesticides	B, DK, FI	Reduced application helps meet key agricultural directives.	No new instruments planned for this agriculture. Data on pesticide use are poor but some evidence that application ins some sensitive areas is too high.	Informing farmers of best practices is critical. There is also an issue of affordability of charges by poor farmers.
Fertilizers	FI			
NOx	FR, IT	Tax can help reduce emissions and meet European Sulfur and Nitrogen Protocols but level needs to be quite high to have an incentive effect.	No tax proponed.	Monitoring has to be good for this to work. Rebate for capture of emission has to be included in scheme.
SO2	DK, FR, IT		Tax is in place. Detailed information not available.	
Minerals (P, N)	B, DK, NL	Helps meet key agricultural directives.	None proposed. Similar issues to fertilizer charges.	

Source: Rosenstock (EC DG ENV A.1) and Own Comments.

D.2. Institutional and Administrative Reforms

8.33 The EU 2003 Report on Romania's progress toward accession has noted that there are still major gaps in the implementation of the *acquis* program generally, including in the area of the environment. The areas in which the situation is still challenging are listed below.

(a) Progress is needed in integrating the environment into other policies. The medium to long term energy strategy, for example, has been prepared but little attention has been given to the environmental dimension. In addition, the capacity for carrying out strategic environmental analysis is weak and needs to be built up.
(b) No developments have been made in the area of environmental impact legislation, which is a key requirement under EU law.
(c) Considerable work is needed on industrial pollution control and risk management. While legislation has been adopted, enforcement will need more staff than have been allocated to the National Environmental Guard.
(d) No progress has been made in the field of noise.
(e) The Ministry of Environment and Water Protection has expanded its administrative capacity through the creation of the National Environmental Agency (NEPA), eight Regional EPAs, and 34 local EPAs. However, the Ministry remains understaffed and the situation has been deteriorating since 2001.
(f) Although the budget for environmental protection has been increased slightly, it is still low.

8.34 The Bank's own experience supports these findings. However, the World Bank has expressed its growing concern that in the rush to accession Romania is passing laws and establishing a regulatory framework in the virtual absence of effective consultation, and without either the capacity or the resources to carry them out. While the body of legislation has grown considerably, staff levels have not increased and working conditions remain poor. Romania urgently needs to build up the capacity of the local Environmental Protection Inspectorates (EPIs) in order to improve permitting, monitoring, inspection, and enforcement. Although they are progressing in their environmental management capacity, the key ministries are not up to the levels of the present accession group of countries.

8.35 In view of this shared opinion, Romania should give higher priority to institutional strengthening in the environment sector. Inevitably, this will require that an increased budget be allocated to the Ministry. But this is essential if the objectives of improved consultation, more effective enforcement, and better coordination of environmental policies with the other ministries are to be achieved.

E. CONCLUSIONS

8.36 In comparison with new EU members and candidate countries, Romania is starting out with a lower level of environmental capital and a poorer state of the environment in many dimensions. This is demonstrated by indicators such as the country's low rate of access to improved water sources and sanitation, its high mortality rate for children under the age of five,

and its low energy efficiency. Hence, the country will need to devote more resources and will need to receive more assistance to fulfill the environmental requirements necessary for accession to the EU.

8.37 The total investment cost required to comply with 17 directives that address environment-related concerns amounts to approximately €29.7 billion. This figure is about 29 percent higher than originally estimated by the EC and it makes Romania one of the highest in this regard among the new EU members and candidate countries. The EU funds committed to help finance the investments during the period 2004 to 2015 are estimated to be about €6.9 billion in total. Hence, the remaining €22.8 billion will need to be obtained from other sources, namely, from central and local government and the private sector.

8.38 The estimated investments by the central and local governments imply a major increase from the present levels. An estimate made of the investment needs by year over the period 2004-15 shows that the central government will have to allocate more for the environment and that local governments will have to mobilize more funds than they have at present if the schedule is to be met. With realistic expectations of what can be achieved, however, one has to conclude that it is unlikely that the central and local governments will be able to raise their expected shares of the total, at least in the next five years. On a more optimistic note, the picture looks better after 2007, especially for the central government. For local government the medium term will continue to be challenging, and an enhanced role for the private sector will be critical if the targets are to be met. Specific constraints on the environmental side for private sector participation in the supply of local public services have been noted, and some suggestions, have been offered for dealing with them.

8.39 A major demand is also being placed on the private sector as a result of the *acquis*, and it is by no means clear that the levels of investment required can be met. External resources will be vital to the success of the program here, and measures that would ease the path should continue to be pursued actively by the government.

8.40 The government is seeking to mobilize more funds for the environment by using economic instruments such as charges and allocating them through an Environment Fund. If Fund adheres to principles of sound finance and expenditure control, this measure is to be welcomed. These environmental charges serve not only to raise revenues but also to reduce, in the first place, the emissions that are the source of the investment needs. Examples of potential instruments that can be adopted in Romania, in addition to those already introduced, are the carbon tax and more product charges, and these instruments should be investigated further.

8.41 Examples of additional environmental benefits that can be, expected from the environmental investments are the reduction of risks to health and the protection of the ecosystem. Estimates of these benefits have been reported for Romania and other countries. They show that Romania will derive the greatest benefits from air pollution reduction, followed by water and waste measures. However, there is considerable uncertainty about the magnitude of these benefits, and more information is needed, especially at the local level, so that the data can be used in sequencing the investments. In particular, an effort needs to be made to have a better

picture of the benefits of the drinking water and solid waste directives, and to select those investments that will generate the greatest benefits first.

8.42 Finally the successful execution of the environmental directives does not depend solely on the availability of funds. An important need is to strengthen the institutional capacity to implement the directives. Perhaps even more than in other countries, there is a need in Romania to further integrate environmental policies into it's the country's overall framework. Judicial, legislative, and data collection institutions must complement the environmental regulatory institutions as the enforcement and monitoring of the environmental regulations will need to rely on the strength of such complementary bodies.

ANNEX 1: FISCAL SUSTAINABILITY ANALYSIS

Fiscal sustainability measures the government's ability to service its debt while maintaining macroeconomic stability.[181] Fiscal sustainability analysis is centered on the concept of the government's lifetime budget constraint. It determines the size of the primary surplus needed to sustain the initial debt level given assumptions about output growth, interest rates and inflation.

The primary balance needed to keep the initial debt to GDP ratio constant is calculated using the following equation, assuming a constant GDP growth, constant primary balance and seigniorage in percent of GDP:

$$\bar{x} = \bar{r}\,\bar{b}_{t-1} - \bar{\sigma} \qquad (1)$$

where $\bar{r}$ is the real interest rate on government debt, calculated using assumptions about GDP growth g and nominal interest rates r:

$$\bar{r} = (r-g)/(1+g) \qquad (2)$$

The initial debt to GDP ratio is $\bar{b}$ t-1, and $\bar{\sigma}$ is the real value of seigniorage revenue as a percent of GDP. The seigniorage is defined as the net revenue from printing money and is measured as the change in base money.

Real interest rate is computed from

$$r = (R - \pi)/(1 + \pi) \qquad (3),$$

where π represents the average inflation rate. Assuming a steady state inflation rate of 3.5 percent in the medium term, an average output growth of 4 per annum, and an average cost of borrowing of about 10 percent, we estimate the real interest rate $\bar{r}$ =2.2 percent.

Seigniorage revenue as a percent of GDP is calculated based on the following equation:

$$\bar{\sigma} = \frac{\pi + g + \pi g}{(1+\pi)(1+g)}\,\bar{m} \qquad (4)$$

where $\bar{m}$ is base money as a percent of GDP, which is estimated at 4.8 percent of GDP at end 2002. Using the assumptions about inflation and output growth, we estimate a seigniorage revenue of about 0.3 percent of GDP.

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[181] Burnside, A. Craig, (2002) *Fiscal Sustainability in Bulgaria*, World Bank. Processed.

Using equation (1) with initial debt ($\bar{b}$ t-1) equal to 28 percent of GDP at end-2002, we estimate that the primary surplus needed to sustain the initial debt level of 28 percent of GDP is 0.3 percent of GDP.

In the interpretation of results, some data constraints and possible measurement issues should be taken into account. Government debt here refers to gross public and publicly guaranteed debt while usually net government debt is used to estimate the sustainable fiscal deficits. In addition, this stock of debt includes temporary borrowing from the treasury resources, which have not been netted out in the total public debt. The government budget deficit is calculated on a cash basis and does not take into account the accumulation of tax arrears. While the stock of debt includes both public and publicly guaranteed debt, interest payments in the budget cover only the cost of servicing government debt, and the cost of activated guarantees.

ANNEX 2: MODELING OF AGRICULTURAL POLICY

A Brief Description of Simulation Methodology

A partial equilibrium model of the Romanian agricultural sector has been used to simulate a series of scenarios on the adoption of EU-type agricultural policies and to provide information about the likely impact on producers' value added (farmers' income), consumers' real income, poverty, and the state budget. Ten major agricultural products are considered in the model, namely, wheat, barley, maize, sunflower, potatoes, milk, beef, pork, poultry, and eggs (~70 percent of Romania's gross agricultural production). For each of these activities the simulation approach identifies and quantifies the potential impact of the changes in protection under various scenarios (see Box 1). The analysis developed in this study assumes that Romania is a "price taker" in world markets for the products analyzed. Wheat, barley, maize, sunflower seed, and potatoes are considered as exportable, while the other commodities are considered as importable. Border price equivalents are calculated as unit values of imported or exported commodities, depending on Romania's trade position in the commodity discussed.

In brief, **farmers' income** is determined as the difference between revenues from the sale of agricultural product and tradable input costs, plus any non-price-related direct monetary transfers to farmers. Any change in agricultural policies affecting input prices, output prices, or direct monetary transfers (such as the CAP direct payments) translates into changes in the value added of agricultural production (i.e., farmers' income). In the medium to long term, the level of production of the various commodities is responsive to the level of profitability of each commodity (approximated by value added). Changes in value added thus lead to changes in the total output, further compounding the initial changes in farmers' income. For each commodity, the extent of the medium- to long-term supply response is determined by the elasticities of supply, which in this study were consistent with the elasticities used in similar World Bank studies for other countries in the regions.[182]

Changes in agricultural output prices affect consumers via their impact on food prices. Higher food prices lead to an increase in household food expenditures and, given a fixed nominal disposable income, the consumer is forced to reduce the consumption of non-food goods and services by the percentage increase in **food expenditure** multiplied by the share of food expenditure in total consumption. This reduction in the consumer's ability to purchase goods and services is equivalent to a reduction in **real income**. In the medium to long term, consumers adjust to the new set of relative prices, moving away from the consumption of foods that have

[182] See, e.g., Csaki, C., Nash, J., Matusevich, V., and Kray, H.A. (2002), *Food and Agricultural Policy in Russia: Progress to Date and the Road Forward*, World Bank Technical Paper No. 523; and Csaki, C., Nash, J., Fock, A., and Kray, H.A. (2000), *Food and Agriculture in Bulgaria – The Challenge of Preparing for EU Accession*, World Bank Technical Paper No. 481.

become relatively more expensive as a result of the policy changes. The medium- to long-term impact on income is therefore expected to be more moderate compared to the short-run impact. The exact magnitude is determined by the price elasticity of demand for each product, which regulates the extent of consumers' adjustments to the changes in food prices. To allow for the various effects, two types of simulations are carried out for each scenario: one simulation with no supply and consumption changes (static short-run impact) and a second simulation allowing for a supply and consumption response (medium- to long-run impact).

The impact of the agricultural policy scenarios on **poverty** in Romania has also been analyzed. The share of the Romanian population classified as poor was determined based on the Total Poverty Headcount Ratio and the Extreme Poverty Headcount Ratio derived from a separate World Bank study on poverty in Romania.[183] For the analyses of the potential impacts of the CAP-introduction scenarios we used the Extreme Poverty Headcount Ratio as an appropriate indicator of poverty in Romania. Based on these assumptions, we calculate the changes in the number of poor resulting from the introduction of the various EU integration scenarios.

The **trade-related effects** of the policy changes on tariff revenues and export refunds are estimated based on the premise that these are required to "protect" domestic price levels under CAP-type policies. In our computations of trade-related effects we do not treat Romania as a non-member country implementing CAP-type policies on its own. We thus simulate the trade-related budgetary implications if Romania adopts CAP-type agricultural policies before accession. The calculated revenues from trade flows include trade with EU member countries. Not only would the revenues from tariffs and the expenditures for export subsidies be lower if the trade flows within the enlarged EU were subtracted, but, most important, they would be financed by funds from the CAP. Under our simulation, Romania does not receive any compensation from the EU budget for introducing CAP-type agricultural policies.

Romania's potential **gains from EU Structural and Cohesion Funds** (SCF) were estimated on the basis of average current per capita payments to EU member states. Assuming that Romania falls under Objective 1, per capita payments would amount to €217 per inhabitant per annum (EU Commission, 2002). Therefore, before imposing the maximum limit of 4 percent of GDP on SCF payments, Romania would qualify for annual transfers of 152 trillion ROL (€4.8 billion), namely, about 13 percent of the 2001 GDP. Romania's potential gains from SCF have been estimated on the basis of the payments granted to Greece, Ireland, Portugal, and Spain. SCF payments are granted to countries in which per capita GNP is less than 90 percent of the EU average. The total amount to be spent in 2002 is about €45 per inhabitant. These estimates are fairly optimistic as they assume that Romania (and other new entrants) would be supported under the same conditions that apply to current EU members.

[183] The consumption levels corresponding to these poverty lines are 1,535,570 ROL and 1,060,658 ROL per capita, respectively; 28.9 percent of the Romanian population fall below the first, higher poverty line and 10.9 percent fall below the second, lower poverty line in the year 2002 (World Bank 2003: Romania: Poverty Assessment, Vol. 2, p. 9f).

ANNEX 3: IMPACT OF CHANGES IN AGRICULTURAL POLICY

I. Absolute values

Scenario	Gross Agricultural Output *[billion ROL]*		Farmers' income[iii] *[billion ROL]*		Poverty *[% of population below poverty line[iv]]*		Net budget revenues from EU[v] *[bln ROL]*
Time horizon[i]	SR	LR	SR	LR	SR	LR	
A: Base run with current policies	168,938	168,938	65,676	65,676	10.9	10.9	0
B_1: Agenda 2000 without direct payments[ii]	171,501	154,259	64,181	58,541	13.7	12.7	35,856
B_2: Copenhagen with 100% dir. payments[ii]	211,334	220,626	104,013	114,611	13.7	12.7	75,688
B_3: Copenhagen with 25% direct payments[ii]	182,390	170,064	75,069	71,772	13.7	12.7	46,744
B_4: Copenhagen with SIPS (25% dir. paym.)[ii]	178,622	165,227	71,301	67,559	13.7	12.7	46,744
C_1: Council Compromise with decoupled direct payments[ii, vi]	162,134	143,509	54,813	48,772	12.5	12.1	79,410
C_2: C. Compromise with 100% dir. payments [ii]	205,687	214,980	98,366	108,965	12.5	12.1	79,410
D: Romanian negotiation position	213,524	243,724	110,262	130,638	13.7	12.7	81,363
E: Non-intervention scenario	160,520	153,301	65,569	64,773	10.5	10.6	0

II. Percentage changes relative to Scenario A

Scenario	Gross Agricultural Output		Farmers' income		Household food expenditure		Household income	
Time horizon[i]	SR	LR	SR	LR	SR	LR	SR	LR
B_1: Agenda 2000 without direct payments[ii]	1.5	-8.7	-2.3	-10.9	7.1	4.5	-3.9	-2.5
B_2: Copenhagen with 100% dir. payments[ii]	25.1	30.6	58.4	74.5	7.1	4.5	-3.9	-2.5
B_3: Copenhagen with 25% direct payments[ii]	8.0	0.7	14.3	9.3	7.1	4.5	-3.9	-2.5
B_4: Copenhagen with SIPS (25% dir. paym.)[ii]	5.7	-2.2	8.6	2.9	7.1	4.5	-3.9	-2.5
C_1: Council Compromise with decoupled direct payments[ii, vi]	-4.0	-15.1	-16.5	-25.7	4.0	2.8	-2.2	-1.6
C_2: C. Compromise with 100% dir. payments [ii]	21.8	27.3	49.8	65.9	4.0	2.8	-2.2	-1.6
D: Romanian negotiation position	26.4	44.3	67.9	98.9	7.1	4.5	-3.9	-2.5
E: Non intervention scenario	-5.0	-9.3	-0.2	-1.4	-1.7	-1.2	1.0	0.7

Notes: i SR = Short Run effect, LR = Long Run effect

ii These are the direct payments granted to EU farmers as compensation for the price cuts introduced under the CAP reforms in 1992 and 1999.

iii Income effects deriving from market price support and income effects deriving from direct (compensation) payments to farmers are considered jointly.

iv Referring to the Extreme Poverty Headcount Line of 1,060,658 ROL according to World Bank (2003): Romania: Poverty Assessment, Vol. 2, p. 9f.

v Net revenue is calculated as Total Receipts less Total Contributions from the EU Budget, assuming the application of the restriction on maximum annual receipts from EU Structural and Cohesion Funds: Currently, maximum annual transfers from EU Structural and Cohesion Funds to any member country should not exceed 4 percent of national GDP.

vi Our simulations cover activity-based, i.e. commodity-specific, direct payments only. In the event of a decoupling of direct payments, these are granted not to individual commodities but to the farm as a whole. Therefore (due to the nature of the analytical approach) the results displayed above are correctly indicating the value-added as proxy for the income generated from the analyzed activities, but underestimate the total farm income. While these decoupled payments have not been included in the farm income calculations, the net revenue indicated above includes the direct payments granted to the sector as a whole (net transfer without direct payments: ROL 35,856 billion).

Source: Own calculations.

ANNEX 4: EARNINGS FUNCTION FOR MALES AND FEMALES IN 2000

Earnings Function for Males and Females in 2000

2000	Male		Female		Male-Female	
	Coef.	t-value	Coef.	t-value	D-coef	t-value
Experience	**0.0274**	11.85	**0.0276**	12.87	**-0.0002**	-0.08
Exp. squared	**-0.0005**	-8.84	**-0.0004**	-7.99	**0.0000**	-0.34
No. of years of schooling	**0.0469**	14.49	**0.0409**	11.52	**0.0061**	1.26
Married	**0.1106**	7.05	**-0.0251**	-2.08	**0.1357**	6.85
Industry: Manufacturing is the omitted category						
Farming	**-0.1438**	-4.56	**-0.0750**	-1.98	**-0.0688**	-1.40
Extractive industry	**0.4113**	12.04	**0.2264**	4.51	**0.1850**	3.05
Electricity, Water, Gas RA	**0.1796**	7.08	**0.1721**	4.92	**0.0075**	0.17
Construction	**-0.0357**	-1.78	**-0.0654**	-1.74	**0.0298**	0.70
Trade, Hotel and restaurants	**-0.0998**	-4.37	**-0.1128**	-5.5	**0.0129**	0.42
Transport, Storage, Communications	**0.0201**	1.07	**0.1325**	4.94	**-0.1123**	-3.43
Finance, Banking, Insurance	**0.0410**	0.82	**0.1841**	5.71	**-0.1430**	-2.40
Real Estate	**-0.0526**	-0.97	**0.0156**	0.28	**-0.0682**	-0.88
Public administration, Defense	**0.0585**	2.2	**-0.0770**	-2.6	**0.1355**	3.40
Education	**-0.2632**	-8.33	**-0.1805**	-7.54	**-0.0826**	-2.08
Health and social assistance	**-0.1488**	-4.12	**-0.0764**	-3.33	**-0.0724**	-1.69
Other social and personal services	**-0.1404**	-5.87	**-0.1522**	-6.16	**0.0118**	0.34
Household activities	**-0.3789**	-1.55	**-0.1316**	-0.88	**-0.2473**	-0.86
International organizations	**-0.1136**	-0.27	**0.1840**	0.89	**-0.2976**	-0.63
Occupation: Skilled workers is the omitted category						
Politicians, chief and senior executives of institutions	**0.5263**	13.1	**0.7761**	13.21	**-0.2498**	-3.51
Experts and intellectual activities	**0.2665**	10.26	**0.3876**	13.48	**-0.1211**	-3.12
Technicians	**0.1299**	6.13	**0.2113**	9.63	**-0.0813**	-2.67
Office workers	**0.0435**	1.39	**0.1274**	6.06	**-0.0839**	-2.22
Operational workers in services and trade	**-0.0881**	-3.6	**-0.1050**	-4.88	**0.0168**	0.52
Farmers	**-0.0998**	-1.01	**-0.1956**	-2.04	**0.0958**	0.70
Plant and machine operators	**0.0474**	2.82	**0.1288**	5.42	**-0.0814**	-2.80
Unskilled workers	**-0.2659**	-10.6	**-0.2094**	-9.4	**-0.0565**	-1.68
Armed forces	**0.4631**	11.88	**0.4468**	3.98	**0.0163**	0.14
Ownership of the firm: state firm is the omitted category						
Private firm	**-0.0600**	-4.4	**-0.0275**	-1.91	**-0.0325**	-1.64

2000	Male		Female		Male-Female	
Mixed firm	**0.0250**	1.36	**0.0270**	1.34	**-0.0019**	-0.07
Coop.	**-0.3852**	-6.13	**-0.2036**	-5.12	**-0.1816**	-2.44
Public of national and local interest	**-0.0013**	-0.05	**0.0363**	1.59	**-0.0376**	-1.10
Other	**0.0048**	0.04	**-0.0916**	-0.76	**0.0965**	0.56
Nationality: Romanian is the omitted category						
Hungarian	**-0.0449**	-1.93	**0.0262**	1.24	**-0.0711**	-2.26
Gipsy	**0.0593**	0.72	**0.0207**	0.26	**0.0386**	0.34
German	**0.3149**	2.9	**0.1267**	1.47	**0.1881**	1.36
Other	**0.0224**	0.38	**-0.0436**	-0.54	**0.0659**	0.66
Population of the locality: between 15 and 50 thou. is the omitted category						
Population less than 5 thou.	**-0.1135**	-1.06	**-0.0208**	-0.23	**-0.0927**	-0.66
Population bw. 5 and 15 thou.	**0.0202**	1.01	**-0.0201**	-1.01	**0.0403**	1.43
Pop bw 50 and 150 thou.	**0.0613**	3.76	**0.0688**	4.39	**-0.0075**	-0.33
Pop. bw. 150 and 500 thou.	**0.1202**	7.67	**0.0810**	5.35	**0.0392**	1.80
Pop. above 500 thou.	**0.0319**	0.26	**-0.0037**	-0.02	**0.0357**	0.16
Regions: North East is omitted						
South East	**0.0918**	4.45	**0.0163**	0.83	**0.0756**	2.66
South East	**0.0171**	0.84	**-0.0304**	-1.55	**0.0475**	1.68
South West	**0.0913**	4.41	**0.0038**	0.19	**0.0875**	3.03
West	**0.0702**	3.2	**0.0120**	0.58	**0.0582**	1.93
North West	**0.0348**	1.66	**0.0152**	0.77	**0.0196**	0.68
Center	**0.0239**	1.12	**-0.0081**	-0.41	**0.0320**	1.10
Bucharest	**0.2191**	1.79	**0.1781**	1.1	**0.0410**	0.20
Const.	**13.3295**	275	**13.2287**	262.2	**0.1008**	1.44
No. of observations	6,540		6,214			
R-squared	0.4117		0.4326			

Source: Staff computations using Integrated Household Survey data.

ANNEX 5: NON-BANKING FINANCIAL SERVICES

NON-BANK FINANCIAL SECTOR ISSUES[184]

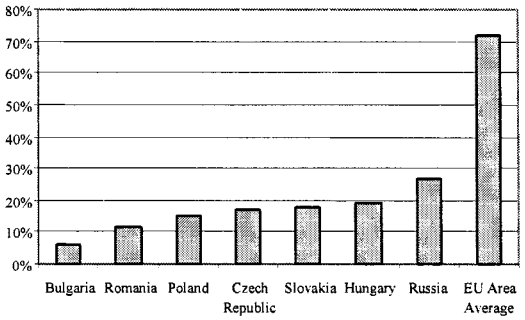
1. Capital Markets

The capital market in Romania is one of the smallest in Eastern Europe, with an estimated market capitalization in 2002 of around 11 percent of GDP, half the average in EU accession countries (Figure 6.4).

Capital market diversification is limited to a relatively small range of instruments, consisting of stocks listed on the two stock exchanges, BSE and RASDAQ. In 2002, the market capitalization on both exchanges was US$4.5 billion, out of which the BSE accounted for US$2.7 billion. The daily trading volume of both exchanges was US$330 million over 2002, out of which US$213 million was on the BSE. The fixed income market mainly consists of government securities (Treasury bills and bonds) and a limited number of municipal bonds. The corporate bond market is very small. In April 2003, the outstanding value of government securities was about 56,000 billion ROL (denominated in ROL), and US$424 million (denominated in US$), with daily traded volumes of 1,300 billion ROL and US$4 million, respectively.

Stock market activity has been highly concentrated in a few equities. The top 10 listed companies have accounted for over 85 percent of the market capitalization, compared to an average of 60 percent in EU accession countries. On the BSE, the most active exchange, over 90 percent of the trading volume has consisted of the 5 closed-end investment funds (SIFs), a few large banks and companies. Notwithstanding growth in market capitalization on the Bucharest Stock Exchange (BSE) of about

Figure 4. Stock Market Capitalization (2002) (% of GDP)



Source: Estimated GDP and IFC Emerging Market Database

[184] This section is extracted from the Joint Bank-Fund Financial Sector Assessment Program (FSAP). See Romania: Financial System Stability Assessment, Including Reports on the Observance of Standards and Codes on the following topics: Banking Supervision, Securities Regulation, Anti-Money Laundering and Combating the Financing of Terrorism, Monetary and Financial Policy Transparency, Country Report No. 03/389, December 16, 2003.

120 percent in 2002 and on the RASDAQ of about 70 percent, activity on these two markets remains insufficient to assure their viability. Exploratory discussions are under way about their possible merger. Compliance with EU directives could reduce the number of traded securities even further, as a result of high minimal capital requirements for listed companies and a requirement that all listed companies have a public "float" of at least 25 percent of outstanding shares.

Capital markets in Romania are disproportionately small, in good part as a consequence of lack of investor confidence caused by, inter alia, the elements that follow.

- There was the collapse of two large open-ended money market mutual funds—SAFI (1996) and FNI (2000). First, in 1996, SAFI, an open-ended[185] money market mutual fund failed after the CNVM required it to re-value the net asset value of its portfolio downward according to a new valuation methodology. The re-evaluation triggered a crisis in investors' confidence, causing a run on the fund. Second, in 2000, the National Investment Fund (FNI), which was an open-ended fund with over 300,000 investors and US$150 million assets, also suffered from massive redemption demand due to doubts about the overvaluation of the assets in the fund.

- The capital market has been subject to frequent legal and regulatory changes, adding to the uncertainty. In 2000 alone, there were five emergency ordinances issued affecting the balance among shareholders' interest. Following the 2000 collapse of FNI, a number of reforms were initiated to strengthen the regulatory and supervisory environment and to strengthen the transparency of the capital market.[186] In 2002, new securities laws were enacted regarding the structure of the CNVM (Law No 514/2002); securities, financial investment services and regulated markets (Law 525/2002): collective investment in transferable securities (Law 513/2002), and commodities markets and derivative financial instruments (Law 512/2002). However, in an effort to comply with EU directives, CNVM has initiated another legal drafting process, to combine these new laws into a single securities law.

- There is insufficient protection of investors who do not have managerial control of the corporations that issue securities (outside investors). Romania still suffers from important forms of abuse of minority shareholders' rights including dilution of minority shareholders' rights through capital increases without prior revaluation of existing capital, abusive allocation of profits (including transferring

[185] The form and structure of open-ended funds is that of a type generally known as "contractual," that is to say that the management of the pool of assets is covered by a civil law contract between the management company and the investor. The legal form of closed-ended funds is that of a joint stock company and therefore its directors are bound by the duties imposed by the joint stock company legislation and its shareholders have the same rights as shareholders in any other joint stock company.

[186] A "code of conduct" for listed companies in accordance with OECD was introduced to improve transparency and corporate governance. Some of the listed companies are in the process of adopting this code to become eligible for the Transparency Plus tier listing on the stock exchange.

profits outside the company), delays in the payment of dividends, fraudulent transfers of company's assets to third parties, and limited access to information.[187]

- Corporate governance is weakened by the continued government shareholding in privatized companies. The state privatization agency (APAPS) holds shares in an estimated 90 percent of the companies traded on the BSE and the over the counter RASDAQ

- Financial reporting is weak. While IAS will soon be required for all publicly traded companies (and all financial institutions), the Ministry of Public Finance has issued annual instructions which for 2002 require that annual financial statements be prepared in accordance with IAS except for IAS-29, Financial Reporting in Hyperinflationary Economies. Non-application of IAS-29 may generate corporate governance abuse when in-kind contributions (using current market values) are used to fund increases in share capital. The result is that existing shareholders may see their interests unfairly diluted.

- While supervision of capital markets has improved, CNVM should be further strengthened in this respect. CNVM still lacks sufficient resources and trained staff to adequately monitor activities and common business practices in the capital markets.

2. Insurance

The insurance market plays an insignificant role within the Romanian economy, as both total gross premium income (GPI) and assets in the industry represent less than 1 percent of GDP. GPI as a share of GDP in CEE countries varies from 3 to 5 percent and the average for EU countries is 8 percent.

Important progress has been made in modernizing the regulatory framework of the insurance sector, but critical areas such as corporate governance, internal controls, reinsurance, and prudential rules on assets and liabilities need further strengthening. The Insurance Supervisory Commission (ISC) was recently established (2000), but it still lacks a formal and transparent supervisory process and an adequate capacity in critical areas of supervision. Aware that further consolidation of the market is required, the ISC plans to achieve it through increased minimum capital requirements, the implementation of newly introduced solvency rules, and the further strengthening of prudential rules on asset and liability.

While the insurance market is small, a rapid growth of about 40 percent in 2002 and an expected growth of between 30 and 40 percent in 2003 suggest that it has a good potential for promoting financial intermediation and facilitating economic transactions through risk transfer.

[187] The abuses of shareholders' rights are comprehensively described, besides other corporate governance issues, in the OECD report on "Corporate Governance in Romania" of 2001.

3. Pensions

The Romanian public pension system consists exclusively of one unfunded pillar, which suffers from major structural weaknesses. These include: (i) a very high contribution rate (35 percent of nominal earnings out of a total payroll tax of 58 percent) that stimulates evasion, narrows the contribution base, and causes economic inefficiency, as workers switch to the informal labor market which operates with less capital and has lower productivity; (ii) a very high dependency ratio[188] as a result of evasion, high unemployment, and low retirement ages; (iii) the aging of the Romanian population (a significant decline of the total population is projected over the medium term), which will further worsen this ratio; and (iv) a low gross replacement rate (pension over wage) of 36 percent (2001), despite high contributions.

Systemic pension reform is essential, as the current system will not be financially sustainable in the long run, given its very high contribution rate and the widespread evasion. Reforms should include a multi-pillar pension system with funded and un-funded components, public and private sector management, and effective regulation and supervision. Funded pension systems are more conducive to growth, as an increase in national savings, properly intermediated through the financial sector, may lead to more capital accumulation. As a matter of fact, a privately funded pillar for the pension system could strongly support the development of local financial markets. However, there should be a regulatory and supervisory framework ensuring that these schemes do not assume more risk than they can effectively manage.

4. Financial Investment Funds

The privatization investment funds (SIFs) were created from the coupon privatization programs of the 1990s. The five SIFs are the largest institutional investors in Romania and their portfolios include significant holdings in the privatized banks, including BRD. The SIFs were exempted from the 2002 law on collective investment funds and thus operate under the special purpose 1996 legislation approved for their creation and the prior 1993 investment law. The SIFs are therefore exempt from the substantial governance provisions of the 2002 investment funds law, and there is little transparency in their portfolio of assets. To simplify the securities legislation, the authorities may choose to include SIFs under the provisions of the investment funds legislation, with additional regulations as needed to meet the specific requirements of SIFs and do allow for an orderly transition to the new law on collective investment funds.

5. Credit Unions and Credit Cooperatives

The total volume of savings in the credit union system is small, at approximately US$170 million, which is not of systemic significance, although the soundness of these entities is important for public confidence in financial institutions in general and for market development. Credit union assets are limited to loans to members up to a level related to the savings of the borrower and government securities. Credit unions (ECUs) are not technically credit institutions, as they do not take deposits from the general public. However, membership is open to all who have permanent employment.[189] The Ministry of Public Finance has overall responsibility for the credit union system.

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[188] This is the ratio of beneficiaries over contributors.

[189] In practice, ECUs may be close to collecting deposits from the general public and thus close to meeting the definition of a bank, as the law permits membership by anyone with an employment contract. Romania had a

Credit unions are subject to supervision exercised by the National Union of Credit Unions, which, in turn, reports to the Ministry of Public Finance. The National Union has recently expanded its supervisory staff and has made organizational changes to support better supervision. The legal framework for credit unions is limited, not sufficiently robust to handle a potential expansion of this type of intermediary, and permits incorporation with negligible capital and by a few individuals and companies. It is not clear what the regulatory situation of ECUs would be should they decide to secede from the National Union. Therefore, more restrictive regulations may be needed. The Ministry of Public Finance should have clear authority to intervene in the management and operations of credit unions as needed.

The main four networks of credit cooperatives have combined assets of US$96 million, which is not of systemic significance. However, as with credit unions, they are important for confidence in the system and for market development. Credit cooperatives take deposits from the general public and are beginning to be supervised by the NBR, although a form of delegated supervision through the Association of Credit Cooperatives is applied. Thus, there is a need for monitoring of the Association's performance by supervisors. The NBR should retain ultimate regulatory and supervisory powers with respect to credit cooperatives. Licensed credit cooperatives are covered by the Deposit Guarantee Fund.

6. Housing Finance

Housing finance is negligible relative to the size of the economy. By the end of 2002, the outstanding reported portfolio was equivalent to US$100 million, or less than 2 percent of total private credits or 0.22 percent of GDP. Despite the recent fast growth of mortgage lending, it remains low compared to international benchmarks (35 percent of GDP in the EU, and between 4 percent and 7 percent in most other EU accession countries). So far, mortgage loans have been conservatively underwritten and have performed well, although many households conclude foreign exchange denominated mortgages due to affordable initial repayments and easier refinancing. This could become a major factor of credit risk for middle-income borrowers in case of devaluation vis-à-vis the euro.

The size of the mortgage market is limited by the incomplete legal framework and lack of long maturity mortgage securities. Currently, banks are dependent on long-term external lines. In that way banks cannot transform much of their short-term resources or finance high levels of volatile adjustable rate mortgages. The legal framework of mortgage loans is incomplete and unclear, with several layers of laws and ordinances. Harmonization is needed across different lenders. Priority should be given to the introduction of rules on (i) prepayment fees; (ii) acceptable indexes to adjust lei loans; (iii) common on-line NBR reporting standards applied to banks and mortgage companies; (iv) comparative summarized information to borrowers; and (v) consistent prudential rules for mortgage credit insurance.

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negative experience when Law 109/1996 allowed the creation of *Banca Populara*, which engaged in financial intermediation activities outside the regulatory authority of the NBR. The result was the failure of numerous comparatively large intermediaries of the type in 1999.

ANNEX 6: THE ATHENS MEMORANDUM

In recognition of potential gains from increased trade, and as part of a wider movement to deeper regional integration, the governments of Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Former Yugoslav Republic of Macedonia, Greece, Kosovo, Romania, Serbia and Montenegro, and Turkey signed, in November 2002, the "Athens Memorandum – 2002" and agreed to develop a South East Europe Regional Electricity Market (SEE REM).

Under the Athens Memorandum, participating countries have made a commitment to undertake the following steps:

Policy

- Energy strategy to be adopted.

Effective tariffs and affordability

- Power tariffs and payments discipline to be such that effective tariffs cover costs.
- Social safety net for the power sector to be in place.

Regulation

- Independent regulator to be set up.
- Grid codes to be adopted and implemented.
- Transmission tariff methodologies to be adopted.

Industry commercialization and restructuring

- Increased utility transparency to be achieved through application of International Accounting Standards (IAS) and best practice on corruption abatement as advised by a reputable international body to be adopted.
- Transmission system operator to be set up. This entity should be independent at least in terms of its legal form, organization and decision making from other activities not relating to transmission.
- Distribution system operator(s) to be set up. This entity should be independent at least in terms of its legal form, organization and decision making from other activities not relating to distribution.

Market development

Information exchange between national dispatch centers to commence, moving to tele-information exchange among dispatch centers.

- Commercial codes to be developed
- Open network access and liberalization of the market for non-household consumers to take place in a phased manner from 2005.

Regarding inter-regional trade, the Memorandum states that the energy market in SEE will be integrated into the European Union's internal energy market. The 2003 revision of the Athens Memorandum also includes provisions relating to gas market development, and proposes the establishment of a South East Europe Regional Energy Market.

Requirements for the gas sector largely mirror those for the power sector and include: the setting up of an independent gas regulator; the unbundling of different gas industry functions with legal separation of transmission and distribution from other industry functions; open access to networks and storage facilities; the opening of the gas market in a phased manner from 2005, defining eligible customers at that time to include power generators, and ensuring that 20 percent of the market is liberalized and that there is separate ownership of transmission and distribution. For countries in SEE where gas penetration is currently less than 10 percent, a gas expansion plan to raise the use of gas above this threshold before 2010 must be adopted and implemented.

Since signing the Athens Memorandum, the Government of Romania has developed a Road Map for the Energy Sector, adopted in July 2003, mapping out steps to align the Romanian energy industry with the EU *acquis* in the energy field. The Road Map covers energy demand and supply, investment requirements, and the energy sector institutional framework (e.g., regulation, market design). Without attempting a full summary, key aspects of the Road Map highly relevant to the present chapter are given as follows:

- The Government states as a main objective accession to the regional energy market and the wider European market.
- The Government recognizes the need to align energy tariffs with economic costs and to maintain payments discipline.
- The power sector will be liberalized on the basis of a bilateral contracts model with a day ahead market.[190] The World Bank is working with the Romanian market operator to develop and implement this framework.
- The Government's intention is that investments will be delivered by the private sector. In particular, it is hoped that strategic investors will purchase assets in power generation and distribution.
- Required capacity additions in the power sector are estimated by the Government to be 1300 MW between 2003 and 2005 and 4400 MW between 2006 and 2010.

[190] Discussed in detail below in the section *Market Rules*.

ANNEX 7: EU DIRECTIVES: IMPLEMENTATION COSTS AND ASSUMPTIONS

A. Directives

Table 8.9. List of Directives or Council Regulations and their Corresponding Concerns

Sector	Directives	Concern
Water Quality	76/464	Unloading hazardous substances (and 7 daughter-directives)
	91/271	Urban waste water purification
	91/676	Water protection against agricultural nitrates
Air Quality	88/609	Limiting emissions of specific pollutants in the atmosphere by means of big burning installations
	93/12	Decreasing of sulphur content in liquid fuels, as amended through Directive No. 99/32
	94/63	Monitoring of emission of organic volatile compounds resulting from gasoline storage and distribution from terminals to service stations
	96/62	Air quality assessment and management
	98/70	Gasoline and diesel oil quality
	99/13	Limiting emissions of volatile organic compounds due to the use of solvents in activities and installations
Waste Mgt	94/62	Packing and wastes by packing
	99/31	Waste storage
IPPC	96/61	Integrated Pollution Prevention and Control (IPPC)
Other	79/409	Preservation of wild birds
	92/43	Preservation of natural habitats, wild flora and fauna
	96/29	Setting the basic security standards for the workers' and the population's health security against ionizing radiation
	97/43	Human health security against ionizing radiation in medical exposure
	2003/54	Common rules for the internal market in electicity and repealing Directive 96/92/EC
Sources	Council Reg	
Phare	3906/89	A Council Regulation which aims to provide economic aid to candidate Central and Eastern European countries
ISPA	1267/99	A Council Regulation establishing an Instrument for Structural Policies for Pre-accession

SAPARD	1268/99	A Council Regulation on community support for pre-accession measures for agriculture and rural development in the applicant countries of Central and Eastern Europe in the pre-accession period

Table 8.10. Transition Period of the EU Directives and Estimated Implementation Cost (in million Euros)

	Directives	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Water Quality	76/464[a]							933													
	91/271											8,000									
	91/676					1,962															
Air Quality	2001/80[b]					1,402															
	93/12[c]			140																	
	94/63				363																
	96/62			42																	
	98/70			380																	
	99/13							474													
Waste Mgt	94/62						243														
	99/31										8,196										
IPPC	96/61[a]																				
Other	79/409[d]		10																		
	92/43[d]		10																		
	96/29			19																	
	97/43			2,500																	
	2003/54[e]							903													
Sources of Funds																					
Phare,ISPA, SAPARD	3906/89, 1267/99, 1268/99 [f]			2,793																	
Non-EU				931																	

Assumptions Used in the Calculations

1. Regarding Annex Table 8. 2:

[a]Figures are based on Poland's weighted expenditures for the corresponding directive, where the weight is the ratio of Romania's population to Poland's population. Weight =0.58.

[b]Figure includes costs administered by Termoelectrica and the Ministry of Administration and Interior (MAI). Note that the MAI counterpart = €155.4 million, comes from the State Budget & Environmental Funds. Termoelectrica's counterpart amounts to about €1.2 billion. This directive amends Directive 88/609.

[c]Costs for Aperchim and Petrobazi refineries = 104+36 = €140 million. Administrative costs are about €160,000.

[d]Scenario 5% - protected areas extend over 5% of country surface; minimum value.

[e] The required investment effort for the whole energy sector from 2003 to 2015 is US$10,385 million, which was converted to euros (US$1 = €0.87). The share of private and state-owned companies in the total investments are about 43% and 57%, respectively. Furthermore, the environment investment cost is estimated at 10% of the total investment efforts. These figures were derived from the "Road Map for the Energy Sector of Romania" prepared by the Ministry of Economy and Commerce of the Government of Romania. These estimates should be interpreted with caution as there is a wide range of possibilities.

[f] The expenditures are charged to the EC budget and are allocated as €860 m, €931 m and €1,002 m respectively, for years 2004, 200, and 2006.

2. Regarding Table 8.4 of the Main Text:

At the time this chapter was prepared, only Directive 2001/80 had detailed information about the annual investments that were necessary. For the other directives, annual values were estimated based on available similar information from Poland. The available flows of funds for different sectors (air, water, waste, IPPC, other) in Poland covered 17 periods, and were used as weights to derive Romania's annual figures. Adjustments were made to directives whose compliance period ends before or beyond 17 years.

Using Directive 76/464 with a compliance period of 12 years, as an example:

Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
WATERP	1021	832	680	840	910	910	1010	1060	1067	1110	960	960	960	960	910	860	810	**15860**

Note: WATERP – flow of funds for directives related to water quality in Poland.

Let WATERP – flow of funds for directives related to water quality in Poland

$$X = \sum_{j=9}^{17} WATERP_j$$

$$Y = \sum_{j=1}^{17} WATERP_j$$

$$Z = Y - X$$

To estimate the funds allocated for the first year of meeting the directive, the following formula is used:

$$T_1 = WATERP_1 * \left(1 + \frac{X}{Z}\right) * \frac{1}{Y} * 933$$

$$= 1021 * 2.18 * \frac{1}{8597} * 933$$

$$= 241$$

where 933 is the aggregate value of investment to fulfill Directive 76/464.

3. Regarding Table 8.5 of the Main Text:
Complete data are only available for year 2001. Based on 2001 values, the shares of the local and central governments in the total public investments are estimated to be about 82 percent and 18 percent, respectively.

4. Regarding Table 8.6 of the Main Text:
Step 1. The EU Funds (ISPA and Cohesion Funds) for Romania were estimated using the EU funds for Bulgaria. The European Commission prepared a document entitled "Roadmaps for Bulgaria and Romania" (COM(2002) 624 Final). The report provides the EU grants for both countries from 2004 to 2006, and states that the division of allocation between Romania and Bulgaria is set at 70/30. This ratio was used to estimate how much of ISPA and Cohesion Funds are available for Romania from 2004 to 2015.

Step 2. To determine the directives to which the EU Funds are allocated, similar directives in Poland were examined. Based on Poland's information, the Funds are distributed to only 5 directives: 76/464, 91/676, 91/271 (Water); 99/31 (Waste); and 2001/80 (Air).

Step 3. Poland data from Step 2 were used as weights to derive the Romanian annual figures.

STATISTICAL ANNEX

Table 1.1: Population by Area
(mid-year)

	Total	Urban	Rural	Total	Urban	Rural	Urban	Rural
	(Thousand of inhabitants)			(Annual % growth)			(Percent of total)	
1990	23,206.7	12,608.8	10,597.9				54.3	45.7
1991	23,185.1	12,552.4	10,632.7	-0.1	-0.4	0.3	54.1	45.9
Census 1992	22,810.0	12,391.8	10,418.2	-1.6	-1.3	-2.0	54.3	45.7
1992	22,789.0	12,367.4	10,421.6	-0.1	-0.2	0.0	54.3	45.7
1993	22,755.3	12,406.2	10,349.1	-0.1	0.3	-0.7	54.5	45.5
1994	22,730.6	12,427.6	10,303.0	-0.1	0.2	-0.4	54.7	45.3
1995	22,681.0	12,457.2	10,223.8	-0.2	0.2	-0.8	54.9	45.1
1996	22,607.6	12,411.2	10,196.4	-0.3	-0.4	-0.3	54.9	45.1
1997	22,545.9	12,404.7	10,141.2	-0.3	-0.1	-0.5	55.0	45.0
1998	22,502.8	12,347.9	10,154.9	-0.2	-0.5	0.1	54.9	45.1
1999	22,458.0	12,302.7	10,155.3	-0.2	-0.4	0.0	54.8	45.2
2000	22,435.2	12,244.6	10,190.6	-0.1	-0.5	0.3	54.6	45.4
2001	22,408.4	12,243.7	10,164.6	-0.1	0.0	-0.3	54.6	45.4
2002	21,794.8	11,578.8	10,216.0	-2.7	-5.4	0.5	53.1	46.9
Census 2002	21,698.2	11,436.7	10,261.4	-0.4	-1.2	0.4	52.7	47.3
2003 [a]	21,772.8	11,580.3	10,192.5	-0.1	0.0	-0.2	53.2	46.8

[a] As of January 1st.
Note: 1990-2002: at July 1st; 2003: at January 1st.
Source: Statistical Yearbook of Romania 20001and NIS data.

Table 1.2: Population by Gender
(mid-year)

	Total	Male	Female	Total	Male	Female	Male	Female
	(Thousand of inhabitants)			(annual % growth)			(Percent of total)	
1990	23,206.7	11,449.1	11,757.6				49.3	50.7
1991	23,185.1	11,435.3	11,749.8	-0.1	-0.1	-0.1	49.3	50.7
Census 1992	22,810.0	11,213.8	11,596.3	-1.6	-1.9	-1.3	49.2	50.8
1992	22,789.0	11,200.7	11,588.3	-0.1	-0.1	-0.1	49.1	50.9
1993	22,755.3	11,176.4	11,578.9	-0.1	-0.2	-0.1	49.1	50.9
1994	22,730.6	11,156.8	11,573.8	-0.1	-0.2	0.0	49.1	50.9
1995	22,681.0	11,124.0	11,557.0	-0.2	-0.3	-0.1	49.0	51.0
1996	22,607.6	11,080.9	11,526.7	-0.3	-0.4	-0.3	49.0	51.0
1997	22,545.9	11,041.4	11,504.5	-0.3	-0.4	-0.2	49.0	51.0
1998	22,502.8	11,012.1	11,490.7	-0.2	-0.3	-0.1	48.9	51.1
1999	22,458.0	10,984.5	11,473.5	-0.2	-0.3	-0.1	48.9	51.1
2000	22,435.2	10,968.9	11,466.4	-0.1	-0.1	-0.1	48.9	51.1
2001	22,408.4	10,949.5	11,458.9	-0.1	-0.2	-0.1	48.9	51.1
2002	21,794.8	10,642.5	11,152.3	-2.7	-2.8	-2.7	48.8	51.2
Census 2002	21,698.2	10,581.4	11,116.8	-0.4	-0.6	-0.3	48.8	51.2
2003 [a]	21,772.8	10,627.7	11,145.1	-0.1	-0.1	-0.1	48.8	51.2

[a] As of January 1st.
Source: Statistical Yearbook of Romania 2001; 2002 and 2003: National Institute for Statistics.

Table 1.3: Population by Age Group and Gender
(thousand, mid-year)

Age group	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
						Total						
Total	**23,206.7**	**23,185.1**	**22,789.0**	**22,755.3**	**22,730.6**	**22,681.0**	**22,607.6**	**22,545.9**	**22,502.8**	**22,458.0**	**22,435.2**	**22,408.4**
0 - 4	1,804.6	1,726.9	1,561.7	1,447.4	1,344.6	1,230 1	1,210 4	1,176 8	1,164 4	1,147 1	1,144.8	1,135.5
5 - 9	1,698 3	1,661 4	1,663 0	1,712.7	1,748 4	1,745.6	1,660.1	1,545.4	1,432 9	1,330 7	1,218 3	1,198.7
10-14	1,965 8	1,940.6	1,877.5	1,787.3	1,709.8	1,668 7	1,629.3	1,653.6	1,702.9	1,737.2	1,735.0	1,651 4
15-19	1,879.4	1,885 6	1,940 4	1,983.8	1,989.3	1,963.5	1,931 4	1,867 3	1,778 7	1,701.9	1,661 8	1,623.5
20-24	1,974.1	2,089.3	2,053 2	1,864.0	1,811.7	1,821 7	1,865.7	1,925.2	1,971.5	1,978.8	1,955.4	1,924.9
25-29	1,394.4	1,344 0	1,282.2	1,553.7	1,722 5	1,860.9	1,966.3	2,023.8	1,840.9	1,792 8	1,806.7	1,854 9
30-34	1,708.4	1,642 3	1,509 8	1,423 3	1,358 1	1,304.7	1,253.4	1,261 8	1,530 8	1,698 3	1,837.5	1,945 7
35-39	1,720.0	1,741.0	1,716 6	1,713 9	1,703 5	1,629.5	1,559.6	1,481.3	1,397.9	1,335.0	1,285 2	1,237 9
40-44	1,437 1	1,518 1	1,558 0	1,622.0	1,616.8	1,641.3	1,659 9	1,674.4	1,672.6	1,663.8	1,594 8	1,530 5
45-49	1,197 4	1,196 9	1,184 4	1,208.1	1,280.0	1,379.5	1,453 4	1,507.4	1,569.6	1,565.4	1,592.4	1,613.7
50-54	1,440 8	1,376 5	1,311 4	1,243.9	1,192.0	1,127.6	1,127.4	1,131.2	1,154 2	1,224.2	1,322.5	1,396 4
55-59	1,353 6	1,353 9	1,352.7	1,352 6	1,352.6	1,346.7	1,281.6	1,229.2	1,165 9	1,118 3	1,060.7	1,063.3
60-64	1,219.3	1,229 8	1,245.1	1,247 5	1,245 0	1,240.3	1,240 7	1,237.0	1,236 5	1,236.8	1,234.5	1,178.0
65-69	981 4	1,020 8	1,036.6	1,054 3	1,065.3	1,077 0	1,084 5	1,096.2	1,098 5	1,096.3	1,095.1	1,099.5
70-74	488.3	531.5	599.7	705.5	775 1	807.1	838.6	853.9	869.1	878.9	891.8	904.7
75-79	534.3	500.1	444.1	368.9	342.9	357 4	389 5	446.8	521.7	570.5	598.0	626.6
80-84	282.5	293.7	308.2	316.4	317 0	316.3	291 3	262.3	216 7	203.7	219.1	245 9
85 and over	127.1	132.9	144 4	149.9	156.0	162 8	164 6	172.3	178.1	178.3	181.4	177.5
						Male						
Total	**11,449.1**	**11,435.3**	**11,200.7**	**11,176.4**	**11,156.8**	**11,124.0**	**11,080.9**	**11,041.4**	**11,012.1**	**10,984.5**	**10,968.9**	**10,949.5**
0 - 4	920 8	881 4	797 7	739.3	688 1	630.5	621 2	604.4	598.1	589.1	587 9	582.9
5 - 9	868 3	849.8	848.1	874.3	891.5	890 0	846 6	788.7	731.5	680 8	624 2	614.9
10-14	1,004.9	991.4	958.1	911.7	872.5	851.7	831.1	842.9	868.9	885.2	883.9	841.5
15-19	960.2	963 8	998.6	1,019.2	1,018 7	1,003.3	985 7	952 1	906 6	867 8	847.5	827 6
20-24	1,006.1	1,064 4	1,035.1	941.6	917 9	926 5	955.1	990.0	1,012.2	1,012.7	998 5	981.7
25-29	713 6	687 4	652 0	789.2	875.5	945.6	994 6	1,019 6	929.7	908 1	918.7	949.2
30-34	867 6	836 0	762.3	719.3	686 8	659.5	634 6	640 1	776.4	862.3	932.9	982.7
35-39	867 2	877.9	860.7	858.8	853 4	816 8	782.5	744 0	702 8	671.9	646 9	624 2
40-44	719 7	760.9	778.9	809 7	806.5	818 1	826.4	832.1	830.3	825.9	792 6	761.8
45-49	589.4	589 5	586 5	598 1	633 7	682.6	718 1	743.7	772 9	770 2	783 4	793.4
50-54	699.3	666.1	636 2	603.3	578 8	547 7	547.3	549 6	560 5	594.7	642 4	677 8
55-59	653.8	652 9	648 6	646.3	643.8	638.4	605 7	579 8	549 9	528.1	501.7	503.2
60-64	573.7	578.6	586.0	585.5	582.4	578.1	576 4	572.1	569 2	566.8	563.9	537.0
65-69	430.1	454.0	464.8	476.0	481.6	486.5	489.1	493.3	492.5	489.9	487.7	488 4
70-74	196.9	214.2	240 8	285.6	317.7	335.7	352.5	362 2	371 0	375 8	381.6	386 9
75-79	213.9	197.1	172 8	141.4	130 0	134.8	146.6	168.6	198.0	219.3	233.1	247.3
80-84	112 6	116 3	119 5	121.2	119 9	118.1	107.0	95.4	77 5	71.8	77.2	86 4
85 and over	51 1	53 5	53.8	55.8	58.0	60 3	60.4	62.7	64.2	64 0	64 8	62 8
						Female						
Total	11,757 6	11,749 8	11,588.3	11,578.9	11,573.8	11,557.0	11,526.7	11,504 5	11,490 7	11,473 5	11,466 4	11,458 9
0 - 4	883 8	845.5	764 0	708.1	656 5	599 6	589 2	572.4	566.3	558 0	556.9	552.7
5 - 9	830.0	811.5	814 9	838.4	856.9	855.6	813.5	756.6	701 4	649 9	594.1	583 8
10-14	960 8	949 2	919 4	875.6	837.2	817.1	798 2	810.7	834.0	851 9	851.1	809.8
15-19	919 2	921.7	941.8	964 6	970 6	960.2	945 6	915.1	872.1	834.0	814.3	795.9
20-24	968 0	1,024 9	1,018.1	922.3	893.9	895.3	910.6	935 2	959 2	966.2	957.0	943 2
25-29	680 8	656 6	630 2	764.5	846.9	915.3	971.7	1,004 2	911.3	884.7	888.1	905.6
30-34	840 7	806.3	747.4	704.0	671.3	645.1	618 8	621 7	754 5	836 0	904.6	963 1
35-39	852 7	863 1	855 9	855.1	850.1	812.7	777 1	737 3	695 1	663 1	638.3	613 8
40-44	717.4	757 2	779.0	812.3	810 3	823 3	833.5	842 3	842.2	837 9	802.2	768 7
45-49	608.0	607.3	597.9	610.0	646 4	697.0	735.3	763.8	796.7	795 2	808 9	820 3
50-54	741.5	710 4	675.1	640.5	613 2	580.0	580 2	581.5	593 6	629 5	680.1	718.6
55-59	699.8	701 0	704.1	706.3	708 8	708.3	675 9	649 4	616.1	590.2	559.1	560.0
60-64	645 6	651.2	659.1	662.1	662.6	662.2	664 3	664 9	667 3	669.9	670 6	641 0
65-69	551 3	566 8	571.8	578.2	583.7	590.5	595.4	602.9	606 0	606 4	607.4	611.0
70-74	291 4	317.3	359 0	419 9	457.4	471 5	486 1	491.8	498 1	503 2	510.2	517.8
75-79	320.4	302.9	271 3	227.5	212.9	222.6	242 9	278 2	323.7	351 2	364.9	379.3
80-84	169 9	177.5	188 8	195.2	197.1	198.3	184.3	166.9	139 1	131 9	141.9	159 4
85 and over	76 0	79.3	90 7	94.1	98 0	102.6	104.2	109.6	113.9	114.3	116.6	114 7

Source: Romania Statistical Yearbook (2002).

Table 1.5 : Labor Market (ILO methodology)

	1994	1995	1996	1997	1998	1999	2000	2001	2002
	(Thousand of persons)								
Active Population	11885	12120	11726	11757	11577	11566	11585	11447	10557
male	6361	6514	6379	6369	6296	6262	6254	6155	5768
female	5524	5606	5348	5388	5282	5304	5331	5292	4789
Employment	10914	11152	10936	11050	10845	10776	10764	10697	9673
male	5873	6027	5979	6004	5885	5799	5772	5719	5253
female	5042	5126	4956	5046	4960	4977	4992	4978	4420
Unemployed	971	968	791	707	732	790	821	750	884
male	488	488	399	364	410	463	482	436	515
female	483	480	392	342	322	327	340	314	369
Unemployment rate [1]	8.2	8.0	6.7	6.0	6.3	6.8	7.1	6.6	8.4
male	7.7	7.5	6.3	5.7	6.5	7.4	7.7	7.1	8.9
female	8.7	8.6	7.3	6.4	6.1	6.2	6.4	5.9	7.7
Inactive population [2]	10863	10592	10906	10752	10937	10908	10860	10961	11238
male	4711	4629	4716	4655	4724	4731	4721	4794	4875
female	6152	5963	6190	6097	6213	6177	6140	6167	6363

ILO methodology; for 2002: provisional.

Notes:

1) Share of ILO unemployed to active population 2) 2002: estimated as total population - active population.

Definitions:

Active population: all people providing labor force available for goods and services production during the reference. period, including employment and unemployment

Employment: all people aged 15 and over who have carried out an economic or social activity producing goods or services, with a duration of one hour at least during the reference period, with a view to obtain incomes in the form of salaries, in kind remuneration or other benefits (working persons having a job, unpaid family workers and self employed).

Unemployed: people aged 15 and over, meeting simultaneously the following criteria:they do not have a job, they are ready to start working during the next 15 days.

Table 2.1: Gross Domestic Product by Expenditure
(current prices)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001[a]	2002[a]
						(Billions of Romanian Lei)							
GNI at Market Prices		2,205.0	6,001.5	19,925.5	49,559.7	71,645.5	107,967.1	250,617.6	369,875.2	539,428.4	797,590.7	1,159,047.6	1,497,084.2
Net Factor Income From Abroad[b]		1.1	-27.7	-110.2	-213.5	-490.0	-952.5	-2,308.1	-3,923.0	-6,301.8	-6,182.4	-8,195.2	-15,172.4
GDP at Market Prices	857.9	2,203.9	6,029.2	20,035.7	49,773.2	72,135.5	108,919.6	252,925.7	373,798.2	545,730.2	803,773.1	1,167,242.8	1,512,256.6
Consumption	679.5	1,672.5	4,642.5	15,235.8	38,452.4	58,662.4	89,939.4	218,619.8	337,468.6	484,361.4	692,532.9	994,206.5	1,250,333.8
Households [c,d]	565.2	1,338.6	3,781.4	12,762.6	31,600.6	48,785.4	75,665.5	187,620.0	310,922.7	453,307.9	634,590.4	916,519.2	1,149,828.4
Public Administration [d]	114.3	333.9	861.1	2,473.2	6,851.8	9,877.0	14,273.9	30,999.8	26,545.9	31,053.5	57,942.5	77,687.3	100,505.4
Gross Domestic Investment	259.5	618.1	1,893.5	5,795.9	12,348.3	17,510.0	28,159.9	52,171.4	66,333.5	87,740.6	156,491.1	263,527.9	349,462.9
Gross Fixed Domestic Investment	169.8	317.0	1,156.8	3,583.7	10,095.7	15,424.9	24,998.5	53,540.1	67,919.9	96,630.4	151,947.2	238,977.5	319,645.1
Change in Stocks	89.7	301.1	736.7	2,212.2	2,252.6	2,085.1	3,161.4	-1,368.7	-1,586.4	-8,889.8	4,543.9	24,550.4	29,817.8
Resource Balance	-81.1	-86.7	-506.8	-996.0	-1,027.5	-4,036.9	-9,179.7	-17,865.5	-30,003.9	-26,371.8	-45,250.9	-90,491.6	-87,540.1
Exports of goods and services	143.5	387.9	1,675.6	4,611.5	12,394.2	19,921.3	30,651.1	73,795.7	84,559.3	152,902.7	264,186.6	388,928.9	536,051.4
Imports of goods and services	224.6	474.6	2,182.4	5,607.5	13,421.7	23,958.2	39,830.8	91,661.2	114,563.2	179,274.5	309,437.5	479,420.5	623,591.5
Memo:													
Population (thousands)	23,206.7	23,185.1	22,789.0	22,755.3	22,730.6	22,681.0	22,607.6	22,545.9	22,502.8	22,458.0	22,435.2	22,408.4	21,794.8
Exchange Rate (Romanian Lei per US$, average)	22.4	76.4	308.0	760.1	1,655.1	2,033.3	3,082.6	7,167.9	8,875.6	15,332.8	21,692.7	29,060.9	33,055.4
GDP (Million Current US$)	38,247.9	28,850.6	19,578.5	26,361.0	30,072.6	35,477.1	35,333.7	35,285.9	42,115.5	35,592.3	37,052.6	40,165.5	45,749.2
GDP (Million PPP)		112,601	106,986	110,600	116,931	129,680	136,550	127,882	121,021	122,340	127,002		
GDP per capita (US$)	1,648.1	1,244.4	859.1	1,158.5	1,323.0	1,564.2	1,562.9	1,565.1	1,871.6	1,584.8	1,651.5	1,792.4	2,099.1
GDP per capita (PPP)		4,857.0	4,695.0	4,860.0	5,144.0	5,718.0	6,040.0	5,670.0	5,378.0	5,448.0	5,661.0		
Total Consumption per capita (US$)	1,305.4	944.3	661.5	880.9	1,022.1	1,272.0	1,290.6	1,352.8	1,689.7	1,406.6	1,423.0	1,526.7	1,735.5
Household Consumption [c,d] per capita (US$)	1,085.8	755.8	538.8	737.9	840.0	1,057.9	1,085.7	1,161.0	1,556.8	1,316.4	1,303.9	1,407.4	1,596.0

Note: ESA 79 methodology in 1990-97 and ESA 95 methodology since 1998.

[a] Provisional.

[b] Converted into ROL at the annual average exchange rate.

[c] Housholds and private administration.

[d] Since 1998 final consumption of non-market services provided by the public administration (education health, social security, etc) that were previously included in the public administration consumption are included in the household consumption.

Source: National Institute for Statistics, SIMA and WB staff calculations.

Table 2.2: Gross Domestic Product by Expenditure, as percent of GDP
(current prices)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001[a]	2002[a]
							(Billions of Romanian Lei)						
GNI at Market Prices		2,205.0	6,001.5	19,925.5	49,559.7	71,645.5	107,967.1	250,617.6	369,875.2	539,428.4	797,590.7	1,159,047.6	1,497,084.2
Net Factor Income From Abroad[b]		1.1	-27.7	-110.2	-213.5	-490.0	-952.5	-2,308.1	-3,923.0	-6,301.8	-6,182.4	-8,195.2	-15,172.4
GDP at Market Prices	857.9	2,203.9	6,029.2	20,035.7	49,773.2	72,135.5	108,919.6	252,925.7	373,798.2	545,730.2	803,773.1	1,167,242.8	1,512,256.6
							(Percent of GDP)						
Consumption	79.2	75.9	77.0	76.0	77.3	81.3	82.6	86.4	90.3	88.8	86.2	85.2	82.7
Households [c,d]	65.9	60.7	62.7	63.7	63.5	67.6	69.5	74.2	83.2	83.1	79.0	78.5	76.0
Public Administration [d]	13.3	15.2	14.3	12.3	13.8	13.7	13.1	12.3	7.1	5.7	7.2	6.7	6.6
Gross Domestic Investment	30.2	28.0	31.4	28.9	24.8	24.3	25.9	20.6	17.7	16.1	19.5	22.6	23.1
Gross Fixed Domestic Investment	19.8	14.4	19.2	17.9	20.3	21.4	23.0	21.2	18.2	17.7	18.9	20.5	21.1
Change in Stocks	10.5	13.7	12.2	11.0	4.5	2.9	2.9	-0.5	-0.4	-1.6	0.6	2.1	2.0
Resource Balance	-9.5	-3.9	-8.4	-5.0	-2.1	-5.6	-8.4	-7.1	-8.0	-4.8	-5.6	-7.8	-5.8
Exports of goods and services	16.7	17.6	27.8	23.0	24.9	27.6	28.1	29.2	22.6	28.0	32.9	33.3	35.4
Imports of goods and services	26.2	21.5	36.2	28.0	27.0	33.2	36.6	36.2	30.6	32.9	38.5	41.1	41.2
Memo:													
Population (thousands)	23,206.7	23,185.1	22,789.0	22,755.3	22,730.6	22,681.0	22,607.6	22,545.9	22,502.8	22,458.0	22,435.2	22,408.4	21,794.8
Exchange Rate (Romanian Lei per US$, average)	22.4	76.4	308.0	760.1	1,655.1	2,033.3	3,082.6	7,167.9	8,875.6	15,332.8	21,692.7	29,060.9	33,055.4
GDP (Million Current US$)	38,247.9	28,850.6	19,578.5	26,361.0	30,072.6	35,477.1	35,333.7	35,285.9	42,115.5	35,592.3	37,052.6	40,165.5	45,749.2
GDP per capita (US$)	1,648.1	1,244.4	859.1	1,158.5	1,323.0	1,564.2	1,562.9	1,565.1	1,871.6	1,584.8	1,651.5	1,792.4	2,099.1
Total Consumption per capita (US$)	1,305.4	944.3	661.5	880.9	1,022.1	1,272.0	1,290.6	1,352.8	1,689.7	1,406.6	1,423.0	1,526.7	1,735.5
Household Consumption [c,d] per capita (US$)	1,085.8	755.8	538.8	737.9	840.0	1,057.9	1,085.7	1,161.0	1,556.8	1,316.4	1,303.9	1,407.4	1,596.0

Note: ESA 79 methodology in 1990-97 and ESA 95 methodology since 1998.

[a] Provisional.

[b] Converted into ROL at the annual average exchange rate.

[c] Housholds and private administration.

[d] Since 1998 final consumption of non-market services provided by the public administration (education health, social security, etc) that were previously included in the public administration consumption are included in the household consumption.

Source: National Institute for Statistics and WB staff calculations.

Table 2.3: Gross Domestic Product by Exepnditure[a]
(constant prices)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1998	1999	2000	2001[b]
	(Billion of 1998 Romanian Lei, according to ESA 1979)									(Billion of 1998 Romanian Lei, according to ESA 19			
GNI at Market Prices		387,395.6	352,463.1	357,383.5	371,666.1	397,202.5	412,365.3	387,123.2	367,270.8	369,875.2	365,851.7	374,910.4	396,582.0
Net Factor Income From Abroad [c]		133.1	-798.8	-1,287.0	-1,144.9	-2,139.0	-2,742.5	-2,857.9	-3,923.0	-3,923.0	-3,647.9	-2,529.5	-2,502.9
GDP at Market Prices	444,705.2	387,262.5	353,261.9	358,670.5	372,811.0	399,341.5	415,107.9	389,981.1	371,193.8	373,798.2	369,499.5	377,440.0	399,084.9
Consumption	333,508.0	294,224.4	277,790.4	281,201.4	291,818.1	323,312.0	345,867.4	330,990.4	334,672.4	337,468.6	329,049.9	333,860.5	353,933.6
Households [d, e]	296,341.7	248,143.6	229,434.0	231,490.9	236,999.1	267,598.4	289,230.5	279,124.7	278,626.2	310,922.7	307,535.9	308,025.3	328,321.1
Public Administration [d,e]	42,856.4	47,386.3	48,417.3	49,718.0	55,184.2	55,741.5	56,576.2	51,800.7	52,740.9	26,545.9	21,460.6	25,855.8	25,777.7
Gross Domestic Investment	144,389.1	104,534.6	91,783.7	89,047.5	81,214.8	77,842.1	79,776.4	70,587.9	66,525.2	66,333.5	59,973.1	71,821.2	84,753.1
Gross Fixed Domestic Investment	63,323.8	43,303.8	48,061.0	52,059.5	62,835.4	67,177.8	70,986.9	72,225.6	68,111.6	67,919.9	64,635.7	68,186.9	74,424.0
Change in Stocks	159,631.2	127,763.7	81,005.2	64,265.9	27,882.2	12,898.9	10,180.7	-1,657.5	-1,586.4	-1,586.4	-4,688.7	1,653.5	6,849.3
Resource Balance	-86,675.5	-43,077.9	-55,197.1	-45,331.1	-12,547.6	-13,575.8	-19,222.1	-18,151.3	-30,003.8	-30,003.9	-19,419.6	-28,762.3	-43,840.2
Exports of goods and services	59,631.2	48,949.7	50,380.4	55,976.7	66,628.4	77,968.1	79,550.7	88,628.6	87,104.5	84,559.3	93,404.2	115,294.9	128,113.5
Imports of goods and services	95,180.0	66,996.6	72,031.2	75,204.5	77,321.3	89,958.4	97,813.6	105,135.4	117,108.3	114,563.2	112,822.2	143,358.7	167,956.5
Memo:													
Population (thousands)	23,206.7	23,185.1	22,789.0	22,755.3	22,730.6	22,681.0	22,607.6	22,545.9	22,502.8	22,502.8	22,458.0	22,435.2	22,408.4
Exchange Rate (Romanian Lei per US$, ave)	22.4	76.4	308.0	760.1	1,655.1	2,033.3	3,082.6	7,167.9	8,875.6	8,875.6	15,332.8	21,692.7	29,060.9
GDP (Million 1998 US$)	50,104.2	43,632.3	39,801.5	40,410.8	42,004.0	44,993.2	46,769.6	43,938.6	41,821.8	42,115.3	41,630.9	42,525.6	44,964.3
GDP per capita (1998 US$)	2,159.0	1,881.9	1,746.5	1,775.9	1,847.9	1,983.7	2,068.8	1,948.8	1,858.5	1,871.6	1,853.7	1,895.5	2,006.6
Total Consumption per capita (1998 US$)	1,619.2	1,429.8	1,373.4	1,392.3	1,446.4	1,606.1	1,723.7	1,654.1	1,675.7	1,689.7	1,650.8	1,676.6	1,779.6
Household Consumption [d,e] per capita (1998 US$)	1,438.7	1,205.9	1,134.3	1,146.2	1,174.7	1,329.3	1,441.4	1,394.9	1,411.6	1,556.7	1,542.9	1,546.9	1,650.8

[a] Expenditure components of GDP in constant prices do not add up due to the non-aditivity of price deflators used.

[b] Provisional data.

[3] Converted in ROL using the 1998 exchange rate.

[e] Housholds and private administration.

[d] Since 1998 final consumption of non-market services provided by the public administration (education health, social security, etc) that were previously included in the public administration consumption are included in the household consumption.

Source: National Institute for Statistics and staff calculations.

Table 2.4 Gross Domestic Product by Sector
(current prices)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [a]	2002 [a]
							(Billion of Romanian Lei)						
GDP at Market Prices	**857.9**	**2,203.9**	**6,029.2**	**20,035.7**	**49,773.2**	**72,135.5**	**108,919.6**	**252,925.7**	**373,798.2**	**545,730.2**	**803,773.1**	**1,167,242.8**	**1,512,256.6**
Taxes on products [b]	102.0	193.2	484.8	1,857.5	3,848.2	5,579.4	7,458.7	18,569.1	39,806.6	61,605.7	88,063.0	121,588.1	159,418.9
Subsidies on products	-33.8	-80.1	-457.7	-704.5	-678.6	-1,231.4	-2,245.6	-2,269.2	-3,415.4	-3,593.1	-4,666.6	-6,046.2	n.a.
Custom duties	1.6	24.7	86.9	303.5	648.9	1,189.0	1,852.3	3,808.2	5,859.4	7,242.5	9,051.6	9,038.2	n.a.
Gross Value Added	788.1	2,066.1	5,915.2	18,579.2	45,954.7	66,598.5	101,854.2	232,817.6	331,547.6	480,475.1	711,325.1	1,042,662.7	1,352,837.7
Agriculture, forestry and fishing	187.1	415.9	1,147.9	4,205.8	9,897.6	14,269.3	20,949.2	45,532.8	53,772.9	72,805.2	89,014.5	154,706.7	177,211.0
Agriculture [c]	159.6	378.8	1,056.3	3,852.2	9,151.2	13,369.1	19,644.6	43,214.3	50,814.2	68,225.1	83,161.6	149,948.9	n.a.
Agro-services	22.0	25.5	63.6	272.1	502.9	572.2	815.1	1,368.4	1,398.1	2,230.9	1,939.0	n.a.	n.a.
Forestry and Fishing	5.5	11.6	28.0	81.5	243.5	328.0	489.5	950.1	1,560.6	2,349.2	3,913.9	4,757.8	n.a.
Industry	393.6	930.7	2,601.1	7,821.4	21,269.6	28,466.4	43,248.9	91,323.8	117,242.0	162,720.5	258,766.8	386,133.3	515,196.0
Industry	347.6	834.6	2,311.0	6,781.4	18,018.3	23,711.3	36,181.5	78,093.8	98,212.8	135,343.8	219,479.7	328,926.8	439,490.6
Mining and quarrying		66.8	197.4	656.6	1,640.4	1,884.9	2,137.2	6,211.6	9,696.4	11,912.2	17,206.6	n.a.	n.a.
Manufacturing		699.2	1,810.7	5,338.4	14,287.6	19,086.5	31,405.4	65,123.4	79,238.0	103,426.2	176,217.1	n.a.	n.a.
Electricity, gas and water supply		68.6	302.8	786.5	2,090.3	2,739.9	2,638.9	6,758.8	9,278.4	20,005.4	26,056.0	n.a.	n.a.
Construction	46.0	96.1	290.1	1,040.0	3,251.3	4,755.1	7,067.4	13,230.0	19,029.2	27,376.7	39,287.1	57,206.5	75,705.4
Services	227.3	766.7	2,447.2	7,399.9	16,778.2	26,037.8	39,878.8	97,217.0	166,097.4	253,356.0	372,127.3	513,323.9	675,932.0
Trade, hotels, restaurants	53.2	296.5	859.5	2,057.7	4,075.8	7,570.2	12,722.3	28,767.5	50,403.2	74,598.8	101,406.7	142,348.2	n.a.
Real estate and other services	37.9	85.9	260.8	839.5	2,158.0	3,452.6	5,871.1	25,860.1	42,454.2	69,557.0	104,378.9	137,356.1	n.a.
Financial & banking services	23.2	57.9	322.2	1,014.5	2,375.7	3,588.1	3,243.1	4,298.7	6,622.6	9,499.9	12,363.5	17,261.0	n.a.
Transports	42.2	125.2	457.2	1,759.3	3,711.7	4,567.8	7,658.9	17,270.7	23,862.3	33,982.6	50,047.9	68,376.6	n.a.
Communication	7.2	21.9	57.1	255.3	642.3	1,008.8	2,145.8	5,394.6	11,664.7	20,306.6	30,305.5	42,289.4	n.a.
Public administration	23.9	68.1	203.3	620.2	1,611.1	2,691.8	3,355.2	6,763.3	12,833.7	18,275.3	34,599.7	50,077.1	n.a.
Education	22.3	61.3	159.8	491.6	1,260.1	1,853.9	2,776.5	5,152.7	10,016.3	16,343.1	23,260.3	33,396.9	n.a.
Health	17.4	49.9	127.3	361.8	943.5	1,304.6	2,105.9	3,709.4	8,240.4	10,792.7	15,764.8	22,218.6	n.a.
Adjustment for banking services	-19.9	-47.2	-281.0	-847.9	-1,990.7	-2,175.0	-2,222.7	-1,256.0	-5,564.7	-8,406.6	-8,583.5	-11,501.2	-15,501.3

Note: ESA 79 methodology in 1990-97 and ESA 95 methodology since 1998.

[a] Provisional.

[b] For 2002: (Taxes + Customs duties) net of subsidies [c] For 2001: agriculture and agro-services.

Source: National Institute for Statistics. Breakdown of Industry: Statistical Yearbook 1997 and 2001.

Table 2.5: Gross Domestic Product by Sector, as percent of GDP
(current prices)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [a]	2002 [a]
							(Billion of Romanian Lei)						
GDP at Market Prices	**857.9**	**2203.9**	**6029.2**	**20035.7**	**49773.2**	**72135.5**	**108919.6**	**252925.7**	**373798.2**	**545730.2**	**803773.1**	**1167242.8**	**1512256.6**
							(percent of GDP)						
Taxes on products [b]	11.9	8.8	8.0	9.3	7.7	7.7	6.8	7.3	10.6	11.3	11.0	10.4	10.5
Subsidies on products	-3.9	-3.6	-7.6	-3.5	-1.4	-1.7	-2.1	-0.9	-0.9	-0.7	-0.6	-0.5	n.a.
Custom duties	0.2	1.1	1.4	1.5	1.3	1.6	1.7	1.5	1.6	1.3	1.1	0.8	n.a.
Gross Value Added	91.9	93.7	98.1	92.7	92.3	92.3	93.5	92.0	88.7	88.0	88.5	89.3	89.5
Agriculture, forestry and fishing	21.8	18.9	19.0	21.0	19.9	19.8	19.2	18.0	14.4	13.3	11.1	13.3	11.7
Agriculture [c]	18.6	17.2	17.5	19.2	18.4	18.5	18.0	17.1	13.6	12.5	10.3	12.8	n.a.
Agro-services	2.6	1.2	1.1	1.4	1.0	0.8	0.7	0.5	0.4	0.4	0.2	n.a.	n.a.
Forestry and Fishing	0.6	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.4	n.a.
Industry	45.9	42.2	43.1	39.0	42.7	39.5	39.7	36.1	31.4	29.8	32.2	33.1	34.1
Industry	40.5	37.9	38.3	33.8	36.2	32.9	33.2	30.9	26.3	24.8	27.3	28.2	29.1
Mining and quarrying		3.0	3.3	3.3	3.3	2.6	2.0	2.5	2.6	2.2	2.1	n.a.	n.a.
Manufacturing		31.7	30.0	26.6	28.7	26.5	28.8	25.7	21.2	19.0	21.9	n.a.	n.a.
Electricity, gas and water supply		3.1	5.0	3.9	4.2	3.8	2.4	2.7	2.5	3.7	3.2	n.a.	n.a.
Construction	5.4	4.4	4.8	5.2	6.5	6.6	6.5	5.2	5.1	5.0	4.9	4.9	5.0
Services, of which:	26.5	34.8	40.6	36.9	33.7	36.1	36.6	38.4	44.4	46.4	46.3	44.0	44.7
Trade, hotels, restaurants	6.2	13.5	14.3	10.3	8.2	10.5	11.7	11.4	13.5	13.7	12.6	12.2	n.a.
Real estate and other services	4.4	3.9	4.3	4.2	4.3	4.8	5.4	10.2	11.4	12.7	13.0	11.8	n.a.
Fin.a.ncial & banking services	2.7	2.6	5.3	5.1	4.8	5.0	3.0	1.7	1.8	1.7	1.5	1.5	n.a.
Transports	4.9	5.7	7.6	8.8	7.5	6.3	7.0	6.8	6.4	6.2	6.2	5.9	n.a.
Communication	0.8	1.0	0.9	1.3	1.3	1.4	2.0	2.1	3.1	3.7	3.8	3.6	n.a.
Public administration	2.8	3.1	3.4	3.1	3.2	3.7	3.1	2.7	3.4	3.3	4.3	4.3	n.a.
Education	2.6	2.8	2.7	2.5	2.5	2.6	2.5	2.0	2.7	3.0	2.9	2.9	n.a.
Health	2.0	2.3	2.1	1.8	1.9	1.8	1.9	1.5	2.2	2.0	2.0	1.9	n.a.
Adjustment for banking services	-2.3	-2.1	-4.7	-4.2	-4.0	-3.0	-2.0	-0.5	-1.5	-1.5	-1.1	-1.0	-1.0

Note: ESA 79 methodology in 1990-97 and ESA 95 methodology since 1998.

[a] Provisional data.

[b] For 2002: Net taxes and customs duties. [c] For 2001: Agriculture and agro-services.

Source: National Institute for Statistics. Breakdown of Industry: Statistical Yearbook 1997 and 2001.

Table 2.6 : Gross Domestic Product by Sector[a]
(constant prices)

	1995	1996	1997	1998	1998	1999	2000	2001 [b]	2002 [b]
	(Billion of 1998 Romanian Lei, according to ESA 79)				(Billion of 1998 Romanian Lei, according to ESA 95)				
GDP at Market Prices	**399,341.5**	**415,107.9**	**389,981.1**	**371,193.8**	**373,798.2**	**369,499.5**	**377,440.0**	**399,084.9**	**418,447.6**
Taxes by products [c]	36,209.9	38,096.8	35,970.9	32,952.2	39,806.6	37,482.7	38,282.5	39,172.1	42,689.2
Subsidies by products	-9,040.0	-10,017.2	-4,528.9	-2,105.9	-3,415.4	-4,666.6	-3,076.8	-3,395.7	
Customs duties	4,513.3	4,830.9	4,796.3	5,741.4	5,859.4	5,336.2	5,084.3	4,830.1	
Gross Value Added	362,066.7	381,572.6	351,894.6	334,606.1	331,547.6	329,902.3	335,834.9	357,961.0	364,806.4
Agriculture (agro-services, forestry, fishery)	63,435.4	60,794.7	59,988.8	53,763.8	53,772.9	55,532.4	45,488.4	56,955.0	54,754.8
Agriculture [d]	58,986.3	56,718.1	56,622.5	50,814.2	50,814.2	52,530.4	42,675.7	55,199.2	
Agro-services	2,810.3	2,418.8	1,774.8	1,398.1	1,398.1	1,428.8	1,008.0		
Forestry and Fishery	1,647.1	1,646.0	1,553.4	1,551.5	1,560.6	1,573.2	1,765.9	1,753.9	
Industry	134,698.6	142,480.6	128,369.3	121,785.1	117,242.0	115,302.7	122,226.3	131,317.7	140,769.1
Industry [e]	110,601.4	118,188.0	108,764.1	103,053.7	98,212.8	96,709.9	102,457.6	110,511.0	118,519.2
Constructions	24,097.2	24,292.7	19,605.2	18,731.4	19,029.2	18,592.8	19,768.8	20,806.7	22,249.9
Services, of which:	174,943.4	184,565.4	165,739.8	164,579.7	166,097.4	165,100.8	174,181.4	175,574.8	184,880.3
Trade, hotels, restaurants	47,387.4	53,288.3	47,553.4	49,494.3	50,403.2	50,594.6	51,173.3	51,934.6	
Real estate and other services	40,139.6	46,154.9	42,992.8	42,971.0	42,454.2	44,070.6	47,156.6	47,552.0	
Financial & banking services	9,652.6	8,277.6	6,405.1	6,529.1	6,622.6	6,661.9	6,799.8	6,815.1	
Transports	29,817.5	30,040.2	26,525.3	22,890.9	23,862.3	22,703.8	23,807.0	24,086.5	
Communication	8,774.6	11,561.1	11,375.7	11,580.6	11,664.7	11,677.5	12,174.5	12,587.5	
Public administration	15,223.8	14,138.5	13,682.2	13,222.1	12,833.7	12,306.6	14,737.7	14,500.5	
Education	10,041.7	11,048.4	10,011.7	9,975.1	10,016.3	10,383.3	10,865.5	10,841.2	
Health	7,096.3	7,766.9	6,843.8	7,916.6	8,240.4	6,674.0	7,362.1	7,165.8	
Adjustment for banking services	-4,200.6	-3,978.6	-1,853.5	-5,522.5	-5,564.7	-6,005.1	-5,956.3	-5,794.9	-15,501.3

[a] Data in constant prices do not add up due to the non-aditivity of price deflators used.

[b] Provisional.

[c] For 2002: Net taxes and customs duties. [d] For 2001: Agriculture and agro-services. [e] Industry includes manufacturing, mining and quarrying, electricity, gas and water supply.

Source: National Institute for Statistics.

Table 2.7: Financing of Investment
(current prices)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001[a]	2002[a]
						(Billion of Romanian Lei)					
GDP at Market Prices	6,029.2	20,035.7	49,773.2	72,135.5	108,919.6	252,925.7	373,798.2	545,730.2	803,773.1	1,167,242.8	1,512,256.6
						(percent of GDP)					
Gross Domestic Investment	31.4	28.9	24.8	24.3	25.9	20.6	17.7	16.1	19.5	22.6	23.1
Gross Fix Capital formation	19.2	17.9	20.3	21.4	23.0	21.2	18.2	17.7	18.9	20.5	21.1
Public[b]	16.2	13.2	12.8	13.0	13.8	13.7	10.8	8.8	7.9	7.7	7.1
Private[b]	3.0	4.7	7.5	8.4	9.1	7.5	7.4	8.9	11.0	12.8	14.0
Change in stocks	12.2	11.0	4.5	2.9	2.9	-0.5	-0.4	-1.6	0.6	2.1	2.0
Financing of Investment	31.4	28.9	24.8	24.3	25.9	20.6	17.7	16.1	19.5	22.6	23.1
Gross National Saving	22.9	24.2	23.3	19.0	18.2	14.3	10.5	11.8	15.4	17.0	19.7
Gross Domestic Saving	23.0	24.0	22.7	18.7	17.4	13.6	9.7	11.2	13.8	14.8	17.3
Current Transfers	0.3	0.8	0.9	1.0	1.7	1.6	1.8	1.8	2.3	2.8	3.4
Net factor Income from Abroad	-0.5	-0.6	-0.4	-0.7	-0.9	-0.9	-1.0	-1.2	-0.8	-0.7	-1.0
Foreign Saving	8.5	4.7	1.6	5.2	7.6	6.3	7.3	4.2	4.1	5.6	3.4

[a] Provisional.

[b] Public and private fixed investment estimated using private sector share in investment, as provided by NIS.

Source: SNA data: National Institute for Statistics; BOP data: 1992: IMF BOP Yearbook, 1993-2002: National Bank of Romania; Other: WB staff calculations.

Table 2.8 : Industrial Output Indices[a], by Activities

	(1995=100)[2]						(1998=100)[3]				
					97/00						99/01
	1996	1997	1998	1999	2000	AVE	1999	2000	2001	2002*)	AVE
INDUSTRY	**106.3**	**98.6**	**85.0**	**83.1**	**89.4**	88.8	**97.6**	**104.5**	**113.3**	**116.8**	104.9
Mining and quarrying	**101.3**	**94.9**	**80.7**	**75.3**	**79.7**	82.3	**92.6**	**97.2**	**102.1**	**98.8**	97.2
Coal mining and preparation	105.7	85.7	65.0	56.8	69.0	68.4	84.6	104.0	115.4	112.6	100.5
Petroleum and gas extraction	100.1	98.1	91.2	87.4	88.0	91.1	96.0	96.1	98.1	93.5	96.7
Mettaliferous ores quarrying and preparation	97.4	87.5	77.3	59.4	57.8	69.4	92.0	91.0	105.6	101.3	96.0
Other extractive activities	91.5	122.0	87.0	86.3	88.5	94.9	87.0	91.1	87.4	100.2	88.5
Manufacturing industry	**107.9**	**100.6**	**86.6**	**85.6**	**93.0**	91.3	**98.6**	**106.6**	**117.2**	**122.2**	107.2
Food and beverages	101.8	85.5	84.2	98.5	114.3	94.9	105.4	117.7	134.9	152.4	118.7
Tobacco	107.9	111.8	124.5	127.4	119.8	120.7	102.8	95.6	115.5	108.7	104.3
Textile and textile products	95.6	83.9	73.5	55.2	55.1	65.8	85.7	86.3	89.1	85	87.0
Textile, furs and leather wearing apparel	125.6	137.7	103.4	109.1	147.9	123.1	126.3	149.5	172.1	182.1	148.1
Leather and footwear	103.4	100.9	94.3	95.9	112.4	100.6	105.8	119.9	124.8	122.8	116.5
Wood processing industry (exclusing furnitue)	109.5	99.3	88.3	86.9	100.9	93.6	104.5	111.1	120.1	98.8	111.7
Pulp, paper and cardboard	104.8	89.6	77.0	80.0	85.0	82.8	112.9	117.1	130.3	143.8	119.9
Crude oil processing, coal coking and treatment of	92.1	89.5	87.5	65.1	67.5	76.6	84.3	87.9	97.1	108.3	89.6
Chemical industry and synthetic and artificial fibres	87.8	67.3	51.8	52.9	63.6	58.5	104.1	126.9	130.3	131.4	119.8
Rubber and plastics processing	100.3	79.8	66.5	52.0	50.4	61.1	91.9	93.7	118.3	116.9	100.6
Other products of non metallic minerals	110.2	104.8	91.5	80.9	88.0	90.9	94.4	95.4	95.7	89.3	95.2
Metallurgy	92.2	93.1	92.6	58.6	74.2	78.2	68.7	87.5	101.7	131	84.9
Metallic constructions and metal products	62.0	87.2	51.0	59.4	61.2	63.4	105.3	107.1	106.6	102.3	106.3
Machines and equipments	124.4	109.2	72.5	60.1	77.7	78.0	78.0	79.9	92.0	96.5	83.1
Computers	na	na	na	na	na		na	na	na	na	
Electric machinery and appliances	116.8	128.0	110.2	97.5	100.3	108.4	102.2	106.8	118.2	120.1	108.9
Radio, TV sets and communications equipment	134.1	138.6	116.8	107.7	28.8	84.2	83.2	43.3	40.1	31	52.5
Medical, precision, optical and watchmaking instruments and apparatus	127.1	123.1	85.8	118.0	129.3	112.7	111.0	114.0	123.9	107	116.2
Road transports means	169.2	161.7	181.1	185.4	137.4	165.3	108.2	78.0	77.1	83.5	86.7
Other transport means	105.6	115.8	130.4	118.4	131.5	123.8	96.0	104.6	109.3	108.6	103.2
Furniture and other nonclassified activities	143.4	137.7	102.9	108.8	114.1	115.2	110.8	121.4	123.9	133.5	118.6
Electric and thermal energy, gas and water	**100.8**	**88.6**	**78.3**	**74.6**	**75.4**	79.0	**94.7**	**94.3**	**93.1**	**90.9**	94.0
Electric and thermal energy, gas and hot water production, transport and distribution	103.0	89.3	78.3	75.1	76.8	79.7	95.9	98.4	102.1	103.2	98.8

Average growth index over a period was calculated as geometric mean of indices

1) years 1991-1993 in structure 1989; years 1994-1996 in structure 1991; 2) in structure 1995; 3) in structure 1998.

*) provisional data.

[a]) Industrial Output Indices are determined from the series of representative products at the level of each industrial activity, and of their related weights in the gross value added, calculated using a Laspeyres formula.

Source: Statistical Yearbooks of Romania 1996, 1999, 2001, 2002 and staff calculations.

Table 2.9: Structure of Industrial Output, by Activities

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
						(Billion Romanian Lei)						
INDUSTRIAL OUTPUT [1]		2768	6726	18091	44301	60339	92969	217340	260899	392878	632032	966445
in billion US$		36.2	21.8	23.8	26.8	29.7	30.2	30.3	29.4	25.6	29.1	33.3
Memo" average exchange rate in ROL/US$	22	76	308	760	1655	2033	3083	7168	8876	15333	21693	29061
						(Percent of total output)						
Mining and quarrying	**9.0**	**8.9**	**7.5**	**6.8**	**7.1**	**6.9**	**6.7**	**7.9**	**6.8**	**5.3**	**5.6**	**5.7**
Coal mining and preparation	1.0	1.1	2.2	2.1	2.4	2.2	2.2	1.8	1.5	1.3	1.4	1.3
Petroleum and gas extraction	6.8	6.7	4.4	4.0	3.7	3.6	3.6	5.1	4.4	3.1	3.5	3.8
Other extractive activities	1.1	0.9	0.8	0.7	0.9	1.1	0.9	1.0	0.9	0.9	0.7	0.6
Manufacturing industry	**85.8**	**83.5**	**81.6**	**84.6**	**79.6**	**80.5**	**81.9**	**78.9**	**78.8**	**74.4**	**79.4**	**79.7**
Food and beverages	14.4	14.8	14.7	19.4	15.9	16.3	17.1	16.1	18.2	13.9	16.1	14.3
Tobacco	0.5	0.5	0.4	0.6	0.5	0.5	0.7	1.1	1.5	1.8	1.5	1.6
Textile and textile products	6.8	6.7	4.9	4.3	3.5	3.2	2.8	2.6	2.4	2.2	2.1	2.1
Textile, furs and leather wearing apparel	3.6	2.7	2.1	2.6	2.2	2.6	2.9	2.4	3.2	3.5	3.3	3.6
Leather and footwear	1.9	1.9	1.7	1.6	1.2	1.5	1.4	1.2	1.4	1.3	1.3	1.4
Wood processing industry (excl. furnitue)	1.6	1.8	2.0	1.8	1.8	1.9	1.9	1.8	2.0	2.6	2.5	2.5
Pulp, paper and cardboard	1.2	1.5	1.4	1.0	0.9	1.2	1.2	1.0	1.0	1.1	1.2	1.0
Publishing houses, polygraphy	0.3	0.3	0.3	1.5	1.1	1.1	1.3	1.1	1.5	1.5	1.3	1.3
Crude oil processing, coal coking and treatment of nuclear fuels	6.9	6.5	6.7	8.6	7.7	7.7	6.4	8.3	6.3	7.9	10.1	10.8
Chemical industry and synthetic and artificial fibres	7.3	7.8	8.9	7.4	7.5	8.7	7.8	7.2	5.8	5.8	7.0	6.3
Rubber and plastics processing	2.6	2.6	2.2	2.3	1.6	2.1	2.1	1.7	1.7	1.8	1.7	1.7
Other products of non metallic minerals	3.5	3.6	3.9	2.9	3.7	3.8	3.9	4.2	3.8	3.5	3.3	3.3
Metallurgy	8.5	9.6	10.6	8.8	9.5	10.4	10.4	11.6	9.7	9.0	11.4	13.2
Metallic constructions and metal products	4.1	3.3	3.0	2.5	4.4	2.8	3.0	2.5	3.1	2.7	2.5	2.5
Machines and equipments	9.3	7.8	7.5	6.2	5.4	5.8	5.6	4.6	4.4	3.8	3.6	3.7
Computers	0.5	0.1	0.1	0.3	0.1	0.2	0.4	0.4	0.4	0.3	0.2	0.2
Electric machinery and appliances	2.5	2.4	2.2	1.7	1.8	2.0	2.3	2.1	2.3	2.0	1.9	1.9
Radio, TV sets and communications equipment	0.8	0.7	0.4	4.1	3.2	0.9	1.3	1.0	0.9	0.8	0.7	0.6
Medical, precision, optical and watchmaking instruments and apparatus	1.1	0.9	0.6	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.5
Road transports means	3.7	3.5	3.1	2.7	2.9	3.0	4.2	3.3	3.9	3.5	2.5	2.5
Other transport means	2.3	2.1	2.6	1.5	1.3	1.5	1.7	1.7	2.1	2.2	1.9	1.9
Furniture and other nonclassified activities	2.2	2.3	2.2	2.2	2.8	2.6	2.7	2.4	2.5	2.4	2.3	2.3
Waste recovering	0.2	0.1	0.1	0.3	0.3	0.3	0.4	0.2	0.3	0.4	0.6	0.5
Electric and thermal energy, gas and water	**5.2**	**7.6**	**10.9**	**8.6**	**13.3**	**12.6**	**11.3**	**13.2**	**14.5**	**20.3**	**15.0**	**14.6**
Electric and thermal energy, gas and hot water production, transport and distribution	5.0	7.3	10.3	7.9	12.4	11.6	10.3	12.2	13.0	19.1	14.0	13.8
Water collection, treatment, distrib	0.2	0.3	0.6	0.7	0.9	1.0	1.0	1.0	1.4	1.2	1.0	0.8

The industrial output represents the value of finished goods delivered or to be delivered, semi-fabs from own production, the value of processing raw materials and customers' materials, work(services) with industrial character rendered to third parties, and remaining unfinished output and semi-fabs.

Source: Statistical Yearbooks of Romania 1996, 1999, 2001, 2002.

Table 2.10: Evolution of the Privatization Process

Year	1993	1994	1995	1996	1997	1998	1999	2000		2001	2002
					(Number of Companies Prizatized)						
Total	265	860	1479	2791	3832	5073	6420	7761	Total	7956	8215
Small	239	711	1031	2010	2930	3823	4576	5646	Small and		
Medium	24	134	404	640	797	1066	1546	1793	Medium	7625	8012
Large	2	15	44	69	105	184	298	302	Large	311	346
					(Equity Privatized in billion Romanian Lei)						
Total CCs	64	575	3747	6854	10760	19180	28597	41370			
Small CCs	32	121	354	779	1151	1705	2279	4756			
Medium CCs	22	321	2176	3797	4835	6639	9930	15134			
Large CCS	11	133	1216	2279	4774	10835	16388	21480			

Notes:
Small companies: with capital under 10 billion Romanian Lei.
Medium companies: with capital between 10 and 50 billion Romanian Lei.
Large companies: over 50 billion Romanian Lei.
Source: Romania privatization team and data available on APAPS site.

Table 2.11: Private Sector Share in Total GDP and in Value Added by Branches

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001[a]	2002[a]
							(Percent of GDP)						
GDP, total	**16.4**	**23.6**	**26.4**	**34.8**	**38.9**	**45.3**	**54.9**	**60.6**	**61.4**	**63.7**	**65.6**	**67.9**	**66.8**
							(Percent of Gross Value Added)						
GVA in Industry	5.7	9.2	11.8	17.4	23.3	29.9	38.5	42.1	46.0	53.7	68.4	76.0	78.6
GVA in Agriculture and Forestry	61.3	73.9	81.7	83.5	89.3	89.0	90.1	96.8	96.3	96.7	98.6	98.9	97.1
GVA in Construction	1.9	16.1	21.0	26.8	51.6	57.8	69.3	76.6	79.3	81.9	91.7	96.3	96.4
GVA in Services	2.0	16.8	18.8	29.3	39.1	58.1	66.7	71.5	76.1	76.6	71.6	67.4	64.4
							(Percent of total)						
Investment	4.3	8.1	15.6	26.0	36.8	39.3	39.7	35.4	40.5	50.5	58.3	62.4	66.4
Construction	3.1	4.5	13	30.2	55.5	70.8	75.5	70.5	74.7	85.6	89.3	89.8	89.6
Export (FOB)	0.2	15.9	27.5	27.9	40.3	41.2	51.4	54.8	48.9	65.7	65.7	66.7	66.6
Import (FOB)	0.4	16.1	32.8	27.2	39.2	45.4	48.3	52.4	48.3	72.1	70.1	69.6	72.6
Retail Trade	..	..	..	64.4	70.1	71.9	74.3	79.9	86.7	90.8	92.0	93.3	na
Services delivered to households	..	..	..	43.9	55.9	58.9	60.3	62.1	74.5	83.4	85.7	87.4	na
Average number of employees	0.7	2.4	5.3	10.9	17.5	22.1	23.0	27.8	34.6	39.4	44.5	49.0	na

[a] Provisional data.

Source: National Institute for Statistics.

Table 3.2: Exports by Major Commodities

Section	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
						(million US dollars)							
Total Exports, f.o.b.	**5775**	**4266**	**4363**	**4892**	**6151**	**7910**	**8085**	**8431**	**8302**	**8487**	**10366**	**11385**	**13876**
Live animals and animal products	23	148	185	162	219	170	155	199	94	116	126	131	145
Vegetable products	38	70	50	58	64	209	374	164	181	250	119	181	178
Animal or vegetable oils and fats	0	6	7	61	46	80	67	126	70	54	21	25	10
Food, beverages and tobacco	21	36	48	47	68	72	108	106	91	64	72	97	105
Mineral products	1136	621	572	574	714	731	692	638	507	502	822	784	1181
Chemical products	301	285	423	345	489	724	691	560	336	327	519	503	481
Plastics and rubber	106	54	85	82	143	202	193	186	174	182	230	231	359
Hides and skins, dressed leather, furs	36	25	25	35	56	53	53	66	62	65	99	143	173
Wooden products, excluding furniture	180	115	155	177	222	258	296	338	385	495	564	530	624
Paper and paper articles	33	22	17	19	34	85	58	64	46	48	81	105	125
Textiles and textile articles	573	404	455	785	1156	1570	1733	1942	2162	2197	2506	2979	3514
Footwear, headger, umbrellas, others	129	87	73	160	311	428	505	545	609	683	789	982	1166
Articles of stone,plaster,cement ceramics, glass and similar materials	78	75	88	100	111	152	150	151	157	159	161	172	200
Basic metals and articles	949	634	735	959	1065	1437	1268	1557	1583	1310	1658	1516	1782
Machinery, appliances and electric equipments; audio and video	947	692	508	439	519	656	673	737	790	968	1451	1680	2175
Transportation means and materials	770	492	473	405	391	428	441	448	427	450	509	598	786
Miscellaneous goods and products	413	404	366	402	436	574	552	526	519	502	533	613	745
Others (XIV+XVIII+XIX, XXII)	42	96	98	82	107	81	75	78	109	115	107	115	127
						(as percent of total exports)							
Live animals and animal products	0.4	3.5	4.2	3.3	3.6	2.1	1.9	2.4	1.1	1.4	1.2	1.2	1.0
Vegetable products	0.7	1.6	1.1	1.2	1.0	2.6	4.6	1.9	2.2	2.9	1.1	1.6	1.3
Animal or vegetable oils and fats	0.0	0.1	0.2	1.2	0.7	1.0	0.8	1.5	0.8	0.6	0.2	0.2	0.1
Food, beverages and tobacco	0.4	0.8	1.1	1.0	1.1	0.9	1.3	1.3	1.1	0.8	0.7	0.9	0.8
Mineral products	19.7	14.6	13.1	11.7	11.6	9.2	8.6	7.6	6.1	5.9	7.9	6.9	8.5
Chemical products	5.2	6.7	9.7	7.1	7.9	9.2	8.5	6.6	4.0	3.9	5.0	4.4	3.5
Plastics and rubber	1.8	1.3	1.9	1.7	2.3	2.6	2.4	2.2	2.1	2.1	2.2	2.0	2.6
Hides and skins, dressed leather, furs	0.6	0.6	0.6	0.7	0.9	0.7	0.7	0.8	0.7	0.8	1.0	1.3	1.2
Wooden products, excluding furniture	3.1	2.7	3.6	3.6	3.6	3.3	3.7	4.0	4.6	5.8	5.4	4.7	4.5
Paper and paper articles	0.6	0.5	0.4	0.4	0.6	1.1	0.7	0.8	0.6	0.6	0.8	0.9	0.9
Textiles and textile articles	9.9	9.5	10.4	16.0	18.8	19.8	21.4	23.0	26.0	25.9	24.2	26.2	25.3
Footwear, headger, umbrellas, others	2.2	2.0	1.7	3.3	5.1	5.4	6.2	6.5	7.3	8.0	7.6	8.6	8.4
Articles of stone,plaster,cement	1.4	1.8	2.0	2.0	1.8	1.9	1.9	1.8	1.9	1.9	1.6	1.5	1.4
ceramics, glass and similar materials													0.0
Basic metals and articles	16.4	14.9	16.8	19.6	17.3	18.2	15.7	18.5	19.1	15.4	16.0	13.3	12.8
Machinery, appliances and electric	16.4	16.2	11.6	9.0	8.4	8.3	8.3	8.7	9.5	11.4	14.0	14.8	15.7
equipments; audio and video											0.0	0.0	0.0
Transportation means and materials	13.3	11.5	10.8	8.3	6.4	5.4	5.5	5.3	5.1	5.3	4.9	5.3	5.7
Miscellaneous goods and products	7.2	9.5	8.4	8.2	7.1	7.3	6.8	6.2	6.3	5.9	5.1	5.4	5.4
Others (XIV+XVIII+XIX, XXII)	0.7	2.3	2.2	1.7	1.7	1.0	0.9	0.9	1.3	1.4	1.0	1.0	0.9

Source: National Institute for Statistics.

Table 3.3: Imports by Major Commodities

	Section	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
							(million US dollars)							
	Total Imports, c.i.f.	**9202**	**5793**	**6260**	**6522**	**7109**	**10278**	**11435**	**11280**	**11838**	**10557**	**13055**	**15552**	**17862**
I	Live animals and animal products	352	42	86	68	99	129	74	65	208	123	148	280	295
II	Vegetable products	424	369	429	475	140	154	167	170	226	224	273	335	276
III	Animal or vegetable oils and fats	46	14	39	21	30	28	21	33	56	32	35	34	66
IV	Food, beverages and tobacco	389	360	442	400	391	580	605	426	524	416	476	558	537
V	Mineral products	3,896	2,626	2,028	1,872	1,906	2,484	2,689	2,408	1,687	1,252	1,893	2,237	2,272
VI	Chemical products	655	410	414	514	563	932	990	940	1,028	975	1,077	1,218	1,503
VII	Plastics and rubber	92	76	180	204	227	390	448	444	512	477	581	758	981
VIII	Hides and skins, dressed leather, furs	92	18	76	114	149	211	263	278	306	302	362	509	620
IX	Wooden products, excluding furniture	75	35	33	30	27	56	52	53	59	68	83	110	149
X	Paper and paper articles	44	39	91	96	135	235	274	255	311	264	291	345	419
XI	Textiles and textile articles	264	246	562	659	810	1,209	1,343	1,565	1,825	1,937	2,131	2,500	2,930
XII	Footwear, headger, umbrellas, others	15	45	42	48	67	106	124	157	198	190	222	254	291
XIII	Articles of stone,plaster,cement ceramics, glass and similar materials	114	74	55	63	69	114	145	143	163	154	179	230	291
XV	Basic metals and articles	522	243	272	278	352	549	715	670	790	688	891	1,138	1,322
XVI	Machinery, appliances and electric equipments; audio and video	1,321	838	914	1,149	1,450	2,113	2,506	2,593	2,723	2,483	3,216	3,527	4,093
XVII	Transportation means and materials	637	142	294	283	332	397	415	384	485	420	552	799	1,018
XX	Miscellaneous goods and products	72	31	52	77	113	181	202	209	227	207	242	275	338
	Others (XIV+XVIII+XIX, XXII)	192	185	251	171	249	410	402	487	510	345	403	445	461
							(as percent in total imports)							
I	Live animals and animal products	3.8	0.7	1.4	1.0	1.4	1.3	0.6	0.6	1.8	1.2	1.1	1.8	1.7
II	Vegetable products	4.6	6.4	6.9	7.3	2.0	1.5	1.5	1.5	1.9	2.1	2.1	2.2	1.5
III	Animal or vegetable oils and fats	0.5	0.2	0.6	0.4	0.5	0.3	0.2	0.3	0.5	0.3	0.3	0.2	0.4
IV	Food, beverages and tobacco	4.2	6.2	7.1	6.1	5.5	5.7	5.3	3.8	4.4	3.9	3.6	3.6	3.0
V	Mineral products	42.3	45.3	32.4	28.7	26.8	24.2	23.5	21.3	14.3	11.9	14.5	14.4	12.7
VI	Chemical products	7.1	7.1	6.6	7.8	7.9	9.0	8.6	8.3	8.7	9.2	8.2	7.8	8.4
VII	Plastics and rubber	1.0	1.3	2.9	3.1	3.2	3.8	3.9	3.9	4.3	4.5	4.5	4.9	5.5
VIII	Hides and skins, dressed leather, furs	1.0	0.3	1.2	1.7	2.1	2.1	2.3	2.5	2.6	2.9	2.8	3.3	3.5
IX	Wooden products, excluding furniture	0.8	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.8
X	Paper and paper articles	0.5	0.7	1.4	1.5	1.9	2.3	2.4	2.3	2.6	2.5	2.2	2.2	2.3
XI	Textiles and textile articles	2.9	4.2	9.0	10.1	11.4	11.8	11.7	13.9	15.4	18.3	16.3	16.1	16.4
XII	Footwear, headger, umbrellas, others	0.2	0.8	0.7	0.7	0.9	1.0	1.1	1.4	1.7	1.8	1.7	1.6	1.6
XIII	Articles of stone,plaster,cement	1.2	1.3	0.9	1.0	1.0	1.1	1.3	1.3	1.4	1.5	1.4	1.5	1.6
	ceramics, glass and similar materials	0.0											0.0	0.0
XV	Basic metals and articles	5.7	4.2	4.3	4.3	4.9	5.3	6.3	5.9	6.7	6.5	6.8	7.3	7.4
XVI	Machinery, appliances and electric	14.4	14.5	14.6	17.6	20.4	20.6	21.9	23.0	23.0	23.5	24.6	22.7	22.9
	equipments; audio and video	0.0											0.0	0.0
XVII	Transportation means and materials	6.9	2.5	4.7	4.3	4.7	3.9	3.6	3.4	4.1	4.0	4.2	5.1	5.7
XX	Miscellaneous goods and products	0.8	0.5	0.8	1.2	1.6	1.8	1.8	1.9	1.9	2.0	1.9	1.8	1.9
	Others (XIV+XVIII+XIX, XXII)	2.1	3.2	4.0	2.6	3.5	4.0	3.5	4.3	4.3	3.3	3.1	2.9	2.6

Table 3.4: Direction of Trade in Exports [a]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
					(million USD)					
Total Exports, f.o.b.	4892	6151	7910	8084	8431	8302	8487	10367	11385	13876
					(percent of total)					
Europe	65.5	67.7	71.0	74.0	75.8	81.2	84.1	84.9	85.1	82.3
European Union 1)	41.4	48.2	54.1	56.5	56.6	64.5	65.5	63.8	67.8	67.1
of which:										
Austria	1.6	1.6	2.0	2.1	2.1	3.0	2.9	2.4	3.0	3.0
France	4.5	5.1	5.8	5.7	5.5	5.9	6.2	7.0	8.1	7.6
Germany	14.3	16.1	18.1	18.4	16.8	19.6	17.8	15.7	15.6	15.6
Italy	8.3	12.9	15.7	17.1	19.5	22.0	23.3	22.4	24.9	24.9
Netherlands	4.3	3.5	3.0	4.2	3.1	3.8	3.9	3.2	3.4	3.1
UK of Great Britain and Northern	3.8	3.3	3.0	3.1	3.5	3.6	4.9	5.3	5.1	5.8
Other European countries										
Bulgaria	2.1	1.7	0.9	0.9	0.7	0.9	1.6	2.8	1.8	1.3
Hungary	2.4	2.6	2.2	2.1	2.2	2.6	3.2	3.4	3.3	3.1
Poland	0.4	0.2	0.5	0.7	1.2	1.0	1.4	1.0	0.9	0.8
Republic of Moldova	1.9	1.0	1.0	1.2	1.5	1.6	1.2	1.4	1.0	0.8
Russian Federation	4.5	3.4	2.0	2.0	3.0	1.0	0.6	0.9	0.7	0.3
Switzerland	2.4	0.7	0.8	0.5	0.5	0.6	0.7	0.6	0.5	0.5
Turkey	5.7	4.1	4.4	4.8	4.2	3.9	5.5	6.0	4.0	4.1
Ukraine	2.1	1.5	1.7	0.8	1.1	0.6	0.7	0.9	0.4	0.3
Yugoslavia	0.2	0.3	0.4	1.7	1.7	1.4	1.0	1.3	1.4	0.9
Asia	25.0	19.6	16.6	14.2	12.9	8.0	6.9	6.5	7.4	9.7
China	8.6	4.5	2.3	1.2	0.5	0.3	0.4	0.8	0.8	1.5
Africa	5.3	6.8	7.2	6.8	5.4	4.4	3.9	3.6	2.6	2.1
America	4.1	5.8	5.1	4.9	5.8	6.3	5.0	4.8	4.6	5.5
United States of America	1.4	3.1	2.5	2.4	3.8	3.8	3.7	3.7	3.1	4.3

Notes: According to 2002 structure.

[a)] The breakdown by continents and countries include goods for which customs declarations have been completed with destination country for export and origin country for imports.

Source: National Institute for Statistics ; staff calculations.

Table 3.5: Direction of Trade in Imports [a]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
					(Million USD)					
Total Imports, c.i.f.	6522	7109	10278	11435	11280	11838	10557	13055	15552	17862
					(percent of total)					
Europe	71.5	75.8	76.6	77.3	77.6	82.6	82.6	80.7	81.6	82.5
European Union 1)	45.3	48.2	50.5	52.3	52.5	57.7	60.7	56.6	57.3	58.4
of which:										
Austria	2.5	2.7	3.1	3.1	2.7	2.9	2.9	2.5	2.8	3.3
France	7.8	5.1	5.2	4.9	5.7	6.9	6.7	6.1	6.3	6.4
Germany	15.8	18.0	17.5	17.6	16.4	17.4	17.4	14.7	15.2	14.9
Italy	9.4	11.8	13.3	15.3	15.8	17.4	19.5	18.7	19.9	20.7
Netherlands	2.4	2.5	2.7	2.3	2.0	2.3	2.3	2.2	2.1	2.2
United Kingdom	2.6	3.1	2.9	2.9	3.4	3.4	4.2	4.1	3.5	3.8
Other European countries										
Bulgaria	1.1	0.9	0.7	0.6	0.5	0.4	0.5	0.7	1.0	0.8
Hungary	2.6	2.3	3.1	2.5	3.1	4.6	3.9	3.9	3.9	3.6
Poland	0.5	0.4	0.6	0.8	0.8	1.2	1.5	1.5	1.8	2.0
Republic of Moldova	1.3	1.3	1.0	0.7	0.5	0.5	0.4	0.3	0.2	0.3
Russian Federation	11.7	13.8	12.0	12.5	12.0	9.0	6.7	8.6	7.6	7.2
Switzerland	2.3	2.1	1.9	1.7	1.3	1.1	1.2	1.2	1.1	0.9
Ukraine	2.0	2.1	1.9	1.6	1.6	1.4	1.0	1.5	2.1	1.9
Yugoslavia	*	*	*	0.3	0.5	0.5	0.5	0.5	0.2	0.1
Turkey	2.3	2.1	2.4	1.9	1.9	2.3	2.2	2.1	2.4	3.1
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Asia	16.6	11.6	11.2	11.6	11.9	8.5	9.4	9.6	8.9	11.1
China	1.4	0.8	0.9	1.0	1.1	1.5	1.4	1.3	1.6	2.1
Africa	2.8	2.4	4.7	2.7	1.7	0.7	0.8	0.6	0.8	0.8
America	8.7	9.5	6.7	7.3	7.6	6.9	5.8	5.7	5.9	5.0
United States of America	5.7	6.5	4.1	3.8	4.1	4.2	3.5	3.0	3.2	3.0

Notes: According to 2002 structure.

[a)] The breakdown by continents and countries include goods for which customs declarations have been completed with destination country for export and origin country for imports.

Source: National Institute for Statistics; staff calculations.

Table 3.6: Forign Direct Investmeent
(subscribed capital)

Year	No. of companies		Amount of Subscribed Capital					
	number	%	billion Lei	%	million US$	%	million Euro	%
1991-2002	90,749	100	132,774.8	100	9,120.4	100	8,197.6	100
1991	5,501	6.1	1,197.1	0.9	872.1	9.6	783.9	9.6
1992	11,834	13.0	584.8	0.4	544.9	6.0	489.8	6.0
1993	10,626	11.7	916.6	0.7	416.0	4.6	373.9	4.6
1994	11,097	12.2	2,357.3	1.8	911.7	10.0	819.4	10.0
1995	3,389	3.7	737.5	0.6	285.6	3.1	256.7	3.1
1996	3,620	4.0	2,293.6	1.7	587.0	6.4	527.6	6.4
1997	5,262	5.8	2,394.0	1.8	373.9	4.1	336.1	4.1
1998	8,841	9.7	7,360.7	5.5	731.3	8.0	657.3	8.0
1999	7,385	8.1	12,270.9	9.2	947.7	10.4	851.8	10.4
2000	8,558	9.4	18,191.2	13.7	816.9	9.0	734.2	9.0
2001	7,137	7.9	48,443.8	36.5	1,531.7	16.8	1,376.8	16.8
2002	7,499	8.3	36,027.3	27.1	1,101.6	12.1	990.1	12.1

Source: Romanian Trade Register Office.

Table 3.7: Foreign Direct Investment by Country of Origin
(subscribed capital as of April 2003)

Country	No. of companies		Amount of Subscribed Capital					
	number	%	billion Lei	%	million US$	%	million Euro	%
Total	93,016	100	144,782.0	100	9,435.0	100	8,481.0	100
Netherland	1,624	1.7	28,508.6	19.7	1,661.8	17.6	1,493.7	17.6
Germany	10,446	11.2	13,933.1	9.6	927.4	9.83	833.6	9.8
France	2,923	3.1	10,317.1	7.1	695.3	7.37	625.0	7.4
USA	3,613	3.9	6,162.2	4.3	677.2	7.18	608.7	7.2
Italy	13,046	14.0	6,754.4	4.7	593.2	6.29	533.2	6.3
Austria	2,609	2.8	12,673.2	8.8	578.2	6.13	519.7	6.1
Neth. Antilles	7	0.0	16,664.4	11.5	526.7	5.58	473.4	5.6
Cyprus	1,064	1.1	6,881.9	4.8	470.7	4.99	423.1	5.0
Turkey	8,406	9.0	3,437.4	2.4	402.2	4.26	361.6	4.3
UK	1,524	1.6	4,739.9	3.3	327.8	3.47	294.7	3.5
Greece	2,406	2.6	4,575.7	3.2	300.4	3.18	270.1	3.2
Switzerland	1,193	1.3	4,301.5	3.0	268.4	2.84	241.3	2.8
Hungary	4,111	4.4	3,936.0	2.7	234.4	2.48	210.7	2.5
South Koreea	79	0.1	478.4	0.3	218.3	2.31	196.2	2.3
Luzembourg	198	0.2	2,097.5	1.4	171.4	1.82	154.1	1.8
Spain	550	0.6	533.3	0.4	148.4	1.57	133.4	1.6
Virgin Islands	172	0.2	3,046.3	2.1	119.8	1.27	107.7	1.3
Portugal	79	0.1	3,561.7	2.5	108.9	1.15	97.9	1.2
Sweden	758	0.8	2,437.5	1.7	108.6	1.15	97.6	1.2
China	8,152	8.8	1,620.6	1.1	81.2	0.86	73.0	0.9

Source: Romanian Trade Register Office.

Table 4.1: Consolidated General Goverment Budget

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002 [a,b]
							(Billion of Romanian Lei)						
Total revenue and grants	341.3	924.2	2,252.2	6,699.8	15,537.1	22,641.0	31,596.6	72,386.4	110,999.5	173,838.4	251,095.4	351,741.1	448,953.9
Current	338.6	858.2	2,208.1	6,651.8	15,476.3	22,578.8	31,442.7	71,802.1	110,866.6	173,337.3	249,945.0	351,108.0	447,586.8
Tax	304.6	732.2	2,019.1	6,268.8	14,042.3	20,802.8	29,256.7	67,000.1	103,991.9	164,026.3	235,048.2	326,698.7	417,899.0
Profits	61.0	111.3	319.4	754.0	1,910.5	2,811.2	3,547.8	10,779.6	11,067.3	17,037.4	20,334.3	22,206.0	30,189.6
Wages and salaries [c]	58.0	166.8	457.7	1,325.0	3,221.0	4,583.2	6,656.3	13,945.7	15,092.9	17,833.5	26,997.9	37,202.9	41,661.1
Social security [c]	67.6	228.0	691.0	2,137.0	4,602.0	5,884.7	8,186.3	17,670.6	33,424.8	57,666.5	86,556.8	125,106.1	161,600.2
Other direct taxes									3,882.0	8,276.0	8,080.6	13,024.7	14,637.2
VAT	102.0	182.5	418.0	719.0	2,268.2	3,778.3	5,359.4	11,681.3	22,493.2	32,471.2	50,438.7	73,604.0	104,495.2
Customs	1.0	24.6	87.0	275.8	562.0	1,043.0	1,673.7	3,352.7	5,741.4	7,846.7	8,702.3	9,038.2	9,361.5
Excise	--	--	--	744.0	775.0	1,053.9	1,485.4	4,288.7	8,431.3	16,958.0	20,636.3	27,292.6	32,433.5
Other indirect taxes									3,859.0	5,937.0	13,301.3	19,224.2	23,520.6
Nontax	34.0	126.0	189.0	383.0	1,434.0	1,776.0	2,186.0	4,802.0	6,874.7	9,311.0	14,896.8	24,409.3	29,687.8
Capital	2.7	66.0	44.1	48.0	60.8	62.2	153.9	584.3	132.9	297.1	825.7	386.6	681.7
Grants						0.0	0.0	0.0	0.0	204.0	324.7	246.4	685.4
Total expenditure	332.4	852.3	2,529.5	6,770.6	16,643.0	25,061.0	36,810.0	85,639.0	131,122.7	193,567.2	283,351.4	389,320.7	488,780.5
Current	264.4	720.9	2,215.5	5,785.6	13,757.0	20,840.0	30,783.0	71,859.0	115,394.0	177,835.0	255,275.2	351,794.1	439,036.3
Wages and salaries	61.0	170.0	453.0	1,333.4	3,236.0	4,694.0	6,568.0	12,344.0	18,671.4	26,258.8	43,894.1	58,174.1	73,542.0
Materials and operating expenditures	44.0	130.0	399.0	1,002.0	2,688.0	4,384.0	6,305.0	14,430.0	24,066.9	57,503.7	56,503.2	81,119.1	107,415.0
Interest	0.0	0.9	14.8	188.4	672.0	989.0	1,840.0	9,659.0	17,450.0	28,796.0	38,973.2	44,609.9	45,801.9
Subsidies and transfers	159.4	420.0	1,348.7	3,261.8	7,161.0	10,773.0	16,070.0	35,426.0	55,205.7	80,238.5	115,904.7	167,891.0	212,277.4
Subsidies	60.0	201.0	784.7	1,366.4	1,913.0	2,972.0	4,729.0	6,364.0	6,210.7	9,303.0	17,580.9	24,293.6	29,865.0
Transfers	99.4	219.0	564.0	1,895.4	5,248.0	7,801.0	11,341.0	29,062.0	48,995.0	70,935.5	98,323.8	143,597.4	182,412.4
Capital	68.0	131.4	248.0	844.0	2,729.0	3,802.0	5,682.0	12,106.0	13,530.3	15,015.0	24,481.8	36,548.5	48,578.7
Lending minus repayments	0.0	0.0	66.0	141.0	157.0	419.0	345.0	1,674.0	2,198.4	717.2	3,594.4	978.1	1,165.5
Overall balance	8.9	71.9	-277.3	-70.8	-1,105.9	-2,420.0	-5,213.4	-13,252.6	-20,123.2	-19,728.8	-32,256.0	-37,579.6	-39,826.6
Financing	...	...	...	...	...	2,472.3	6,082.6	13,111.4	21,013.4	18,079.7	28,321.8	36,948.0	34,817.9
Domestic	...	...	...	...	...	1,265.0	3,655.0	3,539.0	14,459.0	8,613.7	-1,912.7	10,730.1	4,383.0
External	...	...	...	...	...	908.9	1,403.6	5,198.4	-153.6	2,359.7	22,575.5	20,103.7	22,826.0
Privatization proceeds						298.4	1,024.0	4,374.0	6,708.0	6,859.2	5,061.8	3,460.2	5,531.7
Bank asset recoveries						0.0	0.0	0.0	0.0	247.0	2,597.2	2,654.0	2,077.2
Discrepancy [c]						52.3	869.2	-141.2	890.4	-1,648.9	-3,934.2	-631.6	-5,008.7
Memorandum items:													
Primary balance (including grants)		72.8	-262.5	117.6	-433.9	-1,431.0	-3,373.4	-3,593.6	-2,673.2	9,067.2	6,717.2	7,030.3	5,975.3
GDP at Market Prices, current prices	857.9	2,203.9	6,029.2	20,035.7	49,773.2	72,135.5	108,919.6	252,925.7	373,798.2	545,730.2	803,773.1	1,167,242.8	1,512,256.6

[a] Provisional data.

[b] Excluding National Administration of Roads.

[c] For 1993-1999 tax revenues includes a 7 percent tax on payroll earmarked for the Health Fund.

[d] Overall balance (cash, including grants) plus financing.

Sources: Ministry of Public Finance and IMF.

Table 4.2: Consolidated General Government Budget

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002 [a,b]
							(in percent of GDP)						
Total revenue and grants	39.8	41.9	37.4	33.4	31.2	31.4	29.0	28.6	29.7	31.9	31.2	30.1	29.7
Current	39.5	38.9	36.6	33.2	31.1	31.3	28.9	28.4	29.7	31.8	31.1	30.1	29.6
Tax	35.5	33.2	33.5	31.3	28.2	28.8	26.9	26.5	27.8	30.1	29.2	28.0	27.6
Profits	7.1	5.1	5.3	3.8	3.8	3.9	3.3	4.3	3.0	3.1	2.5	1.9	2.0
Wages and salaries [c]	6.8	7.6	7.6	6.6	6.5	6.4	6.1	5.5	4.0	3.3	3.4	3.2	2.8
Social security [c]	7.9	10.3	11.5	10.7	9.2	8.2	7.5	7.0	8.9	10.6	10.8	10.7	10.7
Other direct taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.5	1.0	1.1	1.0
VAT	11.9	8.3	6.9	3.6	4.6	5.2	4.9	4.6	6.0	6.0	6.3	6.3	6.9
Customs	0.1	1.1	1.4	1.4	1.1	1.4	1.5	1.3	1.5	1.4	1.1	0.8	0.6
Excise	--	--	--	3.7	1.6	1.5	1.4	1.7	2.3	3.1	2.6	2.3	2.1
Other indirect taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1	1.7	1.6	1.6
Nontax	4.0	5.7	3.1	1.9	2.9	2.5	2.0	1.9	1.8	1.7	1.9	2.1	2.0
Capital	0.3	3.0	0.7	0.2	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.0
Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total expenditure	38.7	38.7	42.0	33.8	33.4	34.7	33.8	33.9	35.1	35.5	35.3	33.4	32.3
Current	30.8	32.7	36.7	28.9	27.6	28.9	28.3	28.4	30.9	32.6	31.8	30.1	29.0
Wages and salaries	7.1	7.7	7.5	6.7	6.5	6.5	6.0	4.9	5.0	4.8	5.5	5.0	4.9
Materials and operating expenditur	5.1	5.9	6.6	5.0	5.4	6.1	5.8	5.7	6.4	10.5	7.0	6.9	7.1
Interest	0.0	0.0	0.2	0.9	1.4	1.4	1.7	3.8	4.7	5.3	4.8	3.8	3.0
Subsidies and transfers	18.6	19.1	22.4	16.3	14.4	14.9	14.8	14.0	14.8	14.7	14.4	14.4	14.0
Subsidies	7.0	9.1	13.0	6.8	3.8	4.1	4.3	2.5	1.7	1.7	2.2	2.1	2.0
Transfers	11.6	9.9	9.4	9.5	10.5	10.8	10.4	11.5	13.1	13.0	12.2	12.3	12.1
Capital	7.9	6.0	4.1	4.2	5.5	5.3	5.2	4.8	3.6	2.8	3.0	3.1	3.2
Lending minus repayments	0.0	0.0	1.1	0.7	0.3	0.6	0.3	0.7	0.6	0.1	0.4	0.1	0.1
Overall balance	1.0	3.3	-4.6	-0.4	-2.2	-3.4	-4.8	-5.2	-5.4	-3.6	-4.0	-3.2	-2.6
Financing	...	...	...	...	...	3.4	5.6	5.2	5.6	3.3	3.5	3.2	2.3
Domestic	...	...	...	...	...	1.8	3.4	1.4	3.9	1.6	-0.2	0.9	0.3
External	...	...	...	...	...	1.3	1.3	2.1	0.0	0.4	2.8	1.7	1.5
Privatization proceeds						0.4	0.9	1.7	1.8	1.3	0.6	0.3	0.4
Bank asset recoveries						0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1
Discrepancy [c]						0.1	0.8	-0.1	0.2	-0.3	-0.5	-0.1	-0.3
Memorandum items:													
Primary balance (including grants)	0.0	3.3	-4.4	0.6	-0.9	-2.0	-3.1	-1.4	-0.7	1.7	0.8	0.6	0.4
GDP at Market Prices, current prices, billion Romanian Lei	858	2204	6029	20036	49773	72136	108920	252926	373798	545730	803773	1167243	1512257

[a] Provisional data.

[b] Excluding National Administration of Roads.

[c] For 1993-1999 tax revenues includes a 7 percent tax on payroll earmarked for the Health Fund.

[d] Overall balance (cash, including grants) plus financing.

Sources: Ministry of Public Finance and IMF.

Table 4.3: Summary Table: GFS Consolidated General Budget
(billion of Romanian Lei)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
1. Total Revenue and grants	2,200	6,389	14,884	21,327	30,194	68,394	107,746	175,370	238,041	312,665
2. Total Revenue	2,200	6,389	14,884	21,327	30,194	68,394	107,051	171,135	237,161	311,320
3. Current revenue	2,175	6,384	14,875	21,314	30,089	66,109	103,757	165,185	236,814	311,189
3.1 Tax	1,992	5,938	13,126	18,866	26,431	60,836	96,202	145,684	209,637	266,118
3.2 Non-tax	183	446	1,750	2,448	3,658	5,273	7,555	19,501	27,177	45,071
4. Capital Revenue	25	5	9	13	105	2,285	3,294	5,950	347	131
5. Grants	0	0	0	0	0	0	695	4,235	880	1,345
I Total Expenditures by Function	2,406	6,312	15,913	22,927	34,033	79,734	124,595	191,341	273,990	354,837
1. General public services	104	175	495	725	885	1,881	3,752	7,822	9,295	14,511
2. Defense	196	420	1,170	1,525	2,058	5,784	8,430	9,448	13,548	18,056
3. Public order and safety	58	220	671	829	1,674	2,975	6,641	8,038	19,496	25,239
4. Education	216	637	1,544	2,135	3,437	7,514	11,640	18,803	28,967	20,862
5. Health	190	459	1,273	1,743	2,511	5,449	11,683	25,935	35,331	54,839
6. Social security and welfare	560	1,846	4,582	6,819	9,853	24,720	38,970	57,077	77,258	111,396
7. Housing and Community Ammenities	28	38	142	215	422	626	1,247	1,969	2,139	6,626
8. Recr. Cultr. Relig Affairs	12	35	135	264	484	894	1,562	1,863	3,246	4,007
9-13 Econ. Affairs and services	767	1,957	4,111	5,295	7,433	11,420	15,871	22,961	38,404	49,285
9. Fuel and energy	11	19	74	77	1,229	965	900	3,593	5,427	7,169
10. Agric. Forestry,Fishing,Hunting	218	617	1,308	1,767	2,676	3,658	4,568	5,056	9,256	11,818
11. Mining, manufc.,construction	418	818	1,267	1,718	1,169	1,702	1,929	556	1,198	1,671
12. Transportation and communication	74	217	722	1,043	1,436	3,611	6,281	12,287	17,791	25,332
13. Other econ. affairs & services	46	286	740	690	923	1,484	2,193	1,469	4,732	3,295
14. Other expenditures	274	527	1,791	3,376	5,276	18,473	24,801	37,426	46,307	50,015
of which: interest payments	15	158	649	949	1,745	9,215	15,375	25,770	32,446	35,763
I Total Expenditures and Lend-Repay	2,483	6,483	16,133	23,460	34,571	78,150	118,779	184,600	269,810	348,074
II Total Expenditure	2,406	6,312	15,913	22,927	34,033	79,735	124,595	191,341	273,990	354,836
III Current Expenditure	2,204	5,677	13,770	20,049	30,266	72,613	113,287	176,023	245,091	313,247
1. Expenditure on goods&services	772	2,080	5,358	7,909	11,276	23,487	39,699	67,004	97,310	116,581
1.1 Wages and Salaries	348	1,037	2,544	3,800	5,406	10,257	14,560	26,674	43,037	40,868
1.2 Employer contributions	81	228	551	784	1,091	1,904	2,965	7,050	10,452	10,111
2. Interest payments	15	158	649	949	1,745	9,215	15,375	25,770	32,446	35,763
3. Subsidies and other current transf	1,417	3,439	7,763	11,191	17,245	39,911	58,212	83,249	115,335	160,903
IV Capital Expenditure	202	635	2,143	2,878	3,767	7,122	11,308	15,318	28,899	41,589
V Lending - Repayments	77	171	220	533	538	-1,585	-5,816	-6,741	-4,180	-6,762
Overall Deficit/Surplus	-283	-94	-1,249	-2,133	-4,377	-9,756	-11,033	-9,230	-31,769	-35,409

Source: IMF, Government Finance Statistics Yearbook 2002, page 351 to 353.

Table 4.4 Summary Table: GFS Local Budgets
(billion of Romanian Lei)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
I. Total Revenue and grants	248.0	724.0	1,835.0	3,533.0	5,222.0	11,084.0	14,462.0	23,144.0	35,416.0	74,883.0
II. Total Revenue	80.0	396.0	1,072.0	2,333.0	3,373.0	7,294.0	9,408.0	19,220.0	29,441.0	66,764.0
III. Current revenue	61.0	353.0	1,020.0	2,284.0	3,324.0	7,225.0	9,322.0	19,079.0	29,289.0	66,313.0
IV. Tax revenue	29.0	324.0	907.0	1,937.0	2,846.0	6,168.0	7,402.0	16,165.0	24,459.0	59,320.0
V. Non Tax Revenue	32.0	29.0	113.0	347.0	479.0	1,057.0	1,920.0	2,915.0	4,830.0	6,994.0
VI. Capital Revenue	19.0	43.0	52.0	49.0	49.0	69.0	86.0	141.0	152.0	451.0
VII. Grants	168.0	328.0	763.0	1,200.0	1,849.0	3,790.0	5,054.0	3,924.0	5,975.0	8,119.0
From other levels	168.0	328.0	763.0	1,200.0	1,849.0	3,790.0	5,054.0	3,924.0	5,828.0	7,773.0
I Total Expenditures by Function	241.0	704.0	1,783.0	3,457.0	5,208.0	10,889.0	14,434.0	22,910.0	35,282.0	74,671.0
1. General public services	17.0	55.0	147.0	237.0	341.0	822.0	1,797.0	3,018.0	4,783.0	6,863.0
3. Public order and safety	0.0	0.0	0.0	0.0	118.0	202.0	304.0	406.0	562.0	886.0
4. Education	0.0	0.0	0.0	338.0	590.0	1,041.0	1,204.0	1,914.0	2,570.0	27,038.0
5. Health	0.0	101.0	263.0	408.0	616.0	1,325.0	69.0	95.0	59.0	83.0
6. Social security and welfare	2.0	31.0	79.0	196.0	315.0	480.0	1,244.0	1,750.0	4,116.0	6,957.0
7. Housing and Community Ammenities	157.0	321.0	757.0	1,308.0	1,954.0	4,256.0	6,034.0	9,427.0	10,697.0	16,146.0
8. Recr. Cultr. Relig Affairs	5.0	16.0	42.0	157.0	171.0	524.0	733.0	992.0	2,351.0	3,638.0
10. Agric. Forestry,Fishing,Hunting	1.0	3.0	8.0	12.0	16.0	38.0	63.0	256.0	218.0	496.0
12. Transportation and communication	52.0	159.0	420.0	649.0	986.0	2,040.0	2,717.0	2,617.0	7,840.0	11,235.0
13. Other econ. affairs & services	5.0	14.0	56.0	128.0	25.0	68.0	135.0	188.0	561.0	391.0
14. Other expenditures	2.0	4.0	11.0	24.0	76.0	93.0	134.0	2,247.0	1,525.0	938.0
I Total Expenditures and Lend-Repay	241.0	704.0	1,783.0	3,458.0	5,216.0	10,928.0	14,399.0	22,708.0	34,840.0	74,532.0
II Total Expenditure	241.0	704.0	1,783.0	3,456.0	5,206.0	10,889.0	14,433.0	22,910.0	35,279.0	74,670.0
III Current Expenditure	179.0	485.0	1,150.0	2,451.0	3,809.0	8,184.0	10,716.0	17,932.0	27,681.0	63,931.0
1. Expenditure on goods&services	67.0	332.0	888.0	1,784.0	2,651.0	5,629.0	7,629.0	13,397.0	20,460.0	53,292.0
2. Interest payments	0.0	0.0	0.0	0.0	0.0	3.0	3.0	17.0	35.0	70.0
3. Subsidies and other current transf	112.0	153.0	262.0	667.0	1,158.0	2,552.0	3,084.0	4,518.0	7,186.0	10,569.0
IV Capital Expenditure	62.0	219.0	633.0	1,005.0	1,397.0	2,705.0	3,717.0	4,978.0	7,598.0	10,739.0
V Lending - Repayments	0.0	0.0	0.0	2.0	10.0	39.0	-34.0	-202.0	-439.0	-138.0
Overall Deficit/Surplus	7.0	20.0	52.0	75.0	6.0	156.0	63.0	436.0	576.0	351.0

Source: IMF, Government Finance Statistics Yearbook 2002 page 351 to 353.

Table 4.5: Consolidated Monetary Survey
(Billion of Romanian Lei, end of period)

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Net Foreign Assets	1,110.0	-88.0	-379.0	15,091.0	13,820.0	25,502.0	68,332.1	171,865.5	222,271.4
(million US$ equivalent)	628.0	-34.0	-94.0	1,881.0	1,262.0	1,397.0	2,635.7	5,439.3	6,635.0
Net Domestic Assets	9,539.0	18,366.0	30,714.0	47,054.0	78,710.0	108,620.0	116,727.9	98,646.3	151,440.0
Domestic Credit	9,183.4	17,399.0	31,450.0	46,508.0	79,919.0	101,340.0	112,885.4	143,244.7	200,358.0
Credit to Government, net	-301.2	963.6	4,608.6	10,607.0	20,832.8	43,621.0	37,878.4	24,990.3	20,731.6
Credit to non-government	9,484.5	16,435.4	26,841.4	35,900.7	59,086.5	57,719.0	75,007.0	118,254.5	179,626.4
of which: in foreign currency	2,049.9	4,860.1	9,898.5	19,649.0	34,813.9	33,275.0	44,596.0	70,721.1	112,897.6
(million US$ equivalent)	1,160.0	1,885.0	2,453.0	2,451.0	3,179.0	1,823.0	1,720.1	2,238.2	3,370.1
as % of total	21.6	29.6	36.9	54.7	58.9	57.6	59.5	59.8	62.9
Other Items, net	356.0	967.0	-736.0	546.0	-1,210.0	7,280.0	3,842.5	-44,598.4	-48,918.0
Broad Money	10,648.7	18,278.1	30,334.6	62,145.0	92,529.9	134,122.0	185,060.0	270,511.9	373,711.5
Currency outside banks	2,200.6	3,760.5	5,382.7	9,200.1	11,525.0	17,371.6	25,742.0	35,635.3	45,577.3
Leu-denominated deposits	6,090.0	10,385.6	17,866.3	35,265.0	50,803.9	66,269.0	84,462.0	119,092.4	181,322.5
Foreign currency deposits	2,358.1	4,132.0	7,085.6	17,680.0	30,201.0	50,482.0	74,856.0	115,784.1	146,811.7
(million US$ equivalent)	1,334.5	1,602.8	1,756.0	2,203.7	2,757.8	2,765.4	2,887.3	3,664.4	4,382.4
Memo items:									
Exchange rate, end period (lei/US$)	1,767	2,578	4,035	8,023	10,951	18,255	25,926	31,597	33,500
CPI (eop)	161.7	127.8	156.9	251.4	140.6	154.8	140.7	130.3	117.8
Real annual broad money growth (in percent)	47.2	34.3	5.8	-18.5	5.9	-6.4	-1.9	12.2	17.3
Real annual credit to non government growth (in percent)	33.2	35.6	4.1	-46.8	17.1	-36.9	-7.6	21.0	28.9
Velocity of broad money	5.5	4.5	4.6	5.1	4.1	4.7	5.0	4.8	4.3
Foreign currency deposits/broad money	22.1	22.6	23.4	28.4	32.6	37.6	40.4	42.8	39.3

Source: IMF country reports January 2001 (01/16) and May 2003(03/123).

Table 5.1 Prices
(annual growth rates)

Year	CPI (average)	CPI (eop)	IPPI [a] (average)	GDP deflator
1991	170.2	222.8	220.1	195.0
1992	210.4	199.2	184.8	227.3
1993	256.1	295.5	165	227.4
1994	136.7	61.7	140.5	139.1
1995	32.3	27.8	35.1	35.3
1996	38.8	56.9	49.9	45.3
1997	154.8	151.4	152.7	147.3
1998	59.1	40.6	33.2	54.2
1999	45.8	54.8	44.5	47.8
2000	45.7	40.7	53.4	44.3
2001	34.5	30.3	41.0	37.4
2002	22.5	17.8	24.6	23.5

[a] IPPI = Industrial Production Price Index.
Since 1998 for output delivered on the doemstic market only.
Source: National Institute for Statistics.

Table 5.2: Administered Prices

	1996	1997	1998	1999	2000	2001	2002
				Weights			
TOTAL PRODUCTS (%)	**9.05**	**8.76**	**8.76**	**10.96**	**13.71**	**17.48**	**20.31**
				December-on-December percentage change			
	1996	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Medicines	43.3	140.7	38.9	43.1	62.9	29.0	20.1
Electric Energy	58.7	156.1	141.6	92.6	62.5	35.6	16.3
Heat Energy	58.0	267.0	19.4	140.9	52.2	57.2	45.5
Gas	57.5	265.1	95.7	100.0	68.2	99.6	8.4
Water Supply	69.2	189.6	62.3	53.9	71.1	30.7	39.1
Sewerage Services	71.0	205.6	69.7	63.7	64.9	40.7	42.9
Hot Water	58.0	267.0	19.4	140.8	52.2	57.1	45.5
Postal Services	41.1	138.8	72.6	41.9	44.0	26.4	40.9
Telephone	85.6	249.5	145.0	125.0	34.3	29.5	18.4
Radio-Tv Subscription	33.5	660.1	26.7	94.5	59.0	48.4	5.3
Urban Transport	46.7	184.4	36.1	49.2	58.1	45.7	30.3
Railway Transport	104.2	265.1	41.4	45.6	53.4	108.3	0.0
Transport By Waterway	31.3	316.0	27.9	23.5	0.0	8.3	23.9
Fees For Issue Of Identity Card, Driving Licence And Passport		158.1	81.0	196.3	45.0	27.9	37.4

Source: National Institute for Statistics.

Table 5.3A: Average Net [a] Nominal Monthly Salary Earnings, by Activities

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
						(Romanian Lei)					
Total economy	7,460	20,140	59,717	141,951	211,373	321,169	632,086	1,042,274	1,522,878	2,139,138	3,019,424
						(in USD equivalent)					
Total economy	98	65	79	86	104	104	88	117	99	99	104
						(as percent of total economy)					
Agriculture	90.5	85.2	82.1	79.5	81.0	79.1	74.3	73.4	76.5	71.7	71.4
Sylviculture, forestry and hunting	89.7	92.1	84.0	82.0	84.8	86.3	90.7	92.5	97.2	91.5	88.0
Industry [b]	100.5	101.8	104.5	103.6	107.6	109.0	109.7	105.0	102.1	104.2	103.2
Construction	107.0	106.4	107.5	116.2	106.4	103.4	97.6	94.6	91.9	87.0	86.8
Trade	91.9	89.7	88.3	87.4	79.8	77.9	72.7	68.9	70.1	70.2	73.5
Hotels and restaurants	78.8	73.3	70.4	69.1	68.8	67.4	65.2	63.6	61.8	64.6	69.9
Transport and storage	118.6	125.3	119.8	117.3	119.9	123.8	122.3	117.3	118.6	121.1	120.6
Post and telecommunications	97.4	97.3	109.6	114.6	125.8	120.1	143.2	159.7	166.4	167.5	178.8
Financial, banking and insurance activities	114.3	147.9	143.3	165.0	184.3	205.2	234.6	265.1	262.3	245.8	245.7
Real estate and other services	99.6	104.5	99.1	97.7	107.0	106.0	107.9	101.9	99.8	100.9	99.1
Public administration	110.0	104.1	104.9	105.6	106.9	94.9	96.3	131.7	140.7	142.3	138.9
Education	99.3	93.0	91.0	93.2	92.1	85.8	85.4	100.9	93.0	95.7	95.5
Health and social assistance	107.0	98.1	92.2	88.9	76.3	71.5	73.3	81.6	98.9	82.7	86.9
Other activities of national economy	77.0	73.0	75.4	80.2	73.8	67.1	82.3	82.3	86.3	88.1	85.5
Memo: Exchange Rate, Romanian Lei/ US$	76.4	308.0	760.1	1655.1	2033.3	3082.6	7167.9	8875.6	15332.8	21692.7	29060.9

[a] According to NIS methodology, applied until year 2000, net salary earnings exclude tax but include social security contributions.
Starting year 2000 the net salary earnings are calculated by subtracting from the gross nominal salary earnings the tax and the employee's contribution for unemployment, supplementary pension and health insurance.

[b] Including electric and thermal energy, gas and water.

Source: Statistical Yearbook of Romania.

Table 5.3B: Real Wage Indices
(in percent)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002 [a]
1990	**100.0**	81.7	71.3	59.4	59.4	66.5	72.7	56.3	58.2	56.0	58.6	61.5	62.8
1991		**100.0**	87.3	72.7	72.7	81.4	89.0	68.9	71.3	68.6	71.7	75.2	76.8
1992			**100.0**	83.2	83.3	93.2	101.9	78.9	81.7	78.6	82.2	86.2	88.0
1993				**100.0**	100.1	112.0	122.5	94.8	98.1	94.4	98.7	103.6	105.7
1994					**100.0**	111.9	122.4	94.7	98.0	94.3	98.6	103.5	105.6
1995						**100.0**	109.4	84.7	87.6	84.3	88.1	92.5	94.4
1996							**100.0**	77.4	80.1	77.1	80.6	84.5	86.3
1997								**100.0**	103.5	99.6	104.1	109.2	111.5
1998									**100.0**	96.2	100.6	105.5	107.8
1999										**100.0**	104.6	109.7	112.0
2000											**100.0**	104.9	107.1
2001												**100.0**	102.1

Note: Net salary earnings are calculated by subtracting from the gross nominal salary earnings the tax and the employee's contribution for unemployment, supplementary pension and health insurance. Real net salary earning index is calculated as a ratio between the average net nominal salary earnings index and the CPI computed for for the households of employees.

[1)] Provisional.

Source: 1990-2001: Statistical Yearbook of Romania: 2002: National Institute for Statistics.

Table 5.4: Interest Rate
(period average in percent)

Year	NBR reference rate[a]	Tbill Rate	Lending Rate	Deposit Rate	Spread	CPI (ave) inflation
1991			14.8	8.6	6.2	170.2
1992	50.5		49.6	28.3	21.3	210.4
1993	70.0		58.9	33.8	25.1	256.1
1994	65.3		91.4	58.9	32.5	136.7
1995	39.6		48.6	36.5	12.1	32.3
1996	35.0	51.1	55.8	38.1	17.7	38.8
1997	47.2	85.7	63.7	51.6	12.1	154.8
1998	38.0	64.0	56.9	38.3	18.6	59.1
1999	35.0	74.2	65.9	45.4	20.5	45.8
2000	35.0	51.9	53.5	32.7	20.8	45.7
2001	35.0	42.2	45.1	26.4	18.7	34.5
2002 [a]	20.4	27.2	35.2	18.7	16.5	22.5

[a)] Since February 1st, 2002 : official discount rate; for 2002: eop.
Source: National Bank of Romania, Tbill rate for 1996-2000: International Finance Statistics, IMF.

Table 5.5 Exchange Rates
(Romanian Lei per USD)

	End of Period	Average	End of Period	Average	BRER [a]	REER [b]
	Romanian Lei / US$		Romanian Lei / Euro			
1990	34.7	22.4			100.0	100.0
1991	189.0	76.4			76.1	93.1
1992	460.0	308.0			56.9	57.5
1993	1,276.0	760.1	1,445.6	884.6	79.7	79.6
1994	1,767.0	1,655.1	2,134.0	1,967.1	84.5	85.4
1995	2,578.0	2,033.3	3,299.0	2,629.5	88.5	83.5
1996	4,035.0	3,082.6	5,005.0	3,862.9	78.7	75.3
1997	8,023.0	7,167.9	8,867.0	8,090.9	84.3	87.6
1998	10,951.0	8,875.5	12,788.0	9,989.3	106.6	113.8
1999	18,255.0	15,332.9	18,330.8	16,295.6	88.0	96.7
2000	25,926.0	21,692.7	24,117.7	19,955.8	87.7	105.8
2001	31,597.0	29,060.9	27,881.2	26,026.9	85.6	107.3
2002	33,500.0	33,055.5	34,918.7	31,255.2	90.8	110.2

[a)] BRER as index of nominal exchange rate against the US$ adjusted by US$/Romania CPI; WB staff calcul.

[b/] IFS REER (as nominal effective exchange rate index adjusted for relative movements.
in national price and selected main trade partner countries)

Source: National Bank of Romania, International Finance Statistics - IMF.

Table 6.1: External and Domestic Debt

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
						(millions of USD; end of period)							
External Debt													
Public & Publicly Guaranteed [1]	223.0	1027.0	2319.0	3111.0	4230.1	4934.1	6149.8	6848.9	6966.1	6174.2	6857.6	7774.4	9555.8
Private	7.0	116.0	160.0	246.0	368.0	533.6	1034.5	1730.6	2355.7	2551.4	3316.4	4178.0	5668.4
Short term	910.0	988.0	761.0	892.0	966.0	1000.0	1136.0	918.0	577.0	385.0	376.0	411.2	475.0
Total **MLT**	230.0	1143.0	2479.0	3357.0	4598.1	5467.7	7184.3	8579.5	9321.8	8725.6	10174.0	11952.4	15224.2
Total DOD	1140.0	2131.0	3240.0	4249.0	5564.1	6467.7	8320.3	9497.5	9898.8	9110.6	10550.0	12363.6	15699.2
Memo:													
NBR's Gross Reserves	877.0	1004.0	858.0	956.0	1598.0	1380.0	1587.3	3061.0	2299.1	2492.9	3389.7	4861.2	7305.9
Debt Service	4.0	23.0	383.0	331.0	592.0	967.0	1211.5	1871.8	2249.0	2889.5	1956.7	2600.4	3511.5
o.w: Principal repayments	4.0	13.0	300.0	148.0	382.3	684.4	876.1	1427.7	1712.6	2376.7	1409.5	1980.6	2835.5
						(millions of USD; end of period if not indicated otherwise)							
Domestic Debt in Bn ROL			220.6	459.2	1460.7	2073.0	5465.0	15093.3	26915.7	68512.1	73703.4	91228.0	108433.8
Memo: loans from the Treasury										52711.4	59864.0	74810.0	85581.0
Domestic Debt			716.4	604.2	882.6	1019.5	1772.9	2105.7	3032.6	4468.3	3397.6	3139.2	3280.4
Memo Items:													
GDP in Bn ROL	857.9	2203.9	6029.2	20035.8	49773.3	72135.5	108919.5	252925.7	373798.2	545730.2	803773.1	1167242.8	1512256.6
Xrate/ ave/ ROL/US$	22.4	76.4	308.0	760.0	1655.1	2033.3	3082.6	7167.9	8875.6	15332.9	21692.7	29060.9	33055.5
GDP	38299.1	28850.6	19578.5	26362.5	30072.9	35477.4	35333.6	35285.7	42115.5	35592.0	37052.6	40165.5	45749.1
Export GNFS		4946.0	4995.0	5691.0	7195.0	9404.0	9648.0	9955.0	9519.0	9854.0	12113.0	13418.0	16223.0

Note: Until 1999 , temporary borrowings from the general government account resources was not registred as domestic public debt.
Starting with 1999 , acording to the Law no.81/1999 regarding public debt, temporary borrowings from the general government resources was registred as public debt.
1) IMF included.
Source: Ministry of Public Finance and National Bank of Romania.

Table 6.2: Selected External Debt Indicators

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
						(as percent of GDP)							
Total External DOD	3.0	7.4	16.5	16.1	18.5	18.2	23.5	26.9	23.5	25.6	28.5	30.8	34.3
MLT external DOD	0.6	4.0	12.7	12.7	15.3	15.4	20.3	24.3	22.1	24.5	27.5	29.8	33.3
PPG external debt	0.6	3.6	11.8	11.8	14.1	13.9	17.4	19.4	16.5	17.3	18.5	19.4	20.9
Total Public Sector Debt	0.6	3.6	15.5	14.1	17.0	16.8	22.4	25.4	23.7	29.9	27.7	27.2	28.1
Domestic Debt	0.0	0.0	3.7	2.3	2.9	2.9	5.0	6.0	7.2	12.6	9.2	7.8	7.2
Total debt service	0.0	0.1	2.0	1.3	2.0	2.7	3.4	5.3	5.3	8.1	5.3	6.5	7.7
						(as percent of Export GNFS)							
Total DOD External Debt		43.1	64.9	74.7	77.3	68.8	86.2	95.4	104.0	92.5	87.1	92.1	96.8
MLT DOD		23.1	49.6	59.0	63.9	58.1	74.5	86.2	97.9	88.5	84.0	89.1	93.8
PPG external debt		20.8	46.4	54.7	58.8	52.5	63.7	68.8	73.2	62.7	56.6	57.9	58.9
Total debt service		0.5	7.7	5.8	8.2	10.3	12.6	18.8	23.6	29.3	16.2	19.4	21.6
Interest		0.2	1.7	3.2	2.9	3.0	3.5	4.2	5.4	5.0	4.3	4.4	3.9
						(as percent of total debt)							
as % of total debt													
Short-term debt (% of total debt)		46.4	23.5	21.0	17.4	15.5	13.7	9.7	5.8	4.2	3.6	3.3	3.0

1/ inlcuding temporary borrowings from the general government account resources.

Source: National Bank of Romania; the Ministry for Public Finance; WB staff calculations.

MAP SECTION