

Peru

Policies to Stop Hyperinflation and Initiate Economic Recovery

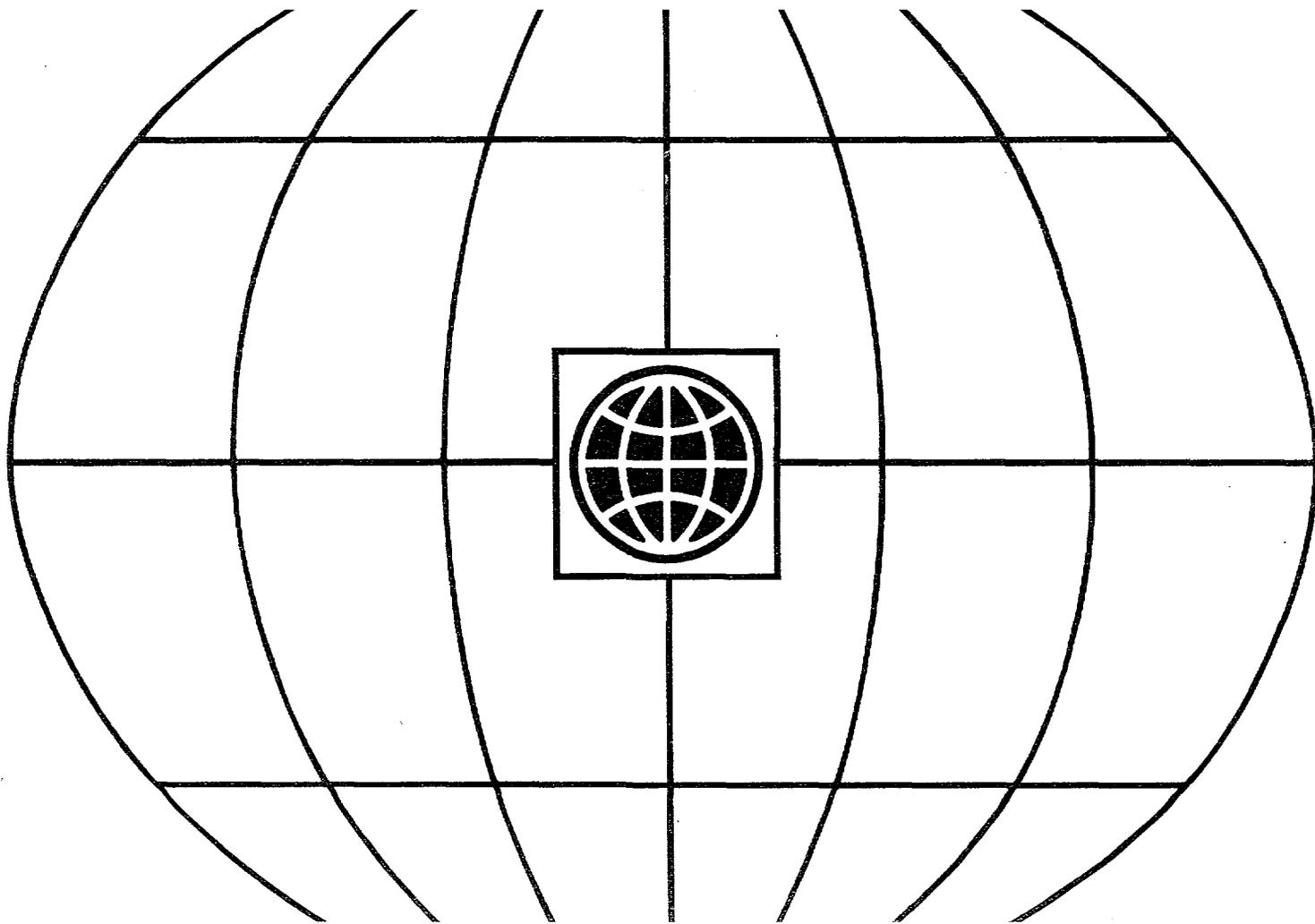
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A WORLD BANK COUNTRY STUDY

Peru

Policies to Stop Hyperinflation and Initiate Economic Recovery

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Washington, D.C., U.S.A.

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PREFACE

This report was prepared and drafted prior to the announcement of two packages of economic measures by the Peruvian Government, first in September 1988 and then in November 1988. A description of these measures as well as an update on the current state of the economy is contained in the Addendum (page 120).

This report is based on findings and analysis of Bank economic missions which visited Lima in October 1987, November/December 1987, and March/April 1988. Support for the Bank work with the Government was provided by the United Nations Development Programme (UNDP). Participation in the missions, which varied in size and composition, was as follows: William Tyler (Mission Chief); Ricardo Lago (Deputy Mission Chief and principal author of this report); Ulrich Lachler (trade and exchange rate policies); Daniel Oks (consultant, macroeconomics); Jeno Malatinszky (public enterprises); Ricardo Martin (projections); Fernando Rezende (consultant, taxation); Javier Escobal (consultant, agriculture); Bruce Herrick (consultant, labor markets); Cesar Burga-Rivera (projections, statistical annex, and research assistance). Pedro Mercader (UNDP Lima Representative) accompanied the work of the missions in Lima and provided valuable guidance and overall support. Valuable comments on an earlier draft were provided by Rudiger Dornbusch. Michel del Buono provided a short note on the state of the energy sector. Brian Wesol provided research assistance in one of the missions. Dorothy Jenkins provided secretarial work throughout the cycle of the report. Milagros Aquino-Divino provided secretarial assistance in the final stage of the report.

This report was discussed in great detail with the Government's economic team in Lima during October/November 1988 by Messrs. Tyler and Lago. While there was general agreement between the Bank and the Government's economic team as to the diagnosis and analysis of the situation, the Government's economic team stressed political and social constraints to taking strong policy action to forestall hyperinflation and indicated the need for a more gradual policy approach.

CURRENCY EQUIVALENTS

Currency Unit = Inti (I/.)

Official Exchange Rate
(Effective December 1, 1988)

I/. 1.00	=	US\$0.002
US\$ 1.00	=	I/. 500

FISCAL YEAR

January 1 to December 31

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COUNTRY MAP

COUNTRY DATA - PERU

AREA		POPULATION	
Total : 1,285,215 Km2		20.7 million (1987)	Growth Rate : 2.6 % pa
POPULATION CHARACTERISTICS (1987)		HEALTH (1987)	
Crude Birth per 1,000	34.8	Pop per Physician (thou)	1.5
Crude Death Rate per 1,000	9.4	Pop per Hospital Bed (thou)	0.6
Infant Mortality per 1,000 live births	88.2		
ACCESS TO SAFE WATER (1985)		ACCESS TO ELECTRICITY (1987)	
% of population - urban	80.6	% of dwellings - urban	54
- rural	9.3	- rural	3
NUTRITION (1987)		EDUCATION (1987)	
Per capita daily caloric intake	2120	Primary school (enrollment rate)	122%
Per capita protein intake (grams/day)	52	Pupils reaching grade 6	65%

GNP PER CAPITA IN 1987 : US\$ 1,212

GROSS DOMESTIC PRODUCT (GDP) IN 1987			ANNUAL RATE OF GROWTH (% constant 1979 prices)				
	Billions Intis	%	1975-79	1980-84	1985	1986	1987
GDP at Market Prices	780	100.0	2.1	-1.0	2.4	9.5	6.9
Gross Domestic Investment	187	24.6	-4.2	-8.3	-10.2	47.8	12.5
Gross National Savings	150	19.7	..	..	..	..	..
Current Account Balance	(37)	-4.9	..	..	..	..	..
Exports of Goods & NFS	72	9.5	12.4	0.2	4.4	-12.3	2.6
Imports of Goods & NFS	85	11.1	-4.9	-7.2	-8.6	25.7	3.8

OUTPUT, LABOR FORCE ,AND PRODUCTIVITY IN 1987

	Valued Added (VA)		Labor Force		VA Per Worker	
	(Billions Intis)	%	'000	%	(Millions Intis)	
Agriculture	76	10.0	2,460	35.2	31	
Mining	21	2.7	168	2.4	122	
Industry	171	22.5	720	10.3	238	
Others	493	64.8	3,642	52.1	135	
Total	760	100.0	6,990	100.0	109	

CENTRAL GOVERNMENT OPERATIONS

	Millions Intis				As % of GDP			
	1980	1985	1986	1987	1980	1985	1986	1987
Current Revenues	1,019	27,963	45,191	66,424	17.1	14.0	11.9	8.7
Current Expenditures	898	27,255	47,755	91,238	15.0	18.6	12.5	12.0
Current Surplus	121	708	(2,564)	(24,814)	2.0	0.4	-0.7	-3.3
Capital Expenditures	263	6,052	10,968	17,064	4.4	2.5	2.9	2.2

COUNTRY DATA - PERU

FINANCIAL SYSTEM

MONEY, CREDIT AND PRICES

1983 1984 1985 1986 1987

(Millions of Intis Outstanding end Period)

Money and Quasi-Money	8,088	19,161	42,617	70,062	147,756
Domestic Credit to Public Sector	3,160	5,173	4,413	13,361	52,780
Domestic Credit to Private Sector	7,247	16,074	33,202	57,643	117,751

(Percentage or Index Numbers)

Money and Quasi Money as % of GDP	24.8	26.3	21.3	18.4	19.4
Consumer Price Index (1979 = 100)	969.5	2,088.0	5,366.2	9,551.1	17,750.4
Annual Percentage changes in:					
Consumer Price Index	111.1	110.2	163.4	77.9	85.8
Domestic Credit to Public Sector	131.7	63.7	-14.7	202.8	295.0
Domestic Credit to Private Sector	93.9	121.8	106.6	74.2	103.6

BALANCE OF PAYMENTS

(Millions US\$)

	1980	1985	1986	1987
	----	----	----	----
Exports of Goods & NFS	4,630	3,792	3,305	3,523
Imports of Goods & NFS	3,970	2,790	3,625	4,209
Resource Balance	660	1,002	(320)	(686)
Accrued Interest Payments	1,111	1,316	1,126	1,182
Other Factor Payments (net)	(202)	(133)	(93)	(65)
Net Transfers	147	134	96	102
Balance on Current Account	(102)	(47)	(1,257)	(1,701)
Direct Foreign Investment	92	(123)	17	135
Net Capital Flows	371	(435)	(978)	(1,137)
Disbursements	1,580	894	475	480
Amortization	1,209	1,329	1,453	1,617
Increase in Arrears	0	1,336	1,959	2,357
Short-Term Capital, EAO	361	(539)	(276)	(569)
Change in Reserves	722	192	(535)	(915)

RATE OF EXCHANGE, 1987 (AVERAGE)

US\$ 1 = I/. 21.9 (trade weighted)

MERCHANDISE EXPORTS (AVERAGE)

(Millions US\$)

	1980-84	%	1985-87	%
	-----	-----	-----	-----
Fishmeal	151	4.5	184	6.8
Coffee	121	3.6	190	7.0
Copper	525	15.8	480	17.7
Silver	290	8.7	113	4.2
Lead	269	8.1	208	7.7
Zinc	279	8.4	249	9.2
Petroleum	673	20.2	384	14.2
Other	298	9.0	205	7.6
Non-Traditional	718	21.6	692	25.6
Total	3,324	100.0	2,705	100.0

EXTERNAL DEBT DECEMBER 31, 1987

(Millions US\$)

Short-Term & Private NG	2,889
Public Medium & Long-Term	6,612
Accumulated Arrears	7,059
Total	16,560

DEBT SERVICE RATIO FOR 1987

- Accrued	79.5
- Paid Debt Service	12.5

IBRD LENDING (AUGUST 22, 1987) (Millions US\$)

DOD	1,165
DOD Incl. Undisbursed	1,580

GLOSSARY OF ACRONYMS

	<u>Spanish</u>	<u>English</u>
APRA	- Alianza Popular Revolucionaria Americana	American Popular Revolutionary Alliance
BAP	- Banco Agrario del Peru	Agricultural Bank of Peru
BCR	- Banco Central de Reserva del Peru	Central Reserve Bank of Peru
BOP	- Balanza de Pagos	Balance of Payments
CD	- Certificados de Deposito	Certificates of Deposit
CRB	- Banco Central de Reserva del Peru	Central Reserve Bank of Peru
CENTROMIN	- Empresa Minera del Centro	Central Peruvian Mining Enterprise
CERTEX	- Certificado de Reintegro Tributario a la Exportacion	Export Tax Reimbursement Certificate
COFIDE	- Corporacion Financiera de Desarrollo	Development Finance Corporation
CONADE	- Corporacion Nacional de Desarrollo	National Development Corporation
CPI	- Indice de Precios al Consumidor	Consumer Price Index
ECASA	- Empresa de Comercializacion del Arroz	Rice Marketing Enterprise
ELECTROPERU	- Empresa Electrica del Peru	Peruvian Electricity Enterprise
ENCI	- Empresa Nacional de Comercializacion de Insumos	Inputs Marketing Enterprise
FENT	- Fondo de Exportaciones No Tradicionales	Fund for Non-Traditional Exports
FRASA	- Fondo Nacional para la Reactivacion del Agro y Seguridad Alimentaria	National Fund for Agrarian Reactivation and Nutritional Security
GDP	- Producto Bruto Interno	Gross Domestic Product
GNP	- Producto Nacional Bruto	Gross National Product
HIERROPERU	- Empresa Minera del Hierro del Peru	Peruvian Iron Mining Enterprise
ICE	- Instituto de Comercio Exterior	Institute of Foreign Trade
IDB	- Banco Interamericano de Desarrollo	Inter-American Development Bank
INE	- Instituto Nacional de Estadistica	Peruvian Statistical Institute
IGV	- Impuesto General a las Ventas	Sales Tax
IMF	- Fondo Monetario Internacional	International Monetary Fund
LIBOR		London Inter-Bank Offer Rate
MEF	- Ministerio de Economia y Finanzas	Ministry of Economy and Finance
MINEROPERU	- Empresa Minera del Peru	Peruvian Mining Enterprise
MN	- Mesa de Negociacion	Negotiation Table
MUC	- Mercado Unico de Cambios	Official Exchange Market
OCN	- Otras Cuentas Netas	Net Unclassified Assets
PAIT	- Programa Nacional de Apoyo al al Ingreso Temporal	Temporary Income Support Program
PETROPERU	- Petroleos del Peru	Peruvian Petroleum Company
PROEM	- Programa de Empleo Temporal	Temporary Employment Program
PSBR	- Requerimientos Financieros del Sector Publico	Public Sector Borrowing Rights
QFD	- Deficit Quasi-Fiscal	Quasi-Fiscal Deficit
QRs	- Restricciones Cuantitativas	Quantitative Restrictions
TINTAYA	- Empresa Estatal Minera Asociada Tintaya S.A.	
WPI	- Indice de Precios al por Mayor	Wholesale Price Index

EXECUTIVE SUMMARY

A. Recent Evolution of the Economy

1. The Economic Situation in 1985. When the current administration took office in July 1985, the economy had not yet recovered from the 1983 output plunge. Unemployment was high and excess industrial capacity widespread. In addition, rampant inflation had translated into progressive financial instability, with capital flight approaching 3 percent of GDP and "dollarization" of bank deposits accounting for more than half of all internal liabilities of the financial system. In late 1983, in view of the difficulties in arranging international commercial bank financing, the previous Administration reluctantly began to accumulate undeclared arrears on external debt payments, so that by mid-1985 arrears had mounted to over US\$2 billion. On the positive side, however, efforts to stabilize the economy undertaken by the Belaunde Administration in 1984/85 left the incoming Government with a strong international reserves position, a competitive real exchange rate, and adequate public sector prices and tariffs. Against this economic background, the socio-political situation had quickly deteriorated, with continuous labor strikes and violent incursions in the cities by terrorist groups based in the Andean Highlands.

2. The Diagnosis by the Incoming Government. The diagnosis of the economy and, relatedly, the economic strategy of the incoming Government, were based on the belief that the demand management policies followed in the early 1980s had been recession-inducing, as well as ineffective in dealing with inflation and the balance of payments disequilibrium. The new Government also believed that Peru had fallen into a "debt trap" in the sense that efforts made to meet external financial obligations had, on the one hand, put undue pressure on Peru's meager savings capacity and thus investment potential; and, on the other, accelerated exchange rate devaluation and consequently inflation. Furthermore, it was perceived that the magnitude of international financial support was likely to be insufficient to allow the country to grow.

3. The Implementation of the Program. Consistent with this diagnosis, the incoming Government launched an economic program based on a set of unconventional economic guidelines. The rationale was to prompt a quick economic recovery by boosting consumption demand and using existing idle industrial capacity. Consumption demand was fueled by increasing real wages, tax-rate cuts and exonerations, and freezing state enterprises' prices and tariffs. The use of idle capacity was promoted by closing the domestic market to imports competing with domestic production. The Government also established multiple exchange rates and price controls. In order to deal with inflation, the Government decreed a one-year price, cost and exchange rate freeze, and scaled-down interest rates. Agricultural subsidies and preferential credit to agriculture were expanded so as to improve the standard of living of the rural poor. Resources to finance this economic program were to come from a reduction in external debt payments. Thus, in his inauguration speech President Alan Garcia unilaterally announced a limit of 10 percent of exports for external debt service payments. The Government's program, officially termed "Plan de Emergencia", was given a duration of one year, but was later extended

through December 1986. For the post-reactivation era the Government envisaged a second phase, where the focus would be on investment and exports, so as to switch from demand-led output expansion into sustainable growth. This strategy, however, was never fully articulated, nor was there an established cutoff date to change strategies.

4. **The Results in 1986-87.** The initial response of the economy to the program was an unparalleled output expansion. GDP expanded 9.5 percent in 1986 and 6.9 percent in 1987. Along with output, employment in the formal sector of the economy grew by a cumulative 10 percent in the two-year period. With the price freeze, inflation declined from 200 percent in the twelve-month period before the freeze to 63 percent in 1986. These positive results, however, were reached at the expense of growing financial and external imbalances and also of increasing misalignments in key relative prices. These imbalances, in turn, indicated that the model followed was unsustainable and that in the absence of corrective measures the economy would lapse into a critical state. First, total public sector revenues dropped by a cumulative 17 percent of GDP in 1986-87. In turn, foreign exchange and financial losses of the Central Bank--resulting from the operation of multiple exchange rates and from interest rate subsidies, respectively--grew rapidly to a level of 2.8 percent of GDP in 1987. As a result, and notwithstanding a reduction in public expenditures (particularly investment), the public sector deficit--as gauged by total Public Sector Borrowing Requirements (PSBR)--more than doubled, jumping from 5.1 percent of GDP in 1985 to 11.2 percent in 1987. Second, the real exchange rate appreciated by 44 percent between July 1985 and October 1987. This, together with booming aggregate demand, rendered GDP expansion to be highly import intensive and, since exports declined, the external current account went from rough equilibrium in 1985 into a deficit of about 5 percent of GDP in both 1986 and 1987. The ultimate effect of this was a sustained drop of gross international reserves from a peak of US\$2.5 billion in March 1986 to less than US\$1 billion in December 1987. Finally, the focus on boosting consumption ruled out the potential for investing the surplus gained by the moratorium, thereby trading-off short-run expansion for future sustainable growth.

5. **The Strategy Revisited.** In 1987, inflation picked up fueled by the pressure of the domestic financing of an overly expansionist budget on a narrow financial sector. Thus, inflation accelerated from 63 percent in 1986 to 115 percent in 1987. During 1987-88 several adjustments to prices and tariffs were effected but these lagged considerably behind inflation. By contrast, wage hikes continued to be granted regularly--every four months--with the idea of keeping real wages on a steady rise. In July 1987, commercial banks, finance firms, and insurance companies were nationalized on the grounds of "democratizing credit allocation and breaking the links between industrial groups and financial institutions." In October and then again in December 1987, in view of the deteriorating international reserve position, the Central Bank devalued the weighted average of all exchange rates--at that time there were as many as nine rates for commercial transactions alone--by a cumulative 78 percent. However, the spread between the lowest and the highest rates widened and exchange

losses enlarged. During 1988, the Central Bank continued to devalue monthly the rates applicable to exports in line with domestic inflation, but the rates for imports were either left unchanged or adjusted insufficiently. Consequently, exchange losses became even greater. Several tax measures were enacted in 1988: increases in sales tax and consumption excise rates and a better proxy system to estimate prepayments on profit taxes. However, both tax and state enterprise revenues continued to decline in real terms during the first half of 1988. As a result, the budget deficit continued to widen due to both lower revenues and higher exchange losses. Interest rates, which had been kept unchanged from March 1986 to March 1988, were adjusted three times during 1988, but remained at levels significantly below inflation.

B. The Economic Prospects in the Absence of Major Policy Reforms

The Risk of Hyperinflation

6. The recent acceleration of inflation, from 115 percent in 1987 to an annual rate of 535 percent during the first seven months of 1988, occurred despite a 120-day freeze decreed in March and effective until June. The key reason underlying this inflationary acceleration is the growing public sector deficit in the face of an unpostponable balance of payment adjustment and a shrinking financial sector. The projected fiscal deficit for 1988, estimated at no less than 12 percent of GDP and most of which to be financed domestically, requires levels of seigniorage that are not sustainable at any stationary rate of inflation, for the broadest definition of money now totals only about 9 percent of GDP and the narrow equals 4 percent. The point has been reached where accelerating inflation is bringing about even faster drops in real broad money; thus, over the first eight months of 1988, the stock of real broad money has dropped to one-half of the December 1987 level. In other words, the velocity of money has doubled. This indicates that further inflation will likely cause revenues from inflation to drop instead of rise. An additional problem is that a large part of real resources shifted to the Government by inflation is transferred back to the private sector in the form of financial subsidies (which also rise with inflation). Therefore, the net inflation tax is thinly based and insufficient to cover the huge targeted deficit of the nonfinancial public sector.

7. Three additional channels are at work that complicate further the dynamics of the current inflationary upsurge. First, foreign exchange losses rise as a percentage of GDP with inflation. This occurs because the current exchange rate adjustment rule consists of moving export rates along with inflation, while import rates are allowed to lag behind. Second, tax and state enterprise revenues have the proclivity to drop (as a percentage of GDP) with higher inflation. This results from the fact that the tax system is poorly indexed to inflation and there are significant lags in tax collection (the so-called Tanzi-Olivera effect) and also from the fact that prices and tariffs are adjusted discretionally and by less than inflation. Third, there is considerable backward-looking indexing of wages and minimum wage adjustments are revised regularly with the idea of ex-ante maintaining real wages. In turn, exchange rate devaluation (black market and/or official rates) closes the inflationary cycle.

8. The current course of partial and intermittent policy measures is insufficient to take the economy away from the present unstable inflationary path. Instead, a strong stabilization package--comprising coherent measures in the areas of, inter alia, public finance, exchange rate and financial policy--is required to avert the risk of a full-blown hyperinflation. If timely measures are not taken, inflation would probably escalate from a projected 650 percent in 1988 into four or perhaps five digits in 1989-90. As experienced by European countries in the 1920s, and more recently by Bolivia, hyperinflation would imply a collapse of the price system, full dollarization of the modern sector of the economy and transition to barter in the rural sector. In parallel, declining public sector revenues and seigniorage from inflation, as GDP percentages, would force down public expenditures. In turn, probable rationing and shortages of basic foodstuffs combined with declining real wages and shortening of wage settlements could rekindle social and labor unrest. In this environment, production and employment would fall consistently. Since hyperinflation is not a viable macroeconomic and monetary regime--it ends with full repudiation of the national currency by economic agents--at some point the fundamental economic problems and issues (reduction of subsidies, viable real wages, realistic prices and tariffs, tax reform) will have to be confronted.

C. The Main Economic Issues and Policy Recommendations

9. A clear implication of the foregoing paragraphs is that there is no alternative to adjustment; the choice is rather between an orderly stabilization, where accounts balance ex-ante and the costs are distributed equitably among social groups, or else a disorderly process in which hyperinflation does the dirty work of closing the gaps ex-post and distributing the costs arbitrarily and unevenly. Moreover, the poor stand to lose more than the rich in the latter process.

10. On the other hand, stabilizing inflation will not per se solve Peru's long standing economic distortions and structural problems, although it will contribute to it. What is needed is macroeconomic stabilization within a medium-term program of phased economic recovery and structural reform. This should comprise, in addition to the budgetary and financial policy actions to deal with inflation, specific macroeconomic and sectoral reforms in the areas of, inter alia, the exchange rate regime, the structure of foreign trade barriers and incentives, interest rates and credit allocation policies, price controls, tax structure, agricultural pricing, and labor market restrictions. Moreover, in a world of increasing interdependency, the success and credibility of such a program will require confronting the now "dormant" external debt problem. These economic issues can be classified into three broad categories: public finance, external sector policies, and other resource allocation issues.

Public Finance

11. Peru's public finance problems can be summarized as: a sustained drop of tax proceeds and state enterprise revenues; a proliferation of foreign exchange, financial and agricultural subsidies; and a considerable

increase in the Government's wage bill. The inevitable consequence of these trends has been stagnation of public investment and enlargement of the budget deficit. In effect, public sector revenues declined from 43 percent of GDP in 1985 to 26 percent in 1987, and an additional drop to 22 percent is projected for 1988. In turn, Central Bank foreign exchange and financial losses soared to nearly 3 percent of GDP in 1987 and may well reach as much as 5 percent of GDP in 1988. Similarly, agricultural subsidies--excluding preferential credit--reached about 1 percent of GDP in 1987. On the expenditure front, the public sector wage bill grew from 7.9 percent of GDP in 1985 to 8.7 percent in 1987, while public investment decreased from the already low level of 6 percent of GDP in 1985 to 4 percent in 1987.

12. In addition to macroeconomic instability, the aforementioned public finance trends have given rise to distortions in resource allocation and impediments to future growth. Indeed, low prices and tariffs of state enterprises have not only hampered investment in normal maintenance of public enterprises but have also made the private industrial plant unduly dependent on cheap fuels and electricity, and thus promoted capital intensive activities. In turn, foreign exchange subsidies to imported inputs and capital goods have yielded similar results. Likewise, tax shelters and exonerations to agriculture, fishing and other activities have rendered financially viable endeavors and firms that could face serious financial trouble when these incentives are eventually removed in an attempt to restore needed tax revenues. On the other hand, high subsidies to basic foodstuffs, medicines and gasoline, coupled with price controls and an overvalued official exchange rate, have not only increased transitorily the purchasing power of wages to levels that are not viable in the medium run, but also resulted in significant smuggling of these items to neighboring countries at the expense of the Treasury and domestic producers. Finally, huge credit subsidies have, along with expanding financial losses of the Central Bank, eroded the financial discipline of borrowers and promoted a discretionary allocation of credit unrelated to the prospective returns on projects.

13. **The Tax System.** Tax proceeds declined from 14 percent of GDP in 1985 to 8.8 percent in 1987. Currently, Peru's tax burden to GDP ratio is about half of the average for a sample of countries with comparable development. The main problems of the tax system are: fragmentation of the tax base (e.g., the coexistence of profit taxes and net-worth taxes); a pervasive system of exonerations under all major taxes; lack of protection of tax revenues against inflation; and lax enforcement of tax laws and weak tax administration. The Government announced in 1987 that it intended to raise the tax burden to 16 percent of GDP by 1990.

14. **Recommendations.** The following recommendations could help in reaching that target, while improving the efficiency of the tax system:

- (a) The current tax system is too complex, particularly in view of the unpreparedness of the Tax Department to administer it. Thus, it would be advisable to carry out a full-fledged tax reform oriented towards simplifying the tax structure into a system consisting of a few

broadly-based and easily collectable taxes (e.g., a value-added tax, a corporate net worth tax, a few excises on consumption, tariffs, and personal income tax for professionals over a certain income threshold). Recent experience in Bolivia in this direction illustrates the potential pay-off of such a strategy. Preparative analytical work of tax reform could start now with a view of establishing the new tax system in fiscal year 1990.

- (b) Immediate action is needed in two areas: first, reducing collection lags and fully indexing tax liabilities to inflation; and second, scaling down current exonerations, conservatively estimated by the Ministry of Finance at no less than 4 percent of GDP.
- (c) Increasing tax compliance and broadening the tax base through strengthening tax administration and simplification of tax laws. Recent steps to create a Superintendencia General de Administracion Tributaria, that will encompass all tax duties now fragmented under different bodies, are positive and need to be coupled with manpower training and centralization of tax files.
- (d) Regarding tax rates, three recommendations are pertinent. First, the tariff code needs to be evened out (current tariffs range from 0 to 155 percent, with 42 different tariff rates) and exonerations reduced. Second, the sales tax rate could be increased from 10 to 16 percent over two years, a level comparable with international standards. Third, further hikes to selective consumption excises other than gasoline do not appear convenient (most are already above 100 percent) since they could encourage black market sales.

15. Prices and Tariffs of State Enterprises. Price controls have been particularly stringent in the case of public sector prices and tariffs. As a result, prices and tariffs have lagged consistently behind inflation over the last three years, and state enterprise revenues have declined from 26 percent of GDP in 1985 to 14 percent in 1987. Most prices and tariffs are now at less than 35 percent of their relative level (with respect to the consumer price index) in July 1985. Prices of hydrocarbons, including gasoline, have become increasingly lower than border prices of similar products; for instance, the ex-refinery price of gasoline is now US\$0.11 per gallon, when the border price is US\$0.60. Besides, low gasoline prices have meant declining tax proceeds from excises to which these products are subject (representing about one quarter of all tax revenues). The price of rice to consumers--rice is marketed by Empresa de Comercializacion del Arroz, S.A. (ECASA)--has become half of the price paid to producers, raising the rice subsidy to 0.3 percent of GDP in 1987 and encouraging spurious speculative arbitrage.

16. According to recent data on consumption patterns by income strata (the 1985-86 living standard measurement survey for Peru), it can be argued

that most price subsidies (e.g., gasoline, water, electricity, telephone) are unwarranted on income distribution grounds, since they are consumed relatively more by the relatively rich. Likewise, subsidies to energy inputs (fuels and electricity) for industry foster relatively capital-intensive industrial activities and technology choice, which dampens employment. As for the subsidies to staples (rice, potatoes, milk, public transportation), which are justifiable on distributional grounds, methods need to be devised to target these subsidies to identifiable needy population groups instead of using indiscriminate price subsidies.

17. **Recommendations.** Confronting the current budgetary problem inevitably involves moving into and maintaining realistic public sector prices and tariffs. In devising a policy of prices and tariffs, two separate aspects need to be considered: static efficiency and dynamic rules of adjustment. Static efficiency dictates that the structure of prices and tariffs to be optimal needs to reflect true scarcities and therefore be in line with "shadow prices" (border prices for tradable commodities and long-run marginal cost for utilities and other nontradable services). In turn, from a dynamic perspective, the issues are twofold: first, the need for a timetable to bridge the transition from the current price structure to the optimal one; and second, the need to devise automatic rules for price adjustments so as to ensure that, in the future, prices and tariffs are not eroded by inflation. In the presence of high and volatile inflation, the only pragmatic approach to achieve the latter is by forward-looking indexing of prices and tariffs to inflation (or the exchange rate, depending on the commodity) at short intervals.

18. **Public Investment.** Revenue constraints as well as reduced foreign partnership (the latter brought about by Peru's unilateral foreign debt stance) have led to a decline of public investment to the lowest level in the decade: 3.9 percent of GDP in 1987, or about half the average for 1980-84. Reportedly, present capital expenditures in most state enterprises are insufficient for maintenance of existing capital stock, let alone new investments. As a result, capacity constraints have been reached in key sectors. In the petroleum sector, low investment by both Petroleos del Peru (PETROPERU) and foreign license contractors--together with unchecked growth in demand--have resulted in a drop of proven reserves from 12 years production in 1981 to 8 years in 1987. Moreover, in 1988, Peru has become again a net oil importer (in value terms) after having been an exporter since the early 1980s. Likewise, in the electrical sector, low investment and fast-growing demand indicate that the excess capacity of recent years will disappear in 1989.

19. **Recommendations.** Recent public investment trends will have serious repercussions on future growth. Again, the importance of raising prices and tariffs to realistic levels is evident. This is needed both to restore the financial position of the public sector (thus, closing the fiscal imbalance and restoring public investment potential) and also to correct unchecked growth in demand for publicly supplied goods and services. In a different vein, the decline in investment has also unveiled Peru's need for and reliance on external partnership and technical assistance, and also the direct relation between the latter two and Peru's posture regarding the foreign debt.

20. The Central Bank's Quasi-Fiscal Deficit. Foreign exchange losses, arising from the operation of multiple exchange rates, and financial losses, resulting from the heavily subsidized interest rates granted by development banks (particularly Banco Agrario), have become one of the most important budgetary problems. For the current year, foreign exchange losses alone will amount to between 3 and 5 percent of GDP; the lower bound estimate on the optimistic assumption that multiple exchange rates were unified during the remainder of the year. Unification of exchange rates alone would correct more than one-third of the current budgetary imbalance. In any case, foreign exchange and financial subsidies should ideally be transparent, subject to the budgetary cycle and under the responsibility of the Minister of Finance.

External Sector Policies

21. Exchange Rate. Peru's exchange rate system has been subject to considerable changes in the rules of the game in recent years. Multiple exchange rates were first introduced in August 1985 with the idea of granting more favorable rates to manufacturing exports than to traditional exports. Later, the scope of multiple rates was extended to imports by granting preferential rates to "priority" imports. The total number of rates has varied considerably over the last three years. Almost monthly there have been changes in the structure, and, at one point, there were as many as nine rates for commercial transactions alone. At present (July 1988), there is a total of six rates for commercial transactions with two different rates applicable to exports and five rates to imports. In addition, there is an official financial rate for commercial bank transactions and also a black market rate. The dispersion of the rate structure is large; high priority inputs are given a rate of 33 Intis/US dollar, while some exports are granted a rate of 167 Intis/US dollar, and the black market rate runs at 300 Intis/US dollar. As for the management of exchange rates, from August 1985 to January 1987, the benchmark rates were frozen in an attempt to stabilize inflation. In January 1987, a crawling peg was initiated--at the rate of 2.2 percent per month--that lasted until July 1987. Finally, in December 1987, the rates applicable to exports started to be moved monthly according to inflation of the previous month, while import rates lagged behind.

22. Recommendations. Multiple exchange rates have led to substantial Central Bank losses. In addition, multiple rates entail relative price distortions, duplicate the incentive structure derived from tariff and export taxes, are costly to administer, elicit rent-seeking behavior from economic agents, and draw scarce public managerial talent to a non-productive task. All these factors imply efficiency losses, difficult to estimate, but likely to be not any smaller than pure budgetary losses. Therefore, the economy stands to gain by unification of rates. Regarding the management of the exchange rate, both a floating-rate regime and a properly managed crawling peg are viable regimes. However, in the current situation of impeded governmental control over fiscal and monetary variables and depleted reserves, a floating rate would probably be a superior and more credible policy approach.

23. Quantitative Restrictions. Since March 1987, all imports are subject to a two-stage approval process: first, from the Institute of Foreign Trade, and then from the Central Bank. Moreover, about 10 percent of all input items are prohibited. Import licenses are issued in accordance with a foreign exchange budget drawn up annually and subject to quarterly revisions. Since January 1988, importers are allowed to obtain automatic licenses for imports to be financed with importers' own foreign exchange.

24. Recommendations. Replacing quantitative restrictions with an appropriately designed tariff structure would result in: (i) efficiency gains in production because quantitative restrictions grant absolute protection, typically to inefficient domestic industries, but also uncertain protection, depending on the discretion in license approvals; and (ii) treasury gains, both in reduced bureaucratic costs inherent with administering quantitative restrictions and increased import duty revenues that, under quantitative restrictions, are captured by selected importers as rents. Successful liberalization (substitution of tariffs for quantitative restrictions) requires fiscal discipline and exchange rate flexibility. A stable macroeconomic environment is a central element to stabilize price signals brought about by tariff protection. In addition, removal of quantitative restrictions puts pressure on the balance of payments that needs to be offset by adequate exchange rate and aggregate demand policies.

25. Tariffs. Peru's current tariff structure comprises 42 different tariff rates, ranging from 0 to 155 percent. The average tariff is 67 percent. The tariff pattern is typical for a country with an import substitution strategy, where final goods with the least value added receive the highest protection, at the expense of intermediate goods and the agricultural and mining sectors. This spurious incentive structure is reinforced by quantitative restrictions. From a fiscal standpoint, actual tariff revenues (as a share of total import value) have declined from 33 percent in 1985 to 29 percent in 1987, as a result of both increasing use of tariff exonerations and tightening of quantitative restrictions. In turn, multiple exchange rates give rise to additional protection, since, by allowing different imports and exports to enter at different exchange rates, some are implicitly subsidized and others taxed. The exchange rate structure leads to a cascade pattern of protection similar to the one granted by tariffs. Therefore, the combined system of protection magnifies the distortions inherent to both structures.

26. Recommendations. Current restrictions to imports in the form of licenses, tariffs and multiple exchange rates provide artificially high incentives for import substitution of consumer goods to the detriment of import substitution of capital goods and intermediate inputs and, above all, to the detriment of exporting sectors. This is the fundamental cause of the chronic failure to develop exports and also of the prevalence of an assembly-type industrial sector fully dependent on imported inputs. The economy stands to gain in efficiency and future growth by moving to a protective system based exclusively on tariff protection within a two-to-four-year period. Moreover, the current tariff structure is dispersed and complex and needs to be simplified into a system of, say, five basic

rates in the range from 10 to 50 percent also over a two-to four-year period. If, at the same time, all tariff exonerations are phased out, these lower tariffs would yield at least the same tariff revenue as now, but with enhanced productive efficiency. For the medium term, consideration should be given to move towards a uniform tariff rate of, say, 10 or 20 percent at the pace allowed by public revenue constraints.

27. **Export Incentives.** To counter the anti-export bias of import restrictions, several incentives for nontraditional exports (mostly manufactured goods) have been established. The most important are: (i) temporary admission system that exonerates exporters from tariffs and sales taxes related to the importation of inputs for exports production; (ii) Certificado Tributario de Exportacion (CERTEX), an export subsidy at varying rates over the FOB value of exports; and (iii) Fondo de Exportaciones No-Tradicionales (FENT), concessional credit for pre- and post-shipment financing of exports. Few exporters avail themselves of the temporary admission system, because it does not allow exporters to circumvent import licenses and prohibitions and also because it reduces the claim of CERTEX subsidies. These three incentives reduce only marginally the anti-export bias derived from import barriers.

28. **Recommendations.** When the anti-export bias of import protection policies is high, as is the case in Peru now, it is difficult to provide adequate compensation to exporters without placing a heavy burden on the Treasury or eliciting countervailing duties from trading partners. The more advisable course of action is to remove the root of the anti-export bias through lifting quantitative restrictions, tariff reform, and maintaining an adequate real exchange rate. Moreover, this is a more cost-effective policy than trying to compensate one set of distortions with another.

29. To the extent that specific export promotion policies are pursued, more emphasis needs to be placed on temporary admission and less on CERTEX. The former is a transparent mechanism and is not subject to the risk of countervailing duties. To this end, imports under temporary admission should be exempted from import licenses and prohibitions. Also, the CERTEX subsidy could be redefined as a flat rate over domestic value-added measured at international prices.

Other Resource Allocation Issues

30. **Financial Policy.** The main issues on financial policy are: low nominal interest rates compared to inflation; heavy financial subsidies channelled by development banks; and regional and sectoral restrictions to credit allocation. Real interest rates have been negative over the last three years. Recent adjustments to rates effected in March, June and August 1988 to levels of 120 percent for savings and 260 percent for lending have been insufficient in the face of rapidly accelerating inflation (projected at 650 percent in 1988). The effects of this policy have been: (i) an unprecedented drop of real financial savings, particularly in 1988 (by August 1988, total real internal liabilities of

the financial sector had dropped to one-half of the level in December 1987); (ii) stringent credit rationing in the formal financial sector, coupled with the upsurge of a flourishing informal credit market; and (iii) permanent pressure on the black market exchange rate reflecting capital flight. Financial subsidies result from the fact that development banks (particularly Banco Agrario) on-lend resources, raised through Central Bank financing, at rates much lower than the average cost of funds of the Central Bank, which, in turn, is much lower than inflation. For example, Banco Agrario lends at nominal rates as low as 0 and 10 percent. Restrictions to credit allocation take the form of regional and sectoral mandatory investment coefficients imposed on commercial banks. These restrictions impede the free flow of savings to the most productive financing opportunities.

31. **Recommendations.** Formal sector financial intermediation needs to be restored by moving to a policy of positive real returns on deposits and loans. In the present circumstances of high and unstable inflation, the only viable way to ensure ex-ante positive returns is by indexing the principal of time deposits and loans to inflation and setting adequate real premia or, preferably, allowing for endogenous determination of real premia by the financial market. In turn, interest rates charged by development banks also need to be linked to inflation to prevent the size of financial subsidies from rising with higher inflation. However, since the public sector is a net debtor in the domestic economy, it is important that fiscal adjustment precedes financial liberalization so as to avoid additional pressure on the fiscal deficit before inflationary expectations are drastically reversed. Finally, current restrictions on credit allocation by commercial banks should be phased out. They lead to a suboptimal use of financial resources and are unnecessary, since selective credit to regions and sectors is already channelled by existing regional and development banks.

32. **Agricultural Pricing and Subsidies.** Subsidies to agriculture are granted through different channels: exchange rate, credit, input prices, and guaranteed output prices. These subsidies are handled by two public marketing boards: ECASA (rice marketing) and ENCI (marketing of inputs and other agricultural products). Credit subsidies are channelled by Banco Agrario. ENCI and ECASA get their funding from government transfers and profits accrued on the importation of foodstuffs (in particular, wheat and maize) at low exchange rates and later sale of those products at marked-up prices. Total subsidies to agriculture are estimated at no less than 2.5 percent of GDP. The most important is the rice subsidy, which arises because ECASA sells the product at half the price it pays to producers. This subsidy alone totalled 0.3 percent of GDP in 1987. The incentive structure for agricultural production has translated into high rates of effective protection for import substitution crops and negative protection rates for Peru's two export crops (coffee and cotton).

33. **Recommendations.** The incentive structure offered to agriculture is overly complex, with the overall balance being unclear. The Government could consider opting for a smaller number of instruments of promotion. Guaranteed prices for the main staples are probably the best planning mechanism because prices are the best incentive for production. Care should be taken that selling prices by ECASA and ENCI are not lower than

guarantee prices paid by them to avoid spurious arbitrage. Disparities in yields among regions of similar climates indicate that there is scope to increase productivity through training and extension services.

34. **Price Controls.** At present, market forces determine the prices of only about one-quarter of the items that consumers buy. The rest are subject to a greater or lesser degree of negotiation between authorities and producers. Price controls have provoked shortages, downgrading of quality, and black market sales, including smuggling across the border. Moreover, despite controls, inflation has accelerated virulently in 1988.

35. **Recommendations.** Removal of price controls would improve significantly resource allocation and promote growth. The best strategy to prevent oligopolistic producers from exercising market power is by opening the economy to foreign trade and competition. In another vein, using some form of price controls transitorily to stabilize inflationary expectations requires, for effectiveness, that such controls be implemented in conjunction with adequate fiscal and monetary policies.

36. **Labor Market Issues.** The main labor market issues are: (i) layoff restrictions, short probation, and high fringe benefits for formal sector employment; and (ii) "high" real wages resulting from the periodic wage hikes above inflation and productivity growth granted in 1986-87. To counter the problem of employment restrictions, legislation was enacted to create a temporary employment program (PROEM) in late 1985. This program, which had a duration of two years, was very successful and has recently been renewed for two additional years. Consideration should be given to incorporating PROEM as a permanent legal provision so as to spur labor market mobility and also to avoid precautionary layoffs in the months at the end of the program's term. In addition, consideration should be given to allowing exporting firms to hire and layoff without restrictions so that they can adjust to the swings in external markets. Likewise, severance payments and labor stability laws could be made more flexible. Regarding real wages, that have started to fall in 1988 in the wake of growing inflation, the current situation calls for bringing them down in line with underlying economic forces on at least three counts. First, the economy is falling into a recession; second, lower real wages are central to achieving the now required real depreciation of the exchange rate; and third, Peru can no longer run an external trade deficit that could sustain high real wages. The important point is that the real wage drop should be achieved through ex-ante nominal wage restraint and moderation so that inflationary pressures are minimized.

37. **The State Enterprise Sector.** The deteriorating performance of Peru's public enterprises is a major source of macroeconomic and structural problems. There are now some 135 nonfinancial state-owned enterprises, that employ 130,000 people and produce about 10 percent of GDP. The sector fully controls the supply of electricity, telecommunications, oil and gas production and about one-third of the sectors of mining and transport. State enterprises have been traditionally viewed as a means to provide inputs, services and consumer goods at low controlled prices and to create employment, while their productivity and profitability has been given secondary importance. As a result, they are overstaffed and operate at high costs; in addition, the goods and services they provide are in

general of low quality. The Government intends to embark on major restructuring of the sector that would include divestiture of some enterprises and liquidation of others. The tentative proposal for divestiture comprises 30 to 40 firms which represent about 4 percent of the book value of total assets of the sector. However, there is a larger group of enterprises, particularly in manufacturing, that could be operated by the private sector more efficiently without detriment to the Government's capacity to control the strategic areas of the economy. The Government may also consider sale to foreign investors especially in areas where they could bring technology transfer and management skills. (The creation of a debt-to-equity swap program could significantly contribute to both divestiture and foreign debt reduction.) As to the selling method, open subscription of bids and/or public placement in the stock exchange could prove to be more transparent and effective mechanisms than engaging in expensive and time consuming economic engineering studies of enterprise pricing.

D. Economic Policy to Stabilize Inflation and Establish the Conditions for Medium-Run Growth

38. **The Preconditions for Stabilization.** At present, the policy options are limited to either allowing the economy to undergo a full-blown hyperinflation or else implementing a strong stabilization program that would push the economy away from the current unstable path. By contrast, it is uncertain whether gradual and intermittent policy adjustments would provide sufficient momentum to escape hyperinflation. In addition to a fully consistent macroeconomic program "on paper," successful stabilization requires: (i) political commitment to implement the program coherently; and (ii) understanding and broad-based support from diverse economic, social and political groups. This, in turn, implies establishing stable rules of the game and distributing the costs of adjustment as equitably as possible among the different social groups. The latter might require establishing well-targeted subsidies for the poorest population groups so as to alleviate the adverse impact of removal of indiscriminate price subsidies and of (at least transitory) lower real wages that would be brought about by stabilization.

39. **Resumption of Growth and the Foreign Debt Problem.** Peru has already pursued, and exhausted, the alternative of obtaining de facto external financing by suspending payments on the external debt. In turn, the possibility of immediate external support--that would be feasible on the assumption of "first best" policies--would require some sort of a debt work-out. This means that part of any fresh external resources would have to be used to address Peru's unsettled debt problem. Clearly, under these circumstances, the country's growth strategy in the near future will have to be based primarily on mobilization of domestic savings, export growth and increased productive efficiency. However, the importance of reaching a settlement on the debt transcends the pure accounting of debt flows. The severe strains to the Peruvian economy imposed by the present unilateral approach are high and will rise over time given the intrinsic integration of Peru's economy with the rest of the world. In particular, in the absence of a settlement, it might prove formidably difficult to carry out

an export oriented growth strategy or to obtain needed external financing and technical innovation to exploit some of Peru's natural resources (e.g., hydrocarbons). Moreover, it is uncertain whether stabilization would be viable and credible without confronting the debt problem. These costs should be weighed against the financial benefit from simply ignoring the debt problem.

40. Peru's foreign debt, now standing at US\$16.4 billion, is not overwhelmingly high when compared to other Latin American countries. In relative terms, it totals about 70 percent of GDP and about US\$827 per capita. Thus, Peru's debt is relatively lower than that of Chile, Costa Rica, Ecuador and Mexico. Nonetheless, Peruvian debt now trades in secondary markets at only 5 cents on the dollar, far below the rates for the other countries. The huge discount on the debt opens the door to the use of market-based debt-reducing schemes. International support to use these schemes will in itself be positively affected by a decisive macroeconomic adjustment effort.

41. Overall Macroeconomic Strategy. The policy approach suggested here to deal with inflation consists of strong conventional fiscal-monetary and exchange rate policies together with income policy, with some similarities to the program put forward in Mexico in 1987. The thrust of incomes policy would be to break existing backward-looking indexation rules (the so-called desagio), in particular for wages, and move into a forward-looking indexing rule for wages, public prices and tariffs, and interest rates. A budgetary financial program consistent with reducing inflation from a projected 650 plus percent in 1988 to a target of 50 percent in 1989 is presented and analyzed in Chapter IV of the report. It is calculated that to reach that target, Central Bank financing of the deficit would have to be cut from an estimated 10.7 percent of GDP in 1988 to about -0.1 percent in 1989. This would mean that the total public sector deficit (including all interest accrued on the external debt and arrears) would decline from 14.1 percent of GDP in 1988 to 4.9 percent in 1989. Specific measures to achieve this reduction include exchange rate unification, tax measures and realignment of prices and tariffs (as detailed in Chapter III, Section A) as well as reduction of public sector wages and subsidies. Tax and state enterprise revenues would need to be raised by about 13 percent of GDP in 1989. The targeted level of Central Bank financing would have to be enforced through tight credit ceilings in nominal terms so as to anchor the inflation target. Forward indexing of wages and prices and tariffs would provide two additional anchors for inflation. By contrast, it is not recommended that the exchange rate be utilized as an anchor, for the Central Bank does not have enough reserves to honor any preannounced rule. Instead, it is suggested that the official exchange rate be allowed to float^{1/} or else be managed in a non-preannounced flexible crawling peg. In order to allow for relative price realignments and also to dry up current excess liquidity, it is suggested that all prices be liberalized during an interim period before the onset of the program. Adjustments to prices and tariffs, geared to make up for accumulated lags, should also be effected

^{1/} The float could be in the modality of an "auction" managed within the so-called Mesa de Negociacion that at some time was operated by the Central Bank.

during this interim period. Monetary policy would be tightened during 1989 by increasing the legal reserve requirements for commercial banks. In addition, with a one-to two-month lag after the fiscal adjustment, the principal of loans and deposits would be indexed to actual inflation and real premia for loans and deposits would either be set at adequate levels or, preferably, allowed to be determined by financial market forces. In subsequent years, the fiscal adjustment would continue, with or without the use of incomes policy, basically by increasing public revenues at an average pace of 2 percent of GDP per annum, and reducing the overall public sector deficit from 4.9 percent of GDP in 1989 to 3.9 percent in 1991, and to 3 percent in 1993. Under the recommended macroeconomic policy program, inflation could be targeted to decline from 50 percent in 1989, to 30 percent in 1991, and to 10 percent in 1993. In addition, the remonetization of the economy (increase in the demand for money) brought about by lower inflation, together with the amortization of domestic debt by Government (derived from the scaling back of the deficit combined with its foreign financing), would allow for increasingly higher shares of overall credit to the private sector (to be achieved by gradually lowering reserve requirements on bank deposits), thereby promoting a crowding-in process of private investment.

42. Illustrative Evolution of the Economy under Stabilization and Structural Adjustment. The main features of the scenario that illustrates the path that the economy could follow in a high policy case are the following. First, GDP growth could resume in 1990 and positive per capita consumption growth in 1991, after a considerable setback in both 1988 and 1989. Second, there is considerable scope for export growth of both manufacturing and traditional exports; current export levels are far lower than they were three years before. Moreover, with the recommended policies, exports could well rise at an average real rate of 15 percent per annum for manufacturing exports, and 5 percent for traditional exports. Third, in the projected scenario the creditworthiness ratios improve slowly but steadily: the debt-to-GDP ratio falls from 74 percent in 1990 to 66 percent in 1993 and the interest-to-exports ratio from 36 percent in 1989 to 30 percent in 1993. The proportion of interest accrued that would need to be refinanced through fresh money requirements every year is high, although declining. To the extent that there could be debt reduction schemes as part of a negotiated debt work-out, the improvement in the creditworthiness indicators would be greater and also the intensity and social cost of adjustment could be somewhat attenuated. Therefore, debt-reducing schemes along with conventional rescheduling (the so-called menu approach) would be a suitable avenue to render the projections scenario viable. Without some form of debt relief, a consistent and sustainable economic work-out will be unlikely.

CHAPTER I

THE EVOLUTION OF THE PERUVIAN ECONOMY 1985-87

A. Background

1.01 Peru is a small and moderately open economy with a long history of heavy dependency on mineral exports for its performance. Well endowed in natural resources, Peru is now the world's largest producer of silver and fifth largest producer of copper. In addition, it has considerable fishing potential and hydrocarbon resources. The country is divided into three physically distinct regions. Efforts to forge physical, economic, linguistic, and cultural links between the highlands (Sierra), the rain forest (Selva), and the coast regions confront the formidable natural barriers of the Andean mountains. About half of Peru's population of about 20 million (1987) live in the coastal region, while 40 percent live in the Andean highlands and the rest in the Amazon region. Income per capita, which has declined steadily since the mid-1970s, is now about US\$1,200. Peru's greatest challenge is to provide jobs and social services at the pace of population growth, now at 2.6 percent per annum. Income distribution has been reported to be one of the most uneven of Latin America, and other welfare indicators, such as life expectancy and infant mortality, are among the lowest in the region. More than half of Peru's poorest 30 percent live in the Andean highlands and are self-employed peasants. Agriculture and mining have long lost their predominance in the economy due to the import substitution model followed since the mid-sixties which gradually made industry the mainstay of the economy. State-owned enterprises, whose number grew steadily since the late 1960s, control several key sectors, such as hydrocarbons, electricity and part of mining, and generate about 10 percent of GDP. In turn, Peru's tax burden ratio, of around 9 percent of GDP, is one of the lowest of the group of countries with comparable income per capita, and the mix between direct and indirect taxes is heavily biased toward the latter.

B. Recent History

1.02 Peru's modern history has been marked by political and economic instability. One term democratically elected governments have usually been followed by periods of military "juntas" and vice versa in an almost mathematical sequence. In turn, recurrent expansionary economic policies have ultimately run into foreign exchange crises and subsequent stabilization episodes. The Peru of the 1950s has been characterized as a laissez-faire economy. The country was open to foreign trade; exports of raw minerals, mostly exploited by foreign interests, and fishmeal paid for imported manufactures. In turn, Government had little direct participation in the economy and economic activity was largely unregulated. Industrialization by import substitution and heavy government spending in infrastructure started with the first Government of Belaunde Terry, between 1963 and 1968, that ended with an economic crisis and a military coup. During the nationalistic rule of General Velasco Alvarado (1968-75), the Government embarked on an inward-looking growth strategy, nationalized foreign corporations--particularly in mining--and undertook a global agrarian reform. Large scale public investment projects brought about a

mounting foreign debt. Favorable external conditions during 1970-74 allowed a particularly rapid expansion of employment and incomes. In fact, income per capita had grown steadily during the whole period of 1950-74, with the exception of the years 1968-69. Thus, per capita income growth averaged 2.7 percent per annum during 1950-74, while inflation was moderate but rising, from an average of 8 percent per annum in the 1950s to 13 percent in the early 1970s. Starting in 1974, however, a deep downswing of the terms of trade together with a sudden withdrawal of foreign financing sources, in the wake of overly expansionary public spending, set the ground for a long recession. In that process, General Velasco Alvarado was forced out of office in 1975 by an internal coup that put his Prime Minister, General Morales Bermudez, into the presidency. Income per capita stagnated in 1974-76 and then dropped for two consecutive years, 1977-78, by a cumulative 10 percent, while inflation accelerated from single digit rates to close to 60 percent in 1978. A successful stabilization program was carried out in 1978-79, with the help of favorable terms of trade and booming exports.

1.03 In 1979, with the economy growing again and restored international reserves, the Government initiated a import liberalization program. In that year, general elections were held and Belaunde Terry was voted back into the presidency. Belaunde enjoyed strong international support, but inherited a country with formidable social problems, income per capita 10 percent below the 1974 level, and major economic distortions. The official economic tenet of his Government was free markets and free prices. However, it engaged in bulky infrastructural investments that complicated macroeconomic management, more so in the face of now declining terms of trade, international recession, and an increasingly overvalued exchange rate. These problems culminated with the drying up of external voluntary lending, particularly after the onset of the Mexican debt crisis in 1982, and the virulence of the "El Nino" stream in 1983 that caused floods in the North and droughts in the South. Hence, GDP plummeted in 1983, by 12 percent, and inflation doubled to 100-plus percent. Subsequently, the import liberalization process, that had been initiated in the last year of the military Government and continued originally by Belaunde, was reversed. Likewise, the parcelling out of land plots that had been granted to cooperatives by the military rulers was effected in a disorderly fashion. In 1984, upon the impossibility of reaching an agreement on foreign debt rescheduling and fresh financing with creditors, the Government engaged in a policy of "undeclared" arrears. In 1984-85 steps were taken to stabilize the economy by means of active exchange rate depreciation, frequent adjustments to prices and tariffs of state enterprises, and some reduction of public expenditures. These policies achieved a turnaround in the external current account that went from an average deficit of nearly 6 percent of GDP in 1981-83 to a small surplus in 1985, but failed to stabilize inflationary pressures and had the inevitable short-run cost of low economic growth.^{1/}

^{1/} A thorough description of Peru's macroeconomic developments during the last 15 years is provided by Carlos E. Paredes (1987), "The Behavior of the Public Sector in Peru 1970-85." World Bank Working Paper.

C. The Diagnosis of the Economy in 1985 and the Strategy of the Incoming APRA Government

1.04 **The Diagnosis.** In August 1985, at the time the APRA Administration took office, GDP had not yet recovered from the 1983 plunge, and was still 6 percent lower than in 1981, the year when the military Government turned power over to the Belaunde Administration. In turn, real consumption per capita was 13 percent below the level five years earlier and real wages were 40 percent lower. The manufacturing sector was documented as having widespread unutilized capacity, with estimates ranging up to 55 percent of installed capacity, while at the same time 12 percent of the labor force was reported in open unemployment and more than 50 percent as underemployed. The efforts to stabilize the economy and continue to service the foreign debt under negotiated rescheduling and fresh-money requests had proved unsuccessful. This failure can be attributed to major implementation errors, adverse exogenous shocks and social conflict. As a result, at the turn of the Belaunde years inflation was rampant, with a rate approaching 200 percent in the 12 month period ending August 1985, and debt payments arrears had started to pile up since late 1984 in the wake of frustrated negotiations with the IMF and the commercial banks. By mid-1985, arrears had surpassed US\$2 billion. Against this background, financial instability worsened progressively with capital flight approaching 3 percent of GDP in 1984 and dollarization of deposits reaching more than half of all internal liabilities of the financial system. The socio-political situation did not fare any better. Violent political groups operating out of the Andean highlands (the "Sierra") had rendered several provinces increasingly insecure and occasional terrorist incursions into the main urban centers had heightened the public's apprehension. In turn, sustained economic decline had given rise to widespread labor unrest and social stress. On the positive side, the macroeconomic adjustment carried out in 1984-85 by the Belaunde Administration left a good legacy to the incoming APRA Government in terms of fairly high international reserves, a competitive exchange rate, and adequate public sector prices and tariffs.

1.05 The diagnosis of the economy and the economic strategy of the incoming APRA Government, were based upon a series of perceptions, broadly held by the new economic team, on the macroeconomic policies followed by the previous administration. First and foremost, the Government believed that the demand management policies of the 1980s had been recession-inducing and ineffective in dealing with inflation. The widespread existence of industrial excess capacity was seen as indicating that excess demand was not the problem. In the second place, the budget deficit was viewed as the result and not the cause of the inflationary process. Thus, internal interest payments on the Government's debt, a major component of public expenditures, were high because inflation was high, but the inflation component of interest rates was an advanced payment of the principal of loans rather than interest per se, and did not add to aggregate demand. Likewise, recession-inducing demand management policies were regarded as increasing the fiscal disequilibrium, for a declining activity level meant a shrinking tax base. Third, inflation was viewed as cost-induced, in a vicious cycle process where the determination of the key prices--namely, the exchange rate, interest rates, public sector prices and tariffs and wages--were simultaneously feeding the inflationary process and being fed

back by it. The process was further validated, in the authorities view, by the aforementioned deficit-inducing implications of recession and inflation, and also by the built-in indexing of domestic dollar deposits. Last, but not least, it was widely believed that Peru had fallen into a "debt trap" in the sense that the efforts made by the previous administration to meet external financial obligations had, on the one hand, accelerated exchange rate devaluation and consequently inflation and, on the other, put undue pressure on Peru's meager saving capacity, resulting in declining domestic investment and growth. Thus, freeing the economy from the constraint imposed by the international financial economy was seen as the way-out to resume growth.

1.06 **The Strategy.** Consistent with this diagnosis, President Alan Garcia launched an economic program based on a set of unconventional economic guidelines. The idea was to prompt a quick economic recovery by boosting consumption demand and using existing slack industrial capacity. Consumption demand would be fueled by increasing real wages, implementing temporary employment public works programs, and transferring disposable income from the public sector to the private sector. The latter would be effected through reducing taxes and freezing public sector prices and tariffs. The use of slack capacity would be guaranteed by closing the domestic market to imports competing with domestic production. In addition, the Government would decree a price, cost, and exchange rate freeze geared to breaking inertial inflation and inflationary expectations. The agricultural sector was made first priority: guaranteed prices to producers of the main staples would be significantly raised, subsidies increased, and lines of agricultural credit on preferential terms considerably expanded. The poor "campesinos" of the "Sierra," the most backward part of the country, would be the main beneficiaries. The necessary resources to finance the strategy were to become available from reductions in external debt payments. Thus, in his inauguration speech President Garcia announced a unilateral limit of 10 percent of exports for external debt service payments.

1.07 The Government "heterodox" economic program, officially termed "Plan de Emergencia," was given a duration of twelve months, from August 1985 to July 1986, but the Plan was later extended through December 1986. The authorities were aware that this reactivation and recovery program, based on consumption-demand expansion, could only last in so far as there was unutilized capacity. Therefore, for the post-reactivation era the Government envisaged a second phase where the focus would be on investment and exports so as to make the transition from short-run output expansion to long run sustainable growth. However, the economic strategy to be followed in the second phase was never fully developed or articulated. Nor was there established a cutoff date in which to switch from one set of policies to the other.

D. The Implementation of the Policies: July 1985 to December 1986

1.08 As part of the reactivation strategy, nominal wages were increased 25 percent in August 1985 and, from then on, periodic wage hikes were granted, approximately every four months. As a result, real wages

increased by 34 percent between August 1985 and December 1986. In parallel, a temporary employment program (PAIT) was instituted by the Government to provide three-month jobs to unemployed workers. In turn, to boost private sector demand while helping firms to adjust to higher wages, firms were granted tax breaks and enhanced exonerations, and prices of fuels for industry and interest rates were reduced. Tax cut measures culminated with a reduction in the sales tax rate from 11 to 6 percent in February 1986. As a result of the new tax measures, central government revenues declined from 13 percent of GDP in 1985 to 11 percent in 1986. To elicit a supply response to the increasing consumption demand, import restrictions for products with locally produced substitutes were tightened, and in many cases imports were prohibited.

1.09 Consistent with the Government's view that inflation was driven by cost-push forces, the two benchmark exchange rates were frozen, after a moderate devaluation in July 1985, and savings and lending interest rates were progressively scaled-down, over a period of seven months, to one third of their levels in early 1985, and then left unchanged throughout 1986. Along with these measures, domestic prices and tariffs of state enterprises were also frozen, and a one-year freeze on prices of all industrial products and most services was enacted. By contrast, most agricultural products were excluded from the freeze and their prices were left to market forces. Moreover, guarantee prices of a few staples were significantly raised while consumer prices lagged behind, thereby increasing agricultural subsidies.

1.10 Multiple exchange rates were established as instruments of export promotion, following the reasoning that exports with high elasticity of supply--manufacturing exports--should be granted a more competitive exchange rate than traditional exports (minerals, petroleum, and fishmeal). Thus, multiple exchange rates were supposed to "alter relative prices to conform national priorities." Despite the exchange rate freeze, some "hidden" small devaluations of some exchange rates did in fact take place during 1986. Indeed, exchange rates to exporters--that were defined as weighted averages between the official and financial exchange rates--were devalued by means of increasing the weight of the, more favorable, financial rate. In parallel, imports deemed non-essential were gradually transferred from the official rate to the financial rate.

1.11 As far as the external debt was concerned, the Government announced that only debts with creditors willing to provide Peru a positive net transfer would be serviced out of the 10 percent of exports ceiling. One exception to the rule was made for short-run trade and working capital credit lines, for which the Government declared that it would continue to pay interest obligations and roll over the principal. Moreover, foreseeing probable trade financing problems, the Government expressed its intent to maintain the strong gross international reserves position inherited from the previous Government (US\$1.8 billion).

1.12 In order to improve the business climate and seek private sector partnership, the authorities launched a policy of bilateral talks and negotiations with major business groups, on a one-by-one basis. This

policy, known as "concertacion," was oriented at inducing firms to invest, primarily in exporting activities. The list of incentives offered by Government as open to bargaining included: concessional credit, special exchange rates, tax cuts and exemptions, price adjustments, and special legal provisions.

Table 1-1: PUBLIC FINANCE (1984-1987)
(Percentages of GDP)

	1984	1985	1986	1987
1. Public Sector Revenues	39.3	43.2	32.3	26.1
- Tax Revenues	11.1	12.7	11.2	8.6
- State Enterprise Revenues	23.9	26.5	17.8	14.4
- Others	4.3	4.0	3.3	3.1
2. Public Sector Expenditures ^{a/} (of which Investment)	45.5 7.4	45.6 5.8	37.3 4.9	32.6 3.9
3. <u>Non-Financial Public Sector Deficit^{a/}</u>	6.2	2.4	4.9	6.5
4. Central Bank Losses	1.5	1.9	1.8	2.8
5. <u>Overall Deficit (3+4)^{a/}</u>	7.7	4.3	6.7	9.3
6. Central Bank Flow of Subsidized Credit to Development Banks	1.4	0.8	1.4	1.9
7. <u>Total Public Sector Borrowing Requirements (5+6) ^{a/}</u>	9.1	5.1	8.1	11.2
8. <u>Financing of PSBR</u>	9.1	5.1	8.1	11.2
- Foreign ^{a/}	4.5	3.9	2.4	1.4
- Domestic	4.6	1.2	5.7	9.8
Memo Item: Nominal GDP (million Intis)	72,845	199,845	381,022	760,166

^{a/} Includes arrears (of interest on foreign debt) incurred during the year, but excludes imputed interest on the outstanding stock of arrears.

Source: Ministry of Finance, Central Reserve Bank and World Bank estimates.

1.13 Unlike in the other heterodox experiments, the Argentine Austral and the Brazilian Cruzado plans, policymakers in Peru never put explicit emphasis on the need to balance the Government's budget. Notwithstanding this and contrary to a common belief, the budgetary and financial policies

of the new Administration were not expansionary right from the outset. Indeed, from August 1985 to June 1986, budgetary policy was reasonably moderate and monetary policy was clearly restrictive. Although public sector revenues, as a percentage of GDP, dropped considerably, public expenditures also dropped. Thus, in the second half of 1985 and first half of 1986, the non-financial public sector, which comprises the Central Government and public enterprises, registered deficits of 1.4 percent and 1 percent of GDP, respectively.^{2/} These deficits were lower than the net foreign financing available (that is, the sum of fresh net disbursements plus accumulation of unpaid interest as arrears). As a result, the non-financial public sector continued the process of amortization of internal debt to the Central Bank which had started in 1984, to the point of becoming a net creditor of the financial system in late 1985. Also contributing to this outcome was the financial discipline dictated by the existence of escrow accounts in the Central Bank where public entities had to deposit the local currency counterpart of the arrears accrued on external debt service. However, total public sector borrowing requirements (PSBR) were larger than the non-financial deficits due to the existence of: (i) foreign exchange and financial losses in the Central Bank; and (ii) transfers of highly subsidized credit from the Central Bank to development banks. Adding these items to the non-financial public sector deficits, the overall deficits resulting were 3.5 percent of GDP in the second half of 1985 and 2.5 percent of GDP in the first half of 1986, respectively.

1.14 Monetary policy was, at that time, unambiguously restrictive in an attempt to, on one hand, sterilize the huge balance of payments surpluses (reserve inflows) originating from the limitation on foreign debt service payments, and, on the other hand, accommodate the growth of monetary aggregates to the lower rate of inflation achieved with the freeze (the inflation rate dropped from 88 percent in the first half of 1985 to 38 percent in the second, and to 28 percent in the first half of 1986). Tighter legal reserve requirements on commercial banks' deposits, the central policy instrument, led to a drop in the broad money supply multiplier from 1.9 in December 1984 to 1.4 one year later (Table 1-2). As a result, in the second semester of 1985, the broad money supply grew only 48 percent, in spite of the expansion of the monetary base at a rate of 90 percent. Along with monetary restraint, the Central Bank took two other monetary measures. First, as noted before, interest rates were scaled down to about one-third of their levels in the first half of 1985. However, since initially this reduction was matched by a similar decline in inflation, real interest rates did not become more negative than before. The second measure was the suspension of the convertibility of foreign currency deposits in commercial banks decreed in August 1985, whereby those deposits become only redeemable into local currency at the official exchange rate plus a small premium.

^{2/} These figures refer to semesters and therefore are not disclosed in Table 1-1 that deals with annual data. Deficits as a percentage of GDP, however, are calculated using the GDP for the whole year, not that of the semester. Budgetary items per semester (as a proportion of the year's GDP) are provided in Annex Table 10.3.

**Table 1-2: FINANCIAL SURVEY: USES AND SOURCES OF BROAD MONEY^{a/}
(Percentage Changes)^{b/}**

	<u>1985-I</u>	<u>1985-II</u>	<u>1986-I</u>	<u>1986-II</u>	<u>1987-1</u>	<u>1987-II</u>
A. BROAD MONEY SUPPLY (USES)	50.7	47.6	21.4	35.4	34.3	57.0
(a) Money	6.4	31.8	12.6	20.5	12.6	36.8
(b) Near Money	44.3	15.8	8.8	14.9	21.7	20.1
- Domestic Currency	7.1	28.2	16.7	17.9	21.8	12.5
- Foreign Currency	37.2	-12.4	-8.0	-3.0	0.0	7.7
B. BROAD MONEY SUPPLY (SOURCES)	50.7	47.6	21.4	35.4	34.3	57.0
(a) Net International Reserves	10.1	27.4	-5.0	-7.1	-2.0	-15.3
(b) Domestic Credit to Non-financial Public Sector	-13.3	-12.3	-4.1	20.7	11.7	33.2
(c) Domestic Credit to Private Sector	48.4	27.2	22.3	29.2	32.0	39.8
(d) Net Unclassified Assets	5.5	5.3	8.2	-7.4	-7.3	-0.7

Memo Items:

Base Money growth ^{c/}	54.8	90.4	23.0	13.3	27.1	67.7
Inflation Rate ^{d/}	87.7	37.6	28.5	26.8	40.1	53.1
Money Supply Multiplier ^{e/}	1.9	1.4	1.4	1.7	1.8	1.7
Income Velocity of Broad Money	5.4	5.6	6.1	6.0	6.3	5.9

a/ Includes all financial operations of formal sector financial institutions (banks and other non-bank) with economic agents

b/ Percent changes are calculated with respect to the stock of broad money outstanding at the end of the previous period.

c/ Growth of base money is calculated as percent previous year base money.

d/ Inflation for the semester.

e/ The ratio of broad money to the base money.

Source: Nota Semanal (Central Reserve Bank) and World Bank estimates.

1.15 Financial policies turned expansionary in the second half of 1986. Total PSBR for that semester jumped to 5.5 percent of GDP of which 4.2 percent was financed through Central Bank credit. In addition, monetary policy loosened up in the form of a reduction in reserve requirements on deposits, leading to a shift of the broad money supply multiplier from 1.4 to 1.7. However, the initial positive response of GDP to the boost in

aggregate demand (that expanded the transactional demand for money) and the now growing balance of payments deficit (that drained domestic liquidity) made feasible temporarily a further slight decline in inflation from 28.5 percent in the first semester to 27 percent in the second. In turn, nominal interest rates were kept unchanged throughout the year at the level reached in March 1986.

E. The Results in 1986: Reactivation and Disinflation

1.16 The initial reaction of economic activity to the Government's "Plan de Emergencia" during the second half of 1985 was sluggish, with GDP stagnating at the level registered in the first part of the year. Thus, for the year as a whole, real growth was a low 2.5 percent. Slow demand expansion in 1985, however, had the reward of a fairly stable fiscal and external environment, with total PSBR at 5.1 percent of GDP (Table 1-1), most of which was financed by accumulation of arrears on external interest payments, and also with the current account of the balance of payments close to equilibrium. In the first quarter of 1986, the economy experienced a modest recovery, followed by an extraordinary output expansion during the rest of the year. Thus, GDP of the last quarter of 1986 was 20 percent larger than GDP of the last quarter of the previous year. On a year-to-year basis, GDP expanded 9.5 percent in 1986 with respect to 1985 (Table 1-3). Moreover, indirect indicators suggest that the informal sector of the economy was even more dynamic than the formal one. On a sectoral basis, manufacturing, construction and fisheries were the most dynamic sectors, growing at 16, 24 and 29 percent, respectively; whereas mining and agriculture were the lagging sectors, the former dropping 4.6 percent and the latter growing only 3.8 percent. On the aggregate demand front, private consumption and construction were the key components leading the recovery, growing at a combined rate of 15 percent, or one and a half times that of GDP. As expected, fast consumption growth brought quickly into use excess capacity in the consumer goods sector; most of this capacity had become idle as a result of slow growth during the early 1980s, culminating in the 1983 recession. The expansion of domestic supply in response to consumption demand-pull was made possible by the virtual closure of the domestic market to most imports competing with national production.

1.17 Along with output expansion, employment in the formal sector of the economy grew 9.1 percent between July 1985 and December 1986, mainly through recruitment on a temporary basis following the newly instituted temporary employment program (PROEM) that enabled employers to circumvent the restrictive probation and layoff procedures of labor legislation. By contrast, export performance was unsatisfactory, with merchandise exports declining by 16 percent in dollar terms--partly the result of 19 percent deterioration in terms of trade and partly the result of a shift of incentives towards the domestic market and buoyant domestic demand for exportable goods. Equally unsatisfactory was the performance of investment in plant and equipment, which due to the real wage boost, the emphasis on consumption, and the decline in public sector savings, barely maintained the historically low ratio to GDP observed in 1984-85 (about 7 percent); thus, real investment in equipment in 1986 was 30 percent lower than the

average for 1980-84 (Table 1-4). The mix between public and private investment was uneven; while private investment expanded 69 percent compared to 1985, public investment dropped 11 percent. As for inflation, the price freeze was successful, with consumer price inflation decelerating from nearly 200 percent the 12 months immediately before the freeze to 56 percent after the 12 months. The combination of price controls for manufacturing products and increasing agricultural producer's prices, translated into a 75 percent improvement in the rural-urban terms of trade between July 1985 and September 1986, thereby improving the living conditions in rural areas and helping restrain migration flows to the cities. Indeed, the share of agricultural producers in national income increased from 7.9 percent in 1985 to 8.7 percent in 1986.

Table 1-3: MAIN ECONOMIC INDICATORS, 1980-1987

	<u>Average</u> 1980-1984	1985	1986	1987
Real GDP Growth	-1.0	2.4	9.5	6.9
Real Per-Capita GDP Growth	-3.6	-0.2	6.9	4.3
Real Consumption Growth	-0.4	2.3	12.1	5.8
Inflation Rate (Dec/Dec)	87.0	158.3	62.9	114.5
Broad Money Supply Growth	94.0	122.4	64.4	110.9
Non-financial Public Sector Deficit (percent of GDP)	6.8	2.4	4.9	6.5
Current Account Deficit/GDP	3.9	0.3	5.0	4.9
Gross International Reserves (US\$ million)	-	2,283	1,961	1,130
Foreign Debt/GDP ^{a/}	51.0	76.9	59.6	47.1
Accrued Debt Service Ratio	61.1	69.7	78.0	79.5
Paid Debt Service Ratio	53.7	34.5	18.8	12.5
Real Exchange Rate (Dec. 1978=100) <u>a/b/</u>	129.7	100.4	115.3	133.2
Terms of Trade (1978=100)	114.6	96.1	78.0	76.5
Real Wage (1979=100)	95	64	83	87
Employment Growth	2.2%	-0.5%	4.3%	5.7%
Utilized Capacity Index	56%	45%	61%	67%

a/ Evaluated at the weighted average of all current commercial exchange rates.

b/ An increase in the series means real appreciation.

Source: National Statistical Institute, Ministry of Finance, Central Reserve Bank and World Bank estimates.

Table 1-4: GDP AND AGGREGATE DEMAND^{a/}
(Index Numbers in Real Terms)

	<u>Average</u> 1980-1984	1985	1986	1987
<u>Aggregate Supply</u>				
GDP	100.0	99.0	108.4	115.9
Imports	23.1	14.8	18.7	19.4
<u>Aggregate Demand</u>				
Consumption	72.9	72.5	81.3	85.9
- Private	62.6	62.3	70.6	75.1
- Public	10.3	10.2	10.7	10.8
Investment	26.2	15.9	23.3	26.4
- Equipment	10.5	6.0	7.4	8.7
- Construction	13.1	10.4	12.9	15.0
- Inventories	2.6	-0.5	3.0	2.7
Exports	24.0	25.6	22.4	23.0
<u>Memo Items:</u>				
- Private Investment	19.1	11.4	19.3	23.0
- Public Investment	7.1	4.5	4.0	3.4

a/ In this table, average GDP of 1980-84 was taken as the base (GDP in 1980-84 = 100). As a result, all figures in the table should be read as proportions of GDP of that period.

Source: National Statistical Institute.

1.18 Clearly, three key ingredients made disinflation possible: first and foremost, the policy of budgetary and monetary relative moderation followed during the first ten months of the Government's term; second, the freeze to the exchange rates and to prices and tariffs of state enterprises; and third, the broad support and credibility of the incoming president that facilitated voluntary compliance with the Government's price guidelines. Price controls per se did not play any significant role, for at the time the Government did not even have the administrative machinery to monitor prices. Also, at that time of relative financial moderation, the Central Bank strengthened the already strong international reserves position inherited from the previous administration. Not surprisingly, during the first ten months of the new administration the behavior of production was sluggish, registering a small decline in the last five months of 1985 and a modest recovery during the first quarter of 1986. The expansion of output became significant in the second quarter of 1986, and turned into spectacular during the second half of 1986, precisely at the time when financial discipline was abandoned, with both the budget and monetary policy turning expansionary. This development, in turn, marked the onset of sustained international reserve losses and, with a lag, the reversal of the low inflation trend (Table 1-2).

1.19 The Early Drawbacks of the Model. Thus, the Government's objective of quickly reactivating the economy by means of a consumption-led boom became a reality. Moreover, along with the recovery, the authorities achieved disinflation. Nevertheless, these positive results were reached at the expense of growing financial and external imbalances, starting in mid-1986, and also at the expense of increasing misalignments in relative prices right from the beginning. These imbalances, in turn, indicated that the strategy was non-sustainable, and that if the necessary adjustments were not effected in a timely manner, the economy would go into an open crisis. First of all, the transfer of fiscal revenues to the private sector as disposable income--effective through tax cuts and exemptions--caused tax proceeds to drop from 12.7 percent of GDP in 1985 to 11.2 percent in 1986. Likewise, the deterioration of state enterprises' prices and tariffs relative to the Consumer Price Index (CPI)--of about 35 percent on average between July 1985 and December 1986--led to a decline in their revenues from 26.5 percent of GDP in 1985 to 17.8 percent in 1986. This reduction of revenues was cushioned in part by a decline in public expenditures. The remainder translated into enlarged public sector deficit.

1.20 Second, the exchange rate freeze, in the wake of declining but still high inflation, translated into a 26 percent real appreciation of the Inti between July 1985 and December 1986. The progressive appreciation of the exchange rate together with the booming domestic absorption rendered GDP expansion to be highly import-intensive. Imports grew 40 percent in dollar terms in 1986, and, since exports declined, the current account of the balance of payments went from rough balance in 1985 to a deficit of 5 percent of GDP in 1986. Third, the road taken in foreign debt policy required the maintenance of a solid international reserves position to facilitate import financing in the event of reduced external trade-financing lines. However, since the current account deficit was larger than unpaid interest on foreign debt and fresh capital inflows, the result was that Central Bank's gross international reserves dropped from the peak of US\$2.5 billion in March 1986 to US\$1.8 billion in December. Fourth, the focus on boosting consumption ruled out the potential for investing the surplus obtained through the moratorium, thereby trading off short-run expansion for future sustained growth.

F. Economic Policy in 1987

1.21 The Strategy Revisited. The price and cost freeze and other measures included in the "Plan de Emergencia" were officially over in December 1986. At the time, most of the discussion on future economic strategy focussed on whether the economy had reached full capacity and, relatedly, when and how to switch from a consumption-led inward-looking expansion to a more sustainable strategy based on investment and export growth. There was growing concern about the international reserve losses and the decline of exports. However, the quickly emerging budgetary imbalance was not regarded as responsible for the underlying macroeconomic disequilibrium, nor was it deemed necessary to engage in drastic corrective adjustments to the exchange rate, prices and tariffs, and interest rates.

Chart 1.1

EVOLUTION OF MONTHLY GDP : 1984-1988 (SEASONALLY ADJUSTED)

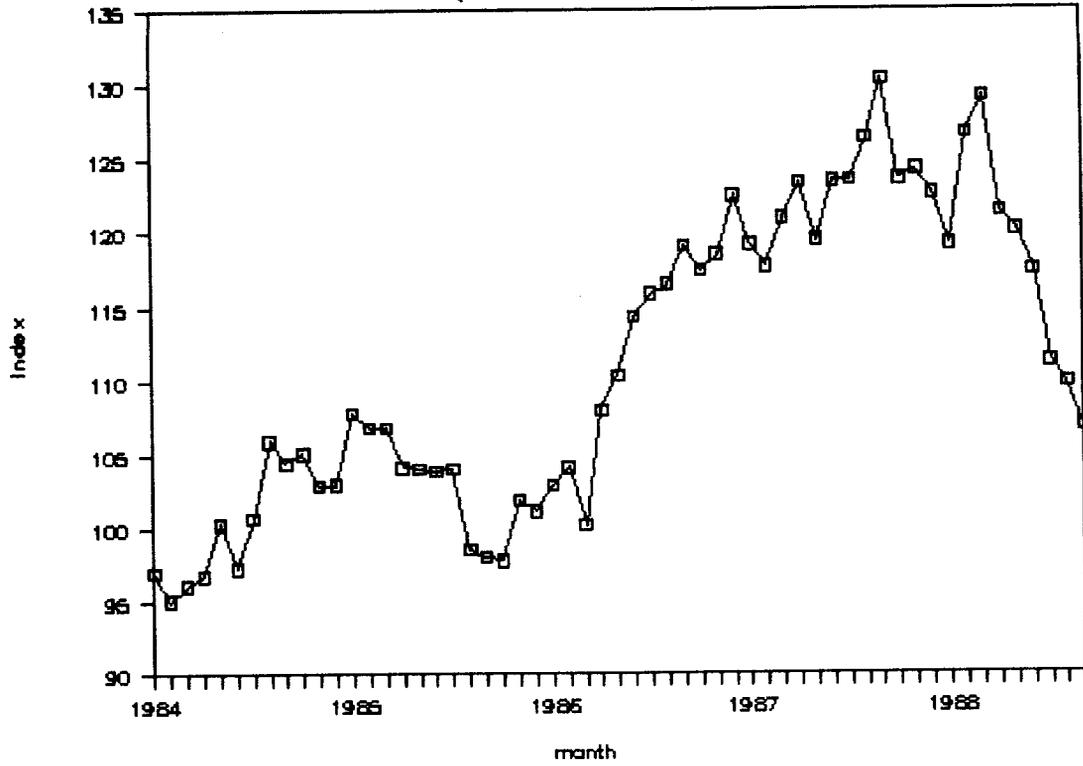


Chart 1.2

INFLATION RATES BY QUARTERS : 1985-1988 (AT ANNUAL RATE)

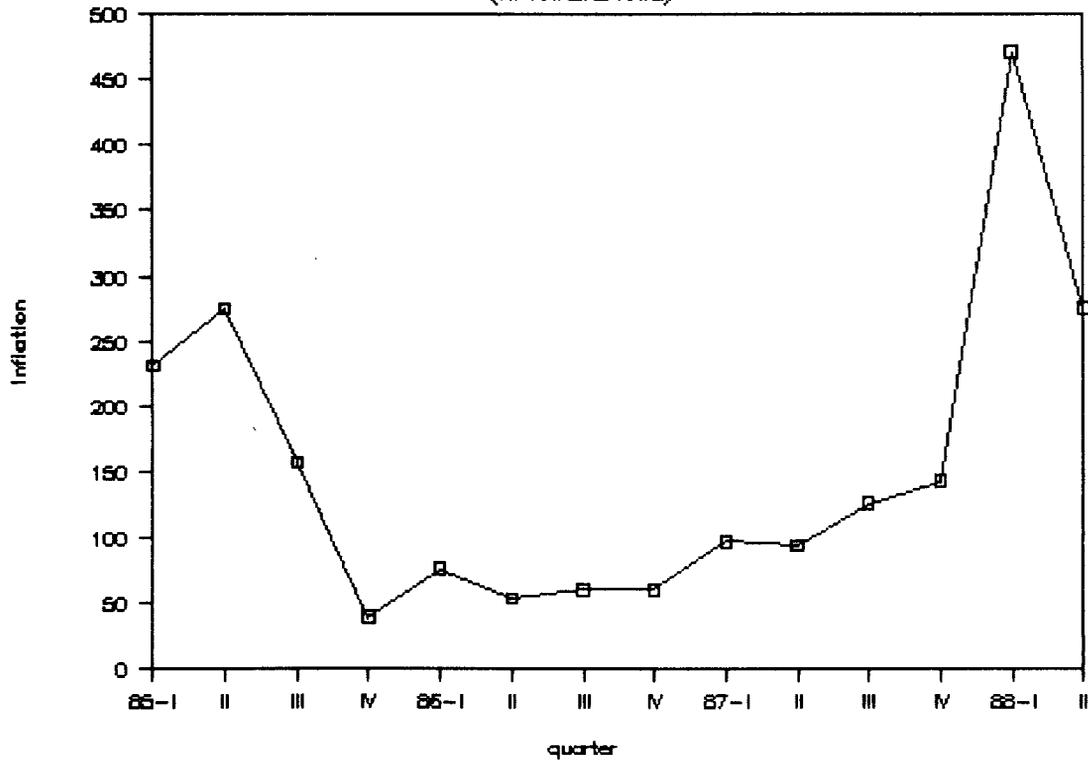


Chart 1.3
EVOLUTION OF MONTHLY EMPLOYMENT
(Base 1979 = 100)

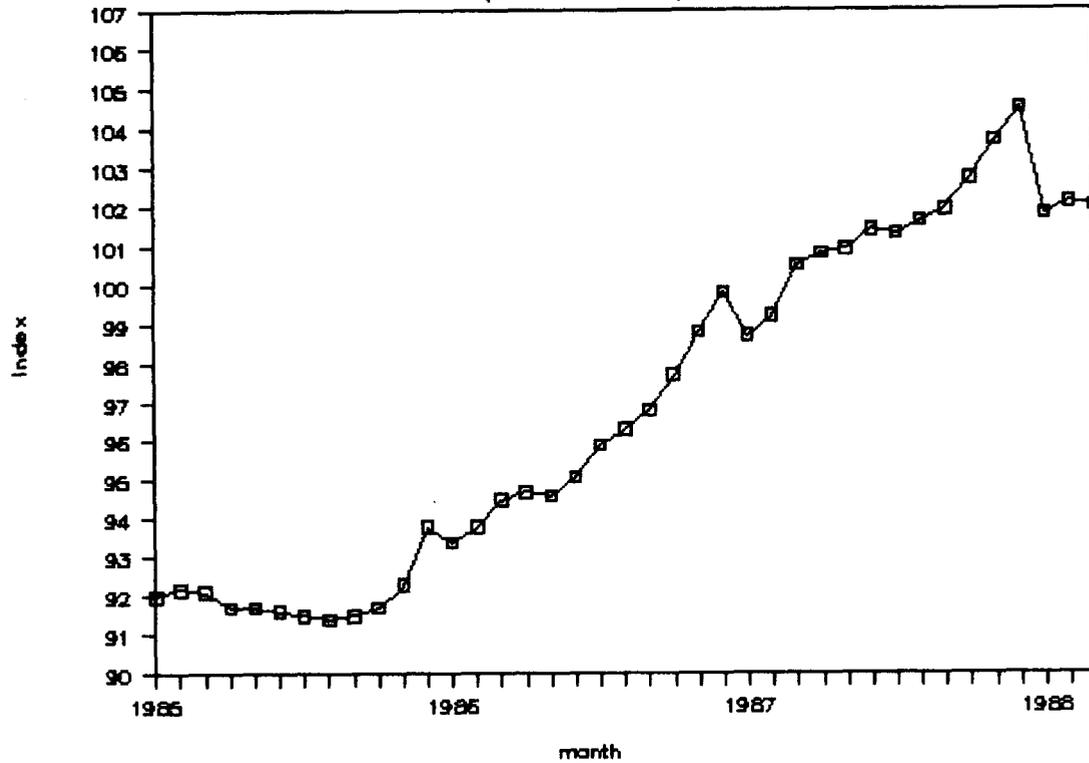


Chart 1.4
EXPORTS & IMPORTS
(MILLIONS US\$)

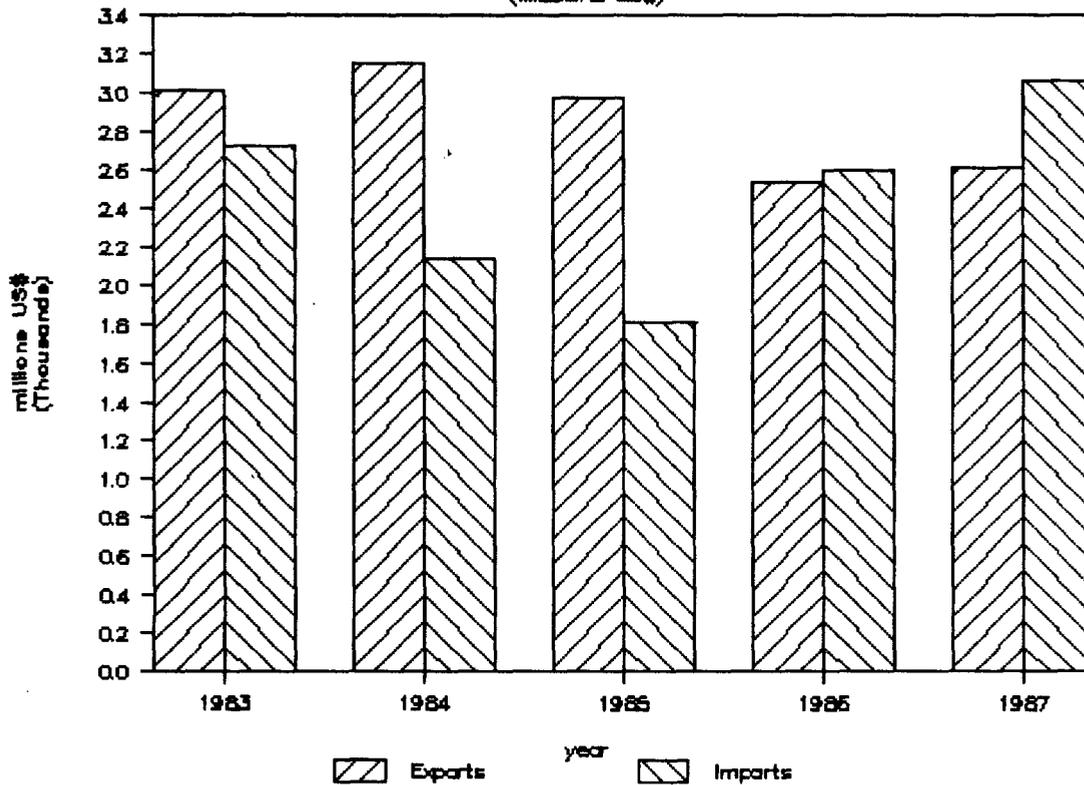
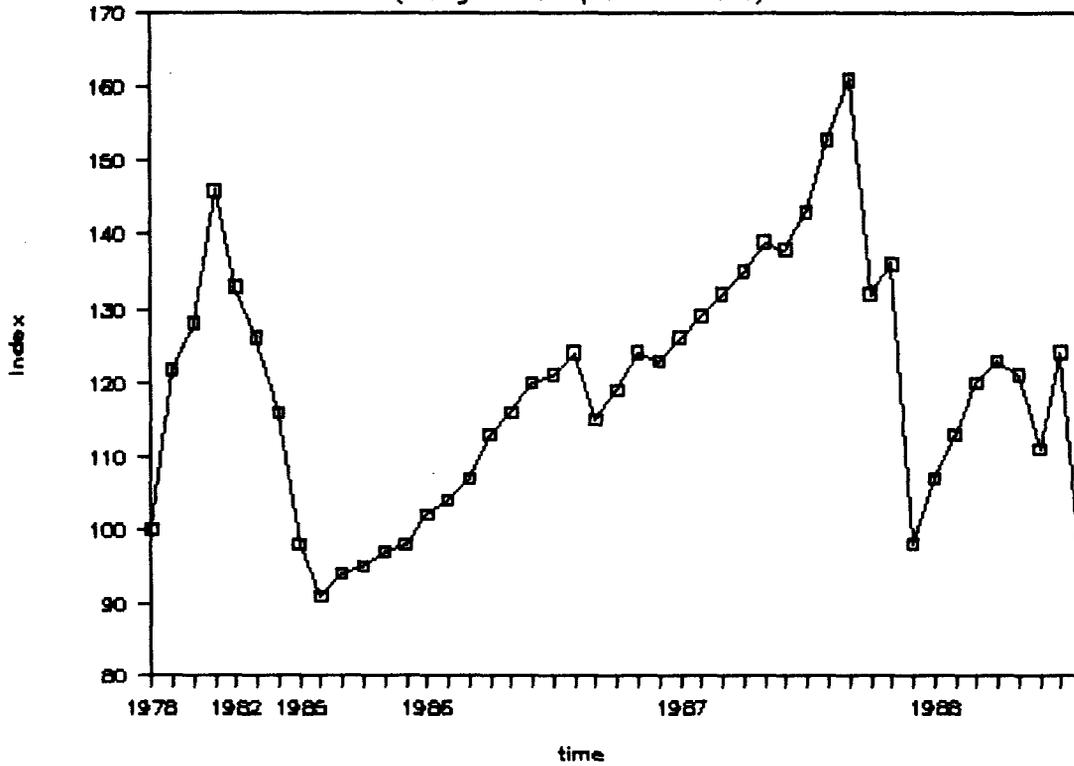


Chart 1.5

REAL EXCHANGE RATE (Trade Weighted)

(Average effective / Base Dec.1978)

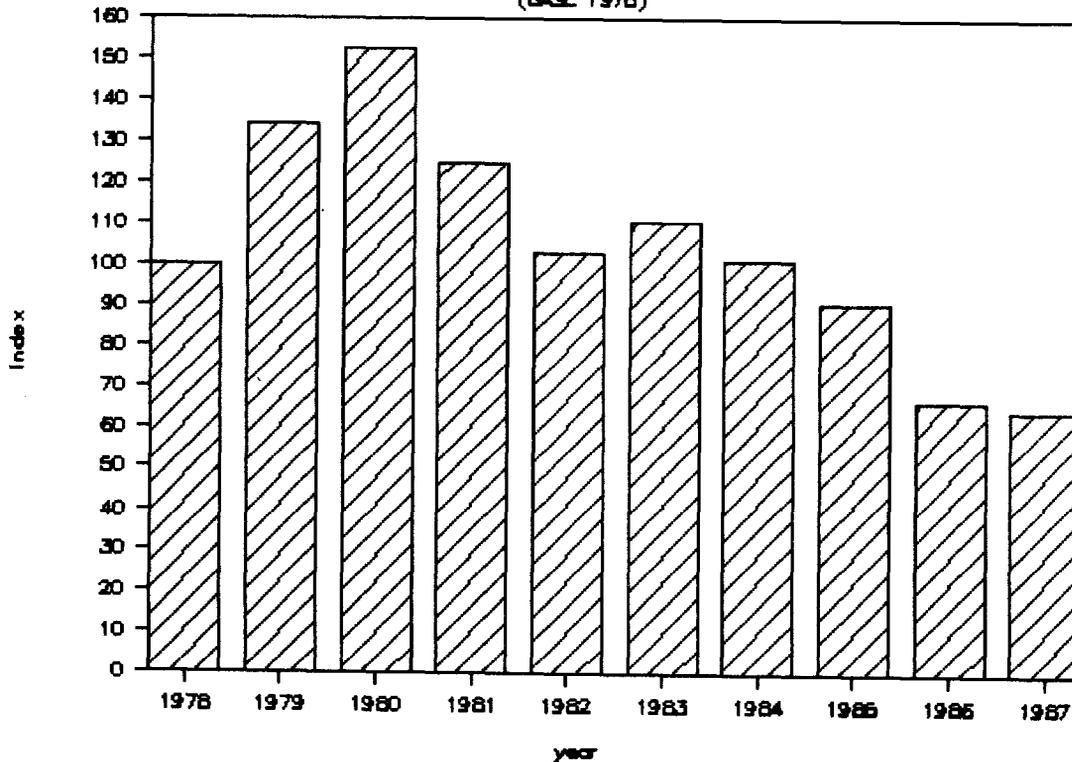


Note: A drop in the index means real depreciation. The index refers to the weighted average of all multiple exchange rates.

Chart 1.6

TERMS OF TRADE INDEX

(BASE 1978)



Instead, it was decided that some flexibility would be given to the exchange rate and price controls, and also that restrictions to imports needed to be intensified. In parallel, since late 1986 the Government had strengthened the policy of bilateral talks ("concertacion") with major private business groups to motivate them to invest in export-oriented projects. To this end, an Investment Council, under the responsibility of the Prime Minister, was established. Foreign direct investment was also actively sought. In addition, a large subsidy scheme, the "Fondo de Inversion y Empleo," was created for priority investments outside Lima. According to this scheme, prospective investors of approved projects would receive one-third of the project's investment as a cost-free equity contribution from the Government. To be considered for the scheme investors were required to make prior purchase of "investment certificates" yielding the legal interest rate. At the end of 1987, the Government issued a so-called Programa Trienal that set the targets for the next three years of increasing the tax burden ratio, simplifying the exchange rate structure, and divesting some state enterprises.

1.22 The New Policy Measures. Following the new strategy of more flexibility in price adjustments, the Government instituted a new price control system in December 1986. Prices were classified into four categories: controlled, special regime, regulated, and supervised. The first two categories--comprising roughly half of the Consumer Price Index and including products such as sensitive foodstuffs, medicines, and public utilities--were kept under rigid price controls whereby each price hike required explicit approval. By contrast, the other two categories were left to more or less automatic adjustments.

1.23 To deal with the outflow of international reserves, two decisions were taken. First, in March 1987 all imports were made subject to foreign exchange licenses from the Central Bank and, concomitantly, a formal foreign exchange budget was instituted to allocate reserves for imports. Second, in January 1987, the Central Bank started to devalue the two benchmark exchange rates--official and financial--at a rate of 2.2 percent per month. This rate of slide, however, was lower than the internal-external inflation differential and, as a result, the Inti continued to appreciate in real terms. In an attempt to reduce the adverse impact of overvaluation on exports, the Central Bank continued to grant ad hoc better "weights" to selected export groups. The monthly slide of the two benchmark rates came to a halt in July 1987, following concerns over the inflationary impact of continuous devaluations. Then, exchange rates remained unchanged until October 1987.

1.24 As far as the key prices are concerned, wage increases continued to be decreed at regular intervals (of about four months), resulting in an additional increase in average real wages of 9 percent between December 1986 and December 1987. In turn, prices and tariffs of state enterprises were adjusted in April and July, but, in general, adjustments fell short of inflation for the year, adding to existing relative price misalignments. Electricity and water tariffs were an exception to this, for they were adjusted more often (every quarter). However, even in these cases accumulated lags persisted. Thus, by December 1987 many prices and tariffs

were at a level--relative to the CPI--of less than 50 percent that of July 1985. As a result, state enterprise revenues dropped again, this time, from 17.8 percent of GDP in 1986 to 14.4 percent in 1987 (Table 1-1). In turn, nominal interest rates were maintained at the level of March 1986 until March 1988.

1.25 Public finances deteriorated further compared to the second half of 1986, as the level of expenditures to GDP was roughly maintained and both tax proceeds and public enterprise revenues continued to drop. Tax proceeds declined further, from 11.2 percent of GDP in 1986 to 8.6 percent in 1987, as a consequence of: (i) the tax cuts and exonerations introduced in 1986; (ii) the erosion of the tax base for foreign trade taxes resulting from the growing overvaluation of the Inti; and (iii) the lagging behavior of tax proceeds, in the wake of now accelerating inflation, due to Peru's poorly indexed tax system. In parallel, foreign exchange losses enlarged particularly after October 1987, as will be seen below. In turn, the Government's wage bill continued to rise, while public investment did not recover. The decline in the ratio of public investment to GDP--to the lowest levels in the decade--was largely the result of the difficulty of starting or continuing many projects due to the lack of foreign counterpart funds and/or foreign technology brought about by Peru's unilateral foreign debt stance.

1.26 The inevitable implication of the additional decline in public revenues was an enlargement of PSBR, which widened to 11.2 percent of GDP in 1987, up from the already high 8.1 percent registered in 1986. Only a small portion of that deficit (1.4 percent of GDP) was financed with foreign sources, mostly accumulation of arrears on interest payments (Table 1-1). The remainder (9.8 percent of GDP) translated into Central Bank primary credit expansion. To put this figure into perspective it must be noted that, first, given Peru's financial structure each point of GDP in monetary base expansion gives rise to an additional 0.7 percent of GDP in secondary expansion of credit to the private sector; and, second, the ratio to GDP of the total stock of internal liabilities of the financial sector in 1987 was only 14 percent. Hence, the monetary implication of the 1987 deficit was an expansion of domestic credit equivalent to over 100 percent of the stock of broad money. Not surprisingly, the result of the expansionary financial policy was an acceleration of inflation from 27 percent in the second half of 1986, to 40 percent in the first semester of 1987, and to 53 percent in the second. At the same time, excessive domestic credit continued to feed the process of sustained international reserves losses triggered in March 1986.

1.27 The Nationalization of the Banking System. Two events that occurred in 1987 marked the reversal of business confidence and precipitated the inconsistencies of the model into an open crisis. The first event was the Government's issuance in May 1987 of low interest "mandatory bonds" to be purchased by Peru's more profitable private firms. Later, in a corrective move, the bonds were made voluntary and the interest rate was raised. The second, and most relevant event, was the initiative to nationalize commercial banks, finance companies, and insurance firms

announced by the President on the occasion of his annual address to the nation in July 1987. This measure was justified by the Government on the grounds of the need to democratize credit, seek a better balance of credit allocation among regions and priority activities, and provide more working capital financing to small and medium enterprises. The latter would result from breaking preferential credit channels arising from the linkages between the ownership of the banks and the major industrial groups. Prior to the nationalization, however, the state already controlled directly around 50 percent of all deposits and 70 percent of credit, and of the 24 existing commercial banks, 8 were already government owned. In addition, the credit allocation by private banks was already highly regulated by the Central Bank in the form of ceilings to interest rates and compulsory investment coefficients by region and sector.

1.28 The nationalization initiative was discussed thoroughly by both chambers of Congress, and finally the law was issued in October 1987. Although the original idea was to nationalize 70 percent of the shares of banks, the law included a provision whereby banks with a 51 percent employee-owned stake could be allowed to remain as cooperatives. Based on this, the largest private commercial bank (Banco de Credito) rushed to block sell 51 percent of its share in the Stock Exchange to its workers. The resulting status quo was later declared legal by the courts and accepted by the Government in April 1988. Final solutions for other banks are still under negotiation on a case-by-case basis. Several of them have been offered the possibility of becoming regional banks, in which case 70 percent of the stock could remain in private hands.

1.29 The Changing Exchange Rate Structure. In July 1987, together with the nationalization of banks, the Government announced the suspension of the, then legal, parallel foreign exchange market operated by "exchange houses" and the introduction of global foreign exchange controls. The parallel market had been operating along with the two official markets: commercial (the so-called Mercado Unico de Cambios, MUC) and financial. Prior to the second quarter of 1987 the parallel exchange rate had consistently registered only a small premium over the official financial rate. However, in the second half of 1987 the interaction between the public's growing concerns about the coherence and viability of the economic policy and the sequence of confidence-eroding events described above, prompted a shift of private portfolios towards foreign exchange in the search for a safer shelter of value. Domestic interest rates did not respond to this challenge--the interest rate structure prevailing since early 1986 had been kept unchanged--and, as a result, the parallel exchange rate took off. Successive adjustments to the official financial rate by the Central Bank to catch up with the parallel market proved unsuccessful and by the end of 1987 the black market premium reached 100 percent.

1.30 In light of these developments, the whole structure of exchange rates was brought under examination in October 1987. Moreover, there was the perception among policymakers that failure to adjust the exchange rate, particularly for exports, earlier and more regularly, was the prime element responsible for the problems of the model. Thus, in that month a 24 percent average devaluation was enacted. Besides, the number of

exchange rates applicable to exports was reduced from nine to three, but the number of rates for imports was left unchanged at five. In December 1987, in view of the continued drop of reserves and the upward trend of the black market rate, the average exchange rate was again devalued 47 percent. In turn, the number of export rates was cut down from three to two and the number of import rates from five to four. However, one week later, under pressure to maintain preferential rates for a series of foodstuffs and medicines, the Central Bank established three additional import rates.

1.31 The multiple exchange rate structure evolved from a system of four export rates and two import rates in late 1986, to one of seven import rates and two export rates in late 1987. Thus, while multiple exchange rates had been originally set forth on the grounds that export groups should be granted a higher rate the higher the elasticity of supply, now the rationale was that imports should have a lower rate the higher the "priority." Furthermore, with the last exchange rate changes the dispersion of the structure widened considerably. In December 1986 the highest official rate was equal to one-and-a-half times the lowest, whereas in December 1987 the highest rate became three-and-a-half times the lowest. The result of this was that the Central Bank foreign exchange losses climbed to 2 percent of GDP in 1987, up from 0.4 percent in the previous year.

G. Economic Performance in 1987: Stagnation of Production and Intensification of Inflationary Pressures

1.32 Economic activity slowed down beginning in the first quarter of 1987, with GDP stagnating throughout the year at the level reached in the last quarter of 1986, albeit with minor month-to-month fluctuations. Notwithstanding this, GDP in 1987 was still 6.9 percent larger than that of 1986, due to comparing a stagnant, but relatively high, level of output in 1987 with a rapidly growing, but lower on average, level of output in 1986 (Chart 1-1). On a sectoral basis, fisheries and mining were the two sectors already showing early signals of recession, registering negative growth by 14 and 2 percent, respectively. By contrast, construction and manufacturing still maintained solid performance, growing at 15 and 12 percent, respectively. These latter rates are, of course, on a year-to-year basis. The corresponding growth rates obtained by comparing production of the last quarter of 1987 with that of the last quarter of 1986 were much smaller (3.2 and 4.6 percent, respectively).

1.33 Several factors seem to have contributed to the stagnation of GDP. Some key economic sectors--such as steel, oil refining, chemicals, electricity, paper--neared full capacity use. This not only limited their own output, but also propagated "bottlenecks" to growth in other sectors, through input-output dependencies. In addition, real aggregate demand itself experienced a slow down, resulting from both the acceleration of inflation and the lower real wage increases. In turn, the establishment of additional restrictions to imports and a formal foreign exchange budget in March 1987 caused delays in approval and delivery of imported inputs, which also constrained production. A similar effect was produced by price controls. Although the new system included automatic price adjustments for some categories of products, for those commodities and services still under

strict controls, inspection and enforcement was strengthened and all price change applications had to be considered simultaneously following regular intervals. This squeezed profit margins in some sectors leading to drops in production and shortages.

1.34 On the aggregate demand front, private consumption plus construction continued to grow slightly faster than GDP (7.9 percent versus 6.9 percent), while real investment in plant and equipment grew by 17 percent, but to a level still 17 percent below the average for 1980-84. It must be noted that the cumulative increase (in absolute terms) in real consumption and construction during 1985-87 was larger than the increase of GDP, indicating the short-run policy focus and also the non-sustainability of the strategy (Table 1-4). Exports continued to show a poor performance in 1987, stagnating in dollar terms, despite drastic exchange rate adjustments and better copper prices late in the year. In turn, commodity imports stayed on the upward trend, rising 15 percent in dollar terms in reflection of expansionary demand management. As a result, the current account registered, for the second year in a row, a deficit of 5 percent of GDP. Gross international reserves, the Government's main concern, dropped by US\$915 million during the year, to US\$1 billion in December. Notwithstanding the announced 10 percent limit on external debt servicing, the actual debt service ratio was close to 19 percent (of exports of goods and services) in 1986 and about 13 percent in 1987. This was due to the fact that the authorities decided to exclude certain payments--namely interest on short-term credit lines--from the computation of the 10 percent. However, most debt servicing was financed out of fresh disbursements of external loans and not from Peru's resources. Thus, the so-called net transfer to Peru in 1986 was a negative 4 percent of exports and in 1987 was a positive 1 percent.

1.35 As noted above (para. 1.26), the widening of the fiscal gap, and its concomitant Central Bank financing, led the way to an upsurge of inflationary pressures. These were compounded by intensification of restrictions on imports since March 1987, periodic adjustments to wages during the year, and since October by exchange rate devaluations. The policy of promoting "low" inflation by overvaluing the exchange rate and losing international reserves that had been followed in 1986-87 was not viable any longer, for liquid reserves had reached critical levels. Thus, a new inflationary momentum was set into motion, with the consumer price index rising by 115 percent in the year ending December 1987, up from 63 percent in 1986. Moreover, the process was accompanied by a collapse of the real prices of agricultural products. This was the result of both lower-than-inflation adjustments to guarantee prices and the cessation of the demand-pull effect that had driven up the market determined prices of vegetables in 1986. Thus, the rural-urban terms of trade, which had risen 75 percent during 1986, returned back to the low level registered in 1985. With these trends, the share of agricultural producers in national income declined from 8.7 percent in 1986 to 6.7 percent in 1987.

H. Economic Policy during January-August 1988

1.36 By the end of 1987, it was evident that the consumption-boom had run its course and the economy was experiencing severe capacity constraints. The macroeconomic situation was critical, with inflation on the rise, GDP stagnated since early in the year, severe misalignments of prices and tariffs, and a mounting fiscal deficit. In addition, of the gross international reserves reported by the Central Bank (US\$1.1 billion), only about US\$300 million were readily liquid. Therefore, a consistent package comprising drastic measures--in the areas of fiscal policy, exchange rate, realignment of prices, reduction of subsidies and interest rates--was required to prevent the upsurge of an explosive inflationary spiral during 1988. However, the Government opted for a sequential process of gradual adjustments that lacked a consistent framework.

1.37 On the fiscal front, several tax measures were decreed for fiscal year 1988: (i) increase in the sales tax rate from 6 to 10 percent; (ii) expansion of the list of items subject to selective consumption excises and increase in all excise rates; and (iii) establishment of a proxy system partially indexed to inflation for monthly prepayments of corporate profit taxes. These measures were expected to yield around 2 percent of GDP in additional tax revenues, compared to 1987. However, during the first seven months of the year this revenue gain was offset by lower tax revenues from gasoline (due to lagging price of gasoline relative to inflation) and also by lower tariff revenues (due to lower imports). In addition, further drops in revenues from some taxes resulted as a consequence of accelerating inflation, given the existence of lags of collection and imperfect indexing to inflation of most tax liabilities. Therefore, the tax burden to GDP ratio in 1988 is expected to fall further relative to that of 1987.

1.38 In the area of exchange rate policy, since January 1988 the Central Bank started to devalue monthly the exchange rates applicable to exports at the pace of the inflation rate for the month, but left a roughly unchanged exchange rate structure for imports. This translated into a growing spread between the average export and import rates; thus, by August the former was equal to twice the latter. If this trend continues, Central Bank foreign exchange losses alone in 1988 could reach 3 to 5 percent of GDP. In turn, interest rates were adjusted in March and June, to 82 percent for saving rates (one year term deposits) and to 120 percent lending rates (less than one year loans), but since inflation in the quarter ending June was 500 percent in annual terms, real rates became more negative than in 1987. As far as interest rates charged by the development banks are concerned, these were only marginally raised--for instance, the rate of "Agricultural Promotion" credit line offered by Banco Agrario was raised from 4 percent to 10 percent--which indicates that financial losses of the Central Bank will increase in 1988 compared to 1987.

1.39 In March 1988, the Government announced an economic package comprising increases to public sector prices and tariffs (in the range of 22 to 50 percent) and to wages (in the range of 40 to 60 percent). Furthermore, it was announced that these adjustments would be followed by a 120-day freeze. However, as noted before, the freeze did not affect the exchange rates for exports that continued to be adjusted monthly. When the

freeze ended in June, additional adjustments to prices and tariffs were effected, in particular gasoline prices were raised by 58 percent. However, these haphazard adjustments to prices and tariffs did not suffice to compensate for escalating inflation during the year and, as a result, real prices and tariffs experienced a further decline. For example, the real price of gasoline in August 1988 was only one third of the price prevailing in July 1985 and about half of the average price in 1987. This aggravated further the public finance disequilibrium and limited severely the investment capability of state enterprises. Reportedly, the latter could not finance even maintenance expenditures. New changes in the exchange rate structure were effected in June and July, with these the number of exchange rates for commercial transactions was reduced from nine in May to four in July. However, in August the process of exchange rate simplification was reversed with the establishment of three additional rates for imports. In turn, wages were again increased in July, at the rate of 71 percent for minimum wage earners and lower rates for civil servants and private sector workers.

1.40 The result of this policy framework was a sharp increase in inflation fueled by, on the one hand, the interaction of a growing budgetary imbalance and an unprecedented process of financial disintermediation (the stock of real broad money as of June 1988 was 63 percent of that in December 1987), and on the other, by exchange rate devaluation, periodic wage increases, and disorderly adjustments to prices and tariffs. Thus, inflation for the first eight months of 1988 ran at an annual rate of 535 percent. In parallel, the economy entered a recession, as signalled by the 1 percent drop of GDP during the first half of the year compared to the the second semester of 1987.

CHAPTER II

THE ECONOMIC PROSPECTS IN THE ABSENCE OF MAJOR POLICY REFORMS

A. The Diagnosis of the Current Crisis

2.01 The Risk of Hyperinflation. The evolution of the main macro-economic variables during the first half of 1988 indicates that with the current course of partial economic reforms and without major policy departure, hyperinflation is likely to result. The recent virulent acceleration of inflation, from 115 percent in 1987 to an annual rate of 535 percent during the first eight months of 1988, occurred despite the 120-day freeze decreed in March 1988 and effective until June, that artificially reduced the inflation rates of May and June. The key reason underlying the recent drastic acceleration of inflation has been the growing public sector budgetary imbalance in the face of an unpostponable balance of payments adjustment and a shrinking financial sector. In 1986 and 1987, although the public sector deficit (as gauged by the total public sector borrowing requirements) reached the high levels of 8.1 and 11.2 percent, respectively, the Central Bank had sufficient international reserves to maintain an overvalued exchange rate, and thus could drain part of the excess demand pressures by running a balance of payments deficit. Moreover, in those years the ratio of internal liabilities of the financial system to GDP (broad money to GDP) stayed stable, thus providing a more solid base to raise the needed inflation tax resources to finance the fiscal gap. However, those conditions have changed in 1988. On the one hand, the indications are that the fiscal deficit has expanded. On the other, the Central Bank cannot afford further sustained reserve losses and the inflation tax base (the ratio of broad money to GDP) is shrinking rapidly. Hence, the fourfold jump of inflation.

2.02 It is important to understand that, while wage indexation and exchange rate adjustments might be responsible for reproducing past inflation, the source of the recent acceleration of inflation is the huge public sector imbalance together with the fact that the only feasible way to pay for it is inflationary finance. Indeed, the deficit implies a command over real resources, but these cannot come from abroad, for there is no foreign financing available, nor can the Central Bank afford much more reserve losses. In addition, since the financial sector is shrinking and the share of credit to the private sector is small, the possibility of squeezing further the latter to effect a shift of additional resources to the public sector does not seem plausible. Therefore, the resources have to come from inflationary finance.^{3/} However, when the ratio of deficit to GDP is high and the ratio of broad money to GDP is small, inflation needs to be high to raise a sufficient amount of resources to pay for the deficit. However, as the inflation rate rises, the financial sector

^{3/} The possibility of issuing bonds, say bonds indexed to inflation, would not solve the problem. In the current situation with real interest rates on bank deposits highly negative, issuing indexed bonds would simply crowd out bank deposits. In this case the deficit will probably increase by more--due to the higher financial service of the bonds vis a vis legal reserve requirements on banks' deposits--than the apparent increase in financing.

shrinks (the demand for domestic money drops) as people shift the composition of their portfolios towards foreign exchange and other stores of value, and therefore the revenue from inflation only rises insofar as the increase in the former outweighs the drop in the latter. Beyond a certain inflation rate--that will certainly be reached if the deficit to GDP is maintained at a high enough level--further inflation will cause inflationary revenues to drop rather than rise. After that moment the model becomes unstable and if the deficit to GDP is not cut down early enough and sufficiently, inflation goes into an explosive path.

Table 2-1: INFLATION RATE AND SEIGNIORAGE LEVELS IN FOUR COUNTRIES, 1980-87

	BRAZIL		ARGENTINA		BOLIVIA		PERU	
	Inflation (CPI) %	Seigniorage (% GDP)	Inflation (CPI) %	Seigniorage (% GDP)	Inflation (CPI) %	Seigniorage (% GDP)	Inflation (CPI) %	Seigniorage (% GDP)
1980	83	2.0	101	4.8	47	3.2	61	2.6
1981	106	2.0	104	3.5	294	1.6	73	2.1
1982	98	2.1	165	7.8	124	12.2	73	0.9
1983	142	2.0	344	8.6	276	10.0	125	2.1
1984	197	2.7	627	7.1	1,282	15.9	112	0.9
1985	227	2.7	672	6.5	11,857	6.8	158	3.2
1986	n.a	n.a	n.a	n.a	n.a	n.a	63	3.6
1987	n.a	n.a	n.a	n.a	n.a	n.a	115	4.3
1988	n.a	n.a	n.a	n.a	n.a	n.a	600-800 ^{a/}	8-12 ^{a/}

a/ Projected range for 1988 on the basis of information available by August 1988.

Note: Seigniorage for Brazil and Bolivia was calculated as change during the year of base money divided by nominal GDP. For Argentina M1 was used instead of base money since this approximates better the concept of seigniorage net of interest paid on banks reserves. For Peru, a more thorough calculation was carried out taking in account the difference between inflation and interest rates on all the financial liabilities of the consolidated public sector, both financial and non-financial (Annex 2).

Source: For Brazil, Argentina and Bolivia, Liviatan and Kiguel (1988), "Inflationary Rigidities and Orthodox Stabilization Policies," World Bank Working Paper. For Peru, Bank estimates as reported in Annex 2.

2.03 The point at issue is whether the Peruvian economy is anywhere near that point. The indications are that this may be the case for two reasons. First of all, the drop in real broad money brought about by the acceleration of inflation in the first half of 1988 has been considerable. In effect, the inflation rate in annual terms has quadrupled compared to 1987, while the stock of real broad money has dropped in eight months to 50 percent of the level registered in December 1987. The latter means that if inflation accelerates further during the rest of the year, real broad money might have dropped by December 1988 to one-third or more of its level one year earlier. This indicates that further hikes in inflation will probably cause a drop in inflationary revenues. Second, the seasonably adjusted budgetary deficit for the first half of 1988, estimated at an annual level of 15 percent of GDP on the basis of preliminary figures,

requires domestic financing in the order of 12 percent of GDP.^{4/} This level of inflationary financing is clearly unsustainable at any stationary inflation rate. Evidence from the European hyperinflations of the post World Wars I and II indicates that at seigniorage levels above 10 percent of GDP economies might precipitate into hyperinflation. Seigniorage levels for Argentina, Brazil, Bolivia and Peru in the period 1980-87 are reported in Table 2-1. An attempt to estimate the inflation rate that maximizes the Government's revenue from inflation (seigniorage) in Peru was carried out and the results and methodology are presented in Annex 1. It was found that seigniorage is maximized at just over 10 percent of GDP, with an inflation rate of about 500 percent per year, or 15 percent per month. Of course, these type of estimates are far from precise, but give an idea of the magnitude of these key variables. It should be emphasized that targeting the inflation rate that maximizes seigniorage is by no means recommended policy. Indeed, on the one hand, inflation (at any rate) brings about efficiency losses in the economy, for people economize in the use of money which is perhaps the most productive input in the economy and which can be produced at negligible cost. Moreover, these efficiency losses become larger as inflation increases. On the other hand, the closer an economy gets to the inflation rate that maximizes seigniorage, the higher the risk of falling onto a hyperinflationary path.^{5/} Higher levels of seigniorage than, say, 10 percent can be reached transitorily in a given year, to the extent that inflation is forced up to a level much higher than that anticipated by economic agents; but in subsequent years, as economic agents adjust real money balances to desired levels, seigniorage falls sharply and inflation shoots up setting off hyperinflation. In Bolivia, for instance, seigniorage was reported at close to 16 percent of GDP in 1984, but dropped to 8.8 percent in 1985, as inflation accelerated from 1,000-plus to 11,000-plus percent.

2.04 An additional complication in the case of Peru is that gross revenues from inflationary finance do not contribute much to pay for the non-financial public sector deficit (comprising the Central Government and state enterprises) and foreign exchange losses. This occurs because a large portion of it is transferred back to the private sector in the form of financial subsidies. Furthermore, as noted in paragraph 2.05 (a) below, the latter have the tendency to rise with inflation. In other words, inflation gives rise to both a tax and a subsidy, and it is only the difference between both what is left to finance the deficit of the non-financial public sector plus exchange losses. As can be seen in Table 2-2, the net inflation tax, the excess of the inflation tax over the subsidy, is meager indeed if not negative. This means that even with higher inflation it is difficult to play the trick of raising enough net real resources to close the non-financial public sector imbalance. It follows that if the latter remains unsettled (it reached 4.9 and 6.5 percent of GDP in 1986 and 1987, respectively), inflation will have to speed up exponentially to raise those resources from a very thin base. However, as said before, beyond a certain inflation rate this is not possible and the model becomes unstable.

^{4/} The remaining 3 percent corresponds to foreign financing, mostly in the form of accrued and unpaid interest accumulated as arrears.

^{5/} The trade-off between inflation and seigniorage (Laffer Curve) calculated is depicted in Annex 1.

**Table 2-2: PERU - INFLATION TAX, INFLATION SUBSIDY,
AND NET INFLATION TAX**
(Percentages of GDP)

	Inflation Tax	Inflation Subsidy	Net Inflation Tax
1980	2.6	1.4	1.2
1981	2.1	1.4	0.7
1982	0.9	1.7	-0.8
1983	2.1	3.0	-0.9
1984	0.9	1.9	-1.0
1985	3.2	2.9	0.3
1986	3.6	1.8	1.8
1987	4.3	3.0	1.3

Source: Based on a very detailed calculation presented in Annex 2.

2.05 Several mechanisms at work complicate further the dynamics of the current inflationary upsurge and, in the absence of timely and drastic corrective measures, could make the transition to hyperinflation particularly short. These are the following:

- (a) The endogeneity of the Central Bank's quasi-fiscal deficit. As noted, the quasi-fiscal deficit--which comprises Central Bank foreign exchange and financial losses--rises as a percentage of GDP with higher inflation. This is so because, on the one hand, foreign exchange losses become larger as inflation accelerates, for under the exchange rate adjustment practice, followed since December 1987, export rates are de facto linked to inflation whereas import rates lag behind inflation. A similar effect occurs with Central Bank financial subsidies; the three recent adjustments to interest rates have raised the cost of funds of the Central Bank (the return on legal reserves) by more than the return on Central Bank assets (in particular, Central Bank credit to development banks).^{6/} On the other hand, since the public sector is a net domestic debtor in the economy, higher interest rates--reflecting sooner or later higher inflation--will translate into an increase in the interest service of the Government's domestic debt as a percentage of GDP, thereby raising the deficit of the Government (or else the losses of the Central Bank).^{7/}

^{6/} For this not to happen, not only would interest rates charged by the Central Bank to development banks have to be raised, pari passu with the cost of funds of the Central Bank, but also rates charged by development banks to their borrowers would need to be raised.

^{7/} In the case of Peru, higher interest rates mostly increase losses of the Central Bank, since the Government's debt with the Central Bank is set at a fixed interest rate of 0.01 percent.

- (b) The Tanzi-Olivera effect. Tax revenues as a proportion of GDP will have the proclivity to drop in the face of accelerating inflation. This arises from the existence of lags in tax collections (i.e., lags between the time in which the taxes accrued and the time in which they are collected). For a given lag, increasing inflation means that economic agents will be paying increasingly lower taxes in real terms. Therefore, unless the tax system is perfectly indexed to inflation or collection lags are eliminated, real revenues will tend to drop. In the Bolivian hyperinflation taxes dropped from close to 10 percent in the early 1980s to 1.3 percent at the peak of hyperinflation. Similar experiences occurred in other hyperinflations. In Peru tax revenues have already declined from 12.7 percent of GDP in 1985 to 8.6 percent in 1987. Since the tax system is poorly indexed to inflation (only corporate income taxes are now collected on the basis of proxy linked--imperfectly--to inflation), inflation will have the tendency to erode real tax revenues. Likewise, prices and tariffs of state enterprises are not indexed to inflation. Largely for this reason, state enterprise revenues have declined from 26.5 percent of GDP in 1985 to 14.4 percent in 1987. Again, further losses will result from the absence of indexing, since sporadic and discretionary adjustments will probably continue to fall short of inflation.
- (c) Indexation. The existence of widespread backward-looking indexation of wages for unionized workers as well as informal dollar indexing of contracts ensures that the inflation rate reached in one period will be projected by inertial forces as a floor to the next period. This is further complicated by the fact that the authorities follow the rule of updating wages for non-unionized workers and civil servants as well as minimum wages regularly--currently every four months--so that purchasing power of wages is at least maintained. However, now that Peru has to live within its means and the economy is going into a recession real wages need to fall. In this context, trying to raise real wages ex-ante will probably lead to ever increasing inflation so that real wages fall ex-post. Moreover, rampant inflation will likely lead to shortening of wage settlements which, in turn, will require exponential acceleration of inflation to reach the average real wages prevailing when wage settlements were less frequent.
- (d) Exchange rate behavior and currency substitution. Inflationary dynamics will be further validated by exchange rate devaluations geared to maintaining the real exchange rate, or, if the official exchange rates are allowed to go overvalued, by devaluation of the black market rate and tight rationing of foreign exchange in the official market. In this respect, despite the considerable adjustments to the official exchange rates since late 1987, the black market exchange rate has been in continuous overshooting, reaching levels far beyond what the real sector of the economy would indicate. Indeed, the black market rate has been on average roughly twice the level of standard 1978-based purchasing power parity rates. This is

a consequence of people's efforts to shift their liquid portfolios away from domestic currency and towards foreign currency so as to escape capital losses arising from inflation. This pattern, is indicating the range of inflation ahead anticipated by economic agents, and it is also a reflection of the instability of the current financial policy.

**B. The Likely Evolution of the Economy
Without Major Corrective Measures**

2.06 The current economic crisis requires the implementation of timely drastic corrective measures if the risk of hyperinflation is to be averted. These measures are described below in Chapters III and IV of this report. By contrast, if the policy thrust to confront the current problems consists of just partial and gradual measures, in particular, in the areas of public finance, exchange rate regime and financial policy, it is unlikely that the current inflationary drive could be controlled. This section presents a scenario, based upon a consistent financial programming framework, illustrating the possible course of the economy under the assumption of partial economic policy measures. It is important to point out that the scenario only intends to identify the main forces now interacting in the economy and to illustrate the possible response of the main economic variables in the absence of sufficient corrective measures. As such, the purpose of this exercise is purely illustrative. In no way can it be considered a forecast or a presumed policy predisposition on the part of the Government.

2.07 **Policy Assumptions of the Macroeconomic Scenario.** The main assumptions underlying the prospective scenario (1988-1991) in the absence of major policy changes are the following:

- (a) Taxes. Adjustment to some tax rates (sales tax and selective excises) are implemented, but little progress is made in the areas of reducing collection lags and/or indexing tax payments to inflation; phasing-out tax exonerations; and increasing coverage and compliance of taxes.
- (b) State enterprises' prices and tariffs. These remain subject to sporadic and discretionary adjustments, but fail to catch up with inflation. As a result, additional lags in relative prices result, and internal revenues of state enterprises drop further.
- (c) Public expenditures. An attempt is made to maintain ex ante the current shares of capital and current expenditures to GDP and also public employment levels and real wages. However, as seen below, this proves to be unfeasible ex post.
- (d) Exchange rate policy. The current system (as of August 1988) comprising two export rates, four import rates, the free bank rate and the black market rate, is simplified into a three-tier exchange system consisting of a unified rate for exports and "non-essential" imports, a preferential rate for "essential"

imports, and the parallel market rate. The rate for essential imports, however, continues to be lower than the export-import rate and, as a result, foreign exchange losses persist. In an attempt to reduce the latter over time, the preferential rate is brought gradually closer to the export-import rate. In addition, it is assumed that the import-export rate is kept constant in real effective terms at the level registered in December 1987.

- (e) Foreign trade regime. The system of 100 percent import license requirements is maintained and no significant measures to simplify and even out the current complex tariff code (42 tariff positions in a range from 0 to 155 percent) are undertaken. There is tight rationing of import licenses throughout.
- (f) Financial policy. Interest rates on deposits and loans continue to be adjusted discretionally, lagging behind accelerating inflation. Consequently, real interest rates become more negative over time. In addition, preferential lending rates of development banks remain much lower than commercial banks loan rates. In particular, nominal lending rates of Banco Agrario, at zero, 4 and 20 percent, are maintained. Further forgiveness of loans to selected borrowers (i.e., peasants and small businesses) are effected. As for monetary regulation, current legal reserve requirements on deposits are loosened up gradually with a view to expanding credit to the private sector, while sectoral and regional restrictions to credit allocation remain unchanged. Indemnification payments to expropriated bankers take the form of long-term bonds indexed to inflation.
- (g) Wages. Adjustments to nominal wages are enacted regularly in an attempt to maintain ex-ante current real wages. Besides, as inflation speeds up wage settlement periods are shortened. However, inflation wins the race and real wages fall ex-post.
- (h) Price controls. These are made more flexible, but enforcement of official prices of selected "essential products" is strengthened.
- (i) Foreign debt policy. Debt service payments are reduced from current levels to a strict 10 percent of exports of goods and services and only on the basis of creditors that provide a positive transfer. Thus, interests payments on short-term trade and working capital lines that were serviced in 1986 and 1987 are partially interrupted.
- (j) Subsidy programs. Explicit government subsidies to rice and other agricultural products and imports are maintained, but are reduced in size over time. The temporary employment public works program (PAIT) is reduced in scope.

2.08 **The Likely Results: Hyperinflation and Recession.** As noted, before, the attempt to carry out a budget that requires more resources from inflationary financing than the viable maximum, forces the economy into a explosive inflationary path. Further, wage indexation and exchange rate adjustments confer inertia to inflation making unfeasible a return to lower rates. The illustrative path of the key economic variables is presented in Tables 2-3, 2-4, and 2-5. Inflation would accelerate from 115 percent in 1987 to 650-plus percent in 1988, and then in crescendo to about 10,000 percent in 1991. In such an inflationary environment coupled with attempts to control price increases of some foodstuffs and other basic products, relative prices would become increasingly distorted and shortages of key commodities would develop. It is clear that the outcome would be an increasingly inefficient allocation of resources and therefore a continued drop of real output. Thus, GDP might fall on average by about 4 percent per annum. Likewise, exports would decline due to the higher incentives for input substitution, the distorted incentive structure and also the scarcity of credit and inputs. Exports would decline by about 6.5 percent per annum. The drop in exports would, in turn, force reductions in imports. In an attempt to minimize the import falldown, the Central Bank would gradually lose the remaining foreign reserves. Import license allocation would become more and more selective and discretionary. Scarcity of imported imports would cause further constraints to production due to the low degree of vertical integration of Peruvian industry.

2.09 Real wages would fall and so would consumption per capita. New entrants to the labor force, now running at the rate of 2.7 percent per year, would find it increasingly difficult to find jobs in an economy in sharp recession and, as a result, unemployment would mount. Profit margins of firms would be severely curtailed, and for these firms making profits capital flight would be a better investment alternative than domestic investment. Thus, real investment would steadily fall by 1991 to half the level of 1987. Capital flight would put permanent pressure on the black market, resulting in a permanently undervalued black market rate. This would push the Central Bank to devalue the official rates so that to prevent the emergence of large spreads between both markets. All this would further fuel back inflationary pressures and expectations.

2.10 It might be questioned whether the sharp acceleration of inflation projected here--to 650 percent in 1988, 1,300 in 1989, 3,500 percent in 1990 and 10,000 percent in 1991 (Table 2-3)--is feasible in such a short span of time. As it was argued above, this results from the fact that now the budgetary imbalance targeted by the authorities is near and perhaps beyond the maximum revenue obtainable from inflation, and therefore at that point inflationary dynamics become explosive. The experience of hyperinflations in other countries demonstrates that the process is particularly rapid. In the 1920s, it took Germany less than a year to go from an average inflation rate of 8 percent per month to one of 47 percent; and also less than a year to climb to a rate of 280 percent per month. Likewise, in the early 1980s Bolivia underwent a similar process: the annual inflation rate jumped from 133 percent to 1,300 percent in two years and then to 12,000 percent in one year. Accordingly, the scenario presented in Table 2-3 may understate the speed with which hyperinflation might develop.

- LOW POLICY SCENARIO -

**Table 2-3: ILLUSTRATIVE PATH OF THE ECONOMY IN THE ABSENCE OF MAJOR POLICY REFORMS
KEY VARIABLES (1988-1991)**

VARIABLE	1987	1988	1989	1990	1991
GDP Real Growth	6.9%	-5.0%	-4.5%	-3.0%	-3.0%
Inflation Rate (Dec/Dec)	115%	654%	1,350%	3,550%	10,500%
Exchange Rate (Intis per US\$) (end of period)	39	272	3,700	128,600	12,800,000
Seigniorage from Inflation (% of GDP) ^{a/}	7.2%	8.7%	6.1%	2.0%	0.3%
Public Sector Revenues (% of GDP)	26.1	22%	20%	16.8%	13.5%
Exports Real Growth	2.6%	-13.2%	-3.2%	-5.0%	-4.6%
Import Real Growth	3.8%	-18.6%	-11.8%	-8.5%	-3.9%
Resource Balance (Deficit) ^{b/} (% of GDP)	1.7%	0.7%	0.5%	0.5%	-0.2%
Current Account (Deficit) ^{c/} (% of GDP)	4.9%	4.0%	4.6%	4.6%	4.1%
Debt Service Ratio					
- Accrued	80%	81%	80%	80%	77%
- Paid	13%	10%	10%	10%	10%
Gross International Reserves (US\$ million)	1,130	700	400	100	0
External Debt/GDP	47%	52%	66%	68%	71%
Consumption Per Capita (real growth)	3.2%	-0.9%	-8.3%	-4.8%	-4.2%
Real Wage Growth	8.8%	-6.0%	-5.0%	-3.5%	-3.5%
Real Gross Investment (1987=100)	100	70	59	59	48
Domestic Savings/GDP	23%	19.6%	14.5%	13.5%	13.2%
Terms of Trade (1986=100)	98	105	95	91	91

^{a/} Here seigniorage is defined as the increase in the Central Bank's monetary base as a proportion of nominal GDP. This definition differs from the inflation tax concept used in Annex 2.

^{b/} This is the balance of goods and non-factor services (the non-interest current account).

^{c/} Includes both accrued unpaid interest and imputed interest on arrears.

- LOW POLICY SCENARIO -

Table 2-4: ILLUSTRATIVE PATH OF PUBLIC FINANCES (1987-1991)
(Percentages of GDP)

	1987	1988	1989	1990	1991
1. Public Sector Revenues	26.1	22.0	20.0	18.8	13.5
- Tax Revenues	8.6	8.0	7.0	5.0	3.0
- Enterprise Revenues	14.4	13.0	12.0	11.0	10.0
- Other	3.1	1.0	1.0	0.8	0.5
2. Public Sector Expenditures	32.6	29.1	25.6	19.2	14.1
- Investment	3.9	2.0	1.5	1.5	1.5
- Current and Other ^{a/}	28.7	27.1	24.1	17.7	12.6
3. <u>Non-financial Public Sector</u> <u>Deficit (2 - 1)^{a/}</u>	<u>6.5</u>	<u>7.1</u>	<u>5.6</u>	<u>2.4</u>	<u>0.6</u>
4. Central Bank Losses	2.8	4.0	2.0	1.0	0.5
- Exchange Losses	2.0	3.0	1.0	0.5	0.2
- Financial Losses	0.8	1.0	1.0	0.5	0.3
5. <u>Overall Deficit (3+4)^{a/}</u>	<u>9.3</u>	<u>11.1</u>	<u>7.6</u>	<u>3.4</u>	<u>1.1</u>
6. Central Bank Credit to Development Banks	1.9	1.0	0.8	0.5	0.2
7. <u>Public Sector Borrowing^{a/}</u> <u>Requirements (PSBR) (5+6)</u>	<u>11.2</u>	<u>12.1</u>	<u>8.4</u>	<u>3.9</u>	<u>1.3</u>
8. <u>Financing of PSBR</u>	<u>11.2</u>	<u>12.1</u>	<u>8.4</u>	<u>3.9</u>	<u>1.3</u>
- External	1.4	1.4	1.2	0.9	0.7
- Central Bank	9.8	10.7	7.2	3.0	0.6
<u>Memorandum Items</u>					
9. Imputed Interest on External Arrears (excluded from 2, 3, 5, 7, 8)	1.2	1.8	2.7	3.2	3.6
10. PSBR (including 9)	12.4	13.9	11.1	7.1	4.9
11. GDP (thousand billion Intis)	0.76	3.3	38.3	1,118.2	96,958.3

a/ Includes accrued unpaid interest on foreign debt, but excludes imputed interest on arrears.

- LOW POLICY SCENARIO -

**Table 2-5: KEY VARIABLES AND PARAMETERS OF FINANCIAL PROGRAMMING EXERCISE
(1987-91)**

VARIABLES	1987	1988	1989	1990	1991
Central Bank Financing of Public Sector Deficit (% GDP)	9.8%	10.7%	7.2%	3.0%	0.6%
Decrease of Central Bank International Reserves					
- Nominal (\$US million)	915	430	300	300	100
- Percent of GDP	2.6%	1.3%	1.1%	1.0%	0.3%
Increase in Monetary Base (%GDP) (Seigniorage from inflation) ^{a/}	7.2%	9.4%	6.1%	2.0%	0.3%
Real Monetary Base (end of period) (1987=100)	100.0	56.2	28.6	7.3	0.7
Broad Money Supply (Nominal growth rate)	113%	324%	635%	832%	948%
Inflation rate					
- December/December	115%	650%	1,350%	3,550%	10,500%
- Average/Average	86%	350%	1,130%	2,900%	8,830%
Nominal GDP growth	97.0%	331%	1,070%	2,800%	8,600%
Exchange Rate (Intis per US\$) (period's average)	22	100	1,350	38,100	3,200,000
PARAMETER	1987	1988	1989	1990	1991
Income Velocity of Broad Money ^{b/c/}					
- Level	7.3	12.3	23.2	88.1	863.7
- Annual Growth	8.5%	69%	88%	280%	880%
Reserve to Deposits Ratio of Commercial Banks	0.43	0.40	0.35	0.30	0.28
Currency to Deposits Ratio	0.40	0.46	0.60	0.70	0.80
Broad Money Supply Multiplier	1.69	1.7	1.7	1.7	1.7

a/ Here seigniorage is defined as the increase in the Central Banks monetary base as a proportion of nominal GDP. This definition differs from the inflation tax concept used in Annex 2.

b/ Calculated as the ratio of real GDP to real Broad Money Supply both as of December or else nominal GDP (evaluated at December prices) over nominal Broad Money (as of December).

c/ The assumption for velocity growth is that it rises by 0.2% per each percentage point of increase in anticipated inflation ($\Delta V/V = 0.2\Delta\pi^e$; where V =velocity and π^e = expected inflation. The rationale of this assumption is provided in Annex 1. It was also assumed that economic agents anticipate 65 percent of the actual increase in inflation ($\Delta\pi^e = 0.65\Delta\pi$).

2.11 The path of public finances underlying the projections of inflation is presented in Table 2-4. The PSBR projected for 1988 is 12.1 percent of GDP and requires domestic financing of 10.7 percent of GDP. This projection is conservative, judged on the basis of estimates for the first half of the year. In particular, it assumes that, in the second quarter, prices and tariffs of parastatals are kept at the relative level (with respect to the consumer price index) of the first semester; exchange rate losses are cut to half of their current level; and also that total public expenditures are reduced in 1988 by 4 percent of GDP compared to 1987. Nonetheless even under this "optimistic" public finance scenario, budget financing requires seigniorage of about 8.7 percent of GDP (Table 2-5), and yields an inflation rate of about 650 percent.

2.12 The shrinkage of the financial sector (rise in velocity of money) brought about by that inflation rate (velocity goes from 7.3 in 1987 to 12.3 in 1988) would require a draconian public finance adjustment to push the economy away from this unstable path of inflation. In the presence of price stickiness and rigidity of expectations, this would also entail a very deep recession. That is why, in the absence of a drastic adjustment now, it would be unlikely that from 1989 onwards, inflation would go down instead of up. However, at inflation rates beyond 500-600 percent, seigniorage would drop (as illustrated in Chart 1.1 of Annex 1). Therefore, the budgetary deficit as a ratio of GDP would become increasingly smaller ex-post regardless of the size of the targeted deficit ex-ante. In turn, public revenues to GDP would decline due to the Tanzi-Olivera effect and also to lagging prices and tariffs. As a result, real public expenditures, including real wages and subsidies, would be forced down by the very dynamics of inflation. Specifically, the projection is that public sector revenues would fall progressively from 26 percent of GDP in 1987 to about 14 percent in 1991. The drop would be particularly acute in the case of domestically based taxes and enterprises' revenues, in contrast to foreign trade taxes and export revenues of enterprises, for the latter would be relatively protected by their linkage to the exchange rate. In turn, seigniorage from inflation is projected to decline progressively from 8.7 percent in 1988 to 0.3 percent in 1991. In consistency with these trends, public expenditures would be forced to fall from 33 percent of GDP in 1987 to 14 percent in 1991. The implication of this scenario is that, if major corrective measures are not taken soon, hyperinflation would effect a far more drastic adjustment and at a much higher economic and social cost.

2.13 Evidence from other country experiences indicates that the main social costs of hyperinflation are: (i) declining real wages, incomes and consumption levels; (ii) social unrest in the wake of labor demands ever frustrated by inflation and shortages a basic staples; and (iii) political instability. In turn, the main economic costs are: (i) progressive decline in the use of money and with it efficiency losses from reduced specialization in production and trade and also welfare losses from limited possibilities to diversify consumption through trade; (ii) wastage of resources devoted to economizing in the use of money and revising contracts too frequently; (iii) distorted relative prices and inefficient resource allocation; (iv) declining investment and with it little possibility for growth in the future; (v) erosion of the discipline to pay taxes; and (vi) total collapse of financial intermediation and from it destruction of saving habits and inefficient intertemporal allocation of resources. Data

on the Bolivian hyperinflation illustrates eloquently some of these costs (Table 2-6).

Table 2-6: BASIC DATA ON THE BOLIVIAN HYPERINFLATION

	Seigniorage (as % GDP)	Inflation Rate	GDP Growth	Unemployment Rate	Central Government Revenues (as % GDP)
1981	1.6	28.6	-0.4	9.7	9.4%
1982	12.2	133.3	-5.6	10.9	4.6%
1983	10.0	269.0	-7.2	13.0	2.6%
1984	15.9	1,281.4	-2.4	15.5	2.6%
1985	8.8	11,749.6	-4.0	18.0	1.3%

Source: Liviatan and Kiguel (1988), "Inflationary Rigidities and Orthodox Stabilization Policies," World Bank Working Paper.

Table 2-7: REAL CASH BALANCES IN THE GERMAN HYPERINFLATION COMPARED TO ILLUSTRATIVE SCENARIO FOR PERU (Average Monthly Rates)

German Hyperinflation (1921-23)				Peru Scenario (1987-91)			
Period	Nominal Money (Growth) /a	Inflation /a	Real Money (Index)	Year	Nominal Money (Growth) /a	Inflation /a	Real Money (Index)
1921-II	5.5%	8.4%	100.0	1987	6.5%	8.6%	100.0
1922-I	6.5%	12.8%	68.0	1988	13.0%	18.0%	58.0
1922-II	29.4%	46.7%	24.0	1989	18.0%	25.0%	29.0
1923-I	40.0%	40.0%	24.0	1990	20.0%	35.0%	7.0
1923-II	233.0%	286.0%	3.0	1991	22.0%	147.0%	0.7

a/ Percent increase per month.

Source: German hyperinflation data from R. Barro (1985), "Macroeconomics," Table 8.1., p. 193.

2.14 Insight on the shrinkage of the financial sector and the progressive repudiation of the legal tender can be gained from examining the dynamics of inflation, monetary growth, and real cash balances during

the German hyperinflation (Table 2-7).^{8/} The data shows that prices grew during the period much faster than money and consequently the quantity of money in real terms dropped in two years to just 3 percent of the 1921 level. A similar drop would be possible for Peru in the absence of corrective measures.

2.15 Hyperinflation is not a viable macroeconomic and monetary regime. All hyperinflationary experiences have lasted less than two years (counted after inflation surpasses the threshold of, say 40 percent per month). The economic and social costs paid by society are so disproportionate, that after a certain point governments adopt a new currency or let a foreign currency take the place of national currency, and commit themselves to fiscal and monetary restraint. The transition from hyperinflation to price stability is apparently facilitated by the fact that during hyperinflation staggered contracts and backward-looking indexation rules vanish because economic agents find it very costly to accept local currency contracts with a duration beyond one day. This has the positive effect of fully eliminating inflationary inertia by moving the system to perfect price flexibility. Thus, at the end of the process, inflation becomes purely monetary. That is why by going back to fiscal austerity and anchoring the value of the new currency to a reserve currency, the economy goes back to price stability. These ideas, however, should not be taken as a mechanistic approach to stopping inflation, because when the moment of the truth comes, the fundamental problems and issues, such as raising taxes, scaling down public expenditures and subsidies and setting viable real wages, have to be addressed.

2.16 A final issue is the evolution of Peru's creditworthiness under the scenario under study. It is obvious that the 10 percent rule together with the positive net cash flow criterion would progressively send preferred creditors (now offering a marginally positive or neutral cash flow to Peru) into the arrears category as soon as cash-flows turn into the negative. Therefore, Peru's external debt (at face value) would increase approximately at the pace of the external interest rate (assumed in the

^{8/} Historical experiences show that money progressively loses its properties with hyperinflation. First of all, money loses its property of store of value and that occurs even at moderate inflation rates. But when the financial system offers savings and time deposits at positive real returns, this property is recaptured quickly by the financial system. At higher inflation rates, say 500 and up, money also starts losing its property of unit of account as innovative segments of the modern sector of the economy start to quote contracts and prices in foreign currency so as to minimize possible real losses from unanticipated inflation. At higher rates of inflation, say 1000 percent and up, money starts to lose its property of medium of exchange as transactions in the modern sector start to be made in actual dollars or dollar-based informal documents and the rural sectors move into barter. This last stage entails a progressive repudiation of the official legal tender by the public, which causes monthly inflation to reach three digit figures and eventually marks the final stage of hyperinflation.

exercise at LIBOR) mostly by automatic capitalization of interest and principal due as arrears. By 1991, Peru's foreign debt would have expanded from US\$16.9 million (47 percent of GDP) in 1987 to US\$21.5 million (71 percent of GDP). Furthermore, about 82 percent of the debt would be in arrears.

CHAPTER III

THE MAIN ECONOMIC ISSUES AND POLICY RECOMMENDATIONS

3.01 A clear implication of the foregoing chapter is that Peru's most urgent and overriding economic issue is to stop the financial disequilibria, which are pushing the economy into an explosive inflationary path. In order to do this, public sector revenues need to be revitalized and indexed to inflation, subsidies need to be scaled down and redefined, Central Bank's credit has to be brought to tight ceilings, and financial intermediation needs to be restored. Certainly, this process will be painstaking and difficult. Resumption of growth will have to await stabilization of inflation and of balance of payments pressures, and in the interim the different economic and social groups will have to share equitably the burdens of adjustment. Nonetheless, as explained before, there is no alternative to adjustment, the choice is rather between an orderly stabilization, where accounts balance ex-ante and the costs are negotiated with and distributed among social groups and accepted by them, or else a disorderly process in which hyperinflation does the dirty work of closing the gaps ex-post and distributing the costs arbitrarily and unevenly. Needless to say, in the latter case, the poor stand to lose more than the rich for at least two reasons. First, the progressive collapse of the market mechanism will result in unemployment and shortages of basic foodstuffs. Second, the poor demand more domestic currency (as a proportion of their income) than the rich and tend to quote their labor contracts in domestic currency. Therefore, they will end up paying a larger share of inflation taxes. It is true that, in principle, stabilization can be more or less drastic or gradual. However, the stature of the current disequilibria is so paramount that it is clear that no gradualism can be afforded.

3.02 Stabilizing inflation, on the other hand, will not per se solve Peru's long standing economic distortions and structural problems, although it will surely contribute to it. To address these medium-term and structural issues, specific microeconomic policies and sectoral reforms will be required in the areas of, inter alia: exchange rate regime, structure of foreign trade barriers and incentives, tax reform, allocation of credit, and interest rate policy, price controls, agricultural pricing, state enterprise reform, and removal of labor market restrictions. Moreover, in an increasingly interrelated world, the success and credibility of both stabilization and structural reforms will require confronting the "dormant" external debt problem by continuing and strengthening a constructive dialogue with Peru's creditors. By contrast, ignoring the debt problem will pose a formidable deterrent for restoring normal foreign trade flows and financing, attracting foreign investment, and developing an export-oriented strategy. Seeking solutions to the debt problem on the basis of Peru's ability to pay is both in Peru's and in its creditors' self interest. For Peru, it would ensure a return to normal trade and financial relations with its economic partners. For the creditors, it would imply that they recover directly (debt buy-back schemes) or indirectly (e.g., debt-to-equity swaps) at least a portion of their exposure in Peru. In other words, a negotiated settlement for the debt would, in addition to normalizing Peru's economic relations abroad,

yield the benefit of removing the "moral hazard" factor inherent to the current precarious situation, whereby bad economic performance provides the reward of reducing the market value of Peru's external debt.

3.03 The issues dealt with in this section and the corresponding policy recommendations are interrelated and should not be looked at--or the recommendations followed--in isolation. However, for expositional purposes, the issues and policy options are presented and discussed here one-by-one. In addition some of the issues dealt with here are presented at more length in the Annexes (Volume 2) of this report. Later on, in Chapter IV, an illustrative macroeconomic scenario is presented showing the likely path of the main economic variables under the assumption that the policies stated here are followed. The outstanding issues examined below have been classified into three broad categories: public finance, external sector policies (that comprises exchange rate and foreign trade policies), and other resource allocation issues (that comprises financial policy, price controls, agricultural pricing, labor market issues and state enterprise reform). Although this classification involves some degree of arbitrariness, as any other will, it was deemed adequate to structure the presentation.

A. Public Finance

3.04 Peru's public finance problems can be summarized as a sustained drop of both tax proceeds and state enterprise revenues; a proliferation of foreign exchange, financial and agricultural subsidies; and a considerable increase in the Government's wage bill. The inevitable consequence of these trends (Table 3.1) has been stagnation of public investment and enlargement of the budget deficit. In effect, public sector revenues declined from 43 percent of GDP in 1985 to 26 percent in 1987. In turn, Central Bank foreign exchange and financial losses soared to nearly 3 percent of GDP in 1987. Similarly, agricultural subsidies--excluding preferential credit--reached about 1 percent of GDP in that year. On the expenditure front, the payroll has jumped from 7.9 percent of GDP in 1985 to 8.7 percent in 1987, while public investment has decreased from the already low level of 6 percent of GDP in 1985 to 4 percent in 1987.

3.05 In addition to macroeconomic instability, the aforementioned public finance trends have given rise to distortions in resource allocation and impediments to future growth. Indeed, low prices and tariffs of state enterprises have not only hampered normal maintenance and investment, by curtailing their revenue-earning potential but have also made the private industrial plant unduly dependent on cheap fuels and electricity, and thus promoted capital intensive activities. In turn, foreign exchange subsidies to imported inputs and capital goods have yielded a similar result. Likewise, tax shelters and exonerations to agriculture, fishing and other activities have rendered financially viable endeavors and firms that could face serious financial trouble when these incentives are eventually removed in an attempt to restore needed tax revenues. On the other hand, high subsidies to basic foodstuffs, medicines and gasolines coupled with price controls and an overvalued official exchange rate, have not only increased transitorily the purchasing power of wages to levels not viable in the medium run but also resulted in significant smuggling of these items to

neighboring countries at the expense of the Treasury. Finally, huge credit subsidies and forgiveness of loans have, along with expanding financial losses of the Central Bank, eroded the financial discipline of borrowers and promoted a discretionary allocation of credit unrelated to the prospective returns of projects.

Table 3-1: PUBLIC FINANCE TRENDS
(Variables in Real Terms)a/

	1985	1986	1987
1. Public Revenues	100.0	80.1	69.5
- Taxes	32.4	28.8	23.4
- State Enterprises	61.1	46.6	41.8
- Other	6.5	4.7	4.3
2. Public Expenditures	105.6	92.4	86.7
- Wages	18.3	20.9	23.2
- Investment	13.5	12.1	10.4
- Other	73.8	59.4	53.2
3. Non-Financial Public Sector Deficit	5.6	12.3	17.2
4. Central Bank Losses	4.6	4.7	7.5
5. Overall Deficit (3+4)	10.2	17.0	24.7

a/ All figures are index numbers that have been calculated taking real Public Revenues in 1985 as the base at 100.

Source: Ministry of Finance, Central Reserve Bank and World Bank estimates.

3.06 The need to raise public revenues brings up several closely related issues. As far as taxes are concerned, the point is how to raise tax proceeds in such a way that: (i) the fiscal system be simplified in line with the management capability of the tax administration; (ii) price and intersectoral distortions can be minimized; (iii) the tax structure become more progressive and equitable; and (iv) tax proceeds can provide a stable flow of resources both in times of prosperity and of recession. With regard to state enterprise revenues, the issue is not only protecting prices and tariffs from inflationary erosion but also to establish a target structure of efficient relative prices as well as a timetable to reach that structure.

3.07 In turn, in the area of subsidies the issue is how to substitute the current system of widespread and unbudgeted exchange, financial and price subsidies by another structure of subsidies targeted to needy population groups and subject to a transparent budgetary ceiling. As for real wages and public sector employment, the issue is reducing over-employment and setting real wages at levels consistent with comparable

skills in the private sector and paying due regard to the Government's financial constraint. By the same token, productive public investment in infrastructure and state enterprises, needs to be revitalized pari passu with the restoration of public revenues.

The Tax System: Evolution, Structure, and Recommendations

3.08 **Evolution.** Throughout the 1970s, the tax burden ratio showed remarkable stability (around 12 percent of GDP), and the tax system was characterized by an increasing dependence on the external sector. In 1979/80 the combination of high prices for Peru's mineral exports and a more liberal import policy pushed tax revenues up to 16 percent of GDP, half of which originated in either tariffs, export taxes or profit taxes of exporting firms. External conditions changed in the first half of the 1980s, thereby eroding the traditional tax base. However, domestically based taxes were not adjusted sufficiently to compensate for the fall of foreign trade taxes. As a result, the tax burden ratio fell back to the levels prevailing in the mid-1960s (12.5 percent of GDP in 1981-84).

3.09 Fiscal policies adopted since 1985 by the new Government contributed to a further drop of tax revenues. Revenues from import taxes were reduced by overvaluation of the exchange rate, exonerations and import prohibitions to high-tariff items. Export taxes were equally hurt by overvaluation, unfavorable exchange rates for mineral exports, and also depressed terms of trade. In parallel, further revenue losses resulted from a reduction in the sales tax rate from 11 to 6 percent in 1986, together with low proceeds from gasoline excise taxes that originated, initially, in the price-freeze and, later, from the lagging behavior of gasoline prices with respect to inflation. Other sources of revenue drops were new tax exemptions (under the sales tax and tariffs) to agriculture, fisheries and mass consumption goods and the abolition or transfer to regional bodies of some minor taxes (i.e., payroll, capitalization of profits, gambling, etc.). All in all, these developments translated into a drop in the tax burden ratio from close to 13 percent of GDP in 1985 to 11 percent in 1986 and to 8.8 percent in 1987.

3.10 **Structure.** At present, five main taxes make up the bulk of central government revenues: corporate income tax, sales tax (IGV), import tariffs, excises on fuels, and selective excises on other commodities (mainly beer, tobacco and electrical appliances). In addition, there are two other, now low-revenue yielding, taxes: corporate net-worth tax and export taxes. Some reforms adopted since the end of 1985 have helped reduce the fragmentation of the tax system by abolishing smaller levies, as mentioned above. In addition, a major reform in income tax laws was enacted in 1986 with a view to broadening its base and reducing exemptions. Nonetheless, Peru's tax system still continues to be marked by some undesirable characteristics: fragmentation of the tax base (and on occasion double taxation of the same income source); a pervasive system of incentives and exemptions; lack of adequate protection of revenues against inflation; low degree of enforcement of tax laws; and weak tax administration. A detailed description of the Peruvian tax system is provided in Annex 4.

3.11 As shown in Table 3-2 Peru's tax system compares unfavorably with international standards both in terms of tax burden and equity in taxation. Peru's current tax burden ratio 8.8 percent of GDP is barely half of the average for the sample of comparable countries. In turn, progressivity is low, when measured by the mix between direct and indirect taxes, a rule of thumb conventionally used. In 1987, direct taxes only represented 24 percent of total proceeds well below the average for the sample (35 percent). Peru presents one of the lowest personal income tax ratios of the sample. In 1986, only 4 percent of the segment of the active population, classified by the Labor Department as adequately employed, declared personal income tax liabilities. One element of progressivity, however, is given by the relatively high share of selective consumption excises, 3.6 percent compared to 1.9 percent for the sample. Products subject to excises are either income elastic (appliances, cars, jewels, etc.) or price inelastic (gasoline, tobacco, etc.) in line with modern tax theory on either equity or efficiency grounds.

Table 3-2: PERU'S FISCAL REVENUES COMPARED TO A SAMPLE OF COUNTRIES OF SIMILAR DEVELOPMENT
(Percentages of GDP)

	Countries with US\$1,200 of Per Capita Income (around 1980)	Peru 1987
Income Taxes	5.8	1.7
Wealth and Property	0.5	0.4
Domestic Taxes on Goods and Services	4.7	4.6
- Sales Tax	2.8	1.0
- Excises	1.9	3.6
Foreign Trade Taxes	5.3	1.9
Others	0.7	0.2
Total	17.0	8.8

Source: Vito Tanzi, "Quantitative Characteristics of the Tax Systems of Developing Countries," in Newberry and Stern, editors, The Theory of Taxation for Developing Countries. Oxford University Press, July 1987.

3.12 The main problems of corporate profit taxes are: (i) widespread exemptions to small-scale mining, agriculture, livestock and fishing, and to new businesses in the regions of Selva and Frontera; and (ii) inadequate indexing of tax collections to inflation. Advanced tax payments are calculated using as a proxy the previous year's tax liability and setting, every quarter, monthly prepayments as a percentage of the proxy. The experience has been that when inflation accelerates tax prepayments fall short of accrued taxes. In addition to profit taxes, businesses are

subject to net-worth taxes, which are also collected following a similar proxy system. The existence of two taxes on businesses puts undue pressure on the low administrative capability of the tax office; and in parallel entails double taxation of capital, leading to taxing relatively more the capital-intensive sectors (Table 3-3).

**Table 3-3: SECTORAL DISTRIBUTION OF EFFECTIVE TAX RATES ON PROFIT
STEMMING FROM BOTH CORPORATE AND NET-WORTH TAXES**

Sectors	Effective Rates (1986)
Services	17%
Agriculture and Fishing	23%
Construction	33%
Manufacturing	56%
Oil and Mining	72%

Source: Tax returns of 27,114 firms for Fiscal Year 1986. Raul Beltran (1987), "Los Impuestos en 1986 e Incremento de la Presion Tributaria en 1988." Ministry of Economy and Finance.

3.13 The reduction of the sales tax (IGV) rate from 11 to 6 percent in 1986 brought about a strictly proportional reduction in revenues. Therefore, the expectation (along supply-side lines) that a lower rate would lead to increased revenues due to both broader compliance and output expansion did not materialize. In addition, as with corporate taxes, new exonerations were granted in late 1985 to agriculture, fishing, and basic consumption goods. As it is known, exonerations conflict with the rationale of value-added tax, which is geared to have a neutral impact on relative prices. As shown in Table 3-4, the ratio of taxable sales to total sales is particularly high for manufacturing (71 percent) and commerce (57 percent), and low for construction (2 percent) and agriculture and fishing (4 percent), indicating the widespread exemptions in the case of the latter. In parallel, the low and uneven ratios of taxes paid to taxable sales, in all cases below 4 percent, illustrate the low degree of compliance with the tax.

3.14 The quantitative importance of taxes on foreign trade has declined since the early 1980s, even though import tariffs still represent about 20 percent of total tax proceeds. Export taxes are at present insignificant due to depressed terms of trade. As with the other taxes, the tariff code has developed an increasingly complex system of special provisions and exonerations. This complicates further the already cumbersome tariff structure that comprises 42 tariff positions in a range from 0 to

155 percent. In addition, all imports are subject to import licenses which tend to depress tariff revenues since trade restrictions are tighter on consumer goods, which are subject to higher tariffs. The microeconomic implications of tariffs, licenses and multiple exchange rates are examined in Section B of this Chapter.

Table 3-4: SECTORAL INCIDENCE OF VALUE-ADDED TAX
(Percentages)

Sectors	<u>Taxable Sales</u> Total Sales	<u>Tax Paid</u> Taxable Sales
Services	25%	2%
Commerce	57%	1%
Agriculture and Fishing	4%	4%
Construction	2%	3%
Manufacturing	71%	3%
Oil and Mining	14%	4%

Source: Raul Beltran (1987), op. cit.

Table 3-5: NUMBER OF TAXPAYERS BY MAIN DOMESTIC TAXES IN FISCAL YEAR 1986

	Number of Taxpayers	<u>Percent Distribution of Taxpayers by Sector</u>			
		Manufacture	Commerce	Finance	Other Services
Profit Tax	14,662	22%	40%	15%	23%
Net Worth	20,339	20%	38%	19%	23%
Value Added (IGV)	8,762	32%	50%	9%	9%
Excises	2,030	43%	46%	4%	7%

Source: Tax returns of 27,114 firms for the 1986 fiscal year. Raul Beltran (1987), op. cit.

3.15 Widespread evasion is one of the main issues of taxation in Peru. In the past, the predominance of external-sector generated revenues made it easy for the tax administration to control a handful of importers and big

export companies. By contrast, now the emergence of a greater number of taxpayers coupled with the increase in informal activities has encountered the tax administration unprepared to deal with the situation. Evidence of the low degree of tax compliance is presented in Table 3-5. Of 27,114 firms that provided tax information in 1986, only 8,762 declared liabilities on the sales tax, whereas 14,662 contributed to profit taxes and 20,339 to net-worth taxes. It is hard to believe that only half of Peru's most profitable firms had accrued taxable profits and that two-thirds be exempt under the sales tax.

3.16 As part of the so-called Programa Trienal, elaborated by the Government in 1987, the target set for taxes was to increase tax revenues from 8.8 percent of GDP in 1987 to 16 percent in 1990. In this regard, several tax measures were enacted for fiscal year 1988. These were: (i) to raise the percentages of previous year profit taxes used to estimate advanced monthly prepayments under profit taxes to keep pace with inflation during 1988; (ii) to increase the value-added tax rate from 6 to 10 percent; (iii) to extend the list of articles under selective excises and increase all the rates; and (iv) to create a tax on personal property. With these measures the authorities envisaged a net gain in tax proceeds of about 2 percent of GDP in 1988. Besides, it was announced that by eliminating some exonerations and fiscal incentives, together with a more efficient tax administration, an additional 1 percent of GDP would be raised. It can be seen in Table 3-6 that, while revenues under those taxes for which measures were enacted in 1987 (income, value-added and excises other than gasolines) are growing significantly in real terms, real revenues under the remaining taxes are dropping equally as fast. Therefore, it is unclear whether tax revenues as a percent of GDP will be raised in 1988, particularly in light of rapidly accelerating inflation, which intensifies the adverse effects of collection lags and tends to erode real gasoline prices.

**Table 3-6: PERFORMANCE OF TAX PROCEEDS: JANUARY - MAY 1988
COMPARED TO JANUARY - MAY 1987
(Real Growth Rates)**

Main Taxes	Real Growth
Income	27%
Net Worth	-29%
Tariffs	-19%
Value-Added	35%
Excises	3%
- Gasolines	-46%
- Other	49%
Other Taxes	-28%

Source: Alerta Economica (August 1988). Ministry of Economy and Finance.

3.17 Assessment and Recommendations. Over the last two years the Government has implemented a series of reforms in the areas of income and excise taxes. In addition, several minor taxes of low revenue earning potential, and which rendered the tax system excessively fragmented, have been abolished or transferred to local authorities. Nonetheless, the revenue base of the tax system has been significantly damaged through widespread exonerations, inadequate indexing of tax liabilities, exchange rate overvaluation and lagging relative prices of gasolines. In parallel, the tax administration lacks the skilled manpower needed to run the current complex tax system, has ineffective mechanisms of control and penalties, and lacks integration of all tax-related functions (actual revenue collections are in the hands of Banco de la Nacion whereas tax policy falls under the Ministry of Finance). The Government now intends to embark on a process of fiscal reform with the aim of doubling fiscal revenues to GDP over the next three years. In view of the complexity of current tax laws and the unpreparedness of the tax administration to administer the system, it would be convenient to consider a full-fledged tax reform; analytical work for this task could start now with a view to establishing a new tax system in fiscal year 1990. The reform strategy should try to simplify the current tax structure into a system consisting of a few broadly-based and easily-collectable taxes (say, value added, corporate net worth, a few excises on consumption, tariffs on imports and personal income tax for professionals over a certain income threshold). Recent evidence in this direction for Bolivia indicates the potential payoff of such an strategy. The suggestions below could help in that endeavor.

3.18 Immediate action is needed in two areas. First, reducing collection lags and indexing tax liabilities to inflation. This task requires a tax-by-tax analysis aimed at identifying lags and devising formulae to reduce them and to bring tax liabilities in line with inflation. The recently introduced proxy system to calculate prepayments on corporate taxes is a step in the right direction but, in view of the current upward trend of inflation, prepayment quotas would need to be recalculated monthly instead of quarterly, and underestimation of quotas due to errors in forecasting inflation in past months should be recovered by larger quotas in future months. Likewise, the remaining balance due for the year, which is settled three months after the end of the fiscal year, should also be indexed to inflation. Second, it is advisable to cut down current exonerations under all taxes. Preliminary estimates by the Minister of Economy and Finance place losses in revenue due to exonerations at no less than 4 percent of GDP. Official proposals for cutting exonerations during 1988 by 0.1 percent of GDP are clearly insufficient. Furthermore, it must be noted that additional tariff exonerations have been granted during 1988 to imports of equipment and spares by fishing firms and also to imports of inputs by textile firms processing pure cotton and alpaca.

3.19 A third line of action is reducing tax evasion. This goal, however, will not be achieved until the tax administration is strengthened and the tax laws simplified. Recent administrative steps to create the Superintendencia General de Administracion Tributaria that will encompass the various tax policy tasks now fragmented under different agencies are positive, but need to be coupled with training of manpower, and computation and centralization of all tax files. Until this is done, two lines of

action should be intensified: (i) cross-checking of tax data as well as "in-loco" inspection of a sample of major taxpayers to test the accuracy of tax returns; and (ii) enhanced punitive actions for tax violators.

3.20 As far as tax rates are concerned, three recommendations are pertinent. First, the current tariff code needs to be evened out. A system of lower and less disperse tariffs, coupled with a gradual removal of quantitative restrictions and less tariff exemptions, may well raise tariff revenues while inducing higher productive efficiency. Second, the value-added tax rate could be increased from 10 to 16 percent over two years. The latter was the tax rate in 1982 and is perfectly comparable with international standards. Third, further hikes to selective consumption tax rates other than on gasoline do not appear convenient, since most of these are already above 100 percent (in some cases 250 and 300 percent, Annex 4) and higher rates will probably lead to reduced compliance and black market sales.

3.21 Finally, it is advisable that double taxation of income be avoided in the medium run and to the extent allowed by revenue constraints. The current coexistence of corporate income and net-worth taxes, and the recent creation of a tax on personal property when there is already a tax on personal income, might be questionable on efficiency grounds for it implies taxing savings twice, and also has the negative effect of spreading thinly the low administrative capacity of the tax administration over too many taxes. Although the balance between direct and indirect taxes needs to be improved to give the tax system more progressivity, the efficient avenue to achieve this is by reducing exonerations of and increasing compliance with prevailing tax laws (until the new tax system is introduced) rather than creating new taxes.

Prices and Tariffs of State Enterprises: Evolution, Structure, and Recommendations

3.22 Recent Evolution. Price controls have been particularly stringent in the case of public sector prices and tariffs. During the first 17 months of the current administration, prices and tariffs were frozen with the idea of stabilizing inflationary expectations and reducing cost pressures emanating from prices of publicly-supplied electricity and fuel inputs used by private-sector firms. Hence, frozen public prices and tariffs were at the heart of the Government's economy-wide freeze. When the price freeze was lifted in December 1986, and a somewhat more flexible system of price controls was established instead, public prices and tariffs were adjusted sporadically but, in general, at rates significantly lower than inflation. This policy has had a far-reaching deleterious effect on public enterprise finances and investment and, far from controlling inflationary pressures, has, in fact, been one of the major sources of the current inflationary drive. Indeed, low prices and tariffs have contributed significantly to the current budgetary deficit by causing the unprecedented drop in public enterprises' revenues by nearly 12 percent of GDP between 1985 and 1987.

3.23 Structure. In order to find out the current misalignment of public sector prices and tariffs, these would need to be compared to the relevant efficient prices. For commodities that are or can be traded internationally the relevant comparison is with border prices evaluated at

the "shadow" exchange rate; in turn, for electricity services, water and other "non-tradable" commodities the meaningful comparison is with long-run marginal cost or a similar reference. Such an exercise, however, falls beyond the scope of the present report. Therefore, here the main focus is to analyze the drop in revenues resulting from the lagging behavior of public sector prices and tariffs with respect to inflation. In Table 3-7 the relative prices, in relation to the consumer price index, of a selection of goods and services are presented. The point of reference or base period for the index number computations is July 1985. The sample shown in the table is a subset of a larger sample presented in Annex 5, covering prices of commodities representing about 60 percent of total sales to the domestic market of state enterprises. It can be seen in Table 3-7 that by January 1988 most prices had fallen in real terms to less than half of their levels in July 1985. In turn, the price increases decreed in March and July 1988 barely made up for inflation incurred so far in 1988, let alone lags since July 1985.

Table 3-7: RELATIVE PRICES OF SELECTED GOODS AND SERVICES PROVIDED BY STATE ENTERPRISES
(Relative Prices with Respect to the Consumer Price Index; July 1985=100)

	Jul 85	Dec 85	Dec 86	Average 87	Jan 88	Mar 88	Aug 88
Gasoline 84	100	107	66	57	41	45	32
Kerosene Domestic	100	68	42	30	20	31	22
Diesel 1	100	101	56	37	23	23	17
Electricity							
- Residential	100	100	63	62	55	54	36
- Industrial	100	100	62	59	50	48	39
Rice Regular	100	83	72	65	54	55	49
Corn	100	80	94	76	62	104	47
Fertilizers	100	77	47	31	20	19	14
Soy Oil	100	80	42	34	32	27	12
Wheat	100	80	49	41	31	23	11
Bus Fares	100	104	66	66	57	63	66
Local Telephone Calls	100	96	84	82	77	65	48

Source: Statistical Annex Table 5.1.

3.24 Hydrocarbon prices were, by August 1988, between 16 and 37 percent of prices in the base period. The drop of international petroleum prices since the second half of 1985 could account for part of the drop. However, as seen in Table 3-8, prices to the consumer of the main hydrocarbons are below relevant border prices, with the exception of gasoline which is roughly equal. As it is known, consumer prices of gasoline are in most countries two to three times higher than border prices due to heavy domestic excise taxation of gasoline; the rationale of these excise taxes is that they improve the progressivity of the tax system and also help recover road investment and maintenance costs. Thus, as shown in Table 4.2 of Annex 4, gasoline is now subject to excise taxes of between 375 and 236 percent and diesel to taxes of between 43 and 218 percent (over ex-refinery prices). Therefore, when netting out taxes, the ex-refinery prices (which are the relevant ones for the comparison with border prices) of all hydrocarbons are much lower than border prices; gasoline prices are one-sixth and GLP price is one-tenth (Table 3-8). An additional issue is the relative price structure of gasoline, diesel and kerosene, which are almost identical products and can be easily substituted for each other. With gasoline prices at five times that of kerosene and twice that of diesel, it is likely that there be perverse substitution and inefficient use of hydrocarbons. In a different vein, it must be noted that implicit subsidies in gasoline prices worsen income distribution since, as can be seen in Table 3-9, the budget share devoted to gasoline by the 10 and 30 percent poorest population of Peru is almost nil; all in all only about 1 percent of the poor use gasoline at all.

Table 3-8: PRICES OF HYDROCARBONS: DOMESTIC VERSUS INTERNATIONAL
(As of July 1988 and in US\$/Gallon)

	Domestic Price to Consumers ^{a/}	Domestic Price Ex-refinery ^{a/b/}	Border Price (at Callao)
Gasoline	0.51	0.11	0.60
Diesel 2	0.22	0.13	0.57
Kerosene	0.11	0.10	0.55
Fuel Oil	0.18	0.09	0.36
GLP	0.07	0.04	0.53

^{a/} Exchange rate used for conversion is purchasing power parity rate using December 1978 as base year. In July 1988 this rate was 130.6 intis per dollar.

^{b/} Hydrocarbons are subject to heavy excise taxes.

Source: PETROPERU and World Bank estimates.

3.25 As for electricity and water tariffs, increases since 1987 have been, in general, larger and more frequent than for other prices. Yet, even in these cases, prices have continued to lag behind inflation. Thus by August 1988, electricity prices stood at between 36 and 55 percent of base period prices. It must be noted that subsidizing electricity for industrial use, and in general subsidizing energy costs, hurts employment growth in the medium run, since available econometric evidence indicates that the energy input is a complement of capital and substitute for labor. Thus by subsidizing energy costs, the industrial plant becomes relatively more capital-intensive. This entails making scarce use of Peru's abundant factor of production (labor) and abundant use of Peru's scarce factor (capital). As far as residential electricity subsidies are concerned, it is important to point out that only 12 percent of Peru's poorest 10 percent, and 22 percent of Peru's poorest 30 percent, use electricity at all, whereas 59 percent of the less poor (or richer) 70 percent have access to electricity (Table 3-9). This indicates that the subsidy benefits more the relatively better off and, therefore, is regressive on income distribution grounds. The same applies to water and telephone services.

Table 3-9: BUDGET SHARES OF SELECTED ITEMS
(Percentages)

Item	Poorest 10%	Poorest 30%		Non-Poor 70%	All Peru
		All	Urban Only		
Rice	5.7	5.3	5.2	2.2	2.9
Water Service (% who use)	0.3 (11.7)	0.4 (26.8)	1.1 (65.3)	0.5 (51.5)	0.5 (44.2)
Electricity (% who use)	0.3 (11.7)	0.5 (21.6)	1.4 (58.1)	1.0 (58.8)	0.9 (47.6)
Telephone (% who use)	0.0 (0.4)	0.1 (1.4)	0.1 (4.2)	0.4 (12.0)	0.3 (8.8)
Cooking Gas	0.0	0.1	0.3	0.4	0.4
Kerosene	0.7	1.3	3.1	0.9	0.9
Public Transp.					
- Local	0.8	1.7	3.6	2.3	2.2
- Long Distance	1.0	0.9	0.9	1.2	1.2
Fuel and Oil for Vehicles (% who purchase)	0.0 (0.8)	0.0 (1.1)	0.0 (0.5)	1.9 (11.2)	1.7 (8.2)

Source: P. Glewwe, "The Poor in Latin America During Adjustment: A Case Study of Peru." World Bank Working Paper, (1988), page 35, drawing on data from Peru's Living Standards Measurement Survey carried out by Peru's National Statistical Institute and World Bank in 1985-86.

3.26 Regarding rice, Peru's main staple, the lagging behavior of the price to consumers together with the more frequent actualization of the price paid to producers by ECASA, the rice marketing board, has meant an increasing subsidy. Thus, while in the first half of 1985 the consumer price was slightly higher than the producer price, by 1987 the consumer price became about half of the producer price. Transfers from the Government to ECASA to cover that loss reached 0.3 percent of GDP in 1987. In this case, unlike with gasoline, electricity and water, the point can be made that some form of subsidy may be warranted because the poor devote a much larger budget share than the rich to rice consumption (Table 3-9). However, the current size of the subsidy, with the price to producers being twice the price to consumers, clearly encourages speculative arbitrage because a large spurious profit can be made by simply buying rice from and selling it back to ECASA.

3.27 Assessment and Recommendations. The policy of prices and tariffs is in urgent need of revision and requires a drastic change of course. In the current budgetary crisis, Peru can ill afford the high and growing subsidies channelled by its state enterprise sector. Existing subsidies on products that are consumed relatively more by the relatively rich are unwarranted and need to be reconsidered. Likewise, subsidies to productive inputs spur an overly-extensive use of resources, which are in fact very scarce. This creates a wedge between perceived private costs and real social opportunity costs, where the former are made artificially lower than the latter for scarce productive inputs, and the reverse occurs for abundant inputs. All this translates into suboptimal investment decisions and inefficient use of the country's resources, in addition to reducing the financial viability of the public sector and fueling inflation through larger deficits.

3.28 Hence, eliminating some subsidies and rationalizing others would yield fruits in the medium-run in terms of expanding the productive frontier and creating additional jobs. As noted before, in the case of products more widely consumed by the poorest segments of population, subsidies are indeed justified and warranted. However, even here it is necessary to target adequately subsidies to the intended groups, as well as to place total subsidies under tight budgetary ceilings. Recent evidence in Peru with broad scope indiscriminate subsidies and price controls indicates that a share of the available supply of medicines, milk, gasoline, rice, etc., has found its way across the border, benefiting domestic speculators and foreign consumers. This points out that maintaining internal prices of commodities below export parity leads inescapably to exporting subsidies at the expense of the Treasury or domestic producers or both. In this respect, the indications are that commodities which are imported at the cheapest exchange rate (now 33 Intis/US\$) are later smuggled to Peru's neighboring countries at the parallel market rate (now above 200 intis/US\$).

Table 3-10: REVENUE FOREGONE IN 1987 BY SELECTED PUBLIC FIRMS DUE TO "LOW" PRICES (Percentages of GDP)

	PETROPERU (Hydrocarbon)	ELECTROPERU (Electricity)	ECASA (Rice)	ENCI (Grain Marketing)	TOTAL^{a/}
Gasolines	1.1%	-	Standard: 0.28%	Fertilizer: 0.4%	
Diesel	1.6%	-	Other 0.02%	Other 1.1%	
Residual Fuel	1.1%	-	-	-	-
Other	<u>0.6%</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total	4.4%	Total 0.5%	Total 0.3%	Total 1.5%	6.7%

a/ Total refers to a survey comprising 60 percent of total internal revenues of state enterprises.

Source: Annex 5, in Volume II. Table 5.2.

3.29 The recent Living Standards Measurement Survey carried out by the Peruvian Statistical Institute (INE) and the World Bank provides valuable data to identify the consumption habits and production patterns of the poor as well as their geographical location (a Map of Poverty). These data could, in principle, be instrumental in devising well-targeted subsidies to needy population groups. A suggestion of well-targeted subsidy could be the design of a food coupon program that would give beneficiaries the right to get a, say, 30 percent discount on the purchase of five basic staples in any store. Coupons could be issued by the Ministry of Economy for a total of, say, 0.5 percent of GDP and could be distributed through the network of schools and churches located in the areas singled out on the Map of Poverty. Under this scheme, registered sellers that receive coupons could be allowed to cash them at any branch of a banking institution, which, in turn, would receive a refund at the Central Bank. This scheme would permit phasing out price controls while protecting the purchasing power of the poor.

3.30 A policy of well-targeted subsidies, however, requires time to be designed. In the meantime, the current budgetary imbalance needs to be urgently addressed. Prices and tariffs are central variables in this endeavor because on them depend not only state enterprise revenues but also fiscal revenues, for at least one-third of total tax revenues originate from state enterprises (in particular excises on hydrocarbons). A rough preliminary exercise, detailed in Annex 5 and whose global results appear in Table 3-10, indicates that in 1987 state enterprise revenues could have been raised by at least 6.7 percent of GDP, had prices and tariffs been maintained at the July 1985 real level. This even though the sample analyzed comprises only 60 percent of total domestic sales of state enterprises.

3.31 Therefore, confronting the current budgetary problem inevitably involves moving into and maintaining realistic prices and tariffs. In devising a policy of prices and tariffs two separate aspects need to be considered: static efficiency and dynamic rules of adjustment. Static efficiency dictates that the structure of prices and tariffs to be optimal needs to be set in line with "shadow prices" (border prices for commodities and long-run marginal cost for utilities and other services). In turn, from a dynamic perspective the issues are twofold: first, the need for a timetable to bridge the transition from the current price structure to the optimal one; and second, the need to devise automatic rules for price adjustments so as to ensure that, in the future, prices and tariffs are not eroded by inflation.

3.32 Finding out optimal prices is a straightforward task in the case of border prices, but might require data-intensive and time-consuming studies in the case of long-run marginal cost. Therefore, for those instances in which the necessary price studies are not available, a workable solution could be to establish as a provisional target the relative price that prevailed at the peak of the price time-series. In this respect, July 1985 appears to be a suitable base period for most items. As far as the transition from current prices to optimal prices is concerned, there are two alternatives:

- (a) Shock treatment: Catching-up with optimal prices overnight. This strategy is no doubt the one that would maximize revenues and perhaps the most convenient if the policy goal is to kill off the current hyperinflationary drive. However, it would have transitory disruptive costs in economic activity by making non-viable firms whose financial feasibility has depended deeply on subsidized electricity, fuels or other inputs.
- (b) Gradual transition: This strategy would yield the benefit of distributing over time the costs of adjustment in the real sector, but would also have the unfortunate costs of limiting the revenue gains during the adjustment period and fueling inflationary expectations (prices would have to be adjusted by more than inflation in the catch-up period). Moreover, the current financial situation does not allow for much gradualism. Therefore, a workable proposal could be to set the transition timetable so as to recover the revenue losses of state enterprises incurred during the last three years (12 percent of GDP) over a period of, say, one year.

3.33 Finally there is the issue of rules versus discretion. Under either of these alternatives, public sector prices would have to be adjusted in the future periodically to reflect inflation (or inflation plus a suitable mark-up in the gradualist alternative) or exchange rate devaluation, depending on the type of product. Recent evidence in Peru with high and volatile inflation shows that sporadic and discretionary adjustments fall short of inflation and come with delays, because discretionary procedures are generally vulnerable to the political process, complaints from interest groups, and thus lead to elapsed negotiating processes. To continue with that avenue would, in all likelihood, lead to

further misalignment of relative prices and tariffs, further drops of revenues to GDP and, as a result, a larger budgetary imbalance and more inflation. As in Peru, experience in Latin American countries and elsewhere eloquently shows that in the presence of high inflation the only pragmatic approach to protect public revenues is indexing prices and tariffs to the inflation rate (or the exchange rate in other cases) as a way of depoliticizing public sector pricing. Indexation rules should ideally be forward-looking (based on projected inflation) and at short intervals (weekly or at most monthly) to minimize inflationary inertia. The recent Mexican experience with forward-looking indexation is a good example that merits consideration. A further issue is whether indexing the price of a product whose relative price is misaligned makes sense from the macroeconomic efficiency viewpoint. There is no doubt that the best alternative is to find the right relative price, set a timetable to attain it and then index it. But even if the relative price of a commodity is misaligned, it is better for resource allocation to index its price to inflation, thereby keeping the size of the distortion constant in real terms, rather than allowing the distortion to increase with inflation.

Public Investment: Recent Trends and Recommendations

3.34 **Recent Trends**. Public investment as a percent of GDP has decreased by half compared to 1980-84 (Table 3.11). Reportedly, the present capital expenditures are not sufficient even for maintenance of the existing capital stock, let alone new investments or improvement of the critical situation of many state enterprises and public infrastructure. In 1986, the overall investment level was equal to less than 7 percent of the book value of the fixed assets of the sector. Moreover, book value of capital understates real value given present accounting practices. As a result, the indications are that current investment is less than the depreciation of assets. This will inevitably lead to further deterioration of productivity and financial performance of state enterprises and to bottlenecks in infrastructure. The causes of this situation are: (i) incapacity of public sector to generate sufficient own funds, resulting from the policy of lagging prices, tariffs, and low taxes; and (ii) sharp decrease in foreign financed projects and external technical assistance and cofinancing, due to Peru's foreign debt stance. The focus of this section is exclusively on investment in two key sectors: hydrocarbons and electricity. These two sectors have traditionally accounted for half of total investment of state enterprises and about a third of total public investment.

Table 3-11: PUBLIC INVESTMENT 1980 - 1987
(Percentage of GDP)

	<u>Average</u> <u>1980-84</u>	1985	1986	1987
Central Government	3.0	2.3	2.2	1.5
State Enterprises	4.5	3.5	2.7	2.4
- PETROPERU	0.6	0.7	0.5	0.3
- ELECTROPERU	1.7	1.4	0.8	0.8
- Other	2.2	1.4	1.4	1.3
TOTAL	7.5	5.8	4.9	3.9

Source: Ministry of Economy and Finance.

3.35 PETROPERU's capital expenditures have dropped from an average of US\$100 million per annum in 1981-85 to an average of US\$35 million in 1986-87. Likewise, licensed foreign contractors engaged in exploration and production activities in Peru have reduced investment levels from about US\$250 million in 1981-85 to about US\$50 million in 1986-87. In parallel, domestic demand for petroleum products has grown rapidly, by a cumulative 23 percent between 1985 and 1987, due to declining relative prices. As a consequence of these two trends, proven reserves of hydrocarbons have dropped from a peak of 12 years production in 1981 to 8 years production in 1987. Moreover, the indications are that Peru has again become a net oil importer in 1988, after having been a net exporter since the early 1980s. Indeed, although production is still larger than domestic consumption (150,000 versus 135,000 barrels/day), the 1988 forecast for external trade in hydrocarbons is that Peru will run a deficit of about US\$90 million. This is so because, due to technological factors of Peruvian refineries, petroleum throughput is heavily biased towards residual fuel oil which is not needed domestically and then has to be exported at low prices (US\$60/ton). In turn, Peru imports large quantities of light fuels such as kerosene, diesel and jet kero at the higher price of US\$200/ton. In sum, although at present Peru is still a marginal net exporter in volume terms, in value terms it has become a net importer again.

3.36 Hydrocarbon production is one area where the Government has traditionally relied heavily on foreign participation: PETROPERU has exploration and production contracts with Occidental Petroleum and Oxy-Bridas. In 1985 the Government terminated the contract with Belco and forced a renegotiation of contracts on the other two under less favorable conditions. This led to a decline in activities of foreign firms. Shell has been working under an exploration contract and has recently discovered an important field of natural gas and condensates, with reserves estimated at 11 trillion cubic feet of natural gas and 650 million barrels equivalent of condensates. The development of this field, should it prove financially viable, would require an investment of US\$1.5 billion and could form the base of Peru's energy supply in the latter part of the 1990s. The

Government has recently signed a tentative development agreement with Shell. On the other hand, to spur increasing activities by foreign firms in exploration and production, the Parliament made significant changes to the Hydrocarbons Law in late 1987. The attractive new features of this law include accelerated depreciation of exploration costs and a facility to repatriate profits.

3.37 **ELECTROPERU** has the largest share of investments but, as a ratio to GDP, investment has also dropped by about half between 1980-84 and 1986-87. As a result, it is expected that the excess capacity of the recent years will disappear and in 1989 there could be a shortfall in generating capacity if tariffs are not adjusted sufficiently and demand growth remains unchecked. A small addition to hydrocapacity, the 83 MW Carhuaquero plant is expected to come on stream in 1989. In addition, ELECTROPERU is planning to invest in a 200 MW peaking gas turbine, an investment of US\$126 million. This unit would be added to the system in 1990-91 provided that ELECTROPERU successfully seeks export credit.

3.38 Finally, a word on mining. There are four public enterprises operating in the sector: CENTROMIN, MINEROPERU, TINTAYA and HIERROPERU. Their investment has been cut sharply in 1986-87, to less than one-fourth of the 1983 level, and although production has not declined significantly, recoverable reserves have dropped considerably in recent years. Moreover, technical conditions in the mines as well as mineral transportation belts have been reported in urgent need of rehabilitation.

3.39 **Recommendations.** Recent public investment trends will have serious repercussions on future growth. Again, here is seen the importance of raising prices and tariffs to realistic levels so as to both restore the financial position of state enterprise and thus their investment and correct the unchecked growth in demand. In the absence of urgent price measures, capacity constraints in electricity will be encountered soon and Peru will turn into a chronic oil importer. In a different vein, the decline in investment has also unveiled Peru's reliance on external partnership and technical assistance and also the direct relation between the latter two and Peru's attitude towards the foreign debt. If anything, this points out the need to strengthen a constructive dialogue with all creditors with a view to finding solutions to the debt impasse. Debt to equity swaps, for example, could simultaneously help on the foreign debt and investment fronts. Finally, it must be noted that the prospects of public investment in the two or three years to come, even in the most optimistic adjustment scenario, are grim indeed, because priority and emphasis will have to be given to stabilization.

The Central Bank's Quasi-Fiscal Deficit: Definition, Measurement, and Recommendations

3.40 **Definition.** The Central Reserve Bank's (CRB) intervention in Peru's financial and foreign exchange markets has created subsidies to the private sector with budgetary implications. Those subsidies, that are conventionally referred to as the quasi-fiscal deficit of the CRB, have recently become an important source of primary money creation. The sources of the quasi-fiscal deficit (QFD) examined here are interest rate and foreign exchange losses. Interest rate losses occur when the interest the CRB pays on its liabilities (mainly legal reserves of financial agents in

the CRB and interest on foreign liabilities, since currency in hands of the public bears zero interest) is higher than the interest it receives on its assets (mainly credit to the Government, credit to the development banks and international reserves). On occasion, CRB's financial losses also arise from: (i) forgiveness of loans made by financial agents upon request of the Government--two recent cases are the debt of medium and small firms with the Banco Minero and the debt of northern peasants with the Banco Agrario; and (ii) operational losses incurred by development banks. In turn, foreign exchange losses are a result of multiple exchange rates. During the 1985-87 period, foreign exchange losses were due to the fact that the average exchange rate paid to exporters and other sellers of foreign exchange (including those offering foreign exchange to the Government in the open market) exceeded, on average, the exchange rate charged to importers and financial debtors.

3.41 **Measurement.** Foreign exchange and financial losses are difficult to measure, since they are excluded from the legal definition of the budget deficit and fall outside the budgetary cycle, and for that matter escape the authority of the Minister of Finance. The current CRB accounting practice is to capitalize those losses under the item Net Unclassified Assets (NUA). Netting out the effective flow of foreign exchange losses incurred every period from NUA is not an easy task. Other items such as revaluation of assets and liabilities in foreign exchange and movements in the price of gold appear aggregated in the same sub-account along with pure foreign exchange losses. Something similar happens with financial losses. An attempt was made to identify and estimate as accurately as possible foreign exchange and financial losses from 1985 to 1987. The results are shown in Table 3-12 and the methodology is presented in Annex 3. It can be seen that the so-called CRB quasi-fiscal deficit soared since the second half of 1987, following the exchange rate adjustments of October and December of that year that expanded the dispersion of multiple exchange rates and widened the gap between the import and export rates. All this resulted in a quasi-fiscal deficit of 2.8 percent of GDP in 1987, of which 2.5 percent occurred in the second semester alone.

Table 3-12: CENTRAL RESERVE BANK'S QUASI-FISCAL DEFICIT (QFD)
(Percentages of GDP)

	1985			1986			1987		
	1985 I	1985 II	Year	1986 I	1986 II	Year	1987 I	1987 II	Year
Financial Losses	-	0.5	0.5	0.4	1.0	1.4	0.2	0.6	0.8
Foreign Exchange Losses	0.2	1.2	1.4	0.5	-0.1	0.4	0.1	1.9	2.0
Total QFD	0.2	1.7	1.9	0.9	0.9	1.8	0.3	2.5	2.8

Source: Annex 3.

3.42 **Projection 1988.** The exchange rate adjustment rule followed since January 1988--consisting in devaluing the export exchange rate monthly at the pace of domestic inflation while adjusting import rates less frequently and by less than inflation--has translated into an ever-widening exchange rate gap and thus greater exchange losses. Two estimates of foreign exchange losses in 1988, on the basis of the information available as of

August 1988 and under two scenarios for September to December, are presented in Table 3-13. In both scenarios the export rate during September to December is adjusted pari passu with projected domestic inflation. However, the scenarios differ on the import rate assumption. In scenario A (optimistic), the assumption is that the import rate is gradually moved closer to the export rate so as to close the gap between both rates by December 1988. By contrast, in Scenario B (pessimistic) the gap is kept throughout at the level of August 1988. The result is that foreign exchange losses alone would be in the range of between 3.1 percent and 5.1 percent of GDP. Adding to this a projection of financial losses of 1 percent of GDP, the quasi-fiscal deficit in 1988 would be in the range of 4.1 percent to 6.1 percent of GDP.

3.43 **Recommendations.** Foreign exchange losses have become the single most important budgetary problem. The unification of exchange rates alone would correct more than one-third of the current budgetary imbalance. Although it can be argued that, in principle, the exchange rate structure could be fine-tuned so that losses are eliminated, the evidence in Peru and elsewhere has been that, in practice, multiple rates result almost inescapably in exchange losses. It must be noted that, in addition, multiple rates lead to other efficiency losses in resource allocation; this issue is addressed below in Section B of this Chapter. The exchange rate adjustment pattern followed since December 1987, consisting of indexing the export rate to domestic inflation while managing discretionarily the import rates, if continued will lead to increasingly larger losses. In turn, financial losses will also continue to widen as long as interest rates on commercial banks deposits (and thus the return paid by CRB on legal reserves) are increased without simultaneously adjusting the rates charged by development banks to their borrowers and relatedly the rates charged by the CRB to development banks. Additionally, forgiveness of loans by financial intermediaries will also contribute to worsening the already critical budgetary problem.

3.44 Foreign exchange and financial subsidies should ideally be transparent, subject to the budgetary cycle and under the responsibility of the Ministry of Finance. By contrast, when they are hidden in the monetary accounts it is cumbersome to have a clear assessment of the budgetary problem, let alone to limit the subsidies to a budgetary ceiling. Some public agencies have learned the way to get extra-budgetary transfers through multiple exchange rates. For example, ENCI obtained considerable "transfers" in 1986 and 1987 by importing foodstuffs, particularly maize and wheat, at the lowest exchange rate and later selling those products at higher prices. The total transfer to ENCI reached 0.5 and 0.9 percent of GDP, more than one-third of total foreign exchange losses, in 1986 and 1987, respectively. Contrary to a common belief that keeping import exchange rates and official interest rates down helps keep inflation down by reducing cost-push pressures, in reality these subsidies entail a transfer of monetary and real resources to preferred borrowers and importers. This transfer, in turn, has to be paid for by bank depositors and currency holders (largely workers) by taxing the latter through higher inflation. Generally, the latter groups are poorer than the former, and therefore the transfer is socially regressive.

Table 3-13: PROJECTION OF FOREIGN EXCHANGE LOSSES IN 1988

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Foreign Exchange Losses (Percent of GDP)
Monthly Inflation	12.8	11.8	22.6	17.9	8.5	8.8	30.9	23.8	19.4 ^P	19.4 ^P	21.6 ^P	22.7 ^P	
Average Export Rate (Intis/US\$)	43	48	54	67	77	92	100	132	166 ^P	198 ^P	236 ^P	287 ^P	
Average Import Rate (Intis/US\$)	38	36	45	45	45	47	71	76					
- Scenario A ^a									110 ^P	150 ^P	206 ^P	287 ^P	3.1%
- Scenario B ^b									96 ^P	114 ^P	137 ^P	166 ^P	5.1%

Note: The assumption for GDP in 1988 is 3,278 billion Intis, corresponding to real GDP growth of -5 percent and GDP deflator inflation of 365 percent. These assumptions are the same as in the low policy scenario presented in Chapter II (para. 2.7). In turn, the turnover of dollars [(Imports + Exports)/2] is assumed at US\$3,500.

p/ Projection.

a/ Scenario A: The assumption is that import rate is adjusted so that to gradually close the gap between import and export rates from September to December.

b/ Scenario B: The assumption is that the gap is maintained from September to December at the level prevailing in August.

B. External Sector Policies

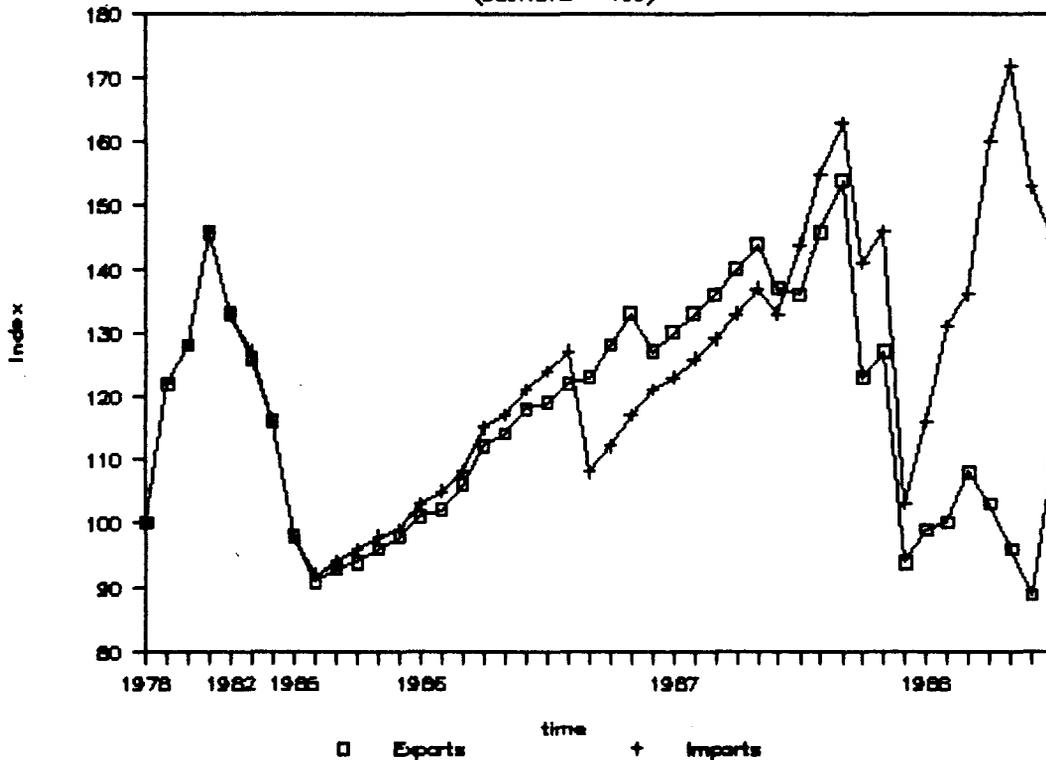
Exchange Rate Policy: Evolution, Structure, and Recommendations

3.45 **Recent Evolution.** Peru's exchange rate system has been subject to considerable changes in the rules of the game in recent years. As far as the structure is concerned, multiple exchange rates for commercial transactions were first introduced in August 1985 with the original idea of granting more favorable rates to manufacturing exports than to traditional (fishmeal, mineral, and agricultural) exports. By December 1985 there were three rates for exports and one for imports. In September 1986 the scope of multiple rates was extended to imports by granting a preferential rate to "priority" import items such as wheat, medicines and fertilizers. Thus, by December 1986 there were four rates for exports and two for imports. During 1987, the rate structure was complicated further by, first, creating a whole constellation of rates for specific categories of exports and later, in December 1987, reducing the number of export rates to two but expanding the number of import rates from three to seven. Hence, at its peak, the multiple rate system had as many as nine different rates for commercial transactions alone. In July 1988, the number of import rates was cut down to three, but later, in August, it was again expanded to five. Therefore at present there is a total of six rates, with two different rates applicable to exports and five rates applicable to imports. The changing exchange rate structure for commercial transactions is shown in Table 3-14.

Chart 3-1

REAL EXCHANGE RATE — EXPORTS & IMPORTS

(Dec. 1978 = 100)



Note: A drop in the indexes means real depreciation. The indexes refer to the weighted average of all multiple exchange rates applicable to imports and exports, respectively, adequately adjusted by the relation between Peru's Consumer Price Index and that of Peru's seven main trading partners. The base is December 1978=100.

Table 3-14: EXCHANGE RATE STRUCTURE FOR TRADE TRANSACTIONS: 1985-88

Type of Transactions	Exchange Rate/(Intis per US\$)						
	Dec. 1985	Dec. 1986	July 1987	Dec. 1987	May 1988	July 1988	Aug. 1988
<u>Imports</u>							
1. Wheat, maize, medicines, dairy, edible oil	13.9	13.9	15.9	15.9	15.9	33.0	33.0
2. Fertilizers and seeds	13.9	13.9	15.9	20.0	20.0	33.0	33.0
3. Low grade beef and livestock	13.9	17.5	19.0	25.0	25.0	33.0	33.0
4. Raw material and imports	13.9	17.5	19.0	33.0	33.0	33.0	33.0
5. Paper and tractors	13.9	17.5	19.0	33.0	33.0	33.0	75.0
6. High grade beef	13.9	17.5	19.0	35.0	35.0	125.0	125.0
7. Priority capital goods	13.9	17.5	29.0	45.0	45.0	125.0	125.0
8. Consumer goods, non-essential imports and capital goods	13.9	17.5	29.0	54.9	74.3	125.0	125.0
9. Imports of petroleum companies	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	131.0
10. Automobile spare parts	13.9	17.5	29.0	54.9	74.3	125.0	209.0
Weighted Average <u>a/</u>	13.9	16.9	20.7	36.1	45.2	75.5	88.4
<u>Exports</u>							
11. Petroleum	13.9	13.9	18.7	40.0	77.0	100.1	131.0
12. Mining (small & medium mines)	14.1	15.9	22.4	40.0	77.0	100.1	131.0
13. Cotton	14.1	15.2	21.0	40.0	77.0	100.1	131.0
14. Coffee, sugar & fishmeal	14.1	15.2	20.0	40.0	77.0	100.1	131.0
15. Other traditional	14.1	15.2	19.1	40.0	77.0	100.1	131.0
16. Non-traditional (except certain textiles)	14.6	19.2	26.8	42.0	77.0	100.1	131.0
17. Alpaca, cotton and wool textiles	14.6	19.2	29.0	42.0	97.9	127.3	166.7
Weighted Average <u>a/</u>	14.2	16.0	21.5	40.6	77.3	100.5	131.6
<u>Memo Item:</u>							
Number of import rates	1	2	3	7	7	2	5
Number of exports rates	3	4	7	2	2	2	2
Total number of rates for trade	3	5	9	9	9	4	6

a/ Weights equal to the shares of each group of imports (exports) in 1984 total imports (exports).

Source: Central Reserve Bank.

3.46 As far as the management of the real exchange rate is concerned, the period between July 1985 and August 1988 can be divided into three broad subperiods. The first, from July 1985 to December 1986, started with an 18 percent devaluation of the two benchmark exchange rates (commercial^{9/} and financial). After July 1985, the two benchmark rates were held fixed against the US dollar until December 1986 as part of the freeze. During this period, however, some nominal devaluations did in fact take place by transferring some transactions from the relatively appreciated MUC rate to the higher financial rate, or else by granting ad hoc weighted averages of both rates for specific commodities. Nevertheless, the nominal devaluation of the average exchange rate against the US dollar carried out in this manner amounted to only 18 percent between August 1985 and December 1986. On a trade-weighted basis however, some help came from the slide of the dollar against other currencies, since 60 percent of Peruvian trade is with countries other than the US, the 40 percent devaluation of the dollar against the other four major currencies translated into an "implicit" additional devaluation of the Inti of about 24 percent in 1986. All in all, these movements were insufficient to compensate for the differential between internal and external inflation and consequently the average effective exchange rate appreciated 26 percent in real terms between August 1985 and December 1986. The second subperiod starts in January 1987 with a move to a crawling peg regime. Thus, both official exchange rates (MUC and financial) started to be depreciated at a rate of 2.2 percent per month, but again this was not enough to compensate for the then rising inflation rate. In July 1987, the monthly depreciation of the two official rates was brought to a halt. By the beginning of the third subperiod, October 1987, the trade-weighted effective real exchange rate index had risen to 161 from its level of 91 in August 1985 (an increase in the index means real appreciation). It bears mentioning that throughout this period the degree of overvaluation varied considerably between different products, due to multiple exchange rates. For example, in October 1987, the real exchange rate index for nontraditional exports stood at 109, while for some "essential" imports the index level was 227.

3.47 The third subperiod started in late 1987. In view of the deteriorating international reserves position, two devaluations were carried out in October and December 1987, by a cumulative 78 percent on average. After these devaluations, the effective real exchange rate, on a trade-weighted basis, was slightly below (more competitive than) the level prevailing when this administration took office (98 versus 91). In addition, the Government announced that it would pursue a strategy of monthly mini-devaluations through 1988, adjusting the exchange rate by the increase in the Wholesale Price Index recorded over the preceding month or by 85 percent of the change in the Consumer Price Index if figures for the WPI were not timely available. However, this preannounced rule was quickly discarded, for in January only the export rates were devalued and by less than 85 percent of consumer price inflation for that month (6.8 versus 12.8 percent). In February, the Central Bank devalued again the export rates by 10.9 percent and once more left the import rates unchanged. Finally, in March the Government announced that export rates would continue to be depreciated monthly to ensure appropriate competitiveness for the exporting sectors. By contrast, it was also announced that the import rate structure, that resulted after shifting some import transactions to the

^{9/} The commercial rate is officially called rate of the Mercado Unico de Cambios (MUC).

more depreciated rates, would be left unchanged for 180 days. Hence, export rates continued to be devalued in March, April and June on the basis of domestic inflation, while import rates were maintained unchanged. Needless to say, it was at that point when the gap between the average import rate and the average export rate widened sharply and with it foreign exchange losses mounted. During July and August the export rates were devalued by exactly the rate of inflation and some adjustments were made to both the level and the structure of import rates, but the average import rate stood at a level of 67 percent of the export rate.

3.48 **The Problems of Multiple Exchange Rates.** The original intent pursued with multiple exchange rates is usually to promote specific export activities or to subsidize certain types of imports. However, such exchange rate systems have serious efficiency, fiscal and administrative implications. Among them, the following are the most relevant. First, multiple exchange rates entail a system of implicit subsidies and taxes to specific export and import substitution activities, arbitrarily encouraging some activities and penalizing others. Besides, to the extent that multiple exchange rates affect imported inputs, pervasive differential effects are caused on the cost structure of production processes. All this distorts the relevant opportunity costs and blurs the informative content of prices as indicators of relative scarcities, leading to inefficient allocation of resources. Second, multiple rates duplicate the incentive structure which derives from tariffs and export taxes and lead to possible inconsistencies between both systems of incentives (e.g., a favorable exchange rate encourages one activity and the tariff structure penalizes it by, say, raising high tariffs on its inputs). Third, multiple rates generally translate into foreign exchange losses and are costly to administer; adding to budgetary imbalances. Finally, the existence of multiple rates elicits spurious rent-seeking behavior on the part of economic agents, opens doors to corruption, and draws scarce public sector managerial talent to an unproductive task.

3.49 Multiple exchange rates in Peru have been defended on four grounds: (i) the need to grant export groups higher exchange rates the higher the supply elasticity of the export category; (ii) the need to subsidize priority imports through low exchange rates; (iii) the need to alter relative prices "to conform national priorities"; and (iv) the fact that allegedly the Customs administration is inefficient to enforce the tariff code and consequently, it has been argued, tariff policy is ineffective to achieve the previous objective. The first three arguments are questionable in view of the considerations made in the previous paragraph. Moreover, the fiscal cost to the budget of foreign exchange losses was already examined above (Section A). In turn, a preliminary assessment of the price distortions involved in multiple exchange rates is made below (Section B).

3.50 As for the fourth argument, it must be noted that, if Customs is incapable of administering tariffs effectively, this must necessarily apply to managing multiple exchange rates too, for it is also Customs who verifies which commodities enter/leave the country and at which exchange rate. Therefore, the advisable course of action would be to reform and restructure the Customs Office, enabling it to administer tariffs efficiently, while unifying altogether multiple commercial exchange rates.

3.51 Recommendations. In line with the two issues raised above, the recommendations can be classified under two headings. The first refers to the structure of exchange rates and the second refers to the management of the real exchange rate. Regarding the structure of exchange, the considerations made in the previous section underline that no other price matches the exchange rate in its ability to provide pervasive signals for guiding efficient microeconomic allocation of resources. By encumbering the exchange rate with additional functions, its fundamental role is diluted and the comparison of domestic and foreign costs and prices becomes distorted, leading to resource misallocation. Besides, as mentioned in above, the Government cannot afford the growing foreign exchange losses implied by multiple rates. The aforementioned considerations suggest that Peru's economic efficiency in resource allocation could be improved by unifying all exchange rates for commercial transactions. Promotion policies are best dealt with through the tariff system. In addition, if the Government wishes to continue subsidizing certain imports, this is better done by either reducing the relevant tariffs or by explicitly granting subsidies through the Government's budget, if and when this is financially feasible.

3.52 As far as the management of the exchange rate is concerned, the main issues are whether to allow the exchange rate to float freely or whether to follow a sufficiently flexible crawling peg, and whether or not there should be controls to capital transactions. In the current Peruvian macroeconomic environment of high and very volatile inflation, and with unsettled fiscal and monetary disequilibria, the possibility of following an independent exchange rate management--for instance a preannounced crawling peg or tablita--should be ruled out as non-viable. In this regard, recent experience in Peru and elsewhere eloquently shows that using the exchange rate to stabilize inflationary expectations, in the absence of financial discipline, is tantamount to running against the stream and leads, in all likelihood, to growing overvaluation, severe foreign exchange rationing, loss of reserves, proliferation of parallel markets, and ultimately exchange regime collapse. Examined below are the three viable options in exchange rate management:

- (a) Floating Rate Regime. The adoption of an unrestricted floating regime would probably be the best alternative. In such a context, equilibrium in the balance of payments would be attained through endogenous exchange rate adjustment, while allowing the Central Bank to gradually restore international reserves. In addition, it would permit the integration of the current parallel market into the mainstream, thereby enhancing the supply of foreign exchange. In this framework, policy making would focus on curtailing the public finance imbalance as the means of gradually reducing inflationary pressures and thus exchange rate depreciation. Furthermore, it would send the private sector a clear signal of the Government's commitment to maintain external competitiveness and with it serve the interests of the exporting sector. It is true that exchange rate changes would feed-back the inflationary process and vice versa. However, this is inevitable given the current expansionary stance of domestic financial policies and inflationary momentum. Any other exchange rate regime would prompt the same feed-back on inflation, if not through the official exchange rate, through the inevitable parallel market

rate. The transition to the float could be carried out either overnight or gradually. The latter course could be pursued by progressively sending import and export transactions to the Mesa de Negociacion,^{10/} following a prespecified timetable, and allowing the exchange rate sufficient flexibility to clear that market without rationing. Removal of control to capital flows could be considered as the last stage of the transition process.

- (b) Two-tier Exchange Rate. Some economists have proposed the temporary use of a dual exchange rate with a commercial rate and a financial rate--for the purpose of isolating the trade account from volatile short-term capital movements without resorting to capital controls. To achieve that objective, it is necessary that the exchange rate used for short-term capital transactions be sufficiently flexible to play the role of a shock absorber. The idea is to weaken the link between the capital account and the trade account without affecting official foreign reserves (provided that the Government does not intervene in the financial market). Problems arise, however, if a significant and persistent spread between both rates is allowed to develop. This occurs when underlying economic forces give rise to capital movements of a long-term nature. Such pressures are generated, for example, when there is a permanent worsening of terms of trade or when interest rates are controlled in such a manner that domestic interest rates fall short of expected returns on foreign assets. These developments prompt asset holders to seek higher returns abroad; this, in turn, pushes up the financial rate. Once a significant spread develops exporters and importers have incentives to under- and over-invoice their respective receipts, with the effect of draining official reserves. Also, domestic agents are likely to base their inflation and official exchange rate expectations on the behavior of the market determined financial rate in setting prices and wages. Under these circumstances, governments are tempted to intervene with the objective of stabilizing the financial rate and inflationary expectations. Such intervention in effect finances capital flight. To avoid this outcome, the more adequate response is to reduce the exchange rate spread by adjusting the official rate along with the other policy parameters, such as domestic interest ceilings and/or tighter credit ceilings. Moreover, as agents become more familiarized with the dual system and gain arbitrage experience, the Government is forced to respond increasingly quickly to any change in spread, so that eventually the justification for having dual rates vanishes. An alternative option is to impose capital controls. This strategy inevitably leads to

^{10/} The Mesa de Negociacion (MN) is an auction run by the Central Bank to exchange the still outstanding stock of CDs in foreign exchange. It operated actively from July 1987 to April 1988, when some import categories were sent to this market. However, after a new "free" market, operated by commercial banks, was created in April the MN lost relevance. The workings of the MN is described in Annex 6.

the creation of black markets, with similar characteristics to the financial exchange market that was just discussed. There may be fewer agents disposed to participate in an illegal parallel market than in a legal one, and that may, on the other hand, reduce the volume of potential capital flows responding to changing economic conditions. However, since it makes for a thinner market, the parallel exchange rate is likely to be more volatile and thus have a more unsettling impact on price expectations. It is hardly clear, therefore, that this represents a better alternative. In either case, while there is a rationale to maintain in the very short run a two-tier exchange rate system, the only effective solution in the medium term is to unify exchange rates and allow the exchange rate to float or else adopt a sufficiently flexible exchange rate policy stance.

- (c) Crawling Peg. The Central Bank could also follow a policy of flexibility in exchange rate management without recurring to a float. In this context, the Central Bank would have to target a desired overall balance of payments outcome (flow of international reserves) and adjust the exchange rate sufficiently to achieve it. This necessarily entails a "trial and error" process and, unlike a float, is subject to imprecision, particularly in the short run, and also requires an adequate level of reserves. Another pitfall of this procedure is that it leaves a great deal of discretion to the monetary authority and with it the temptation of letting the rate become overvalued. The private sector, therefore, might perceive as uncertain the Central Bank's commitment to manage the exchange rate adequately. In any case, if a crawling peg is adopted, it is important that the Government does not preannounce a rate of devaluation; instead, the suitable depreciation at each time should be decided in view of the course of foreign exchange receipts and outlays, reserve position, domestic versus foreign inflation, and terms of trade developments.

Table 3-15: CONSUMER VERSUS WHOLESALE INFLATION
(Percent)

	CPI	WPI
1980	60.8	53.0
1981	72.7	66.1
1982	72.9	64.2
1983	125.1	136.5
1984	111.5	115.6
1985	158.3	166.4
1986	62.9	37.3
1987	114.5	72.4

Source: Central Reserve Bank.

3.53 Finally, two technical issues relevant to the crawling peg alternative deserve consideration: (i) the use of price indexes for real exchange rate calculation; and (ii) exchange rate indexation rules. Regarding the use of price indexes in the computation of real exchange rate indexes, the bundle of goods used in calculating the WPI encompasses a higher proportion of traded to nontraded goods than the CPI. Consequently, a real exchange rate index based on differences in the WPI inflation rates is, in principle, a better indicator of the competitiveness of domestic relative to foreign tradables. This is important for existing Peruvian exporters currently competing against foreign producers and for consumers deciding between buying domestic or foreign tradables. Real exchange rates computed on the basis of the CPI, on the other hand, represent a better index for gauging the relative price of traded to non-traded goods. This is important in an intertemporal context for both existing exporters deciding to expand production capacity and new investors deciding to set up production for specific markets. Even though a producer remains competitive internationally, it may prove to be even more profitable to reorient production toward the domestic market. Moreover, to the extent that labor costs are important in determining profitability, those costs are more closely linked to the CPI than to the WPI. On the consumer side, the question is whether to buy tradables versus nontradables. Therefore, in principle, both indices should be taken into account to form a judgment as to the required magnitude of a devaluation, and in this sense the Government's current policy stance represents a good compromise. In the case of Peru, however, there are reasons to suspect the accuracy of the WPI, which suggests that more emphasis be placed on the CPI-based real exchange rate. This is because the WPI, unlike the CPI, is constructed on the basis of list prices rather than actual prices. In 1986, the Government introduced a comprehensive system of price controls, which is only partly effective in practice. The list prices used in calculating the WPI reflect the official price structure and thus underestimate true transaction prices. This is evident from the increasing divergence of the CPI inflation rate from the WPI rate observed after 1985, as shown in Table 3-15.

3.54 Regarding the issue of exchange rate indexation, the current strategy followed for exports of devaluing the exchange rate in proportion to the rate of inflation is advisable in view of the magnitude of domestic fiscal-monetary shocks. Adherence to this indexing rule should not be too rigid, however, since there may also be other shocks that require exchange rate adjustments. Movements in international commodity prices, interest rates, and flows of external financing are examples of real disturbances that are particularly relevant to Peru. Table 3-16 describes the evolution of Peru's term of trade. These have fluctuated widely over the last decade and are currently about 50 percent below the peak level in 1980. Appropriate adjustments of the exchange rate are needed to counter the impact of terms of trade movements even when a purchasing power parity rule is pursued. Moreover, it is also useful to note that the 1987 terms of trade are still about 24 percent below the 1978 level, so caution is advised in using the later year as a benchmark for pegging the real exchange rate. Other variables such as capital flows and, particularly, international reserves targets also need to be considered in the management of the rate. Therefore, in practice, the process should be one of "trial and error" in which the effects that changes in the exchange rate have on the Balance of Payments are continuously monitored so as to get feed-back about the future desirable course of the exchange rate.

Table 3-16: PERU'S TERMS OF TRADE a/

1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
114.8	100.0	126.8	141.2	119.5	102.3	108.7	101.1	96.1	78.0	76.5

a/ Defined as Index of Export Prices over Index of Import Prices.

Source: World Bank estimates.

Import Restrictions: Structure, Assessment, and Recommendations

3.55 **Quantitative Restrictions.** Import licenses and prohibitions came into use as instruments of protection in the late 1960s and were broadly used during the 1970s with the military Governments of Velasco Alvarado and Morales Bermudez. By March 1979, imports under 40 percent of all tariff positions were prohibited, another 22 percent of items required an import license, leaving only 38 percent free from Quantitative Restrictions (QRs). During the early 1980s, most QRs were removed as the last military cabinet and later the Belaunde Government adopted a trade liberalization course. Beginning in 1984, the trade liberalization plan was abandoned and QRs were increasingly reestablished, mainly prompted by the pressure to reverse a rising deterioration in the trade balance and rising resistance of private import-substitution firms. However, the real causes of the failure of the liberalization effort were expansionary fiscal policies and exchange rate overvaluation. Since 1985 trade restrictions have been intensified; 10 percent of all items are subject to import prohibition, and the number of items requiring import licenses has been increased. Currently, all merchandise imports require an import license (Table 3-17).

**Table 3-17: RECENT EVOLUTION OF QUANTITATIVE RESTRICTIONS
(Number of NABANDINA Tariff Positions)**

	March 1979	1980	1983	Dec. 1984	1985	1986	Aug. 1987	Oct. 1987
Free from QRs	1,753	4,990	5,136	4,996	3,244	3,244	1,830	0
Import License Required	1,038	107	118	126	1,568	1,575	2,975	4,805
Import Prohibited	1,852	7	8	179	525	540	535	535
Total Number of Tariff Positions	4,643	5,104	5,262	5,301	5,337	5,339	5,340	5,340

Source: Central Reserve Bank.

3.56 The comprehensive coverage of import licenses was introduced in March 1987. Licenses are subject to a double approval process, whereby importers submit import applications to the Institute of Foreign Trade (ICE), and this, in turn, refers first round successful applicants to the Central Bank for final approval. Import licenses are issued in conformance to the foreign exchange budget determined jointly with the sectoral ministries, ICE, and the Central Bank. The foreign exchange budget is drawn up annually, subject to quarterly revisions, on a tariff item basis. That is, a certain maximum amount of foreign exchange is available for imports under each tariff item at one of the official exchange rates. In January 1988, a regulation was enacted whereby some imports of inputs, spares, intermediate, and capital goods can be financed with the importer's own foreign exchange. In this case, ICE automatically issues the import license within five days, following a no objection clearance by the Ministry of Industry. Besides, imports under this scheme are granted preferential treatment in the payment of import duties.^{11/} Allegedly, the rationale of this measure is to complement the now meager resources of the foreign exchange budget with parallel market foreign exchange, so as to enlarge the potential for imported inputs in the current year.

3.57 **The Caveats of Quantitative Restrictions.** There are several disadvantages of protection based on quantitative restrictions rather than relying purely on tariffs. Among them: (i) the bureaucratic costs involved in administering QRs; (ii) the loss of government import duty revenues, which are captured by arbitrarily selected importers in the form of rents, (iii) the efficiency losses caused by the absolute nature of protection granted through QRs; and (iv) the uncertainty of protection granted through QRs deriving from the changing discretion in import license approvals. Hence, replacing QRs with an appropriately designed tariff structure in general results in substantial efficiency gains in production. Such a reform, however, needs to be managed with considerable care. In particular, it is essential that the exchange rate be managed in a flexible manner to maintain a viable current account stance and prevent over-valuation of the real exchange rate. Also, a successful liberalization requires fiscal and monetary discipline, for a stable macroeconomic environment is a key element to stabilize price signals brought about by tariff protection. Neglect of these conditions stands out as the primary causes for the failure of the previous trade reform of the early 1980s.

3.58 **The Tariff Structure.** The evolution of tariffs over the last two decades followed the same pattern observed with quantitative restrictions. The average tariff level was raised in the late 1960s and through the 1970s, then was reduced by half during the liberalization episode of 1979-1982, and was raised again after 1982. In 1979, a new tariff code was introduced, using the Brussel Tariff Nomenclature employed by the Andean Pact countries (NABANDINA). At this time a conscious effort was made to reduce the dispersion of tariff rates. This effort was maintained for a while, even after the level of protection increased, by raising tariff

^{11/} In particular, the taxable base is calculated by converting the CIF import dollar value into Intis at the official rate (MUC) multiplied by a coefficient. This coefficient can be 1, 0.6, or 0.35 depending on the degree of priority of the imported item.

rates in the form of uniform tariff surcharges applicable to all items. By 1987, the simple average legal tariff rate, including tariff surcharges, had risen back to the average level prevailing in 1978, or twice the average rate in 1981. The evolution of tariffs in the period 1978-1987 is presented in Table 3-18.

Table 3-18: RECENT EVOLUTION OF TARIFFS, 1978-1987
(Percent)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Average Tariff ^{a/}	66	40	34	32	36	41	57	63	63	67
Max. Tariff	355	155	60	60	60	60	76	120	120	120
Max. Surcharge	1	1	1	1	15	10	15	16	17	21

a/ Unweighted average: includes surcharges.

Source: Central Reserve Bank.

3.59 The Ministry of Economy and Finance (MEF) administers the tariff code, can impose temporary surcharges, and also authorizes tariff exonerations. The legal tariff code currently comprises 5,340 NABANDINA tariff positions. There are 42 different tariff rates, ranging from 0 to 120 percent (all are ad valorem) and three different tariff surcharges. Table 3-19 describes the legal tariff structure (including surcharges) as of December 1987. The manufacturing sector receives the highest legal tariff protection and, within the manufacturing sector, the highest tariff rates fall on consumption goods. This tariff pattern is typical of a country that have followed an import substitution strategy, where final goods with the least amount of value-added receive the highest protection, at the expense of manufactured intermediate inputs, and of the agricultural and mining sectors.

Table 3-19: THE LEGAL TARIFF STRUCTURE
(As of December 1987)

	Minimum (Percent)	Maximum (Percent)	Unweighted Average (Percent)	Standard Deviation	Weighted Average ^{a/} (Percent)
The Whole Economy	0.0	155.0	67.0	25.0	-
Agriculture	1.0	105.0	46.2	24.5	-
Mining	26.0	53.0	36.5	6.7	-
Manufacturing	0.0	155.0	68.6	24.4	68.2
Consumer Goods	0.0	141.0	85.2	25.5	-
Intermediate Goods	1.0	155.0	59.6	19.6	-
Capital Goods	22.0	125.0	67.7	22.7	-
Food, Beverages, Tobacco	1.0	141.0	76.3	28.3	74.5
Textile & Leather	24.0	107.0	96.6	18.5	97.4
Wood, Cork & Prod.	32.0	107.0	81.8	21.3	88.5
Paper & Printing	0.0	155.0	72.6	28.1	72.0
Chemical, Petro Coal Prod.	1.0	107.0	57.5	17.4	52.5
Non-metallic Minerals	32.0	105.0	74.8	22.7	71.7
Basic Metal Industries	22.0	105.0	53.6	15.5	55.1
Metal Products, Machinery	22.0	125.0	69.5	23.3	74.9
Other Manufacturing	22.0	105.0	88.5	20.3	88.9

a/ Weighted by production, calculated on the basis of four-digit CIIU production figures for 1984.

Source: Arancel Integrado de Aduanas del Peru, 1987-88; Ministry of Industry, Estadística Industrial, 1983-84; and World Bank staff calculations.

3.60 Actual tariff revenues collected by the Government, as a share of total import value, fell from 33 percent in 1985 to approximately 24 percent in 1987. This decline has contributed to the decrease in Government revenues experienced over the last two years. Table 3-20 compares the evolution of the actual tariff ratio (total tariffs collected over total import value) with the unweighted average legal tariff. The gap between both rates has been steadily increasing since 1981. Furthermore, both rates have been moving in opposite directions since 1985. Thus, despite legal tariff increases, actual tariff rates have declined. This undesirable development has two sources: (i) the increasing use of tariff exonerations; and (ii) the tightening of quantitative restrictions and import prohibitions. The latter tend to reduce tariff revenue, because imports subject to the most restrictive QRs are also subject to the highest tariffs. A rough estimate of forgone tariff revenue in 1986 through

exonerations alone can be obtained by multiplying total imports by the difference between the average legal tariff (weighted by imports, not shown in the Table) and the average actual tariff. This calculation yields about US\$540 million or 1.8 percent of GDP. To this figure should be added the forgone revenue due to QRs, but this is not possible to be assessed quantitatively. On a sector-by-sector basis, exonerations are highest for agriculture and fishing. This means that the protection bias against agriculture is further increased by exonerations.

Table 3-20: LEGAL VERSUS ACTUAL TARIFFS: 1981-1987
(Rates in Percent)

	1981	1982	1983	1984	1985	1986	1987
Legal Tariff <u>a/</u>	32	35	41	57	62	63	67
Actual Tariff <u>b/</u>	27	26	19	28	33	28	25

a/ Equal to the unweighted average of legal tariffs plus import surcharges.

b/ Equal to total tariffs and surcharge collections divided by total CIF import value.

Source: Ministry of Economy and Finance; Central Reserve Bank and Instituto de Comercio Exterior; and World Bank staff calculations.

3.61 **The Interaction of Tariffs and Multiple Exchange Rates.** As mentioned above, the multiple exchange rate system in Peru has become an additional instrument for granting protection on a discriminatory basis. By allowing different imports and exports to enter at different exchange rates, some imports and exports are implicitly subsidized and others are taxed. To calculate the implicit tariffs and subsidies embodied in the exchange rate system it is necessary to assume a benchmark exchange rate as reference. In the exercise that follows the import weighted average exchange rate was selected as reference. The issue analyzed here is the structure of protection that derives from the interaction of tariffs and multiple exchange rates. The exchange rate structure used in the calculations is the one prevailing on December 21, 1987. Average taxes (subsidies) per sector attributable to the exchange rate structure result from appropriately distributing the applicable exchange rate-induced implicit taxes (subsidies) over all NABANDINA positions. The results, presented in the first part of Table 3-21, suggest a similar cascade pattern of protection to that observed under the pure tariff system (Table 3-19), with consumer goods having a higher protection rate than capital goods and agriculture and these, in turn, a higher protection rate than intermediate inputs.

**Table 3-21: COMBINED NOMINAL PROTECTION OF TARIFFS AND
MULTIPLE EXCHANGE RATES**
(Unweighted Rates in Percent)

	From Exchange Rates Alone ^{a/}				From Exchange Rates and Tariffs ^{a/}			
	Min.	Max.	Average	Std. Dev.	Min.	Max.	Average	Std. Dev.
The Whole Economy	-57.9	66.3	17.2	30.7	-57.4	300.7	99.4	72.6
Agriculture	-57.9	66.3	20.0	38.5	-57.4	240.9	79.6	70.6
Mining	-47.2	66.3	10.9	17.6	-28.0	154.4	51.9	28.3
Manufacturing	-19.2	237.4	96.6	56.8	-47.2	300.7	101.2	72.8
Consumer Goods	-57.9	66.3	41.8	31.4	-46.6	300.7	166.3	79.0
Intermediate Inputs	-57.9	88.3	-2.8	18.2	-44.4	244.2	56.6	43.2
Capital Goods	-47.2	66.3	23.6	25.5	-47.2	244.2	108.7	57.7

^{a/} Exchange rate structure prevailing in December 1987.

Source: Arancel Integrado de Aduanas del Peru, 1987-88; El Peruano (12/21/87); and World Bank staff calculations.

3.62 When the system of taxes and subsidies arising from multiple exchange rates is combined with the system of tariffs, the resulting duties are multiplicative, rather than additive, combinations of both separate sets of rates.^{12/} An important consequence of this result is that, insofar as the tariff and exchange systems have similar structures, the combined system will magnify the distortions inherent to both structures. This may be observed in the second part of Table 3-21, which describes the combined duty structure that arises when the exchange rate structure is combined with the current legal tariff structure. The cascade pattern of nominal protection is accentuated under the combined structure, increasing the gap between the nominal duties levied on consumer goods and those levied on intermediate inputs. Another consequence of superimposing both tax systems is that the dispersion of combined duties (as measured by the standard deviation) triples for most categories in comparison with the dispersion of tariffs alone (Table 3-19). An intuitive way of assessing the price distortions implied by multiple rates and tariffs is by noting that the domestic price of a consumer good, subject to the highest tariff and exchange rate, would be 300 percent above the relevant border price. By contrast, the internal price of a high priority foodstuff would be

^{12/} That is, the domestic price of an otherwise unrestricted import item (P) is equal to the border price (P*) times (1 + t) (1 + S), where t is the nominal tariff rate and S is the implicit tax rate introduced via multiple exchange rates. The rate of nominal protection granted to the domestic import substitute can then be calculated as t + S + tS.

57 percent below the border price. Therefore, if the relative price between both commodities is, say, one in the border, it could be as high as nine domestically due to tariffs and exchange rates (and this ignoring the additional distortions brought about by licenses). The implication is clear: domestic producers would be unwilling to produce the foodstuff and, by contrast, very eager to produce the manufactured commodity. Furthermore, production of the latter would be carried to the point where its cost of production is nine times that of the foodstuff. This is, no doubt, an inefficient use of resources, for the country can, in fact, trade both commodities abroad at a rate of one for one. In other words, expanding domestic production and reducing imports of the foodstuff while, at the same time, curtailing production and increasing imports of the consumer goods would yield the same output mix using less productive resources or, alternatively, a larger output mix using the same amount of productive resources.

3.63 Implication for Effective Protection. Additional insight about the distortions on market signals caused by the current structure of tariffs and multiple exchange rates can be gained by analyzing a rough calculation of effective protection rates. As is well known, effective protection measures the extent to which domestic value added of a production process is artificially inflated (deflated), by tariffs and exchange rate policies, above (below) value added calculated at international (border) prices. Therefore, the rate of protection is calculated as the difference between value added at domestic prices and value added at border prices divided over value added at international prices. ^{13/} The results of a rough calculation of effective protection rates are presented in Table 3-22. Three conclusions can be drawn from the table. First, firms have a greater incentive to produce for the domestic market than for export markets, because tariff and multiple exchange rates allow firms selling in the domestic market to artificially inflate their value added but force firms exporting abroad to artificially deflate their value added. Second, incentives for producing "final touch" consumer goods are much higher than incentives to produce intermediate as well as capital goods. Third, while multiple exchange rates only reduce marginally the anti-export bias, they intensify the disincentives to produce intermediate inputs. These facts explain, on the one hand, the continued decline of manufacturing exports over the last years and, on the other hand, the dependency of the national industry on imported inputs.

^{13/} Assuming that quantitative restrictions are not binding, the effective protection rate: $EPR = (t_i - at_j) / (1 - a)$ where, t_i is the tariff on output; t_j is the weighted average tariff on inputs used to produce good "i"; and $(1 - a)$ is the ratio of value-added to total production (both measured at international prices).

Table 3-22: EFFECTIVE PROTECTION RATES (EPR) FROM TARIFFS AND MULTIPLE EXCHANGE RATES^{a/}
(Rates in Percent)

	Tariffs Alone		Tariffs and Exchange Rates	
	EPR (Domestic Market)	EPR (Foreign Market)	EPR (Domestic Market)	EPR (Foreign Market)
Manufacturing	78	-94	141	-86
Consumer Goods	119	-94	304	-86
Inter. Goods	55	-94	29	-86
Capital Goods	75	-94	180	-86

a/ Export incentives, other than differential exchange rates, are excluded in these calculations.

Source: Bank staff calculations based on the following assumptions: (i) the ratio of value-added to total production (both at international prices) for any of the three product categories is assumed at 0.4 (which is the average for manufacturing reported by Estadística Industrial 1983-84); (ii) average duty on imports to produce any of the three product categories (consumer, intermediate and capital), is assumed to be a weighted average of duties on intermediate imports and capital goods, with weights 0.85 and 0.35 respectively.

3.64 **Export Taxes.** Nontraditional exports are exempt from export duties. Traditional exports, on the other hand, have been subject to taxes at varying rates. During the 1960s and 1970s, the export tax on minerals and agricultural goods stood at 2 percent of export value. This rate was slowly increased during 1974-75, and then abruptly raised to an average of 19 percent in 1976, where it remained until 1981. Over this period, international commodity prices were high, so that this represented an important source of Government revenues. Export taxes were gradually reduced again after 1981, when commodity prices declined. Currently, the average export tax collected over all traditional exports is estimated to be less than 0.5 percent of export value. The different tax rates to which traditional exports are subject are listed in Table 4.3 of Annex 4.

3.65 **Recommendations.** Current restrictions to imports in the form of licenses, tariffs and multiple exchange rates are cumbersome, difficult and costly to administer, and highly discretionary. The economy stands to gain in efficiency of resource allocation and export growth by moving gradually into a protective system based exclusively on tariff protection. This would imply exchange rate unification and gradual phasing out of import licenses. A two to four year timetable for removal of licenses seems to be reasonably long enough to allow the existing industrial plant to adapt to the new incentive structure, while distributing over time adjustment costs in transitory unemployment and plant closings. In addition to liberalization, the current disperse tariff structure is in urgent need of simplification and evening out. The present 42 tariff rate categories, ranging from 0 to 155 percent, is far too complex. Therefore, a two to four year timetable to switch into a tariff structure with, say, five basic rates in the range 10 to 50 percent could be established for implementation along with license removal. For the medium run, consideration should be given to moving gradually towards a uniform tariff of 10 or 20 percent.

This course of action would provide stable rules of the game for private producers and investors, perhaps the best spur that can be given to boost exports and growth. The success of such a program would require a drastic reduction of the current budgetary imbalance and an active management of the exchange rate.

3.66 Current widespread tariff exonerations are at variance with the precarious budgetary situation. The fiscal cost of exonerations was estimated above at about 1.8 percent of GDP. A well designed tariff schedule with five rates ranging from 10 to 50 percent, as recommended above, together with no import licenses, would yield no less than the current tariff revenue ratio but with more productive efficiency. Finally, the traditional exporting sector has been hurt in recent years by low international prices (although copper prices have been rising significantly in 1988) and unfavorable exchange rates, therefore, the now low-yielding export taxes could be phased out altogether.

Export Incentives: Structure, Assessment, and Recommendations

3.67 Structure. To counter the anti-export bias of import restrictions several incentives have been established. The most important are: (i) temporary admission system; (ii) direct export subsidies (CERTEX); and (iii) subsidized export credit (FENT). These incentives only apply to non-traditional exports mostly of manufacturing goods.

3.68 The temporary admission system is administered by the Customs office and consists of exemptions from tariffs and sales taxes on imported raw materials and intermediate products destined to production for exports. Exporters under this scheme are required to present a bank guarantee for the amount of waived duties until exports take place. Few exporters have availed themselves of this incentive. During 1980-88 exporters accounting for less than 10 percent of total non-traditional exports used this facility. This has been due to two problems. First, temporary admission does not allow exporters exemption from import licenses and import prohibitions. Second, exporters under temporary admission only receive the CERTEX export subsidy on the value of exports minus the value of imports entering under temporary admission. This means that it might be more advantageous for the exporter to ignore temporary admission and collect the export subsidy over the full value of exports depending on the size of the import duties and the rate of export subsidies.

3.69 CERTEX is an export subsidy in the form of a negotiable tax-free certificate that can be used by the bearer to pay taxes. The value of this certificate is calculated as a (varying) percentage multiplied by the FOB value of exports. The percentage rate is applied according to several criteria. There is a basic CERTEX rate of between 10 percent and 25 percent, depending on: (i) the value-added of the exported product; (ii) the use of domestic versus imported inputs; and (iii) the labor intensity of production. In addition to the basic rate, there is a compensatory rate awarded to some products, which yields an extra 1 percent to 10 percent, and a decentralizing rate of 10 percent awarded to exports produced outside the Lima-Callao area. Exports of traditional handcrafted items are treated separately and receive a flat rate of 30 percent. The maximum rate granted overall is 35 percent. The exporter only receives

88 percent of the total CERTEX value. The remainder is divided up between municipalities and the Institute of Foreign Trade (ICE). In recent years, CERTEX has not been awarded on textile and clothing exporters to the United States to avoid the imposition of countervailing duties. As shown in Table 3-23, only about two-thirds of all nontraditional exporters qualify or have applied for CERTEX. The average net CERTEX rate awarded to qualifying exporters is 24 percent, while the value of total CERTEX disbursements over all nontraditional exports is about 15 percent in recent years.

Table 3-23: EXPORT SUBSIDIES THROUGH CERTEX
(Million US\$)

	1979	1980	1981	1982	1983	1984	1985	1986 ^P	1987 ^Q
1. Total Non-Traditional Exports	810	845	701	782	555	726	714	645	718
2. Exports with CERTEX	581	620	439	445	293	456	494	-	-
3. CERTEX received by Exporters	151	141	107	117	73	110	118	103	107
4. Total CERTEX/Total Non-trad. Exports (3/1) (subsidy rates)	19%	17%	14%	17%	15%	17%	19%	16%	15%

p = provisional; e = estimated.

Source: P. Hanel (1987), "Effects of Protection of the Domestic Market on the Peruvian Non-Traditional Export Activity, 1979-86," GRADE, Lima. Also, Banco Central de Reserva (Gerencia de Investigacion Economica) and Ministerio de Economia y Finanzas.

Table 3-24: SUBSIDIES THROUGH EXPORT CREDIT (FENT)

	1981	1982	1983	1984	1985	1986	1987
<u>Annual Interest Rate (in %)</u>							
1. FENT	52.6	64.0	77.2	77.7	74.3	20.0	22.5
2. Commercial rate	65.0	74.0	90.6	93.5	90.0	40.0	40.0
3. Difference (2-1)	12.4	10.0	13.4	15.8	15.7	20.0	17.5
<u>Exports and Disbursements</u> (US\$ million) ^{a/}							
4. FENT Disbursements	54	85	93	171	136	109	174
5. Non-trad. Exports	701	762	555	726	714	645	716
<u>Estimates of Subsidy rate</u> [(4)/(5)] x (3) x (180 days/360 days)							
	0.5%	0.6%	1.1%	1.9%	1.5%	1.7%	2.1%

a/ Calculated using the exchange rate applicable to nontraditional exports.

Source: P. Hanel (1987), op. cit.; and Central Reserve Bank.

3.70 FENT allows nontraditional exporters to receive pre- and post-shipment financing at concessional terms. This credit line is administered by the Central Bank out of domestic and external funds. The loan amount can be as high as 90 percent of the FOB value of the export shipment and is normally granted for 180 days, although extension of up to 360 days is possible. Since 1980, the differential between the concessional interest rate charged on FENT credits and average commercial rates has varied considerably. In 1982, rates on FENT credits were 10 percentage points below the commercial lending rates, and in 1987 the difference was about 17.5 points. Table 3-24 shows that the stock of FENT credit accounts for roughly one fourth of total non-traditional exports and that the implicit subsidy awarded to non-traditional exports through FENT is about 2 percent.

3.71 Implications on Effective Protection. Export incentives alter somewhat the effective protection rates for sales to foreign markets presented in Table 3-22, reducing partially the anti-export bias. Adding the average subsidy rates granted through CERTEX (15 percent) and the FENT (2 percent), the resulting total subsidy per dollar of exports is about 17 percent. Lower tariffs from the temporary admission system can be discarded due to the limited use of that facility. Adjusting effective protection for sales abroad by the export subsidy rate, the resulting rates of protection become less negative than before, meaning that, after subsidies, exporters are left on a better footing vis-a-vis external producers (Table 3-25). However, protection for the internal market is positive and very high, therefore the anti-export bias remains.

Table 3-25: IMPACT OF EXPORT SUBSIDIES ON EFFECTIVE PROTECTION RATES (EPR)
(Rates in Percent)

	From Tariffs and Exchange Rates		From Tariffs, Exchange Rates and Export Subsidies
	EPR (Domestic Market)	EPR (Foreign Market)	EPR (Foreign Market)
Manufacturing	141	-86	-38
Consumer Goods	304	-86	-38
Intermediate Inputs	26	-86	-38
Capital Goods	160	-86	-38

Source: The two first columns are from Table 3-22. The third column is from staff calculations.

3.72 Recommendations. Direct export subsidies are aimed at compensating for the anti-export bias generated by import barriers. When this bias turns out to be very high, as is currently the case in Peru, it is difficult to achieve an adequate compensation through fiscal subsidies without placing a heavy burden on the Treasury and without risking foreign

retaliation in terms of countervailing trade policies. As a result, it is advisable to reduce the magnitude of the anti-export bias through removal of QRs and tariff reform, rather than attempting to compensate for that bias through higher subsidies and multiple exchange rates. Moreover, the former approach is cost free, whereas the latter is costly to administer.

3.73 The method used to calculate the CERTEX subsidy involves several problems. First, the percentage rate applied in the calculation of CERTEX rates is determined by too many criteria. Most of these, such as labor intensity of the product and regional location of the firm, are not directly connected with the promotion of exports, but rather are designed to promote additional objectives. This has the effect of diluting the export promotion effort per Inti spent. If the purpose of the fiscal subsidy is to compensate for the anti-export bias generated by the tariff structure, then only the domestic value-added should be used as criterion for calculating the CERTEX rate. That is because the effective disprotection and anti-export bias to be countered are also based on the value added concept. Furthermore, in applying this criterion, the most efficient way to grant the fiscal subsidy would be as a uniform percentage of domestic value-added, where the latter is measured, if possible, at international prices rather than at domestic prices. Using domestic prices could easily lead to a situation where the least efficient domestic producers receive the greatest fiscal subsidies.

3.74 In view of the multiple criteria currently used in calculating the CERTEX rates, it has proven profitable for some firms to take traditional export products, subject these to a marginal processing treatment, and then export these wholly as nontraditional products, on which the CERTEX subsidy is collected. This represents a waste of fiscal resources because the Government is effectively subsidizing products that it does not intend to subsidize, or does not need to subsidize, to be sold abroad. This problem could be easily resolved under the proposed system for calculating the CERTEX subsidy by excluding traditional export content from the value-added calculation.

3.75 In taking advantage of the temporary admissions regime, the exporters' fiscal subsidy is reduced. This happens because the CERTEX is calculated as a percentage rate of net FOB value of exports, where the value of foreign inputs imported through the temporary admissions regime is subtracted. The result has been that relatively few exporters have availed themselves of the benefits of temporary admissions, preferring to collect the higher fiscal subsidy instead. An unfortunate aspect of this development is that exports benefitting from duty-free importation--in contrast to CERTEX subsidies and multiple exchange rates--do not run the risk of being retaliated against through countervailing duties abroad. Therefore, it is advisable to give more emphasis to temporary admissions and less to subsidies in promoting exports. Temporary admissions would be made more attractive to exporters by liberalizing those imports from licensing requirements and prohibitions. By applying the CERTEX rates, as proposed above, on domestic value added rather than on total export value, temporary admission will be more widely used since imports are automatically excluded from the value-added calculation.

C. Other Resource Allocation Issues

Financial Policy: Main Issues and Recommendations

3.76 Financial policy over the last three years was oriented toward enhancing the Government's control over financial institutions and credit allocation. This trend culminated with the nationalization of commercial banks, finance houses and insurance companies in July 1987. The main issues on financial policy are low nominal interest rates compared to inflation; heavy financial subsidies channelled by development banks (Banco de Fomento); and regional and sectoral restrictions to credit allocation. Since the issue of financial subsidies was already addressed above (Section A, paras. 3.40-3.44) here the focus is on the other two issues.

3.77 **Interest Rates.** Borrowing and lending rates of financial institutions were scaled down in several steps to about one-third of their previous levels--soon after the Government took office in July 1985. After that, rates were kept roughly unchanged until March of 1988 (Table 3-26). Initially, the drop in rates was accompanied by a faster deceleration of inflation, consequently real interest, although still negative, became less so than before. This trend, though, was reversed after late 1986 when inflation picked up again. Recent adjustments to rates effected in March and June 1988, to levels of 72 percent for savings and 120 percent for lending, have been insignificant in the wake of rapidly accelerating inflation. Thus, now nominal interest rates are less than one-fifth of estimated inflation for 1988.

Table 3-26: INTEREST RATES
(Maximum Annual Effective)^{a/}

	<u>Borrowing Rates</u>		<u>Lending Rates</u>		<u>Inflation^{c/}</u>
	<u>Savings</u>	<u>Fixed Term (one year)</u>	<u>Commercial (less than a year)</u>	<u>Agricultural Promotion ^{b/}</u>	
Feb. 1, 1985	95	107	101	-	287
Aug. 5, 1985	58	78	110	23	250
Aug. 26, 1985	35	51	75	21	250
Oct. 1, 1985	21	33	45	14	157
Feb. 16, 1986	21	33	40	8	52
Jul. 17, 1987	25	33	32	4	95
Mar. 11, 1988	36	44	55	6	270
Jun. 15, 1988	72	82	120	10	505

^{a/} Rates reported apply from day indicated.

^{b/} Interest rate on credit line of Banco Agrario: Fomento Agroperuario.

^{c/} Consumer price inflation of previous quarter in annual terms.

Source: Central Reserve Bank.

3.78 The effects of this interest rate policy have been: (i) an unprecedented drop of real financial savings (particularly during 1988) coupled with the proliferation of informal savings and credit markets; (ii) stringent credit rationing in the formal financial system; and (iii) strong pressures in the black market exchange rate, reflecting capital flight. As far as financial disintermediation is concerned, the drop of real internal liabilities of the financial system, that had been mild during 1985-87, accelerated rapidly during 1988. Thus, by August 1988, real broad money was less than one half the level of December 1987. Charts 3-3 and 3-4 show clearly the close correlation between accelerating inflation and increasingly negative real interest rates, on the one hand, and quickly declining real financial liabilities (broad money) on the other hand. Furthermore, Chart 3-2 indicates that the drop of near monies, that is saving and term deposits, has been even more pronounced and sustained than non-interest bearing instruments (M1). The macroeconomic implications of this trend have already been examined at large in Chapter II. Another important implication has been that rationing of credit to the private sector has intensified, for the total availability of financial resources has dropped while the demand for credit has likely increased due to increasingly more negative real interest rates. Rationing of credit usually favors low return and low risk borrowers and investments and therefore hurts efficiency and growth.

Chart 3-2

NEAR MONEY / BROAD MONEY

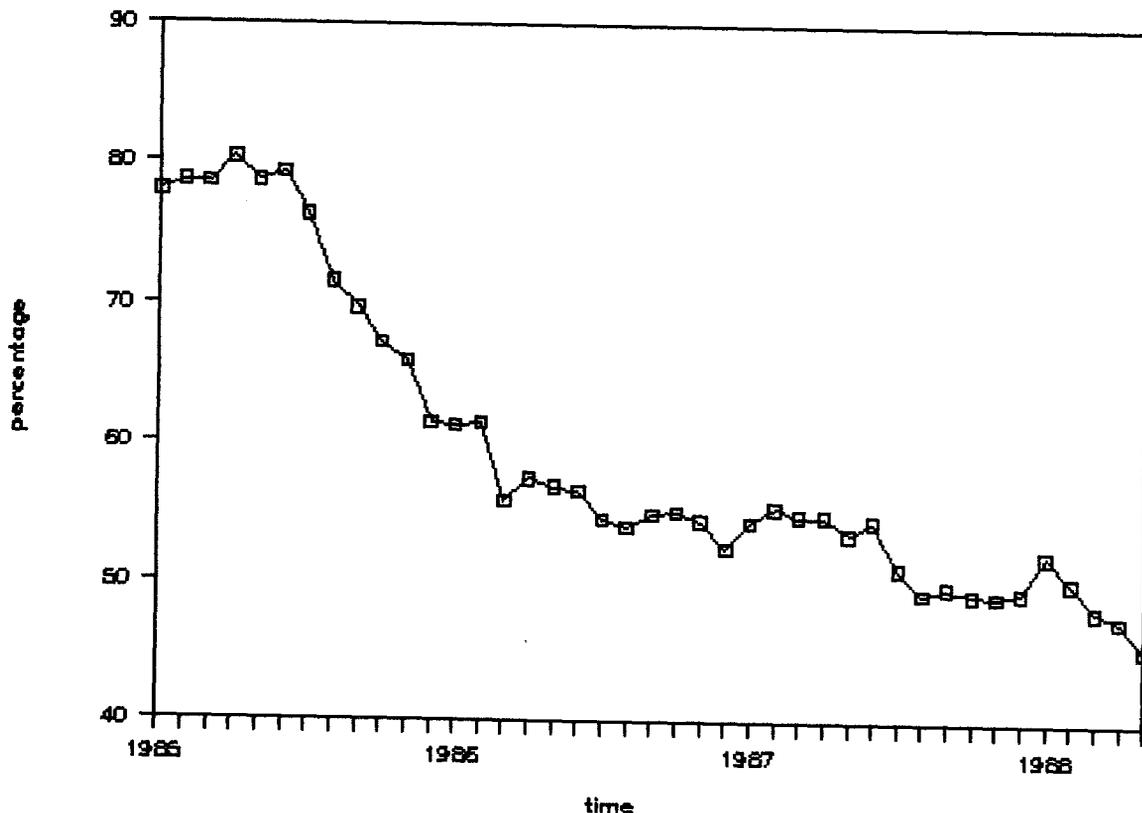


Chart 3-3

INTEREST RATES & INFLATION

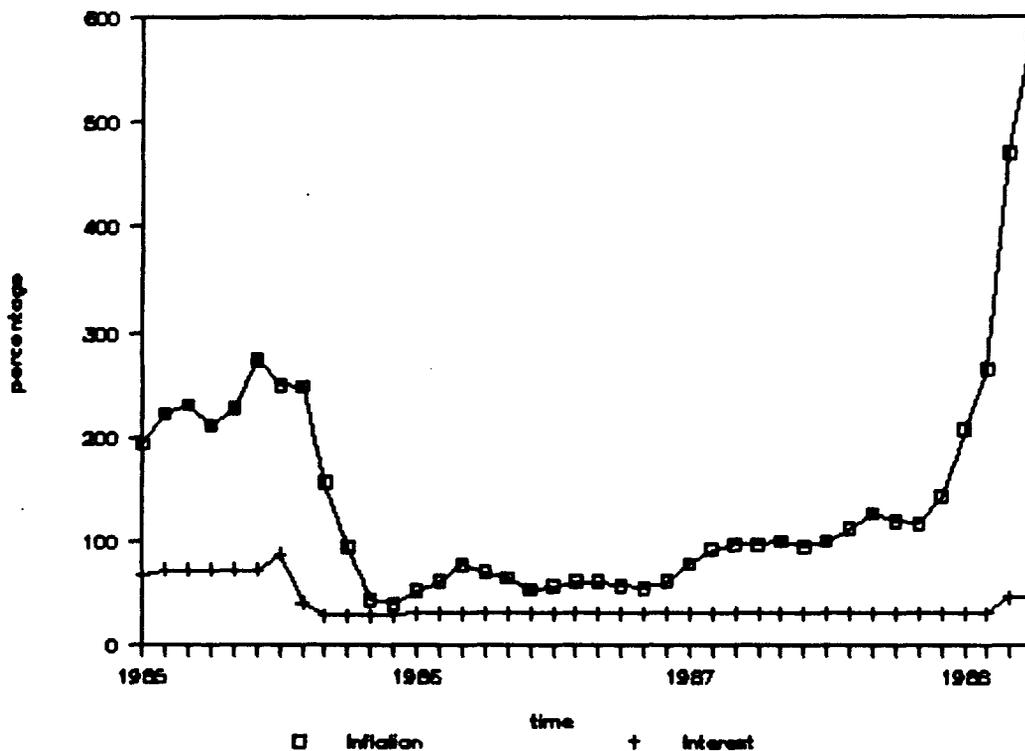
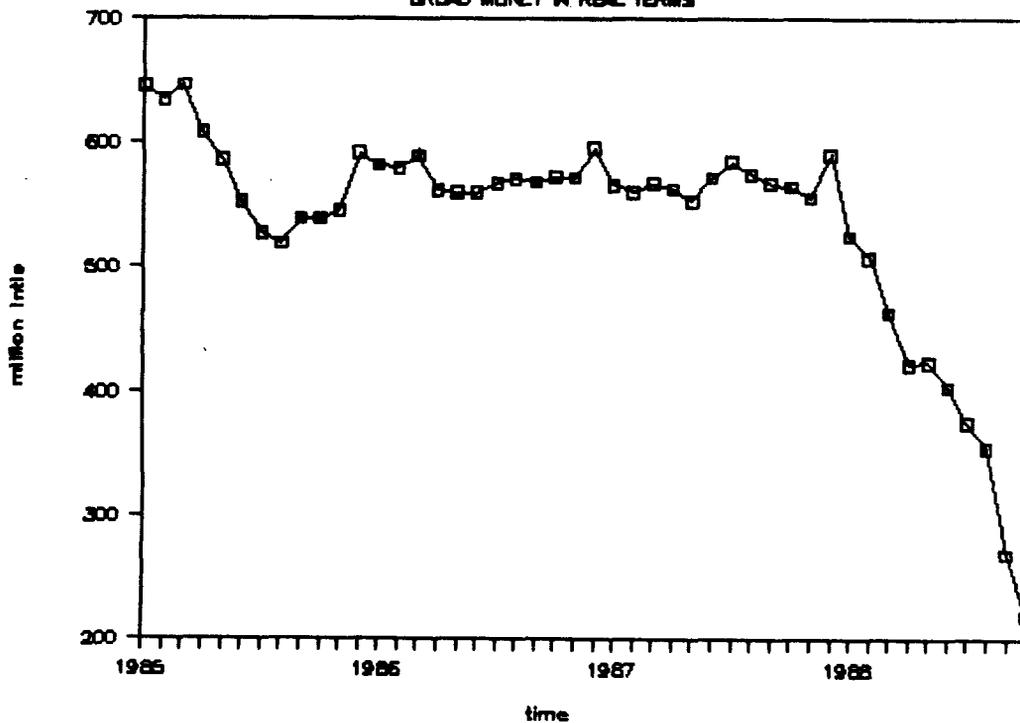


Chart 3-4

INTERNAL LIABILITIES - FINANCIAL SYSTEM BROAD MONEY IN REAL TERMS



3.79 Reportedly, financial disintermediation in the organized market has been accompanied by a flourishing informal financial market according to conjectural evidence since there is no published data on the latter. Indeed, savers and firms have found in inter-firm borrowing-lending arrangements a way to escape the high real discounts involved in saving as banks deposits. Likewise, borrowing firms have found it increasingly difficult to obtain subsidized resources in the organized market and thus switched to the informal one. Indirect evidence shows that most informal lending is stipulated in dollars and at competitive interest rates. Informal market activity has been further expanded by growing public crowding-out of financial resources. In effect, since public sector demand for credit is satisfied in the organized market, higher public sector deficits push private credit demand to the unorganized market. This, in turn, tends to raise interest rates charged in the latter, thereby inducing a shift in savings away from the formal market and towards the unorganized one, and thus deepening financial disintermediation. Evidence supporting this view is that real interest rates in the informal market registered increases in 1987 and 1988. The situation of small- and medium-sized firms which, in view of their higher risk and lack of collateral requirements, have poor access to formal bank lending is that they have faced much higher financial costs in the unorganized market. Reduced availability of credit for the private sector in the organized market, coupled with the higher cost of informal credit, limit production of firms by making scarce and expensive the financing of working capital. All this questions the validity of the thesis that by reducing banks' interest rates, inflationary pressures are pushed down, and production is promoted.

3.80 Low nominal interest rates in the presence of soaring inflation have prompted economic agents to seek in foreign exchange a safer shelter for their savings. This shift of the liquid portfolio towards dollars explains the chronic overshooting of the parallel market exchange rate which occurred over the last year. The latter, in turn, has rendered the profitability of investing in dollars a self-fulfilling prophecy. The relative returns of domestic term deposits and parallel market dollars are compared in Table 3-27. It can be seen there that, since the second quarter of 1987, the nominal rate of return on hoarding dollars has not only been far higher than the deposit interest rate but in general also significantly above inflation. This indicates that the current expansionary fiscal policy together with the maintenance of the current interest rate and exchange rate policies imply systematic overshooting of the parallel exchange rate that later translates into higher inflation. It should be pointed out, however, that interest and exchange policies alone are no panacea to achieve control of the current inflationary upsurge and to stabilize the parallel dollar market. Indeed to be effective, exchange and interest rate policies need to be supported by stabilizing aggregate demand management, and this inevitably means cutting down the current budgetary deficit.

Table 3-27: RETURNS OF BANK DEPOSITS AND BLACK MARKET DOLLARS
(Quarterly Rates)

	Black Market Exchange Rate (Intis per US\$)	Nominal Return in Intis of		Inflation Rate of the Quarter
		Black Market Dollars	Domestic Time Deposits	
1986 I	17.4	0.0	4.9	15.4
II	17.4	0.0	4.9	11.4
III	17.6	1.1	4.9	12.6
IV	19.9	13.1	4.9	12.6
1987 I	20.3	2.0	4.9	18.5
II	29.6	45.8	5.5	18.2
III	41.4	39.9	5.7	22.7
IV	90.4	118.4	5.7	24.8
1988 I	110.0	21.7	6.2	54.6
II	180.0	63.6	9.3	39.2
III	425.8	136.6	22.1	241.1

Source: Instituto Nacional de Planificacion and Central Reserve Bank.

3.81 **Credit Restrictions.** Since February 1987, commercial banks are required to follow compulsory investment coefficients for agriculture and by regions. Thus, banks have to lend at least 45 percent of the nominal increase of deposits, over the stocks prevailing in February 1987, to the district in which they raised the deposits. In addition, banks are obliged to lend to agriculture and livestock a varying proportion (from 5 to 36 percent, depending on the location of the bank) of its deposit growth.

3.82 **Assessment and Recommendation.** The maintenance of the current interest rate structure will lead to the destruction of organized financial intermediation. With the inflation observed during the first seven months of 1988 (535 percent at annual rate) and current interest rates (82 percent for one year deposits), depositors will lose no less than two thirds of their financial wealth in one year. This policy, if continued, in all certainty, will prompt further increases in the velocity of circulation of money and a rush from financial deposits to hard currencies and goods, thus, putting further pressure on the parallel market exchange rate and inflation, deepening financial disintermediation and deteriorating banks' profitability. Additionally, domestic agents will increasingly abandon domestic currency and shift into the dollar, not only as a store of value but also as a unit of account and medium of exchange. In turn, dollarization will mean a total loss of control over monetary aggregates by the Central Bank. In the present circumstances of high and unstable inflation, the only viable way to ensure ex-ante positive real returns to financial deposits and loans is by indexing the principal to inflation registered over the life of the deposit/loan. Setting competitive real premia or, preferably, allowing for an endogenous determination of premia by the financial market would prove to be an efficient tool for restoring financial intermediation in the organized market. Interest rate indexing to inflation, however, has to encompass all interest rates in the system, including interest rates charged by the development banks, and in

particular Banco Agrario, to their borrowers. If the latter is not done, financial losses of the Central Bank will enlarge making worse the budgetary imbalance. A suggestion for interest rates charged by Banco Agrario is that they be set as a fixed percentage of inflation, say 80 or 90 percent. This rule will still imply a subsidy but the size of the subsidy will remain constant in real terms.

3.83 In another vein, current restrictions to credit allocation of commercial banks in the form of mandatory sectoral or regional investment coefficients, limit the potential for saving resources to flow to the most productive opportunities. If, in the future, interest rates are indeed moved towards positive real returns, interest rates should be allowed to play the primary role in the natural selection of borrowers and investment projects. While considerations of regional development and sectoral priorities are legitimate, these objectives can be best achieved through the existing development and regional banks. By contrast, the portfolio of commercial banks should be allowed, to the extent possible, to be determined by creditworthiness and return prospects and not by administrative regulations. Therefore, it is advisable that the current restrictions on commercial banks portfolios be eliminated or made more flexible.

3.84 The recent developments in the process of nationalization of commercial banks to the effect of allowing the Banco de Credito to remain as an employee-owned enterprise and offering other commercial banks to become 70 percent privately owned regional banks are commendable and could improve business climate and expectations. To the extent that some commercial banks will still be partially or fully nationalized, it is important that the Government devise mechanisms to minimize the macro-economic pressures of indemnification payments. Such mechanisms could include medium-term negotiable bonds and swaps of banks' shares for enterprises owned by the banks or public enterprises for sale.

3.85 Finally, a formidable challenge faced by the supervisory and regulatory authorities is how to go from the current creditor selection process based on who-you-know and collateral criteria, to credit allocation based on interest rates and the client's cash-flow projections and profitability of intended investments. This will undoubtedly require strengthening the technical staff of banks. Hence, the future development of a more efficient and vibrant financial system necessitates the review of current methods and procedures, and this task should be one of the first items in the agenda of the regulatory and supervisory authorities.

Price Controls: Structure and Recommendations

3.86 Structure. All prices fall into one of four categories. In principle, prices in all categories are controlled or monitored. Table 3-28 provides an overview of the categories and the price setting mechanisms. The most sensitive food and fuel prices are "controlled." Less sensitive food items, clothes, shoes, and household goods are among the items whose prices are "regulated." These goods are eligible for automatic, rather than discretionary, price increases, up to a ceiling percent fixed by the Ministry of Economy and Finance. Less sensitive agricultural products and services have "supervised" prices. For most practical purposes, these prices are set by market forces, although the

regulations require the Intersectoral Committee for Price Administration (CIPA) to monitor these prices, whenever they rise above CPI inflation for the month. Finally, there is a fourth category of prices called "special regime" that comprises prices of public utilities, transport, medicines, and rents. Here, individual procedures exist to control the price increases applicable to each item (for example, a public utility commission oversees the price of electricity).

Table 3-28: PRICE CONTROLS AND THEIR ADMINISTRATION, 1988

Category	Type of Products or Services	Weight in CPI	Methods of Setting and Readjustment
Controlled	Most sensitive foodstuffs	26%	Fixed by the Government through the CIPA. Raised only after requests from committees of producers.
Regulated	Most manufactured goods	28%	Automatic increase permitted up to a ceiling amount fixed monthly by MEF. Faster increases require authorization by CIPA, are based on producers' committees applications, must be cost-based, and may involve a 45-day delay.
Supervised	Less sensitive agricultural products and services	24%	Based on supply and demand but monitored by CIPA "to avoid unjustified increases."
Special Regime	Medicines and public utility tariffs	22%	Individual procedures for each good, e.g., public utility commission for electricity.

Note: CIPA = Intersectoral Committee for Price Administration.
MEF = Ministry of Economy and Finance.

3.87 **Assessment and Recommendations.** At present, market forces determine the prices of about one quarter of the items that consumers buy. The rest are subject to a greater or lesser degree of negotiation between political authorities and producers. Of course, market forces, although repressed, cannot be extinguished altogether and, as a result, producers' response to price controls is to either curtail production of commodities (leading to shortages) or downgrade the quality of the products, or else engage in black market sales. The evidence during 1988 has been that inflation has accelerated virulently despite price controls and that significant shortages, black market sales, and smuggling across the border has occurred in the case of articles subject to the most strict controls. In general, an administratively determined relative price structure is arbitrary, and leads to inefficient allocation of resources. Some sectors over-produce while others under-produce.

3.88 Price controls of manufactured products have been justified on the grounds that in their absence domestic oligopolistic producers would try to exercise their market power. However, this reasoning is only valid when domestic producers are protected from foreign competition through import prohibitions and licenses. Consequently, opening up the domestic market to foreign supplies--along the lines recommended in Section B of this Chapter--provides the solution to the problem. By contrast, now the authorities require collective action from producer groups before prices are raised and this opens an invitation to overt oligopolistic collusion. Even oligopolistic competitors who under other circumstances might not be inclined to collude are, in effect, prompted to do so.

3.89 Recent evidence in Peru and elsewhere has demonstrated that price controls are no substitute for stabilizing budgetary and monetary policies in the fight against inflation. A different issue is using a combination of some form of price controls, or better price adjustment guidelines, in conjunction with supportive adequate monetary and fiscal policies with a view to stabilizing inflationary expectations. This is the so-called heterodox approach to reduce inflation, recently tried by Peru, Argentina, Brazil, Israel and Mexico. These experiences have shown, however, that to have a chance of success two preconditions are required. First, it is crucial to set relative prices at the outset of the program close to their equilibrium levels, and, second, fiscal and monetary policies need to be fully consistent with the target of inflation pursued. If Peru attempts to follow this avenue again, all prices--including the exchange rate--would have to be liberalized immediately before the program so that viable relative prices are reached. After that, and during the duration of the program, say, for one year, some flexible form of price controls--an inflation guideline--could be used in conjunction with the necessary fiscal and monetary policy. In the absence of the latter conditions, the best policy course as far as prices are concerned would be full immediate removal of most or all price controls.

Agricultural Pricing and Subsidies: Policies, Assessment, and Recommendations

3.90 The Policy Strategy. Since mid-1985 the objectives of agricultural policy have been to improve the living standards of agricultural producers, to provide subsidized staples to consumers, and to expand agricultural production and employment. The Government's main concern was the secularly depressed income level of Peru's poorest population group: the "campesinos" of the Andean region (Sierra). In this region live about two-thirds of Peru's 30 percent poorest population. Most inhabitants of the Sierra are self-employed agricultural producers. Further, this part of the country registers Peru's lowest social welfare indicators and has been, over the last 15 years, the breeding ground of violent political groups. Improving the living conditions of the Andean population inevitably meant increasing the prices of their agricultural products. To achieve these objectives, the Government put forward an incentive structure that included several types of subsidies and support mechanisms. On the one hand, the two public marketing agencies, ECASA for rice and ENCI for other foodstuffs, were in charge of making effective guarantee and shelter prices. In some instances guarantee prices were set above consumer prices for the same products and, as a result, trading accounts for these products

were operated at a loss. Rice, Peru's main staple, is the most prominent item of this group, followed by maize, wheat, sorghum and potatoes (Table 3-30). In addition, ENCI supplied agricultural inputs, including fertilizers, at low prices to farmers and peasants. In turn, the Central Bank provided considerable financial resources at highly concessional interest to the Banco Agrario so that this institution could significantly expand subsidized credit to the sector. Besides, the Central Bank provided foreign exchange at concessional rates--the lowest of the multiple exchange rate structure--for imports of agricultural products and inputs to be carried out by ENCI.

Table 3-29: MAIN AGRICULTURAL PRODUCTS (1987)
(percentages)

	Share in Demand	Share in Production	Import/Consump. Ratio	Export/Output Ratio	Share in Cultivated Area	Region of Cultivation
Rice	14.7	14.0	15.3	-	8.8	Coast and Jungle
Wheat	11.3	1.5	88.1	-	3.8	Sierra
Potatoes	9.6	10.7	-	-	8.0	Coast and Sierra
Yellow Maize	8.9	5.9	40.4	-	9.3	Coast and Jungle
Sugar	5.8	4.6	33.2	7.2	1.8	Coast
Cotton	5.4	6.3	-	4.3	4.0	Coast
Coffee	2.8	10.9	-	71.2	6.2	Jungle
White Maize	2.2	2.5	-	0.7	7.7	Sierra
Beans	1.0	1.2	-	4.9	3.0	Sierra
Other	38.3	42.4	-	-	47.9	-

Source: Ministry of Agriculture and own estimates.

3.91 In order to finance the price supports for agricultural products and subsidies in the provision of agricultural inputs, the Government created the National Fund for Agrarian Reactivation and Nutritional Security (FRASA). This fund is financed by two sources: transfers from the Treasury and foreign exchange subsidies accrued to ENCI on imports of agricultural products, mainly wheat and yellow maize. In turn, FRASA's resources are drawn by ECASA to pay for rice subsidies and by ENCI to finance operating losses in the domestic trading accounts of wheat, maize, potatoes and other products, and also to provide fertilizers and other agricultural inputs at low prices. Operationally, FRASA is managed by ENCI.

3.92 **Subsidies.** Total subsidies to agriculture are difficult to estimate given the different channels that have been used to grant subsidies (exchange rate, credit, inputs, output prices). This is further complicated by the fact that these subsidy categories are not additive; for instance the subsidy through low exchange rates goes to FRASA, and from there finances in part the other subsidies. However, some insight can be gained by examining each of the categories. Direct product price subsidies are granted by ECASA and ENCI and result from a negative margin between selling and buying prices of products subject to price supports. Total subsidies amounted to 0.34 percent of GDP in 1986 and 0.32 in 1987. About 90 percent of those totals went to finance losses in rice marketing. The remainder was spread over domestic maize, domestic wheat, barley, potatoes

and sorghum. Over the last three years ECASA has been selling rice at a price increasingly lower than the price paid to producers. Thus, in early 1986, ECASA's selling price was 22 percent below the price paid to producers; in turn, by early 1987 this negative margin became 47 percent. Rice and potatoes are Peru's two main staples; rice accounts for 2.4 percent of the total budget of an average Peruvian and potatoes accounts for 3.7 percent. Moreover, these budget shares are larger for the 30 percent poorest population: 5.3 percent and 9.3 percent, respectively. However, unlike potatoes most rice consumed is purchased through the market rather than being produced by the consumer. Therefore, although a subsidy to rice consumers is progressive from a distributive viewpoint and therefore may be justified, a growing rate of subsidy as percentage of the producer's price is clearly unwarranted.

Table 3-30: PRICE CLASSIFICATION OF PERUVIAN MAJOR CROPS BY PRICE REGIME

Controlled	Guarantee	Shelter	Free Market
Rice	Wheat	Beans (2 varieties)	Tubers and Roots
Yellow Maize	Barley	White Maize	Fruits
Sugar	Quinoa	Wheat Seed ^{a/}	Fresh Vegetables
Sorghum	Beans (10	Onions ^{b/}	Olluco
Soybean	varieties)	Potatoes ^{b/}	Cassava
Wheat and Bread	Kiwicha		Cotton (restriction to export)
	Dried Vegetables (4 varieties)		Coffee (restriction to export)
	White Maize		All other products
	Sorghum		
	Dried Potatoes		

^{a/} Valid only during 1987.

^{b/} Valid beginning on January 1988.

Source: Ministry of Agriculture and ENCI.

3.93 In turn, credit subsidies granted by Banco Agrario in 1987 amounted to 1.6 percent of GDP, if lending interest rates are compared to inflation, and to 0.3 percent of GDP, if the benchmark for comparison is the commercial lending interest rate. Loans granted by Banco Agrario to peasants in the Trapecio Andino at a zero interest rate account for about one sixth of total lending and the rest of lending is largely channeled at very low nominal rates (10 percent in August 1988). As far as subsidies through input prices are concerned, these have resulted in negative real growth of costs of production for all crops (Table 3-31), but at a significant fiscal cost. Thus, the exchange rate subsidy for fertilizers alone totalled 0.1 percent of GDP and to this should be added an additional 0.1 percent financed with FRASA resources. All in all, total subsidies to agriculture amount to no less than 2.5 percent of GDP.

Table 3-31: CHANGES IN AGRICULTURAL PRICES, OUTPUT, COSTS AND INCOME, 1985-87
(Percentage Changes in Real Terms)^{a/}

	Prices		Output		Costs		Revenues	
	1986/85	1987/86	1986/85	1987/86	1986/85	1987/86	1987/86	1987/86
Rice	-3.8	24.1	-7.4	62.5	-32.5	-8.6	-10.9	101.7
Wheat	15.2	-16.0	31.2	10.1	-26.5	-10.9	51.2	-7.5
Potatoes	120.2	-61.7	6.5	3.1	-28.7	-23.3	134.5	-60.5
Yellow Maize	20.6	-17.7	32.7	9.3	-33.0	-6.4	60.1	-10.1
Sugar	-13.2	14.0	-13.7	-3.2	n.a.	n.a.	-25.0	10.4
Cotton	-19.1	15.2	4.5	-33.4	-34.1	-17.1	-15.5	-23.3
Coffee	51.0	-69.0	5.8	2.4	n.a.	n.a.	59.8	-68.0
White Maize	9.5	-12.5	9.6	-9.6	-28.0	-10.9	20.0	-20.9
Beans	54.5	-21.9	16.7	8.5	-31.8	-7.0	80.3	-15.3
Total								
Agriculture	38.9	-31.6	2.9	3.0	n.a.	n.a.	40.9	-29.5

a/ Deflated by the consumer price index. Output figures in metric tons.

Note: Data on different variables come from different sources and therefore might not be strictly comparable.

Source: Ministry of Agriculture, National Planning Institute, and own estimates.

3.94 **Performance.** In late 1985 and 1986, the combination of high producer prices, both guaranteed and market determined, and expanding real aggregate demand elicited a supply response. Thus, in 1986 agricultural production grew 2.9, in spite of lower than normal rainfall that caused yields per hectare to drop. Expansion of domestic production, however, was insufficient to meet growing demand and, as a result, agricultural imports practically doubled. Producer prices of agricultural products experienced and unprecedented upturn, rising 198 percent between July 1985 and September 1986, a period when consumer's prices of manufacturing products grew only 70 percent. These price trends translated into a 75 percent improvement of rural versus urban terms of trade in that period. All this led to an unparalleled expansion of real agricultural income, by nearly 41 percent in 1986, thereby increasing the share of agricultural producers in national income from 7.9 percent in 1985 to 8.7 percent in 1986. However, price incentives to agricultural producers experienced a reversal starting in late 1986. In effect, since October 1986 the rural versus urban terms of trade began to decline and this tendency continued throughout 1987. Thus, by December 1987 the terms of trade had returned back to the low level of July 1985 and this, in turn, led to a reduction of the share of agricultural producers in national income from 8.7 percent in 1986 to 6.3 percent in 1987. Despite the substantial reduction of real agricultural prices in 1987, production of seven out of nine major crops expanded, probably due to the fact that agricultural production responds

with a lag to price increases effected in the previous period, due to the gestation of crops. Thus, in 1987 agricultural output grew by 3 percent and cultivated area is estimated to have expanded from 1.4 million hectares to 1.5 million.

3.95 **Assessment and Recommendations.** An important conclusion which can be derived from the analysis is that the incentive structure offered to agriculture is very complex and expensive and that the overall balance is unclear. The Government could consider to move into a smaller number of instruments of promotion. This would allow a better control over the global effect on agriculture. In this context, it would be desirable to focus on guaranteed agricultural prices as the main planning mechanism, given that prices are the best incentives or disincentives for production, while, at the same time, eliminating exchange rate subsidies, reducing subsidies through input prices, and rationalizing credit subsidies. In turn, guaranteed prices should be limited to the main staples, and in particular those produced by poor Andean peasants. Selling prices charged by ENCI and ECASA for those commodities should be kept at least equal to guaranteed prices to avoid spurious arbitrage. It is also important that guaranteed prices be set in line with projected border prices. An estimate of these can be obtained from the quotes in international future markets together with a projection of the exchange rate. In the medium run, it would be advisable that ENCI and ECASA evolve into price stabilizing agencies that would intervene the market buying (selling) at a prespecified low (high) price, leaving for private trading transactions at prices within a band.

Table 3-32: EFFECTIVE PROTECTION RATES FOR SELECTED CROPS (1987)^{a/}
(Rates in Percent)

Yellow Corn	Beans	Wheat	Barley	Potatoes	Rice	Cotton		Coffee	
						Internal Market	Foreign Market	Internal Market	Foreign Market
3,412%	104%	55%	136%	28%	-2%	-84%	-18%	-74%	-34%

^{a/} The exchange rate used for the computation is the purchasing power parity rate.

Source: World Bank staff estimates.

3.96 The current incentive structure is clearly hurting Peru's two major export crops (cotton and coffee), as shown by the negative effective protection rates presented in Table 3-32. In this respect, a price structure more in line with international prices together with rationalization of subsidies and gradual reduction of protection (QRs and tariffs) will help correct this bias, thereby promoting a reallocation of cultivated land towards export crops and away from inefficiently produced import substitution crops, thereby increasing Peru's earnings of foreign exchange.

3.97 The objective of protecting the consumer while at the same time ensuring producer profits is commendable but has become very expensive. Subsidies to agriculture are estimated at no less than 2.5 percent of GDP. In view of the current financial crisis, the time has come to be selective in the design of subsidies, targeting these only to the poorest strata of consumers and also to the poorest agricultural producers. A budgetary ceiling for agricultural subsidies needs to be set. In parallel, more emphasis needs to be placed on long-term solutions to agricultural poverty such as raising productivity and regularizing land tenure; the latter is a critical issue in view of the disorderly parcelling out of previous cooperative farms carried out since 1980. Over the last three years, yields per hectare have not increased in spite of the massive transfer of subsidized resources to agriculture. However, regional level analysis shows that there are large disparities in yields even in regions with similar geographic and climatic conditions. This means that there is ample room for maneuver for extension and training services to promote substantial increases in agricultural output, even in the short term, by reducing the range of yield differentials. This is by far a superior approach to widespread subsidies.

Labor Market Issues and Recommendations

3.98 Employment Regulations. Peru has experienced in recent years a process of growing informalization of production and employment. Segmentation between formal and informal activities has been reinforced by Peruvian labor legislation requiring fringe benefits equivalent to 25 percent of the basic wage (or 56 percent of take-home pay) to be paid to workers in the formal sector. These benefits increase labor cost differentials and require, in turn, that formal sector workers have productivity sufficiently high enough to offset their higher costs. In addition to direct costs of obligatory fringe benefits, inflexibility is further increased in labor markets for formal sector firms by the "employment stability law" which makes it expensive to discharge workers, even for a cause, after a three-month probationary period. Firms that fire workers who have more than three months of seniority must pay them one month of salary for each year of employment, in addition to accumulated vacation pay. Women receive an additional month of salary as a "derecho de mujer." Cost of termination of formal sector workers is de facto higher given the strength of Peruvian labor unions.

3.99 In 1985 the Government reduced the length of the probationary period for employees from three years to three-months. To partially counteract this, in July 1986, the Government instituted the so-called massive employment program (PROEM), with the idea of facilitating temporary employment. Under PROEM, any company which has one or more workers on a permanent payroll may hire temporary workers. The use of temporary employees is registered with the Ministry of Labor and monitored by it, so as to avoid confusion between temporary and permanent workers. The maximum length of "temporary" employment is two years under the PROEM. At the end of the period of temporary employment, the workers receive a bonus paid by the Government. Operationally, of course, the existence of such a program

offsets partially the legalized shorter probationary period. In effect, the Government shortened the period from three years to three months, and then relaxed its regulations, permitting extension of probation to two years. In addition, a previous limit that only 10 percent of workers could be temporaries was lifted. Under the current rules, having a single permanent employee opens the door for a firm to hire an unlimited number of two-year workers. Temporary workers are paid at least the minimum wage rate. Since its inception, the program has involved most workers that were newly employed during 1986 and 1987.

3.100 Wages. By mid-1985, average real remuneration of civil servants had fallen to less than half their value five years earlier. The same course had followed minimum wages. This trend was arrested by the current administration with periodic--quarterly or every four months--wage hikes geared to increasing real wages steadily. In addition, in August 1985 the Government unified nominal minima for the whole nation. Wages of non-unionized workers have also been adjusted regularly by the Government. As far as wages of unionized workers paid by private firms and state enterprises are concerned, they are renegotiated annually through collective bargaining, mostly during the June-October season. In early 1988, the Government established that collective agreements in effect after July 1, 1988, are subject to two additional increases (one in the fourth month and the other in the eighth month) on the basis of CPI inflation registered since the last revision and up to nominal pre-established ceiling. Under the Peruvian Constitution, collective bargaining cannot be interfered with or altered by the Government. Average pay for unionized workers is about three times more than that of non-unionized workers. As seen in Table 3-33, average wages for all categories increased significantly in real terms during 1986-87 (by a cumulative 38 percentage since July 1985), but have started to fall during 1988 in the wake of escalating inflation.

Table 3-33: EVOLUTION OF REAL WAGES: 1985-88

	July 1985	1985	1986	1987	Jan-Aug 1988
Central Government	100	113	119	143	137
Unionized Workers	100	108	137	145	123
Legal Minimum Income	100	120	124	131	121
Non-Unionized	100	114	123	130	118
National Average	100	111	127	138	125

Source: Ministry of Finance. Alerta Economica, August 1988.

3.101 Unemployment and Underemployment. Between 1981 and 1985, measured unemployment varied between 7 and 12 percent, reaching its highest value in 1985 (Table 3-34). The economic program of the new Government was

associated initially with a gratifying decline in measured unemployment, from nearly 12 percent in 1985 to 8 percent in 1986. The significance of the decline was all the more notable in view of the recent rise in the labor force participation. However, the lower unemployment trend has been reversed in 1988 prompted by the falldown of production registered since early this year. Interpretation of the measured rate of unemployment is never a simple matter, especially in low-income countries. A recent World Bank study has revealed that search for work in Lima is more often carried out by employed workers than by persons who are unemployed.^{14/} Thus, the officially measured unemployment rate may be low but, at the same time, many members of the labor force are, in fact, actively looking for better jobs.

Table 3-34: MEASURED UNEMPLOYMENT AND UNDEREMPLOYMENT
(Percentages)

	1981	1982	1983	1984	1985	1986
Unemployment rate	6.8	7.0	9.2	10.5	11.8	8.2
Underemployment rate	47.3	49.9	53.3	54.2	54.1	51.4
- Low Income	21.4	24.0	29.5	33.9	n.a	38.7
- Part Time Employment	3.0	4.0	3.8	2.9	n.a	4.0
- Undeclared	22.9	21.9	20.0	17.4	n.a	8.7

Source: Ministry of Labor and the National Statistical Institute.

3.102 In an economic environment where open unemployment might be regarded by many workers as an unaffordable luxury, the phenomenon of underemployment becomes at least as significant as measured unemployment. The Peruvian Ministry of Labor defines workers as "underemployed" if their incomes are less than the real value of 1967's minimum wage (nearly twice the value of the present minimum wage) or if they are working part-time involuntarily. Rates of underemployment nationwide, so defined, range between 48 and 54 percent of the labor force in the years between 1981 and 1986 (Table 3.34). Almost three-quarters of underemployment in the capital is associated with low incomes; involuntary part-time work only accounts for about one in ten underemployed workers.

3.103 A formal employment program that was created by the Government in July 1985, Programa Nacional de Apoyo al Ingreso Temporal (PAIT), provides temporary employment and income to unskilled and unemployed men and women. Reminiscent of recent relief programs in Chile and Panama, its workers paint building facades, clean streets, rehabilitate beaches, plant trees, renovate parks and gardens, etc. All workers receive the same wage rate--the legal minimum income. They are thus classified as "underemployed" by standards of the Ministry of Labor. PAIT estimates in

^{14/} John L. Newman, "Labor Market Activity in Cote d' Ivoire and Peru", World Bank Living Standards Measurement Study, Working Paper No. 36, May 1987.

December 1987 suggested that 190,000 persons were on the payroll, of whom about 40,000 were "ghost workers" (people receiving pay but not working). In some urban areas, as many as 80 percent of the workers are women, according to one estimate. For these workers, a notable proportion of whom are single mothers, domestic service is probably the most important employment alternative. A worker may be employed more than once by the program, but cannot work for it continuously--that is, a continuous series of three-month contracts is not permitted.

3.104 Recommendations. Given the current administrative nature of most wages and prices, every interest group among producers, workers, and consumers regards prices and nominal wages as targets for maneuver and manipulation according to political strength, rather than as the outcome of forces involving effective demand and overall productivity. This administrative structure had led to a perceived divorce between underlying economic forces and political power. Rising prices and wages, compete with one another, and to a large extent, offset one another. The outcome of these competing forces is a price-wage escalation, which validated by expansionary financial policies, is pushing the economy into hyperinflation. As pointed out elsewhere in the report, the current crisis calls for wage moderation and restraint because the economy is falling into a recession and also because Peru cannot absorb any longer a commodity surplus from abroad due to the precarious level of Central Bank's international reserves. Therefore, it is now required that wages are brought more in line with underlying economics forces.

3.105 Regarding probation and lay-off restrictions, the Government has recently extended the PROEM program for two more years. This is a crucial step to spur mobility in the labor market and therefore to maximize employment. However, consideration should be given to incorporating PROEM as a permanent legal provision in order to avoid business uncertainty and precautionary layoffs in the months immediately before the end of the program term. (This phenomenon occurred during the first half of 1988.) Also, serious consideration should be given to: (i) making labor legislation more flexible, in terms of labor stability, perks, and severance payments so as to both allow for labor mobility and eliminate current deterrents to hire workers; and (ii) allowing nontraditional exporting firms, or perhaps all exporting firms, to hire and lay off without restrictions so that they can adjust to the swings in the external market. If labor legislation is not urgently made flexible many firms will face serious financial straits, including bankruptcies, during the forthcoming recession and this will hurt employment regardless of the hypothetical (on paper) protections contained in the "labor stability laws."

3.106 The Temporary Income Support Program (PAIT) has reached many unskilled and unemployed workers. It should now shift into a second phase, emphasizing productive labor, skill training, and differential wages according to skills and productivity. Administered from departmental capitals, its decentralized nature could use simple technology, locally available materials, and unskilled workers to provide rudimentary construction materials, low-income housing, health posts, schools, and secondary roads in rural areas, as well as income for its members. In short, a shift toward productive activity and away from an exclusive emphasis on transfer payments is recommended.

The State Enterprise Sector

3.107 **Background.** The state enterprise sector plays an active role in the economy of Peru, but its deteriorating performance is a major source of the macroeconomic problems for the country. There are some 135 non-financial state-owned enterprises, that employ 130,000 people (about 2 percent of the economically active population) and produce about 7 percent of GDP. The sector is a diverse conglomerate of enterprises: it comprises the 10 largest companies of the country and, at the same time, dozens of very small firms. It controls the total of electricity, telecommunication, and urban water-sewerage services, oil and gas production, and about one-third of mining and transport. In addition, state enterprises are present, to some extent, in virtually all branches of the economy. (A list of all state enterprises is provided in Annex 9.)

Table 3-35: FINANCES OF STATE ENTERPRISES
(In Percentage of GDP)

	1980	1981	1982	1983	1984	1985	1986	1987*
Current Revenues	25.3	21.3	22.6	29.0	23.1	26.1	17.5	14.1
Current Expenditures	25.5	21.4	22.9	27.1	21.5	23.9	17.4	13.8
<u>Current Account Balance</u>	-0.2	-0.1	-0.3	1.9	1.6	2.2	0.1	0.2
Capital Revenues	1.3	0.8	1.1	1.0	0.8	0.4	0.4	0.3
Capital Expenditures	3.0	3.4	4.8	5.1	4.3	3.1	2.2	1.7
Gross Capital Formation	2.5	3.3	4.7	5.0	4.1	3.0	2.0	1.7
<u>Overall Surplus Deficit</u>	-1.8	-2.7	-4.0	-2.2	-1.9	-0.5	-1.7	-1.1

* Preliminary data.

Source: Central Reserve Bank and CONADE.

3.108 **Problems Faced by the Sector.** The economic and financial performance of the state enterprises is poor. Traditionally, they have been viewed as a means to provide productive inputs, services and consumer goods at low prices and to create additional employment, while their productivity and profitability have been given secondary importance. In the last three years the Government has been heavily using the sector for purposes of anti-inflationary and welfare policies through low controlled prices (paragraphs 3.22-3.26). As a result the overall revenues of state

enterprises have fallen from 26.5 percent of GDP in 1985 to 14.4 percent in 1987 and are expected to fall further in 1988. This has eroded their financial viability, drastically reduced their investment potential, to the point of hampering normal maintenance, and put a high demand on financing from the budget and the banking system (Table 3-35).

3.109 The current management system is not conducive to high performance. Both the freedom of action and the accountability of the managers are limited. Most state firms operate in conditions of natural or administratively created monopoly and therefore lack market pressure. They are overstaffed and reduction of redundant staff is extremely difficult. In addition, excessive procurement regulations hamper production and lead to stockpiling of inventory. As a result, the operating costs of the state firms are generally high and the level of services, the quality of goods, the utilization of the capacity are low.

3.110 **Public Enterprise Reform and Divestiture.** The Government is working on a reform package, the main elements of which are: (i) to redefine the role, scope, and size of the sector with a view to liquidation of the most inefficient companies, sale of non-strategic enterprises, and invitation of private capital through sales of shares of some enterprises; (ii) to separate the entrepreneurial activity of the state from political processes; to convert state firms into more autonomous enterprises with clear business-like objectives with more management freedom along with more ex-post accountability; (iii) to increase self-financing of the enterprises through price adjustments and financial restructuring; and (iv) to change the legal framework of the sector according to the above objectives.

3.111 **Assessment and Recommendations.** The program is coherent; its implementation requires radical policy and institutional changes. The slow and indecisive start in 1986-87 suggests that the implementation will be very difficult. In order to give an impetus to the process, it is urgent to elaborate the details of the program, to complement it with an action plan and timetable for the implementation of the measures, and also with a set of financial and technical restructuring plans and "contract programs" for a large number of firms. Announcement of such an action plan would strengthen the commitment and accelerate the implementation.

3.112 As far as the privatization is concerned, the Government's program contains only a rough outline of the proposed divestiture process, and this tentative proposal is very modest: the book value of the assets to be sold would be between 3 and 4 percent of the total assets of the sector (the number of firms between 20 and 40). Undoubtedly, there is a much larger group of enterprises, especially in the manufacturing sector that could be operated by the private sector more efficiently and without any detriment to the Government's capacity to control key areas of the economy. The Government may also consider sale of enterprises to foreign investors, especially in areas where they can bring technology transfer and management skills. The creation of a liberal debt-to-equity swap program could help both in the divestiture and foreign debt-reduction fronts. Therefore, swift action is needed in the divestiture program, including: (i) announcement of a broader list of enterprises slated for sale; (ii) determining the asking price based on quick assessment of the value of the

enterprises; (iii) starting an open subscription process of bids and/or public placements in the stock exchange; and (iv) carrying out financial restructuring of firms with negative net worth or very high debt/equity ratios.

3.113 The corporate management of the sector has been assigned to the National Development Corporation (CONADE), which was formally established in 1981. It has built up a good monitoring system and tries to introduce a business-oriented approach in the sector, but it needs to be further strengthened in order to be able to oversee the sector, to set clear objectives for the managers in terms of profitability and competitiveness, to advise the enterprises in the development of their strategic plans, and to evaluate their performance. Parallel to this process both the ex-ante autonomy and the ex-post accountability of enterprise managers should be further increased, not only in day-to-day operations, but also in strategic decisions.

CHAPTER IV

ECONOMIC POLICY TO STABILIZE INFLATION AND SET
THE CONDITIONS FOR MEDIUM-RUN GROWTH

A. The Preconditions for Stabilization

4.01 As was explained in Chapter II, the economy is now on an explosive inflationary path whose dynamics are to a large extent endogenous. That is, inflation is the mechanism that, in principle, is meant to clear ex-post the current budgetary and financial disequilibria, but the point has been reached where, far from closing the gaps, faster inflation makes them larger. In particular, escalating inflation widens the budgetary imbalance while, at the same time, lowers the revenue from inflationary finance. In this context, the policy options are basically limited to either allowing the economy to undergo a full-blown hyperinflation--with all its economic, political and social implications--or else giving a strong enough impulse to the main policy variables so as to push the economy away from the current unstable path and towards a more manageable course. By contrast, it is uncertain whether gradual policy adjustments could provide sufficient momentum to escape hyperinflation. Moreover, in the current situation, time is a very precious commodity. As time goes by without decisive policy actions, the probability of successfully confronting the crisis declines exponentially, and, in parallel, the magnitude of the measures required rises.

4.02 A fully consistent macroeconomic package--encompassing measures in the areas of the budget, exchange rate, monetary policy, wage policy, and prices and tariffs--is clearly a key precondition for stabilization. However, successful stabilization involves far more than a technically sound economic program "on paper." Indeed, stabilization requires commitment to the program, and coherent implementation of the measures. However, several obstacles stand in the way. On the one hand, adjustment measures will lead to painful costs, at least in the short run. For instance, scaling down the budgetary imbalance calls for higher taxes and prices and tariffs, while the reduction of the external disequilibrium requires a real depreciation of the exchange rate. These measures, in turn, inevitably imply that real wages have to fall, which will probably set the ground for social and political resistance to the implementation of the program. (It must be noted, however, that as indicated elsewhere in the report, the feasible choice is not between adjustment or non-adjustment, but rather between an orderly adjustment or adjustment through hyperinflation.) On the other hand, policymakers will have to contend with the rigidities imposed by the destabilizing expectations, and thus economic behavior, of skeptical economic agents, i.e., the so-called credibility gap. All this indicates that, given the magnitude of the current crisis, the chance of success of a well-designed program will depend critically upon the degree of understanding and support from economic, social and political groups. In turn, to reach these conditions, it will be necessary to distribute the costs of adjustment among the different social groups in an equitable manner.

4.03 Three other elements are crucial for achieving credibility and support. The first refers to the external front. Broad external support,

financial and technical, is a key element for the viability and credibility of the program. Obtaining external support calls for normalizing relations with Peru's creditors in the form of a dialogue geared to finding solutions to the debt problem. The huge discounts in the secondary market for Peruvian debt open the door for creative, voluntary debt-reducing solutions that would be in both Peru's and its creditors' interests. However, any solution to the debt problem, to be palatable to the creditors, would likely require that Peru gradually contributes, in line with its ability to pay, to the solution of the debt problem. In turn, this implies that the external resource balance (the non-interest current account) would have to move gradually into a surplus.

4.04 The second element involves building up confidence within the business community. For this to happen, it is crucial that policymakers set well-defined and stable rules of the game. In this regard, key prices and, in general, all relative prices need to be subject to transparent determination mechanisms (i.e., market forces). In parallel, the scope of special legal provisions, exonerations, and preferential access to credit and foreign exchange, inter alia, need to be significantly reduced or eliminated. All this would enable firms to have a predictable pattern of signals to appraise production plans and investment opportunities. By contrast, discretionary and changing rules in the form of frequent "fine-tuning" of exchange rates or price controls would likely continue to generate uncertainty and, as a result, hinder business confidence. In this respect, it must be noted that over the last three years there have been no less than thirty changes in the multiple exchange rate structure. It is, therefore, improbable that credibility and support from business could be achieved without clear and stable rules of the game.

4.05 The final element focuses on relief of the poorest population groups during adjustment. While stabilization requires the removal of indiscriminate price subsidies and a reduction of real wages, adequate well-targetted subsidies (for instance, food coupons for identifiable families with income levels below a threshold along the lines suggested in paragraph 3.29) need to be devised to alleviate the costs of adjustment on the poor, and reduce their resistance to stabilization. Needless to say, however, that budgetary discipline dictates that such subsidies be placed under strict financial ceilings.

4.06 The rest of this Chapter is organized as follows: In Section B the issues of external debt and real growth are analyzed. In Section C the focus is on macroeconomic stabilization, i.e., the combination of fiscal, monetary and incomes policies that could lead to the control of the current inflationary drive. Finally, a scenario illustrating the possible evolution of the economy under the recommended economic policy reform is dealt with in Section D.

B. Resumption of Growth and the Foreign Debt Problem

4.07 On the basis of the evolution of GDP during the first half of 1988, it can be projected that a considerable downfall of production will take place in 1988. Furthermore, with or without stabilization, production will likely continue to fall in 1989. Assuming that stabilization takes place, one critical issue is when and how Peru could resume positive per capita growth and, beyond that, positive growth of consumption per capita.

Resumption of growth will, of course, depend on the amount of savings, internal and external, available for investment, and on the efficiency in the use of capital or, more generally, in the use of total productive resources. Moreover, in an economy like the Peruvian so heavily reliant upon imported inputs and capital goods, GDP growth will also depend on the capability to generate enough foreign exchange to sustain import growth.

4.08 The indications are that resumption of growth will have to be based primarily on efficient allocation of domestic resources and export growth rather than on foreign financing. Indeed, the possibility of expanding, or maintaining, imports and investment levels by fresh net foreign financing, a positive net transfer, is at best remote. On the one hand, Peru has already used the alternative of obtaining de facto external financing by suspending payments on the external debt. On the other, the possibility of sudden external support from creditor governments and multilateral institutions--that would be feasible on the assumption of "first best" economic policies--will, in all likelihood, require some sort of a debt work-out. This, in turn, will mean that part of the new fresh external resources will have to be used to address Peru's unsettled debt problem.

4.09 It is, therefore, clear that Peru's growth strategy in the near future will have to be based on mobilization of domestic savings, export growth, and increased productive efficiency. The achievement of the two former objectives unequivocally requires, at least in the short run, lower consumption and real wages. In turn, the attainment of the latter calls for the restoration of market signals, the removal of restrictions on imports, credit, and labor, and the establishment of stable rules of the game. Specific suggestions in all these areas have been made in Chapter III of the report. Stabilization of inflation is a necessary condition for those structural reforms to be effective.

4.10 However, the importance of reaching a settlement on the debt transcends the pure accounting of debt flows. Seeking negotiated solutions, through a constructive dialogue with Peru's creditors, would yield potential benefits for Peru. The severe strains to the Peruvian economy imposed by the present unilateral approach would become increasingly evident over time; economic costs would rise steadily given the intrinsic integration of Peru's economy with the rest of the world and the strong potential gains from trade, foregone, at least in part, under the current strategy. In particular, it might prove formidably difficult to carry out a successful export-oriented growth strategy, for Peru's main trading partners are also its creditors. Likewise, current international restrictions on the financing of Peru's foreign trade would become increasingly binding in the wake of Peru's declining international reserves. On the other hand, it must be noted that Peru's modern economy--including the sectors of mining, petroleum and industry--is strongly dependent on the international economy for technological innovation, expertise, and foreign investment. Thus, selected projects of sectoral rehabilitation and/or new investment might be seriously hampered without external financial and technological partnership. The prospective exploitation of the recently discovered gas resources in the Camisea region is a good example at hand. All these are costs inherent to the current debt strategy that, although difficult to quantify pecuniarily, should be weighed against the financial benefit that results from simply ignoring the debt problem.

4.11 **The Debt Problem in Perspective.** Peru's foreign debt, now standing at US\$16.4 billion (Table 4-1), is not overwhelmingly high when compared to other highly indebted Latin American countries. In relative terms, it totals about half of GDP (at current exchange rate which is somewhat overvalued) and about 70 percent of GDP (at 1978-based purchasing parity exchange rate). In per capita terms it is US\$827. Hence, Peru's debt is relatively lower than those of Chile, Costa Rica, Ecuador and Mexico (Table 4-2). Likewise, Peru's ratio of accrued interest to exports (29 percent) is not any higher than comparable ratios for Argentina, Brazil and Mexico. Nonetheless, Peruvian debt now trades in the secondary market at only 5 cents on the dollar, far below the rates for other countries' debt. Even in early July 1985, before the current Government declared the moratorium, Peruvian debt traded at 45 cents when those of Argentina, Brazil and Mexico traded at more than 60 cents. Secondary market rates reflect both a country's ability to pay, and its Government's willingness to pay as they are perceived by financial markets. In the final analysis, both willingness and ability to pay are crucially related to the feasibility of adjusting sufficiently key economic variables (real wages, exchange rate and public finance) so as to generate a surplus that would enable the country to service its debt. This feasibility hinges as much upon social constraints as it does upon economic factors. Peru's social fabric is among the most fragile and conflictive of Latin America and here might lay the ultimate raison d'etre of Peru's debt problem and also of the huge secondary market discounts on Peruvian debt.

Table 4-1: COMPOSITION OF PERU'S FOREIGN DEBT (1987)^{a/}
(US\$ Million)

	Composition	(Percent)
1. <u>Long-Term Debt</u>	<u>12,718</u>	<u>77.7</u>
- Private non-guaranteed	1,391	8.5
- Private and Public Guaranteed	11,327	69.3
- Official Creditors	5,947	36.4
Multilateral	1,900	11.6
(of which) IBRD	1,214	7.1
Bilateral	4,047	24.8
- Private Creditors	5,380	32.9
Suppliers	1,407	8.6
Financial Markets	3,973	42.3
2. <u>IMF</u>	<u>910</u>	<u>5.6</u>
3. <u>Short-Term Debt</u>	<u>2,732</u>	<u>16.7</u>
TOTAL	<u>16,360</u>	<u>100.0</u>

Memo Item:

Total Debt: \$16,360 millions, of which \$7,059 millions (43%) are arrears.

^{a/} Includes arrears of interest and principal as well as imputed interest on arrears.

Source: World Bank estimates.

Table 4-2: FOREIGN DEBT INDICATORS OF LATIN AMERICAN COUNTRIES

COUNTRY	(1) Total External Debt (1987) (US\$ billion)	(2) External Debt Per Capita (1987) (US\$ thousand)	(3) External Debt/GDP (1986) (Percent)	(4) Interest Service Ratio (1986) ^{c/} (Percent)	(5) Secondary Market Price ^{a/} (Cents on the US\$)
Argentina	49.4	1,594	52%	42%	25
Bolivia	4.6	897	91%	19% (paid)	11
Brazil	114.5	827	38%	30%	48
Chile	20.5	1,680	120%	28%	60
Colombia	15.1	520	42%	15%	66
Cost Rica	4.5	1,730	98%	15% (paid)	11
Ecuador	9.0	938	79%	25%	29
Mexico	105.0	1,309	76%	33%	48
Peru	16.4	827	47% ^{b/} (70) ^{d/}	8% (paid) ^{b/} 29% (accrued) ^{b/}	5
Uruguay	3.8	1,267	47%	18%	60
Venezuela	33.9	1,904	67%	20%	53

^{a/} Bid prices as of August 20, 1988.

^{b/} Data for Peru is dated 1987.

^{c/} Interest payments (on medium and long-term debt) divided by exports of goods and services.

^{d/} Figure in parenthesis correspond to debt to GDP ratio evaluating GDP at 1978-based purchasing power parity exchange rate.

Source: Columns (1) and (2) from R. Dornbusch (1988) "Mexico: Stabilization, Debt and Growth"; Columns (3) and (4) from "World Development Report" (1988); Column (5) from "LDC Debt Report" (August 29, 1988).

C. Overall Macroeconomic Strategy

4.12 The economic program discussed in this chapter would have the goal of cutting the root of the current inflationary trend so as to lay the grounds for the removal of the distortions that now impede efficient resource allocation. Conventional wisdom and experience dictate, however, that stabilization of inflation will have to take the lead over other structural reforms both in time and intensity. Moreover, until the hyperinflation menace is eradicated, output expansion and other economic policy goals will have to be subordinated to the target of reducing inflation. Nonetheless, care must be taken to achieve a pre-established inflation path at the least cost in terms of output and employment. Given the magnitude and dynamics of the current Peruvian macroeconomic disequilibria, the only feasible way to escape hyperinflation is a consistent implementation of a strong stabilization program. This must comprise tight fiscal and monetary policies, adequate management of key prices (exchange rate, wages and interest rates), and realignment of all relative prices. The program can be carried out with or without the intervention of supportive incomes policy, understanding the latter as de-indexation of current backward-looking labor contracts and ex-ante nominal wage restraint for those wages set by the Government. It must be noted that, in the implementation of the program and, in particular, in the

beginning, policymakers will be running against the odds of low credibility. Moreover, this will be more so in the absence of incomes policy, because, in this case, the economy will continue to be subject to pervasive inertial inflation and thus rigid inflationary expectation. The evidence from other countries' experiences indicates that disinflating a backward-looking indexed economy with fiscal and monetary policies alone takes longer and entails larger costs, in terms of transitory recession and unemployment, than when those policies are combined with incomes policy. In the current Peruvian context, with inflation and nominal aggregate demand now running at 500-plus percent per annum, the implementation of a budgetary-monetary program designed with an inflation target of, for example, 200 percent, without de-indexing wage adjustments to past inflation, would have the potential to provoke a virtual collapse of production.

4.13 Therefore, the policy course suggested here is a combination of strong conventional fiscal-monetary and exchange rate policies together with incomes policy. The thrust of incomes policy in this context would be to break the existing backward looking indexation, in particular of wages, and move into a forward looking indexing rule for wages, public sector prices and tariffs, and interest rates, where all these prices are readjusted periodically at short intervals. Fiscal accounts and monetary ceilings would be calibrated in consistency with the inflation target. Of course, this approach, if taken at face value, would imply that fighting inflation is cost free and a rather technical exercise, but clearly it is not. There remains the fundamental need for uncompromising fiscal and monetary austerity, scrupulously coherent implementation of the program, and clear rules of the game. It is only when these conditions are fulfilled that it becomes feasible to gain the credibility necessary to bring down people's inflationary expectations to the program's target. If progress on this front is not achieved, a well conceived and technically sound program "on paper" would be abandoned, sooner or later, because of its contractionary effects on output and employment.

4.14 In sum, the ability to influence people's expectations is one key element that marks the difference between a purely orthodox package and the one proposed here. Likewise, the use of large-scale de-indexation of backward looking contracts is another characteristic that, in general, is not contained in a purely orthodox program but is at the heart of the other approach. In much the same vein, another crucial difference between both types of programs is that in a gradualist orthodox adjustment policymakers can afford small transitory budgetary and monetary deviations without losing completely the room for maneuver and/or compromising the thrust of the program. On the contrary, in a program that intends to cut down inflationary expectations sharply, most odds are against the success of the program and everything is dependent on the systematic implementation of promised fiscal and monetary discipline. In a certain way it can be said that policymakers move in a "knife's edge"; any deviation from preannounced plans, however small, heads the program to failure.

4.15 **Anchors.** The previous paragraph brings out the issue of nominal anchors. The inflation target pursued by the program needs to be anchored to one or more key nominal variables. Most heterodox programs carried out in recent years (Mexico, 1987; Israel, 1985; Argentina, 1985) used money--in the form of Central Bank's credit ceilings--the exchange rate, wages, and public sector prices and tariffs as anchors. In the case of

Peru in 1985, the exchange rate and public sector prices were the anchors, for wages were significantly increased and emphasis was never put on public finance. The tentative ideas presented in this chapter suggest anchoring inflation to money, wages and public sector prices and tariffs, but not to the exchange rate. The latter is excluded for two reasons. First of all, in all other similar experiences exchange rate preannouncement has been the weakest link in the implementation of the programs, even when Central Banks had at departure a considerable amount of reserves (e.g., the current Mexican program). Second, Peru's Central Bank does not have enough reserves to honor a preannounced exchange rate rule. Therefore, the absence of reserves rules out the exchange rate as an effective anchor and increases the importance of the monetary and fiscal adjustment as well as wage restraint.

4.16 The Inflation Target. The policy thrust recommended is to administer a fiscal-monetary shock strong enough to push inflation down from a projected 650 percent in 1988 to, for example, 50 percent in 1989. The economy is now in a divergent hyperinflationary path and would continue to stay there unless a fiscal shock moves it back into a convergent path. Incomes policy--in the form of, first, de-indexation and, then, a forward-looking guideline--would be intended to facilitate this transition. From that point on, stabilization would be further reinforced through additional fiscal-monetary adjustments, with or without incomes policy. It could be argued that establishing a price freeze so as to reach zero inflation could be more sound theoretically. However, in practice there are two reasons to rule out that strategy. First, in the last three years the freeze strategy has been pursued unsuccessfully three times and therefore is totally discredited. Second, when the three freezes failed, there was a tendency to maintain public sector prices, the exchange rate, and interest rates unchanged on the expectation that inflation would come down. This of course made matters worse. Therefore, the strategy laid out here consisting of creating automatic mechanisms of indexation of public sector prices and other variables is oriented to avoid that undesirable outcome.

4.17 The Key Components of the Program. In designing a program that intends to influence people's expectations, more so than in an exclusively orthodox program, the adequate sequencing of the different policy measures acquires singular relevance. In particular, fiscal, revenue-raising measures, and relative price realignment have to precede financial and trade liberalization; stabilization has to precede structural reforms. This is so because structural reforms in the absence of stabilization are bound to be short lived.^{15/} The ideas below are intended to throw light upon the adequate management of fiscal, monetary, and incomes policies on the basis of other countries' experiences with similar de-indexation programs. For illustrative purposes and also to link the suggestions with the numerical macroeconomic exercise presented in this chapter, it is assumed that the program is enacted starting in January 1989, and prior measures are taken in October-December 1988 (to be referred to as the interim period). It is also assumed that the forward indexing rule is only

^{15/} For example, removal of QRs to imports in the context of expansionary fiscal policy and exchange rate rigidity leads to abrupt jumps in imports, quick depletion of reserves, and from this to a return to QRs. Similarly, liberalization of interest rates prior to adjusting the fiscal deficit makes the deficit larger before it gets smaller (J curve pattern), because the public sector is a major net-debtor in the domestic economy and higher interest rates mean greater debt service.

- HIGH POLICY SCENARIO -

Table 4-3: ILLUSTRATIVE PATH OF PUBLIC FINANCES (1988-1993)
(Percentages of GDP)

	1988	1989	1990	1991	1992	1993
1. Public Sector Revenues	22.0	35.0	38.0	40.4	41.4	42.4
- Tax Revenues	8.0	10.0	12.0	13.4	14.4	15.4
- Enterprise Revenues	13.0	23.0	24.0	25.0	25.0	25.0
- Other	1.0	2.0	2.0	2.0	2.0	2.0
2. Public Sector Expenditures	28.0	32.8	35.5	37.5	38.5	39.1
- Investment	2.0	4.0	5.6	6.5	7.5	7.5
- Current and Other <u>a/</u>	26.0	28.8	29.9	31.0	31.0	31.6
3. <u>Non-financial Public Sector</u> <u>Deficits (2-1) a/</u>	<u>6.0</u>	<u>-2.2</u>	<u>-2.5</u>	<u>-2.9</u>	<u>-2.9</u>	<u>-3.3</u>
4. Central Bank Losses	4.0	2.0	1.5	1.5	1.0	1.0
- Exchange Losses	3.0	0.0	0.0	0.0	0.0	0.0
- Financial Losses	1.0	2.0	1.5	1.5	1.0	1.0
5. <u>Overall Deficit (3+4) a/</u>	<u>10.0</u>	<u>-0.2</u>	<u>-1.0</u>	<u>-1.4</u>	<u>-1.9</u>	<u>-2.3</u>
6. Central Bank Credit to Development Banks	1.0	0.8	0.8	0.8	1.0	1.0
7. <u>Public Sector Borrowing</u> <u>Requirements (PSBR1) (5+6) a/</u>	<u>11.0</u>	<u>0.6</u>	<u>-0.2</u>	<u>-0.6</u>	<u>-0.9</u>	<u>-1.3</u>
8. Interest on Foreign Debt	3.1	4.3	4.6	4.5	4.4	4.3
9. <u>Public Sector Borrowing</u> <u>Requirements (PSBR2) (7+8)</u>	<u>14.1</u>	<u>4.9</u>	<u>4.4</u>	<u>3.9</u>	<u>3.5</u>	<u>3.0</u>
10. <u>Financing of PSBR2</u>	<u>14.1</u>	<u>4.9</u>	<u>4.4</u>	<u>3.9</u>	<u>3.5</u>	<u>3.0</u>
- External	3.4	5.0	5.3	4.5	3.9	3.1
- Central Bank	10.7	-0.1	-0.9	-0.6	-0.4	-0.1
<u>Memorandum Item</u>						
11. Nominal GDP (Thousand billion Intis)	3.3	9.6	13.6	17.6	20.9	23.9

a/ Excludes all interest on foreign debt. This variable is accounted for separately in Item 8.

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**Table 4-4: KEY VARIABLES AND PARAMETERS OF FINANCIAL PROGRAMMING EXERCISE
(1987-1993)**

VARIABLES	1987	1988	1989	1990	1991	1992	1993
Central Bank Financing of Public Sector Deficit (% GDP)	9.8	10.7	-0.1	-0.9	-0.6	-0.4	-0.1
Central Bank Domestic Credit Ceiling (Stocks as of Dec. 31) (Intis thousand million)	88	414	404	282	177	94	70
Increase of Central Bank International Reserves							
- Nominal (US\$ million)	-915	-430	250	310	205	150	165
- Percent of GDP	-2.6	-1.3	0.9	1.1	0.7	0.4	0.4
Increase in Monetary Base (% GDP) (Seigniorage from inflation) ^{a/}	7.2	9.4	0.8	0.2	0.1	0.0	0.3
Real Money Supply (end of period) (1987=100)	100	56	43	44	51	59	68
Broad Money Supply (Nominal growth rate)	113	324	14	33	38	27	27
Inflation rate							
- December/December	115	654	50	30	20	10	10
- Average/Average	86	365	189	38	24	14	10
Nominal GDP growth rate	97%	342%	187%	42%	29%	19%	14%
Exchange Rate (Intis per US\$) (Periods average)	22	100	357	495	580	627	650
PARAMETERS	1987	1988	1989	1990	1991	1992	1993
Income Velocity of Broad Money ^{b/c/}							
- Level	7.3	12.3	16.0	16.0	14.4	13.0	11.7
- Annual Growth Rate	8.5	69.0	30.0	0.0	-10.0	-10.0	-10.0
Reserve to Deposits Ratio of Commercial Banks	0.43	0.40	0.45	0.30	0.15	0.09	0.08
Currency to Deposits ratio	0.40	0.48	0.46	0.40	0.35	0.30	0.30
Broad Money Supply Multiplier	1.69	1.70	1.60	2.00	2.70	3.30	3.60

^{a/} Here seigniorage is defined as the increase in the Central Bank's monetary base as a proportion of nominal GDP. This definition differs from the inflation tax concept used in Annex 2.

^{b/} Calculated as the ratio of real GDP to real Broad Money Supply as of December or else nominal GDP (evaluated at December prices) over nominal Broad Money (as of December).

^{c/} The path of velocity growth is an assumption based on other experiences with similar inflation reducing programs.

used during 1989 to help escape hyperinflation, from 1990 onwards the policy thrust would be conventional orthodox policy. The main ideas and suggestions are presented in the following paragraphs.

4.18 On the budgetary front, it would be necessary to attack the root of the current fiscal-monetary imbalance, providing an early signal to economic agents of the Government commitment to fiscal discipline. To this end, revenue-raising measures and reduction in subsidies could be taken prior to any other action, for example in October-December 1988. In the financial programming exercise, presented below, it is estimated that to reach an inflation of 50 percent in 1989, it would be necessary to cut Public Sector Borrowing Requirements (PSBR2),^{16/} including all interest on the foreign debt, from 14.1 percent of GDP in 1988 to 4.9 percent in 1989 (Table 4-3). Drawing on the analysis sketched in the previous chapter (Section III-A) possible measures to be taken for fiscal year 1989 would be the following. The most clear-cut is the full unification of exchange rates, that would automatically eliminate foreign exchange losses. Other measures could comprise, inter-alia: (i) adjustment to prices and tariffs to reach, for example, real prices prevailing in July 1985 on average (together with the introduction of monthly or weekly indexation to inflation, after the adjustment); (ii) reduction of tax and tariff exonerations; (iii) reduction of collection lags of taxes, setting penalties for delayed payments, and full indexing to inflation of monthly prepayments of all direct taxes; (iv) increase in the value added tax rate; (v) reduction of financial subsidies by rationalizing the interest rate structure of development banks; (vi) establishment of a budgetary ceiling for all subsidies; (vii) reduction of the flow of credit from Central Banks to development banks; and (viii) reduction in real wages of civil servants. In subsequent years, a comprehensive tax reform, as suggested in paragraph 3.17, would be required. In addition, the structural problems of overemployment in the Central Government and overdimension of the state enterprise sector would need to be confronted. The composition of expenditures and the structure of the budget appear in Table 4-3. In particular, Central Bank financing of the deficit would decline from the 10.7 percent of GDP in 1988 to -0.1 percent in 1989.

4.19 In turn, on the financial and monetary front, the idea would be to establish domestic credit ceilings in the Central Bank consistent with the fiscal targets (as indicated in Table 4-4). Additional help in controlling nominal aggregate demand could come from a tightening up of monetary policy. (In the exercise it was assumed that the Commercial Bank's legal reserves to deposit ratio is raised from 40 percent in 1988 to 45 percent in 1989. Interest rates are dealt with below).

4.20 As far as the management of the key prices (wages, interest rates and exchange rate), it is necessary to differentiate between the periods immediately before and after the phasing in of the new indexation rule. Regarding wages, two problems have to be handled within the period before: the first is the existence of backward looking indexation, and, the second, is the existence of staggered (overlapping) wage settlements. These two mechanisms are two major channels of reproduction of inflation. Therefore, negotiating with labor: first, abolition of current backward-looking

^{16/} Two definitions of PSBR are utilized for convenience: PSBR1 (excludes all interest on foreign debt); PSBR2 (includes all interest on foreign debt).

indexation and a resettlement of wages (the so-called desagio) at viable levels (significantly lower than those artificially high prevailing in 1986-87, since as explained above a real wage cut is required and this real wage cut has to be accepted and planned ex-ante to make feasible the down trend of inflation); and second, synchronization of all wage settlements in the future. These two elements are sine-qua-non conditions for scaling down inflation to the new plateau targetted. However, initially, during the interim period (at the time the revenue raising measures are effected) a temporary nominal wage freeze might be required to avoid second round effects from prices to wages and vice versa. After that nominal wages would be indexed monthly, in line with the "inflation guideline" to be issued by the Government. The "inflation guideline" would consist of a projection of inflation for each month set forth by the Government at the end of the previous month. If actual inflation turns out to be higher than the guideline, workers would be given a one-shot compensation for the difference at the end of the month. In turn, if actual inflation turns out to be lower, the excess would be deducted from the wage settlement for the next month.

4.21 Interest rates are a central variable for the success of the program. On the one hand, financial intermediation needs to be restored so as to reinforce the deceleration of growth in nominal aggregate demand that results from the reduction of the budget deficit. In monetary terms, attractive real interest rates to deposits would help contain the growth in the income velocity of money. On the other hand, interest rates of loans by development banks are a crucial variable to reduce the Central Bank's financial losses. It is clear that at present the only credible approach to guarantee depositors a positive return would be indexing the principal of loans and deposits to inflation and setting real premia. However, the issue is whether to do it before the start of the program or after. One problem of doing it before is that inflation would be running at rates much higher than the inflation targetted by the program. Therefore, indexing interest before could have destabilizing effects on the deficit (because at present the public sector is the debtor of about half of all internal liabilities of the financial system) and on expectations. A solution could be maintaining nominal rates at levels consistent with the inflation rate targetted by the program for the period before and moving into indexing to actual inflation (not the inflation guideline) plus real premia, once the program starts. Consideration should be given to allowing market forces to determine real premia (real interest rates). Liberalization of rates will be critical in the early stages of stabilization, because credibility will be low and real returns on Inti deposits will have to be very high to induce agents to shift their portfolios away from dollars and into Intis.

4.22 As far as the exchange rate is concerned, the strategy would be to unify multiple rates before the onset of the program. In addition, a float--maintaining current capital controls--during the interim period (November-December 1988), might help to establish the equilibrium exchange rate.^{17/} During the program, the two options would be either to continue with the float (auction) for current account and authorized capital transactions or else to run a non pre-announced crawling peg for those transactions; in addition, a tolerated black market would continue to coexist along with either of the two options. In the second option

^{17/} The float could be in the modality of an "auction" managed within the so-called Mesa de Negociacion, currently operated by the Central Bank (Annex 6).

(crawling peg), the tentative target would be to adjust the nominal rate in line with the differential between domestic inflation and international inflation; nonetheless non pre-announcement would allow the authorities to adjust the nominal rate to terms of trade and external financing shocks. In any event, exchange rate adjustments should be sufficient enough to reach pre-established international reserve targets. However, the float would, in all certainty, provide a less discretionary and more transparent mechanism.

4.23 As regards public sector prices and tariffs, a drastic adjustment would be effected, in the interim period, so as to make up for accumulated lags and with a view to reaching targetted real prices. Although the one-shot adjustment required for each price and tariff depends on the relevant opportunity costs (border price or long-run marginal cost), as suggested in paragraphs 3.31-3.33, on the aggregate the target would be to reach an average real price similar to that of July 1985, consistent with raising state enterprise revenues from an estimated 13 percent of GDP in 1988 to a target of 23 percent in 1989. During the program, prices and tariffs would be adjusted monthly along with the "inflation guideline." Again here forecast errors in a given month would be compensated for with additional adjustment in the subsequent month. Further one-shot realignments of prices and tariffs could be effected in subsequent years, to the extent that any lags remain.

4.24 An important element for the success of the program is the management of price controls. In the interim period, it would be advisable to liberalize as many prices as possible. So that all price pressures now repressed are relieved and relative prices approach their parity levels. This measure would have the effect of drying-up, in one shot, people's excess liquidity, thereby ensuring that the program is not started with either latent excess demand in the goods market or stock disequilibrium in the liquid assets market. Thus, all prices, including the exchange rate and prices and tariffs, would be able to find their new parities at the same time. During 1989, price increases would follow the "indicative inflation guideline." This would imply a phasing out of the two rigid price administrative categories, "controlled" and "special regime", and the generalized prevalence of the "regulated" and "supervised" categories. However, compliance with the indicative inflation guideline should be based on persuasion rather than enforcement. After 1989, price controls could be eliminated altogether, perhaps with the exception of a few sensitive foodstuffs.

4.25 The Macroeconomic Scenario. The results of a financial programming exercise conducted to ascertain the fiscal and monetary policy consistent with an inflation target of 50 percent in 1989 are presented in Tables 4-3 and 4-4. For the rest of the period, inflation is targetted to decline progressively to 20 percent in 1991 and to 10 percent by 1993; the corresponding financial programs are also presented in those tables. As mentioned before the idea would be to use the inflation guideline policy during 1989 to help move the economy away from hyperinflation, but to continue with conventional fiscal-monetary policy in subsequent years. The exercise presented in Table 4-4 is very sensitive to assumptions on a few parameters. First, the coefficient of financial intermediation to GDP (or, its inverse, the income velocity of broad money). Second, the ratio of currency to deposits. And third, the reserve requirements ratio. The evidence regarding the first coefficient is that it rises (falls) with inflation, but the time frame of causality is imprecise. It was assumed

for 1989 that the income velocity of money would still rise by 30 percent despite the drastic drop in inflation. The grounds for such an assumption are threefold: first, it is not clear when, and by how much, inflationary expectations would fall; second, in high inflation processes, people get familiarized with informal financial assets that protect them against inflation, and when inflation comes down, they continue to use those assets; and third, it is always better to subject the financial program to a marginally exigent test and if events turn out to be better than planned policymakers gain additional room for maneuver. After 1989, velocity is assumed to stabilize in 1990 and then decline by 10 percent per annum as the economy remonetizes along with lower inflation. As for the currency to deposits ratio, the assumption is that it stabilizes in 1980-90 and then drops to previous trend levels. With regard to the reserve requirement ratio, the main tool of monetary policy in developing countries, the assumption is that it tightens up in 1989, from 0.4 to 0.45, and then loosens up as inflation recedes, to 0.3 in 1990 and 0.06 in 1993, so as to allow for a higher share of credit to the private sector (the crowding-in process), and also to feed the remonetization process.

4.26 The assumed fiscal adjustment effort in 1989 is basically an increase in public revenues by 13 percent of GDP, together with the elimination of foreign exchange losses (3 percent of GDP) (Table 4-3). Budget cuts in other items (financing to development banks, wages, etc.) are of a lower order of magnitude, but still important. The public sector deficit (PSBR2)--including all external interest--would decline from 14.1 in 1988 to 4.9 percent in 1989. Similarly, PSBR1--excluding all external interest--would decline from 11 to 0.6 percent. In subsequent years, the burden of adjustment continues to fall primarily on public revenues (particularly tax revenues) and is more gradual. Public sector revenues increase by about 1 to 3 percent of GDP per annum and PSBR2 decline steadily from 4.9 percent of GDP in 1989 to 3 percent in 1993. In the budget, all interest on foreign debt was included as a separate line item (Item 8 of Table 4-3); in turn, the foreign financing item can be interpreted as either fresh money requirements, if the debt is rescheduled, or a combination of automatic partial capitalization of interest and fresh money inflows, if agreement with creditors on a profile of interest capitalization is reached. The fiscal effort to service the public foreign debt (the difference between interest accrued and net foreign financing) is assumed to increase from -0.7 percent of GDP in 1989 to 0 in 1991 and to 1.2 in 1993. Thus, in 1993, about 28 percent of the interest on the public debt would be financed through fiscal effort. However, for the economy as a whole the effort to service the foreign debt will be stronger because, as is explained later, it is assumed that starting in 1989 Peru resumes full servicing of interest on short-term external credit lines.

4.27 The tentative PSBR targets, as well as the ceilings on Central Bank's domestic credit (the latter in nominal terms) are specified in Tables 4-3 and 4-4. As mentioned before, the latter variable is a key anchor to reach the inflation targets. If in 1989, actual inflation deviates consistently from the inflation guideline, it would be advisable to either raise more public revenues, or increase the legal reserve ratio, or reduce public sector expenditures and subsidies, or else a combination of the three. By contrast, it would be self-defeating to relax the Central Bank credit ceiling, for this would be viewed as a tacit abandonment of the program. The exchange rate has been projected at purchasing parity after a 15 percent real depreciation in 1989; however, this working assumption is subject to the qualifications made above.

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TABLE 4-5: ILLUSTRATIVE PATH OF THE ECONOMY (1988-1993)
(Percent Unless Otherwise Stated)

VARIABLE	1987	1988	1989	1990	1991	1992	1993
GDP Real Growth	6.9	-5.0	-1.0	2.5	3.5	4.0	4.0
Inflation Rate (Dec/Dec)	115	654	50	30	20	10	10
Exchange Rate - Nominal (Intis per US\$) - Real <u>a/</u> (end of period)	39 100	272 100	442 85	542 85	614 85	637 85	661 85
Exports Real Growth	2.6	-13.2	11.3	6.1	6.1	5.6	6.2
Imports Real Growth	3.8	-18.6	-1.6	2.8	4.2	3.8	2.5
Resource Balance (Surplus) <u>b/</u> (% of GDP)	-1.7	-0.7	-0.2	-0.1	-0.0	0.3	0.8
Current Account (Deficit) <u>c/</u> (% of GDP)	4.9	3.9	4.8	5.0	4.6	4.2	3.4
Debt Service Ratio							
Accrued <u>d/</u>	80	82	36	35	34	32	30
Paid	13	10	36	35	34	32	30
Net International Reserves (US\$ million)	43	-387	-137	173	378	528	693
External Debt/GDP	47%	52%	70%	71%	69%	66%	63%
Consumption Per Capita (real growth)	3.2	-2.2	-9.1	-2.4	0.3	0.1	0.4
Real Wage Growth	8.8	-6.0	-10.0	0.0	1.0	2.0	2.5
Real Gross Investment (1987=100)	100	75	66	71	74	79	83
Real Marginal Savings Ratio	38%	108%	-408%	95%	40%	51%	47%
Real Domestic Savings/GDP	26%	22%	26%	28%	28%	29%	30%
Terms of Trade (1986=100)	98	104	95	92	91	91	91

a/ Decrease means real depreciation.

b/ This is the balance of goods and non-financial services (that is, the non-interest current account).

c/ Includes both accrued unpaid interest and imputed interest on outstanding external arrears.

d/ It results from the hypothetical assumption, made in the exercise for illustrative purposes, that the total stock of debt and external arrears outstanding as of December 1988 is rescheduled at LIBOR to 20 years maturity and 10 years grace period. Likewise, fresh money requirements for 1989-93 (gap of unidentified sources) are granted at similar money terms.

D. Illustrative Evolution of the Economy under Stabilization and Structural Adjustment

4.28 The purpose of this section is to illustrate the possible course of the economy under stabilization and structural adjustment. The latter process is defined here as the full implementation of the structural reforms presented in Chapter III. An additional objective of the scenario analyzed is to explore the conditions under which the Peruvian economy could resume positive growth in per capita consumption (after an initial phase of stabilization) while at the same time restore gradually external creditworthiness. As indicated elsewhere, stabilization requires reductions in both the rate of growth of nominal aggregate demand and the level of real aggregate demand; the former to fight inflation and the latter to restore external balance. Any reduction in real aggregate demand can be, and should be, attenuated by expenditure-switching policies to improve the external balance. It was also indicated that these policy actions will inevitably imply, at least in the short run, slow growth (or recession) and lower real wages and consumption per capita. It was also explained, in Section B of this Chapter, that the growth strategy will have to be one of mobilization of domestic savings, export growth, and efficient import substitution.

4.29 **Assumptions.** Several assumptions are required to perform the illustrative projections of the key variables. First, as far as the external debt is concerned, it is assumed that the total stock debt and arrears outstanding as of December 1988 is rescheduled at LIBOR, 20 years maturity and with 10-year grace period. (This is not a policy proposal, for the debt owed to the World Bank and IMF cannot be rescheduled, but rather an illustrative assumption made to test the viability of a conventional debt work-out.) Likewise, it is assumed that fresh money requirements for each year during 1989-93 (unidentified financing gap) are also granted at similar money terms. It must be noted that, in order to simplify the exercise, possible debt-reducing schemes are not explicitly considered. Second, it is assumed that the structural reforms to be implemented would result in an increase in productive efficiency, as gauged by a decline in the ICOR from a historical average of 7.5, in the period 1970-87, to 6.1 in the positive growth years of 1990-93; that is, a 19 percent improvement in the ICOR. Finally, it was assumed that the terms of trade would worsen slightly, falling from an index number of 109 in 1988, to 95 in 1989, and then to 91 the rest of the period. The projected average prices of the main traditional exports are shown in Table 4-9 (below).

4.30 **Sources of Growth.** On the basis of preliminary information for January-August 1988, GDP is expected to plunge by 5 percent and real investment by 25 percent in 1988 compared to 1987 (Table 4-5). Similarly, imports are expected to drop by 19 percent in real terms and exports by 13 percent, as a result of lack of foreign exchange the former, and of a distorted incentive structure the latter. With the introduction of the stabilization measures and structural reforms starting in late 1988, three major sources of growth would likely emerge: domestically-based investment, direct foreign investment, and export growth. Regarding the first, the combination of positive interest rates, lower real wages and reduced public sector deficit would increase the availability of savings. In particular, domestic savings would rise from a low of 22 percent of GDP in 1988 to 26.5 percent in 1989 and then gradually to 30 percent in 1993 (Table 4-5). In parallel, the removal of restrictions to credit

allocation, together with a rationalization of interest rate subsidies granted by development banks, would translate into a more efficient portfolio of projects and working capital financing. This would be reinforced by an increasing use by the private sector of available financed resources (crowding-in) that would result from the drastic scaling down of the fiscal deficit. In fact, the scenario presented in Table 4-4 envisions a progressive amortization of the Government's domestic debt with the Central Bank.

4.31 As for foreign investment, it could expand on three counts. First, the more liberal legislation for foreign exploitation of hydrocarbons, enacted in 1987, together with the recent discovery of huge gas resources in the Camisea region offer significant potential for foreign investment in this sector. Second, the search for negotiated solutions to the debt problem would open the door for debt-to-equity swaps. Third, the possible establishment of tax-free in-bond areas would offer additional profitable opportunities. It can be seen, in Table 4-8 that foreign investment is assumed to increase from the low US\$50 million in 1988 to an annual average of US\$250 million in 1989-93, which is more in line with past trends. Total investment in real terms is projected to recover steadily from the low 1988 level to a level similar to that of 1985-86 (Table 4-5). However, unlike in those years, now the distribution would be relatively more in plant, equipment and infrastructure and less in construction.

4.32 Exports would provide the demand-pull force to GDP growth. Regarding non-traditional exports (manufactures) the scope is considerable. On the one hand, they have dropped by a cumulative 31 percent in real terms between 1985 and 1988 largely due to booming domestic absorption. With the drop in domestic real aggregate demand brought about by stabilization, industrial plant capacity of producers, that were already exporters in 1985, could be reoriented again to the foreign market. More importantly, the structural reforms in the areas of unification of exchange rates, flexible exchange rate policy, gradual phasing-out of QRs and tariff reform, rationalization of export incentives, and unrestricted lay-off procedures for export firms would contribute to significantly reduce the current anti-export bias, thereby providing a great spur for export growth. Also, the expansion of the existing scheme of payment in-kind for debt service could result in an additional pull for manufacturing exports. This scheme was put forward by the Government in 1987 and successful bilateral agreements have been reached so far with two commercial banks and four socialist countries.^{18/} All in all, non-traditional exports can be projected to grow at an average rate of 15 percent per annum (Table 4-9). As far as traditional exports are concerned, they have also declined by cumulative 22 percent in 1985-88 in the wake of a adverse incentive structure, high taxes and unfavorable exchange rates. With the policy reforms pointed out above, it would not be unfeasible a real growth of 5 percent on average per annum. As a result, total exports could grow at an average rate of 7 percent per annum (Tables 4-5 and 4-9).

^{18/} In these agreements, creditors assume the duty and the cost of selling abroad Peruvian products--out of a restricted list defined by the Peruvian Government with a view to minimizing crowding-out of exports--for a value of, for example, US\$3 of which US\$2 are paid back to the Government and the remainder is kept by the creditor as payment of debt service.

4.33 GDP Growth. After a deep recession in 1988-89, GDP could resume growth in 1990, initially at a rate of 2.5 percent and later to reach a rate of 4 percent in 1992-93. Although, it is difficult to envision the prospective sectoral composition of GDP, it can be said that with the opening up of the economy the current inward-looking sectors of inefficient import substitution would shrink for the benefit of more efficient export-oriented and import substitution sectors. Agriculture, particularly export crops, could also expand in the wake of improved exchange rate and protective structures. The transition from the current industrial structure to the new one would probably give rise to transitory unemployment. This, however, might be minimized if current restrictions on labor legislation are reduced and real wages are allowed to fall to sustainable levels in 1989. Real wages could start rising again, at the pace of productivity growth, in 1991. In turn, consumption per-capita could also resume positive growth in 1991.

4.34 After an initial sharp contraction in 1988-89 (by a cumulative 20 percent), imports could grow at roughly the same pace as GDP during 1990-93. Thus, import growth would be sufficient to sustain the production of firms dependent on foreign inputs, while at the same time allow for increasing imports of consumer and capital goods in the face of the trade liberalization process.

4.35 Evaluation of a Hypothetical Conventional Debt Work-Out. A crucial issue is the evolution of Peru's creditworthiness under this scenario. The underlying current account and capital account projections are presented in Tables 4-7 and 4-8 respectively. In turn, the main creditworthiness ratios are shown in Table 4-6. It can be seen in the latter table that the foreign debt as a proportion of both GDP and exports would decline moderately but steadily after 1990. Similarly, the interest service-to-exports ratio would drop from 36 percent in 1989 to 30 percent in 1993. A particularly relevant indicator is the implicit capitalization of interest ratio that measures the proportion of accrued interest that would have to be financed by either fresh money or interest capitalization, in an hypothetical debt work-out. Over time, this ratio represents the interest capitalization profile; under the assumed illustrative scenario, it declines from 99 percent in 1989-90, to 77 percent in 1992 and then to 64 percent in 1993. These ratios of interest capitalization for the whole economy are lower than the corresponding ratios for public external debt; the difference arises from the assumption that Peru would resume full servicing of interest on short-term trade credit lines (in most of which the borrower is the Central Bank or commercial banks and therefore interest on these lines is not accounted for in the public sector's budget). To the extent that any debt work-out would involve some degree of debt relief, the improvement of the creditworthiness indicators--and the country's creditworthiness--would be accentuated.

Table 4-6: EVOLUTION OF CREDITWORTHINESS IN HYPOTHETICAL DEBT WORK-OUT

	1989	1990	1991	1992	1993
<u>Indicators of Creditworthiness</u>					
1. External Debt (US\$ millions)	18,863	20,319	21,681	22,978	24,108
2. External Debt/GDP	70%	74%	72%	69%	66%
3. External Debt/Exports	493%	485%	464%	440%	412%
4. Interest Service/Exports	36%	35%	34%	32%	30%
5. Interest Accrued (US\$ millions)	1,364	1,469	1,575	1,675	1,766
6. Fresh Money Requirements (US\$ millions)	1,355	1,457	1,361	1,297	1,130
7. Capitalization of Interest Ratio	99%	99%	86%	77%	64%
<u>Indicators of Intensity of Adjustment</u>					
8. Real per Capita Consumption Growth	-9.1%	-2.4%	0.3%	0.1%	0.4%
9. Marginal Savings Ratio	-408%	95%	40%	51%	47%
10. BOP Resource Balance/GDP (Surplus)	-0.2%	-0.1%	0.0%	0.3%	0.8%

Source: World Bank calculations.

4.36 Experience from other countries' work-outs suggests that the projected implicit capitalization ratios are so high as to render a conventional debt work-out based on new money requests improbable. This is complicated further by the fact that the viability of the scenario depends critically on the consistent implementation of a very comprehensive set of far-reaching economic policies. For these reasons, it might be possible that creditors would (i) view ex-ante the scenario as improbable; and (ii) not reach the consensus to, first, reschedule the debt and, then, provide the required new money packages every year. On the other hand, demands from creditors for any immediate, non-token, restoration of commercial bank or Paris Club debt servicing might undermine the domestic political consensus necessary to implement the economic program. A solution could be an agreement with creditors on a profile of partial capitalization of interest as the first step to later reach a formal renegotiated debt work-out. The desirable avenue to follow in the pursuit of the latter is probably the so-called menu approach that would include: (i) conventional

rescheduling for some parts of the debt; (ii) partial automatic capitalization of interest; and (iii) voluntary, market-oriented debt-relief mechanisms (e.g., buy-backs, debt-defeasance, debt-to-equity swaps, etc.). However, without significant debt relief, involving some of these departures, a consistent and sustainable economic work-out will be unlikely.

- HIGH POLICY SCENARIO -

Table 4-7: EVOLUTION OF THE CURRENT ACCOUNT OF THE BOP (1988-1991)
(US\$ Millions)

	1988	1989	1990	1991	1992	1993
Resource Balance	<u>-239</u>	<u>-47</u>	<u>-35</u>	<u>6</u>	<u>85</u>	<u>278</u>
- Exports of Goods & Non-Factor Services	3,478	3,829	4,191	4,676	5,219	5,858
(Volume Growth)	(-13.2)	(11.3)	(6.1)	(6.1)	(5.6)	(6.2)
- Imports of Goods & Non-Factor Services	3,717	3,876	4,228	4,670	5,134	5,580
(Volume growth)	(-18.6)	(-1.6)	(2.8)	(4.2)	(3.8)	(2.5)
Net Factor Payments	<u>1,178</u>	<u>1,371</u>	<u>1,454</u>	<u>1,540</u>	<u>1,625</u>	<u>1,703</u>
(of which)						
Accrued Interest Payments	1,248	1,364	1,469	1,575	1,675	1,766
- Private & Short Term	100	202	202	202	202	202
- Public Medium or Long Term	1,148	1,162 a/	1,268 a/	1,373 a/	1,473 a/	1,564 a/
(of which)						
. Paid	124	1,162	1,268	1,373	1,473	1,564
. As Arrears	424	-	-	-	-	-
. Imputed on Arrears	600	-	-	-	-	-
Net Transfers	<u>107</u>	<u>113</u>	<u>118</u>	<u>126</u>	<u>134</u>	<u>160</u>
Current Account Deficit	<u>1,310</u>	<u>1,305</u>	<u>1,372</u>	<u>1,406</u>	<u>1,407</u>	<u>1,265</u>

a/ It was made the hypothetical assumption, for illustrative purposes, that all debt and arrears outstanding as of December 1988 are rescheduled at LIBOR to 20 years maturity and 10 years grace period. Fresh money requirements for each year are assumed at the same terms and conditions.

4.37 **The Speed and Intensity of Adjustment.** As shown in Table 4-6, the adjustment on the external front is gradual. In particular, the External Resource Balance (Non-Interest Current Account) goes from a deficit of 0.7 percent of GDP in 1988, to a deficit of 0.2 percent in 1989, and from there steadily to a surplus of 0.8 percent in 1993. Nonetheless, the sharp drop in consumption per capita in 1989-90 and, relatedly, the high marginal savings ratios in the same period indicate the importance of debt relief to render socially viable the implementation of the policy reforms.

- HIGH POLICY SCENARIO -

Table 4-8: ILLUSTRATIVE HYPOTHETICAL DEBT WORK-OUT (1988-1993)
(US\$ Millions)

	1988	1989	1990	1991	1992	1993
Current Account Balance	(1,310)	(1,305)	(1,372)	(1,406)	(1,407)	(1,265)
Net Direct Investment	50	200	225	250	260	300
Net Capital Flows (MLT) <u>a/</u>	(1,337)	1,355	1,457	1,361	1,297	1,130
- Disbursements	248	-	-	-	-	-
- Amortization	1,585	-	-	-	-	-
(of which) as arrears	1,461	-	-	-	-	-
- Net Financing Gap <u>b/</u> (unidentified)	-	1,355	1,457	1,361	1,297	1,130
Financing via Arrears	2,485	-	-	-	-	-
Short-Term Capital and E&O	(318)	-	-	-	-	-
Change in Reserves (=-increase)	430	(250)	(310)	(205)	(150)	(165)
<u>Memorandum Items</u>						
1. Net Financing Gap	-	1,355	1,457	1,361	1,297	1,130
2. Interest Payments	-	1,364	1,469	1,575	1,675	1,766
3. Capitalization of Interest Ratio (1/2)	-	99%	99%	86%	77%	64%

a/ For illustrative purposes, it was made the hypothetical assumption that the total stock of debt and external arrears outstanding as of December 1988 is rescheduled at LIBOR to 20 years maturity and 10 years grace period.

b/ Fresh money requirements assumed at LIBOR to 20 years maturity and 10 years grace period.

**Table 4-9: ASSUMPTIONS OF REAL EXPORT AND IMPORT GROWTH
AND COMMODITY PRICES (1989-93)**

Item	Real Growth (1989-93) (Average rate per annum) in percentage	Item	Average Price (1989-93)	Unit
1. Traditional Exports	5.1	Copper	0.67	(US\$/pound)
- Copper	4.0			
- Other	5.6	Silver	7.3	(US\$/TOZ)
2. Non-Traditional Exports	14.8	Lead	1.63	(US\$/Kgr)
3. Services	3.6	Zinc	0.75	(US\$/Kgr)
<u>TOTAL EXPORTS</u>	<u>7.1</u>	Fishmeal	493.1	(US\$/MT)
4. Imports of Goods	3.3	Coffee	123.3	(US\$/qq)
5. Imports of Services	-0.2	Crude Oil	14.9	(US\$/bbl)
<u>TOTAL IMPORTS</u>	<u>2.3</u>			

ADDENDUM

AN UPDATE ON RECENT DEVELOPMENTS

The Dynamics of the Peruvian Hyperinflation

1. This report was finalized prior to September 1988. Since then the macroeconomic situation of Peru has deteriorated markedly, even beyond the path portrayed by the low-policy scenario presented in Chapter II. The illustrative projections in that scenario (done in July 1988) were based on assumptions regarding the adoption of a set of partial and gradual corrective measures insufficient to stop the sources and the dynamics of the then emerging explosive inflationary path.^{1/} Under these assumptions, it was projected that the Peruvian economy would fall into a full-blown hyperinflation similar to that undergone by Bolivia during 1984-85. At the time of the projections, cumulative inflation for the twelve-month period ending June 1988 had been 230 percent. This report projected that inflation would escalate to 650 percent in the twelve-month period ending December 1988 and, from there, it would explode to reach over 10,000 percent in 1991. Policy-making during the period since June 1988 has been roughly similar to the assumptions made in Chapter II of the report. However, developments in recent months have proven that the transition to hyperinflation has been faster and stronger than it was portrayed in the illustrative scenario. Thus, at the time of this writing (November 1988), the revised projection for 1988 inflation is no less than 2,000 percent. It had already been noted in paragraph 2.10 (page 30) that the illustrative scenario "may understate the speed with which hyperinflation might develop," and indeed this has been the case.

2. Insight on the speed and intensity of the Peruvian hyperinflation can be gained from comparing the monthly evolution of the two central variables (inflation and real money balances) in the first half of the Bolivian hyperinflation and in the current Peruvian process. A conceptual question concerns the threshold rate of inflation that triggers hyperinflation. Technically, this rate is that which maximizes Government's real revenues from inflation. This rate varies from one country to another and for different periods within the same country depending on the sensitivity to inflation of the demand for money. In Annex 1 of this report, it was estimated that for the Peruvian economy today the threshold rate is about 510 percent per annum or about 15 percent per month.^{2/} Therefore, a sustained rate beyond that level for several

^{1/} The policy assumptions, made in that scenario, are detailed in paragraph 2.07 (pages 28-29), and the illustrative projections are discussed in paragraphs 2.08 to 2.16 (pages 30-37)

^{2/} The Cagan-Sargent rule of thumb is 40 percent per month. See Cagan, Phillip. (1956), "The Monetary Dynamics of Hyperinflation" in Milton Friedman, editor, Studies in the Quantity Theory of Money, (Chicago University Press), pages 25-117. In turn, Rodriquez calculates a rate of 31 percent for Argentina in 1985 (page 248 of the book Inflacion y Estabilizacion edited by Bruno, Di Tella, Dornbusch and Fischer, El Trimestre Economico, Mexico 1988).

months leads to hyperinflation in the absence of timely corrective intervention. Thus, it can be argued that the Peruvian economy was at the "knife's edge" of hyperinflation in the first half of 1988 and, in all certainty, entered a full-blown hyperinflation in the second half of 1988.

Table A-1: A COMPARISON BETWEEN THE TIMING OF THE PERUVIAN AND BOLIVIAN HYPERINFLATIONS

Period	Bolivia 1984			Peru 1988		
	Monthly Inflation	Cumulative Inflation	Real M2	Monthly Inflation	Cumulative Inflation	Real M2
1st Qtr.	18.8% ^{a/}	67.7%	100 ^{b/}	15.8%(*) ^{a/}	54.6%	100 ^{b/}
April	63.0%(*)	173.3%	71	17.9%	82.3%	88
May	47.0%	301.7%	55	8.5%	97.8%	89
June	4.1%	318.2%	69	8.8%	115.2%	84
July	5.2%	340.0%	89	30.9%(*)	181.7%	76
August	15.0%	406.0%	100	21.7%	242.8%	73
September	37.3%	594.7%	90	114.1%(*)	633.9%	42
October	59.1%(*)	1,005.2%	71	41.0%	934.8%	36
November	31.6%	1,354.5%	66	25.0%(*)	1,193.6%	30 ^{c/}

^{a/} Average monthly inflation of the quarter.

^{b/} Average stock of real money (M2) of the three months of the quarter (index number).

^{c/} Preliminary estimate.

* Months signalled with an asterisk indicate unsuccessful stabilization attempts.

Source: Bolivian data is from Morales, Juan A. (1987), "La Inflacion y Estabilizacion en Bolivia" in the book Inflacion y Estabilizacion edited by Bruno, Di Tella, Dornbusch and Fischer, El Trimestre Economico, Mexico 1988. Peruvian data from Central Reserve Bank of Peru.

3. Two conclusions can be drawn from Table A-1. First, the process of shrinkage of the real demand for money (the base of the inflation tax) is more rapid and systematic in the Peruvian process than it was in the Bolivian case. This indicates that the Peruvian hyperinflation will probably be more intense and virulent than was the case in Bolivia. (Note in the Table that, although the Bolivian hyperinflation started at higher monthly inflation rates than the Peruvian one, by the end of the period of comparison the cumulative rate of inflation was roughly similar in both cases.) Second, attempts to stabilize through partial and incomplete

packages (comprising typically sporadic one-shot adjustments to public prices and tariffs, the exchange rate, interest rates, and wages) give rise to a "red herring" effect in the dynamics of the process. In effect, in the month of the package inflation jumps sharply but in subsequent months inflation comes down (basically because there is a transitory improvement in public finance and also key prices are kept frozen) leading policymakers to believe that effective control of inflation has been achieved. In this respect, it must be noted that in Bolivia there were six unsuccessful attempts of this kind (paquetazos) between November 1982 and August 1985. In Peru there have been four in 1988 (in March, July, September and November). The first two are explained in the report (pages 21-22), and the other two are discussed below.

The September Economic Measures

4. On September 6, 1988, the Government announced a package of economic measures that was officially termed the "double zero plan" since it was intended to reach zero fiscal deficit and zero Central Bank credit. The main measures of the plan were: (i) unification of multiple exchange rates into a new official rate of 250 Intis per US dollar (approximating the then prevailing parallel market rate and representing a 75 percent nominal devaluation with respect to the weighted average of previous multiple rates); (ii) adjustment to prices and tariffs of state enterprises, ranging from 90 percent (milk powder) to 300 percent (gasoline); (iii) several tax raising measures, including partial reduction of exemptions and shortening of collection lags for sales taxes and introduction of a 4 percent transitory tax on all exports; and (iv) adjustment to ceilings on nominal interest rates to roughly double previous levels (annual rates for deposits became 130 percent and for loans 260 percent). These measures were accompanied by a decree that mandated an across-the-board wage increase by a lump sum of 9,000 Intis (US\$36). For minimum wage earners this represented a 150 percent nominal increase. As for price controls to private sector provided goods and services, the Government allowed for a 10-day period of relatively free price adjustments to be followed by a 120-day freeze. The latter also affected the official exchange rate and wages (excluding those of unionized workers that are subject to independent and staggered backward-looking indexation clauses triggered every four months). However, in late September (three weeks after the institution of the freeze) the Government lifted controls on prices of most commodities and services, except for 42 items (namely staples, gasolines and construction materials), most of which are provided by public enterprises. The freeze also was maintained for prices of goods and services subject to the so-called special regimes ^{3/} (electricity, water, pharmaceuticals, health and education) as well as for the exchange rate, minimum wage and interest rates.

5. The deficit-cutting effects of the package were less spectacular than what appeared at first glance. First of all, although in principle the unification of exchange rates alone could have scaled down the deficit by no less than 3 percent of GDP (paragraph 3.42), in reality a significant part of previous Central Bank's foreign exchange losses was transferred to the Treasury. This resulted from the fact that domestic prices of several staples of imported origin (wheat, maize, milk, etc.) had been set on the

^{3/} See paragraph 3.86 of the report.

basis of an "implicit" exchange rate of 66 Intis per dollar when the new official rate was 250 Intis. Second, tax revenue-raising measures implemented barely added up to 1.3 percent of GDP. Third, initial revenue gains from adjustments to prices and tariffs of public firms, and in particular gasoline prices, were largely wiped out by high inflation in September-October 1988 (Table A-1). Fourth, the decreed wage hike hit public spending hard because the payroll accounts for about one-third of total public expenditures. The estimates of the budget items for the period September-December 1988, in light of the September measures are presented in Table A-2.

6. Despite the underlying fiscal imbalance portrayed in Table A-2, the Central Bank stated at the time of the September measures that it would follow a strict policy of zero credit to the public sector. This policy of monetary restraint was in broad terms maintained through late October, forcing the Central Government and public enterprises to curtail expenditures or else resort to financing by accumulating arrears with private sector suppliers. This policy was geared to pushing to the surface the real size of the budgetary imbalance on the expectation that additional revenue-raising measures would be taken. In the first half of November, Central Bank credit loosened up marginally, albeit the general thrust of monetary discipline continued. Owing to monetary tightening, the parallel market exchange rate, which had shot up to nearly 500 Intis per dollar after the September measures (a 100 percent premium over the official rate), stabilized at that level through mid-November (Table A-3). Likewise, monthly inflation declined from 114 percent in September to 41 percent in October and 25 percent in November.

The State of the Economy as of November 1988

7. The monetary squeeze, in the presence of backward-looking indexation of wages and lack of synchronization in price setting by producers, together with tight rationing of foreign exchange for imports of required inputs prompted an unparalleled drop of production; GDP fell an estimated 24 percent between April and October (Table A-3). In early November the Government attempted to partially reduce the degree of indexation of wages by setting a ceiling on cost of living adjustments to wages subject to collective bargaining, but the decree was subsequently abolished in the wake of strikes and protests. Notwithstanding indexation and periodic adjustments to non-indexed wages, the combination of escalating inflation and sharp recession rapidly eroded the purchasing power of wages, on average, to one-half of their December 1987 levels. As shown in Table A-3, strike activity has intensified markedly compared to 1987, but employment levels have not yet fully reacted to the drop in economic activity, perhaps due to the cushion provided by lower real wages. At present both real GDP and real wages are lower than in mid-1985. The balance of payments crisis is expected to aggravate in the coming months due to a massive mineworkers' strike, started in mid-October and still unsettled at the time of this writing, that has paralyzed production in a large segment of the sector. Since there is an average three-month lag between extraction of minerals and the actual payment for exports, monthly commodity export proceeds accruing to the Central Bank may fall by as much as US\$70 million (from an average of US\$200 millions in previous months) starting in early January. Under these circumstances and with little gross reserves left in the Central Bank, drastic exchange rate adjustments will

be needed to clear the market, and this will certainly have further effects on inflation and output contraction.

Table A-2: PUBLIC SECTOR BUDGET (September-December 1988)
(Projected on the basis of the
September economic measures)

	Nominal (Billion Intis)	Percent of GDP (GDP of Sept-Dec period) ^{a/}
1. Public Revenues	917	23.5%
- Tax Revenues	293	7.5%
- State Enterprise Revenues	546	14.0%
- Other	78	2.0%
2. Public Expenditures ^{b/}	1,123	28.8%
3. <u>Non-Financial Public Sector Deficit (2-1)^{b/}</u>	<u>206</u>	<u>5.3%</u>
4. Central Bank Financial Losses	31	0.8%
5. <u>Overall Deficit (3+4)^{b/}</u>	<u>237</u>	<u>6.1%</u>
6. Central Bank's Flow of Credit to Development Banks	31	0.8%
7. <u>Public Sector Borrowing Requirements (PSBR1) (5+6)^{b/}</u>	<u>268</u>	<u>6.9%</u>
8. Interest on Foreign Debt ^{c/}	138	3.5%
9. <u>Public Sector Borrowing Requirements (PSBR1) (5+6) ^{c/}</u>	<u>406</u>	<u>10.4%</u>
10. <u>Financing of PSBR2</u>	<u>406</u>	<u>10.4%</u>
- External ^{d/}	137	3.5%
- Domestic	269	6.9%

- ^{a/} GDP of September-December 1988 estimated at 3,900 billion Intis.
^{b/} Excludes all interest on Foreign Debt (paid, accrued non-paid and imputed on arrears).
^{c/} Includes all interest on Foreign Debt (see footnote b).
^{d/} Effective plus arrears on accrued interest.

Source: World Bank staff estimates.

Table A-8: KEY MONTHLY ECONOMIC INDICATORS, 1988

1988	Real GDP (Index)	Employment (Index)	Real Wage (Index)	Hours Lost in Strikes a/	Inflation Rate c/	Broad Money (Nominal Growth Rate) c/d/	Central Bank's Domestic Credit (Nominal Growth Rate) c/e/
January	100.0	100.0	100.0	157.5	12.8	-1.7	4.8
February	108.2	99.8	94.2	-52.4	11.8	10.1	9.4
March	108.2	100.3	100.7	-45.8	22.6	12.9	10.6
April	101.6	100.2	90.6	-29.7	17.9	8.3	10.4
May	100.3	99.7	87.7	85.0	8.5	9.3	7.3
June	98.0	99.3	84.8	146.3	8.8	3.3	8.6
July	91.3	99.3	87.7	843.5	30.9	24.0	20.6
August	91.3	99.1	76.8	714.2	21.7	15.6	18.4
September	90.5	99.5	60.1	105.4	114.1	23.0	101.3
October	80.6	97.7	47.1	619.2	40.6	19.4	7.5
November	n.a.	n.a.	52.9	1,114.9	24.4	n.a.	n.a.

1988	Official Exchange Market						Parallel Exchange Market		
	Official Exchange Rate (MUC) f/			Average Effective Rate b/			Intis/US\$	Nominal c/ Devaluation	Real Exchange Rate (Index) g/
	Intis/US\$	Nominal c/ Devaluation	Real Exchange Rate (Index) g/	Intis/US\$	Nominal c/ Devaluation	Real Exchange Rate (Index) g/			
January	33.0	0.0	130.0	40.4	3.9	106.5	91.0	0.7	52.1
February	33.0	0.0	148.9	43.0	6.4	112.8	103.0	13.2	51.6
March	33.0	0.0	178.5	49.2	14.4	119.7	107.0	3.9	60.9
April	33.0	0.0	208.9	55.9	13.6	123.4	153.0	43.0	49.7
May	33.0	0.0	225.4	61.3	9.7	121.4	178.0	16.3	45.8
June	33.0	0.0	248.1	74.1	20.9	110.5	180.0	1.1	50.1
July	33.0	0.0	333.1	89.0	20.1	123.5	209.0	16.1	58.5
August	33.0	0.0	408.4	142.7	60.3	94.4	279.0	33.5	51.6
September	250.0	657.6	112.6	278.6	95.2	102.1	425.8	52.6	72.7
October	250.0	0.0	154.5	292.1	4.8	135.0	508.6	19.4	84.2
November	500.0	100.0	93.8	532.5	82.3	90.9	700.0	37.6	75.0

a/ Percent increase over same month of previous year.

b/ Weighted average rate of exchange rates applicable to all commercial transactions. Before September there were multiple exchange rates.

c/ Percent increase over previous month.

d/ Excludes deposits denominated in dollars.

e/ Includes Net Unclassified Assets. The drastic jump in September is largely due to foreign exchange losses (resulting from the drastic devaluation of the official exchange rate, MUC), rather than to effective domestic credit flows.

f/ MUC stands for Mercado Unico de Cambios and is the official exchange rate.

g/ Index number (December 1978=100). A drop in the index means real depreciation.

Source: Central Reserve Bank and Ministry of Economy.

The November Economic Package

8. New economic measures were announced on November 22, 1988. These included: (i) a devaluation of the official exchange rate from 250 Intis to 500 Intis per dollar (plus a provision that allows exporters to sell 30 percent of their revenues to other importers at an unregulated exchange rate); (ii) adjustments to controlled prices and tariffs averaging 100 percent for basic foodstuffs, 140 percent for gasoline, and 110 percent for electricity and water tariffs; (iii) indexation of tax liabilities to the inflation rate and establishment of a 10 percent tax on exports; (iv) adjustment of ceilings to interest rates up to 800 percent per annum for loans and 560 percent for deposits; and (v) increase in nominal minimum wages by 60 percent and in public sector wages by 50 percent. Shortly after the package was announced the parallel market exchange rate shot up to 700 Intis per dollar.

The Drawbacks of the Packages

9. Both the September and November packages contained positive measures consistent with some of the recommendations of this report; in particular, adjustments to prices and tariffs, unification of exchange rates and indexation of tax payments to inflation. However, both stabilization attempts lacked the coherence necessary to stop hyperinflation. Their main drawbacks are described below.

10. First, price adjustments and tax-raising measures were insufficient to balance the fiscal budget and, therefore, insufficient to render viable a credible long-standing policy of reducing the expansion of Central Bank's domestic credit to zero.^{4/} Indeed, price adjustments contained in the last package did not even make up for cumulative inflation in the period September-October. In addition, the packages did not create automatic and periodic rules of adjustment for prices and tariffs of state enterprises (e.g., adoption of a forward-looking indexation guideline, or indexing them to a market-based exchange rate, as recommended in the report). This inevitably leads to real erosion of revenues until the time of the next discretionary adjustment.

11. Second, the packages lacked the necessary incomes policy required to break inertial inflation stemming from staggered and backward-looking wage settlements of unionized workers. As for wages not subject to explicit indexation (those of civil servants, non-unionized workers, and the minimum wage), the practice followed of escalating wages, at the time the exchange rate and price adjustments are effected, has further fueled the price-wage spiral. Real wages--the average over the last indexation cycle or else within the last two successive adjustments--have probably already adjusted through inflation close to viable levels. Therefore, the issue is not one of reducing real wages further, but rather one of abolishing backward-looking indexation and synchronizing future nominal wage settlements at current average real levels. However, a transitory (say, two-month) nominal wage freeze would be required initially, at the

^{4/} The rationale as to why it is necessary to balance the budget and follow a zero domestic credit expansion rule to stop hyperinflation is provided in Chapter IV and Annex 1.

time the revenue-raising measures are implemented, to avoid second-round inflationary effects from wages to prices. From then on, nominal wages could be adjusted on the basis of a forward-looking indexation guideline.

12. Third, as for exchange rate policy, it has become increasingly clear that any strategy different from a market-based approach (a float) is neither credible nor viable, particularly given the fact that the Central Bank currently has little international reserves. Trying to anchor inflation by temporarily freezing the exchange rate without reserves and a credible stabilization program, leads to under-invoicing of exports, delays in the surrendering of foreign exchange by exporters, tightening of import approvals and inevitably to subsequent drastic adjustments to the exchange rate. The case can be made, however, to establish the float with a short lag (one month) after the necessary fiscal adjustment has been effected.

13. Fourth, the same considerations apply to interest rate policy. Full liberalization of rates with a one-to-two-month lag after the fiscal adjustment would be the strategy. This phased approach is justified on the grounds that, since the public sector is the debtor of about one-half of total internal liabilities of the financial sector, raising nominal interest rates before inflationary expectations are cut down will increase the Government's interest expenditures and make the deficit worse before it gets better (J curve pattern), thereby jeopardizing the feasibility of later balancing the budget.

14. Finally, preliminary estimates of the budgetary picture after the November measures indicate that this is not very different from the one portrayed in Table A-2. The domestic financing required by the targeted budget (6.9 percent of GDP) is larger than the current size of the formal financial system (6.7 percent of GDP, as gauged by total internal liabilities of the financial sector). Even under the unrealistically optimistic assumptions that all domestic credit were used by the public sector, interest rates on all deposits were zero, and there were no further financial disintermediation, it is physically impossible to effect a 6.9 percent of GDP transfer of real resources (via inflation tax), from the private sector to the public sector, with a financial system that only totals 6.7 percent of GDP. (Hyperinflation can confiscate the whole financial sector but not more). Of course, in the short run the Central Bank can exercise credit tightening, thereby forcing the public sector to get financing through accumulation of arrears with the private sector (as has occurred since September).^{5/} However, lack of fiscal discipline inevitably leads sooner or later to loss of monetary control. Thus, increasing arrears with domestic suppliers is a "time bomb" and, unless additional timely corrective measures are taken, the Central Bank will soon have to come to the rescue with a policy of easy money. This, in turn, signifies the continuation of the hyperinflationary process.

^{5/} Two recent attempts (in October and November) by the Treasury to issue bonds indexed to inflation and yielding a 6 percent real return have been unsuccessful. Only about 10 percent of the amounts offered was subscribed, largely by public enterprises. This may indicate that, under the current circumstances, private investors might perceive high "default risk" on any public sector debt and therefore prefer dollars in their portfolios. Evidence from other hyperinflations is consistent with this hypothesis.

Bank-Government Discussions on the Country Economic Memorandum

15. Discussions with the Government's economic team on an earlier draft of this report were conducted during the second half of October. There was agreement between the economic team and Bank staff on the inevitability of continuing hyperinflation in the absence of additional drastic corrective measures. The economic team's diagnosis of the causes of the current macroeconomic imbalances was very similar to that portrayed in this report. In particular, the view was shared that the size of the fiscal gap exceeded by far the potential to raise real resources through inflation from a very thin and shrinking formal financial sector. Likewise, the Government's economic team also believed that backward-looking indexation of wages to inflation (affecting about 300,000 workers in the modern sector of the economy, or about one-fourth of all workers in the formal sector) was a key element in the dynamics of inflation, and that any attempt to stabilize nominal aggregate demand growth (through fiscal restraint and monetary discipline) would probably be unviable in the absence of some sort of de-indexation of wages. In the same vein, the economic team believed that increases in the nominal minimum wage and wages of civil servants and non-unionized workers, decreed as part of economic packages, partially neutralized adjustment efforts. However, there were somewhat different views between the Government's economic team and Bank staff in terms of the speed and intensity of adjustment and also in terms of the sequencing of the different economic reforms.

ANNEXES

INFLATION AND INFLATIONARY FINANCE

1. The purpose of this annex is to study the relationship between the inflation rate and the real resources from inflationary finance (seigniorage). In particular, the focus is placed on identifying the shape of the trade-off between the inflation rate (as a tax rate) and the amount of real resources that can be transferred to the government from a given demand for money (as a tax base). This trade-off can be termed as a Laffer curve, in analogy with the theory of taxation. From analyzing this trade-off it can be calculated the inflation rate that maximizes revenues from inflationary finance. It is found that in the case of Peruvian economy, that inflation rate is between 500 percent and 600 percent per annum, and the maximum revenue from inflation is just over 10 percent of GDP.

2. The demand for money utilized here is the simple Cagan formulation:

$$M/p = A \exp(-\alpha\Pi) y \quad (1)$$

Where M/p = real broad money; Π = inflation rate; y = real GDP

Since in Peru interest rates on Bank deposits are very low compared to inflation and the share of deposits in broad money is declining rapidly, it is assumed for simplicity that the nominal return of all broad money is zero.

3. The government's real revenue from inflation (R) is:

$$R = (M/kp) \Pi = [A \exp(-\alpha\Pi) y \Pi] / k \quad (2)$$

Where k = money supply multiplier.

To maximize inflationary revenues:

$$d R / d \Pi = A [\exp(-\alpha\Pi) y - \alpha \Pi \exp(-\alpha\Pi) y] / k = 0$$

This can be written as:

$$(A \exp(-\alpha\Pi) y / k) (1 - \alpha \Pi) = 0$$

The maximum revenues are reached at $\Pi (\max) = 1/\alpha$ (3)

$$\text{Also when } \Pi = 0 \text{ or } \Pi = \infty \implies R (\text{Min}) = 0$$

4. To infer the value of the parameter " α ", the following convenient expression of (1) can be used:

$$(M/p) / y = A \exp(-\alpha\Pi) \quad \text{or} \quad y / (M/p) = \exp(\Pi\alpha) / A$$

Since $V = py/M$ = income velocity of money; therefore:

$$V = \exp(\Pi\alpha) / A \quad (4)$$

Taking logs and then derivatives:

$$d \log V / d \Pi = \alpha \quad \text{or} \quad (dV/V) / d \Pi = \alpha \quad (5)$$

5. The variables of expression (5) can be proxied by the growth rate of velocity and the increase in inflation from the second semester of 1987 to the first semester of 1988. Thus:

$$d V/V \approx \Delta V/V = (1163/809 - 1) = 0.44$$

Since: M/P (at Dec. 1987) = 1163; Real GDP (average July-Dec. 1987) = 121;
and M/p (at June 1988) = 809; Real GDP (average Jan.-May 1988) = 121

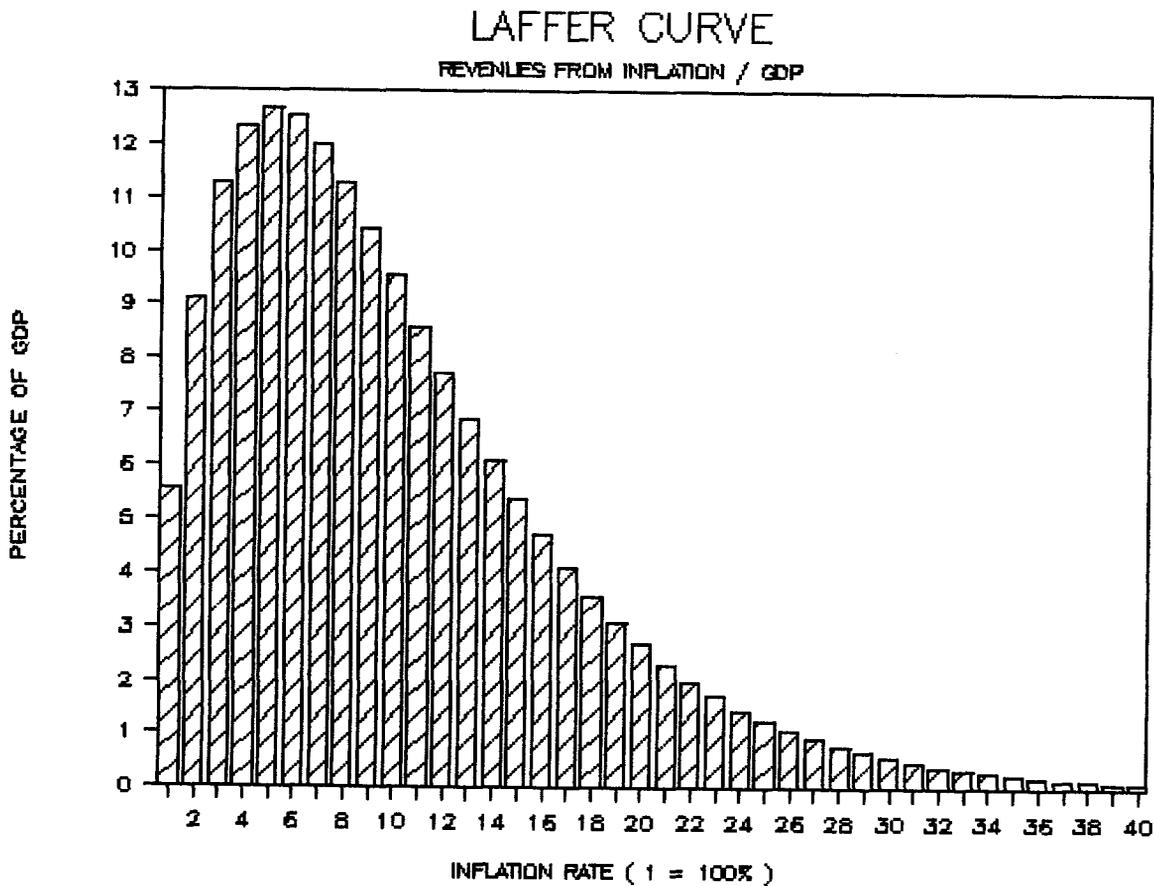
$$\text{In addition: } \Delta \Pi = 3.62 - 1.38 = 2.24$$

Since: Π (July to Dec. 1987) = 138 (annual rate)
 Π (Jan. to June 1988) = 362 (annual rate)

Therefore the estimate of " α " is: $(\Delta V/V) / \Delta \Pi = 0.44/2.24 = 0.196$ and, as a result, the inflation rate that maximizes inflationary finance is:

$$\Pi (\text{max}) = 1/\alpha = 1 / 0.196 = 5.1 \text{ or } 510 \text{ percent per annum}$$

Chart 1-1



6. To find out the numerical expression of equation (2), it is also necessary to calculate A. This can be done using expression (4) and

substituting the values of V and Π observed in 1987 1/

$$V = 10.9 = (1/A) \exp (0.196 \times 1.15) \implies A = 0.11$$

Therefore, the expression for revenue from inflation (equation (2)) is:2/

$$R/y = 0.065 \times \exp (-0.196\Pi) \times \Pi \quad (6)$$

This equation calculates the government's revenue from inflation as a percentage of GDP. The Laffer curve implied by equation (6) is plotted in Chart 1-1.

7. It can be seen in the figure that the maximum revenue from inflation is about 12 percent of GDP and that this is reached at a steady state inflation of between 500% and 600%. For inflation rates beyond 600% percent the model becomes unstable and the revenue from inflation drops exponentially towards zero. (Note that for each (revenue/GDP) point in the vertical axis there are two solutions (two inflation rates) in the horizontal axis; one solution is at low inflation--along the efficient and stable portion of the Laffer curve, and the other solution is at high inflation--that is in the inefficient or unstable portion of the curve. The second solution is, therefore, in the hyperinflationary path).

1/ The value used for V, 10.9, is equal to nominal GDP (1987) divided broad money supply (as of end of 1986); that is GDP/M_1 . Because this measure of velocity is more suitable for inflationary revenue calculations than the alternative GDP/M . The inflation rate in 1987 was 115 percent.

2/ The money supply multiplier in 1987/88 was $k = 1.7$.

THE INFLATION TAX: THEORETICAL DERIVATION AND CALCULATION
FOR 1980-87

A. Introduction

1. The purpose of this annex is to propose a broad measure of the inflation tax and a method to estimate it for Peru in the 1980-87 period.

2. The textbook conventional measurement of the inflation tax is restricted to the inflation-erosion of non-interest bearing public debt (e.g., currency). However, currency is not the only public liability which can be amortized through inflation. The real value of other forms of public debt, such as bonds, fixed interest loans, or interest bearing reserve requirement of the commercial banks in the Central Bank, is also eroded by increases in the price level. Thus, a broader measure of the inflation tax ought to focus on the inflation-amortization of the principal of all public debt instruments (monetary and financial) not compensated by interest payments. The difference between monetary and financial debt instruments, though, is that the latter bear an interest which tends to compensate (partially or totally) the debt-holder for the amortization of debt in real terms induced by inflation. Accordingly, the inflation tax proposed here refers only to that portion of the inflation-amortization of debt which is not compensated by interest payments. To illustrate this, consider the case of currency. Since currency is a zero-interest liability, there is no interest compensation for the inflation-induced real amortization of it and, hence, all that real amortization is inflation tax. In the case of financial debt, since it bears a nominal interest rate which compensates (partially at least) debt-holders for inflation-induced capital losses, the inflation tax will be smaller than the total inflation-amortization of debt.

3. Estimating the inflation tax according to this definition requires knowledge of the component of nominal interest rates which is a compensation (to debt-holders) for inflation-induced capital losses. That component is, of course, equal to the nominal interest rate minus the "benchmark" real interest rate.^{1/} To simplify the calculation process, it is first assumed that the full amount of nominal interest rates is compensation for the inflation-erosion of debt. This obviously implies that the benchmark real interest rate is zero. In a second calculation, though, it is assumed that the benchmark real interest rate is 5 percent. This, in turn, implies that the compensation for inflation-amortization of debt is approximately equal to the percentage nominal interest rate minus 5 percent (see Footnote 1).

4. In principle, in order to estimate accurately the inflation tax, all assets and liabilities of the consolidated public sector, and their corresponding interests and returns, would be required. However, in the

^{1/} More rigorously, $[(1 + i)/(1 + R)] - 1$, where "i" is the nominal rate of interest and "R" is the real rate of interest.

calculation presented here, only a small number of interest rates of financial assets and liabilities are considered. This implies, on occasion, imputing the same interest rates to different types of assets and liabilities. However, the approximations are good enough to provide reliable estimate of inflation tax proceeds.

5. Estimating the broadly defined inflation tax requires assessing the inflation tax base first. This task is best done by consolidating the balance sheets of the non-financial public sector and the financial public sector. The Consolidated Public Sector (CPS) balance sheets arrived at provides the sought tax base for the inflation tax calculations performed below. It also provides the base for the inflation subsidy calculations, the inflation subsidy being defined below as the inflation-erosion of net financial assets of CPS owed by the private sector which is not compensated by interest payments.

6. The plan of this Annex is as follows. The first step taken to calculate the inflation tax (IT) is to derive the CPS balance sheet; this is done in Section B. The IT calculations are performed in Section C. Finally, comments on the evolution of the IT and its relationship with the macroeconomic environment are left to Section D.

B. The Consolidated Public Sector Balance Sheet

7. The balance sheets of the non-financial and financial public sectors are presented in the first sub-section. Then the CPS balance sheet is analyzed. The last subsection shows a table with the different interest rates imputed to different groups of assets and liabilities.

The Balance Sheets

8. The sectors (and subsectors) were chosen considering the presentation of the monetary accounts of the financial system utilized by the Central Reserve Bank and reported in "Nota Semanal". The sectors and the notation employed are:

- The Non-Financial Public Sector (NFPS), of which the Central Government is part (the other main subsectors being public sector enterprises, provincial governments and decentralized agencies.)

- The System of Public Sector Banks (PB), (excluding commercial banks and COFIDE)^{2/} which is formed by the Central Reserve Bank (CRB), the Banco Nacion (BN) and the Banca de Fomento (BF).

^{2/} The Banca Asociada and the recently nationalized commercial banks were not considered public financial institutions because, despite their state property, their lending to private sector is financed through private sector deposits and cancels out. The remainder (requirements in the Central Bank) are already considered as a liability of the Central Bank and, hence, form part of the base of the inflation tax in any case.

- The Consolidated Public Sector (CPS), which comprises both PB and NFPS.

- The Foreign Sector (F), composed of foreign creditors and debtors.

- The Non-Financial Domestic Private Sector (SPR)

- The Financial System (FS), which includes (apart from PB) the group of Non-Public Financial Institutions (NPB). NPB includes, in turn, Commercial Banks (BC) (see Footnote 2) and the Non-Banking Financial System (NB) (of which COFIDE, the Development Finance Corporation, and "Financieras" are the most important institutions).

- A miscellaneous item is the specified in the monetary accounts as "Otros" (O).

The assets and liabilities considered are:

- Deposits (D)
- Foreign Currency Deposits (FCD)
- Loans (L)
- Net Loans (NL)
- Real Capital (K)
- Bonds (B)
- Reserves (R)
- Currency in Circulation (C)

9. An asset, (e.g., D) held by sector i (e.g., BC) and originating in a transaction with sector j (e.g., CRB) is written as D[i,j]. In our example this would be D[BC,CRB] which refers to deposits of BC on the CRB (these are principally legal and excess reserves of BC held in CRB). Note that in this case D[BC,CRB] appears as a liability in the balance sheet of the CRB and as an asset of BC. When an asset is held by more than one sector (or when it is originated in transactions with more than one sector) this is indicated by a dash; e.g., D[SPR-BC,BN] refers to deposits of SPR and BC at BN.

10. The other items reported in the balance sheets are:

- Net Worth (NW)

- Other Accounts Net (OCN). A description of OCN is provided in ANNEX III.

11. The simplified balance sheets of the NFPS, the CRB, BN and BF are reported in the following table:

Table 2-1: THE BASIC BALANCE SHEETS

(A = Assets/L = Liabilities)

i.		A	Non-Financial Public Sector	L
		K[NFPS, SPR-F]		L[CRB, NFPS]
		D[NFPS, CRB]		L*[BN, NFPS] /a
		D[NFPS, BN]		L[BN, NFPS]
		D[NFPS, BF]		L[BC, NFPS]
		D[NFPS, BC]		L[BF, NFPS]
				L[NB, NFPS]
				B[BC-SPR, NFPS] /b
				NL[F, NFPS]
				NW[NFPS]
ii.		A	Central Reserve Bank	L
		R[CRB, F]		NL[F, CRB]
		L[CRB, BF]		C[SPR, CRB]
		L[CRB, BC]		D[BN, CRB] /c
		L[CRB, NB]		D BF, CRB /c
		L[CRB, BN]		D[BC, CRB]
		L[CRB, GC]		D[SPR, CRB]
		OCN[CRB]		FCD[FS, CRB] /d
		L[CRB, O]		D[O, CRB]
				D[NFPS, CRB]
				NW[CRB]
iii.		A	Banco Nacion	L
		R[BN, F]		NL[F, BN]
		OCN[BN]		D[SPR, BN]
		L[BN, NFPS]		FCD[SPR, BN]
		L[BN, SPR]		D[NFPS, BN]
		D[BN, CRB] /c		L[CRB, BN]
		L[BN, BC]		D[BC, BN]
		L[BN, BF]		L[BF, BN]
		L*[BN, NFPS] /a		NW[BN]
iv.		A	Banca de Fomento	L
		R[BF, F]		NL[F, BF]
		L[BF, NFPS]		D[SPR, BF]
		L[BF, SPR]		FCD[SPR, BF]
		D[BF, CRB] /e		L[CRB, BF]
		L[BF, BN]		L[BN, BF]
		L[BF, BC]		D[BC, BF]
		OCN[BF]		D[NFPS, BF]
				NW[BF]

/a With CRB resources.

/b Includes "Bono Tipo C" issued by COFIDE.

/c Includes legal reserves on FCD.

/d Excludes legal reserves on FCD of BF and BN.

/e Includes legal reserves on FCD.

The Consolidated Public Sector Balance Sheet

12. The balance sheet of the CPS reported in Table 2-2 was obtained consolidating the balance sheets of NFPS, CRB, BN and BF. Assets and liabilities of the CPS were grouped into different categories, each of which was imputed a different interest rate (see Table 2-3).

Table 2-2: THE CONSOLIDATED PUBLIC SECTOR BALANCE SHEET

A	Consolidated Public Sector	L
K[NFPS, SPR]		LF = NL[F, NFPS] + NL[F, CRB] +
OCN[CRB-BF-BN]		+ NL[F, BN] + NL[F, BF]
R[CRB-BN-BF, F]		NW
L[PB, BC-SPR] = L[BF, BC] +		C
+ L[BN, BC] +		B[SPR-BC, NFPS]
+ L[CRB, BC] +		L[NPB, NFPS] = L[BC, NFPS] +
+ L[BF, SPR] +		+ L[NB, NFPS]
+ L[BN, SPR] +		EME = FCD[FS, CRB]
+ L[CRB, NB]		EMN = D[BC, CRB] + D[SPR, CRB] +
D[NFPS, BC]		+ D[O, CRB]
		FCD[SPR, BN-BF]
		D[SPR-BC, BN-BF]

Notation: EME are reserve requirements (including excess reserves) on FCD of FS in CRB.
 EMN are reserve requirements (including excess reserves) on deposits of NPB and SPR in CRB.
 LF are net foreign loans to CPS.
 NW stands for total public sector net worth.
 C is currency in circulation.

Imputed Interest Rates

13. The data source for each type of asset was the Central Reserve Bank's publication "Nota Semanal" (NS), various numbers. The interest rates imputed to the groups of assets of the CPS balance sheet are described in Table 2-3 (all interest rates are effective rates and are averages for the period). Most of the interest rate data was provided by the "Subgerencia del Sector Monetario" of the CRB (SGSM). The LIBOR interest rate was obtained from the IMF Financial Statistics (IMF-FS).

Table 2-3: IMPUTED INTEREST RATES

<u>Asset Group</u>	<u>Interest Rate (Description and Notation)</u>	<u>Source</u>
C	institutionally fixed at zero	
B[SPR,NFPS]	i(b): average return on "Bonos Tipo C" of COFIDE for 1984-87; does not account for fiscal benefit (these bonds are tax-deductible)	NS
L[NPB,NFPS]	i(npb): is the interest rate of BC for 90 days "Descuento" loans (for 1980-85) and for 360 days loans (for 1986-87)	SGSM
EMN	i(emn): until 1983 is the passive interest rate for saving deposits;(data on remuneration of reserves was not available), since 1984 it is the remuneration of reserves ("encaje exigible") of BC	SGSM
EME	i(eme): is 1 plus the LIBOR 90 days interest rate times 1 plus the rate of devaluation of the official exchange rate minus one	IMF-FS and NS
D[SPR,BC-BF]	i(ci): interest rate of "Cedulas Hipotecarias"	SGMS
FCD[SPR,BN-BF]	i(fcd): idem i(eme)	
L[PB,BC-SPR]	i(red): rediscounting interest rate of Banco Agrario until 1984 and a simple average of "Selectivo Agrario" and "Fomento Agropecuario" loans thereafter	SGSM
D[NFPS,BC]	i(dep): fixed term deposits for 90-180 days at BC	SGSM

C. Calculation of the Inflation Tax (IT)

14. The broad inflation tax is defined here as the inflation-amortization of the principal of monetary and financial liabilities of the CPS held by the domestic private sector which is not compensated by interest payments. To illustrate this assume that the only two public debt instruments are currency and fixed interest short-term bonds. In the case of currency, since it bears an institutionally fixed zero rate of interest (i.e., there is no compensation for the inflation-amortization of the stock), the inflation tax is equal to the whole inflation-amortization of the stock (that is, the loss in real value of the stock of currency). On the other hand, bond holders are compensated for the inflation-induced drop in value of the real stock of bonds by interest payments. If the interest rate does not suffice to compensate for the inflation-amortization of debt, the difference between the inflation-induced amortization of principal and the interest payments (i.e., the uncompensated inflation-amortization of debt) is deemed the inflation tax on bonds.

15. Accordingly, employing nominal interest rates to measure the compensation for the inflation-amortization of debt (that is, assuming a zero "benchmark" real interest rate), the IT on a given debt instrument, measured in units of "goods" at the beginning of the period, is equal to the product of the stock of debt and the difference between the rate of inflation and the nominal interest rate of that stock, all divided by one plus the rate of inflation. The total IT is then equal to the sum of the ITs on all public debt instruments.

16. Therefore, employing the notation of the CPS balance sheet derived in paragraph 12, the total IT is:

$$(1) \quad IT = (1/1+inf)*\{C*inf + B[SPR,NFPS]*(inf - i(b)) + \\ + L[NPB,NFPS]*(inf - i(npb)) + EMN*(inf - i(emn)) + \\ + EME*(inf - i(eme)) + D[SPR,BC-BF]*(inf - i(ci)) + \\ + FCD[SPR,BF-BN]*(inf - i(fcd))\}$$

where: inf is the rate of inflation.

17. A similar approach can be employed to define and calculate the inflation subsidy (IS) which the CPS gives to the domestic private sector. The IS arises when the private sector borrows from the CPS at interest rates which are below the rate of inflation. In this case the inflation-erosion of private financial liabilities exceeds the cost of holding them, and there is an implicit subsidy to financial debtors. More precisely, the IS is defined as the inflation-amortization of financial assets of the CPS in hands of the private sector which is not compensated by interest payments. Following the notation of the CPS balance sheet of Section B the IS can be calculated as follows:

$$(2) \quad IS = (1/1+inf)*\{L[PB,BC-SPR]*(inf - i(red)) + \\ + D[NFPS,BC]*(inf - i(dep))\}$$

18. The net inflation-induced financial wealth transfer from the private to the public sector is termed net inflation tax (MIT), and can be expressed as the difference between the IT and the IS:

$$(3) \text{ NIT} = \text{IT} - \text{IS}.$$

19. From the conceptual point of view inflationary taxation can arise both from: (a) inflationary misperceptions, which make inflation higher than originally anticipated, thereby rendering ex-post real interest rates lower than ex-ante interest rates; or (b) institutional rigidities in the determination of interest rates, which impede agents from adjusting nominal rates to anticipated inflation. In general, assessing the relative significance of both sources of inflationary taxation (inflation misperceptions and institutional rigidities) involves considerable difficulty. The main difficulty stems from the fact that inflation expectations are non-observable. However, the system of fixed and artificially low interest rates, which have been prevailing in Peru since 1976 (and in particular since 1985), suggests that institutional rigidities have been the principal explanatory factor of the IT on financial assets/liabilities.

20. From equation (1) it is clear that only public financial and monetary liabilities held by the domestic private sector are considered a source of IT. Real assets (such as $K[\text{NFPS}, \text{SPR}]$) are excluded because, unless their relative price changes, their nominal value moves along with inflation. Foreign liabilities (such as LF) or assets (such as $R[\text{CRB}-\text{BN}-\text{BF}, \text{F}]$) are neglected since their rate of return in domestic currency is equal to the external real interest rate plus domestic inflation under purchasing power parity and, therefore, they are perfectly indexed assets.^{3/}

21. The account $\text{OCN}[\text{CRB}-\text{BN}-\text{BF}]$, which approximates cumulative operational losses of public banks (mainly the CRB, see ANNEX III), can be viewed as a non-performing asset (that is an asset with zero nominal return). Or else, the CPS balance sheet could have been presented subtracting this item from the right-hand side of the balance sheet in which case the CPS net worth would have been smaller by a similar amount.

^{3/} Under purchasing power parity:

$$\begin{aligned} \text{dev.} &= \text{inf} - \text{inf}^* \\ \text{where: dev} &\text{ is the rate of devaluation} \\ \text{inf} &\text{ is the domestic rate of inflation} \\ \text{inf}^* &\text{ is the foreign rate of inflation.} \end{aligned}$$

The domestic currency nominal return on the foreign asset is equal to the sum of the foreign interest rate and the devaluation rate:

$$\begin{aligned} i^* + \text{dev} &= i^* - \text{inf}^* + \text{inf} \\ &= r^* + \text{inf} \end{aligned}$$

where: i^* is the foreign nominal interest rate and
 r^* is the foreign real interest rate.

Assuming that the external real interest rate is zero, the nominal return on the foreign asset is equal to inflation under purchasing parity, i.e. the inflation-erosion of the foreign asset (prior to devaluation).

22. The data employed (stocks of assets and liabilities and interest rates) are reported in Table 2-4, and the estimates of the IT, IS and NIT are in Table 2-5.

Table 2-4: STOCKS OF ASSETS/LIABILITIES AND INTEREST RATES

	1980	1981	1982	1983	1984	1985	1986	1987
Stocks (averages, mill. Intia)								
C	218	355	532	871	1,808	5,317	12,188	29,169
B[SPR,NFPS] a/					413	1,030	2,026	3,213
L[NPB,NFPS] b/	21	33	61	166	355	768	1,304	2,684
EMN	148	212	247	404	725	5,013	14,521	26,589
EME c/	130	285	636	1,06	4,312	6,998	5,666	6,444
D[SPR,BN-BF]	141	256	421	704	1,244	2,690	5,923	11,124
FCD[SPR,BN-BF]	41	69	112	259	905	2,512	3,171	4,274
L[PB,BC-SPR]	305	592	1,215	2,803	6,054	12,909	24,265	47,797
D[NFPS,BC]	8	14	21	33	110	384	1,353	2,042
Interest Rates and Inflation d/								
i(b)	38.1	56.3	57.3	62.6	62.6	62.0	43.2	50.4
i(npb)	53.0	71.4	69.6	78.4	97.3	119.8	40.6	36.3
i(emn)	32.8	56.9	67.4	69.9	80.0	79.4	38.3	35.9
i(eme)	55.1	72.6	116.0	158.4	158.2	190.6	6.9	153.8
i(ci)	37.3	62.2	61.6	66.0	75.5	72.1	21.7	24.3
i(fcd)	55.1	72.6	116.0	158.4	158.2	190.6	6.9	153.8
i(red)	25.2	37.5	37.5	47.8	71.2	50.7	25.1	24.4
i(dep)	34.8	62.3	70.8	74.0	80.2	81.5	29.8	28.0
inflation g/	60.8	72.7	72.9	125.1	111.5	158.3	62.9	114.5
1986-IV 1987-I 1987-II 1987-III 1987-IV								
Stocks (averages, mill. Intia)								
C	14,100	16,216	18,219	24,697	35,619			
B[SPR,NFPS] a/	1,714	1,652	1,714	1,838	3,245			
L[NPB,NFPS] b/	1,366	1,565	1,935	2,728	3,572			
EMN	19,764	20,906	24,062	28,245	31,766			
EME c/	3,724	3,579	3,531	3,267	5,897			
D[SPR,BN-BF]	6,920	8,172	9,311	11,250	13,432			
FCD[SPR,BN-BF]	2,743	2,804	2,751	2,747	4,275			
L[PB,BC-SPR]	28,094	33,081	39,155	45,993	56,687			
D[NFPS,BC]	1,721	2,209	2,264	2,084	1,954			
Interest Rates and Inflation f/								
i(b)	9.2	10.7	10.6	10.7	10.9			
i(npb)	8.8	8.8	8.8	8.0	7.2			
i(emn)	8.3	8.3	8.3	7.7	7.0			
i(eme)	1.5	7.4	9.0	2.2	114.9			
i(ci)	5.0	5.0	5.4	5.8	5.8			
i(fcd)	1.5	7.4	9.0	2.2	114.9			
i(red)	5.6	5.6	5.6	5.6	5.6			
i(dep)	6.7	6.7	6.7	6.1	6.0			
inflation g/	12.7	18.5	18.2	22.7	24.8			

a/ For 1984 only "Bonos Tipo C" of COFIDE; for 1985-87 also includes Central Government bonds in hands of SPR and BC. No data could be found for 1980-83.

b/ Approximated by L[BC, NFPS].

c/ EME overestimates net legal reserves on FCD of SPR and BC because it also comprises legal reserves on FCD of BN and BF. Indirect estimates of the latter (which are not reported in Nota Semanal) suggest that EME may have been overestimated 15 percent in 1985, 29 percent in 1986 and 13 percent in 1987.

d/ Annual interest rates expressed in effective percentage terms.

e/ The annual rate of inflation (between the last month of the year and the last month of the previous year) according to the consumer price index of Lima.

f/ Quarterly interest rates in quarterly effective percentage.

g/ The quarterly rate of inflation (between the last month of the quarter and the last month of the previous quarter) according to the consumer price index of Lima.

Source: All asset stocks were simple averages obtained from Nota Semanal (various numbers). Most interest rate series were provided by the "Subgerencia del Sector Monetario" of the CRB and IMF's Financial Statistics.

Table 2-5: INFLATION TAX ESTIMATES a/

	Inflation Tax (IT) (Intis) (% GDP)		Inflation Subsidy (IS) (Intis) (% GDP)		Net Inflation Tax (NIT = IT-IS) (Intis) (% GDP)	
<u>Annual</u>						
1980	135	2.3	69	1.2	66	1.1
1981	185	1.7	122	1.1	63	0.6
1982	74	0.4	250	1.4	-175	-1.0
1983	536	1.6	893	2.7	-357	-1.1
1984	239	0.3	1,162	1.6	-923	-1.3
1985	5,037	2.5	5,532	2.8	-495	-0.3
1986	11,783	3.2	5,868	1.6	5,914	1.6
1987	30,843	4.2	20,622	2.8	10,221	1.4
<u>Quarterly b/</u>						
1986-IV	3,587	0.8	1,867	0.4	1,720	0.4
1987-I	6,141	1.2	3,849	0.8	2,292	0.5
1987-II	6,613	1.0	4,415	0.6	2,198	0.3
1987-III	10,925	1.4	4,974	0.6	5,951	0.7
1987-IV	7,164	0.8	9,001	1.0	-1,837	-0.2

a/ The above calculations are based on equations: (1) for the IT, (2) for the IS and (3) for the NIT. These assume that the benchmark real interest rate is zero (See Footnote 1).

b/ Since INE does not provide quarterly figures of GDP, the annualized quarterly figures of GDP employed were obtained by multiplying the annualized quarterly level of GDP reported by the CRB (base 1970) by the ratio between the annual GDP figures of CRB and INE.

23. The inflation tax and inflation subsidy calculations were repeated assuming a 5 percent benchmark real interest rate (instead of the zero percent assumed before). This implies that the interest compensation for inflation is smaller than the nominal interest rate by approximately 5 percentage points.^{4/} The results are reported in Table 2.6.

^{4/} More rigorously and following the notation of Footnote 1, the compensation for inflation is, $[(1 + i/1.05)] - 1$ where i is the nominal interest rate.

Table 2-6: INFLATION TAX ESTIMATES a/

Period	Inflation Tax (IT)		Inflation Subsidy (IS)		Net Inflation Tax (NIT)	
	(intis)	(%GDP)	(intis)	(%GDP)	(intis)	(%GDP)
1980	160.0	2.6	80.6	1.4	79.4	1.2
1981	222.3	2.1	145.5	1.4	76.8	0.7
1982	155.5	0.9	298.4	1.7	-142.9	-0.8
1983	679.9	2.1	983.0	3.0	-303.1	-0.9
1984	652.2	0.9	1,401.0	1.9	-748.8	-1.0
1985	6,395.6	3.2	5,781.9	2.9	613.7	0.3
1986	13,139.0	3.6	6,827.0	1.8	6,312.0	1.8
1987	31,564.0	4.3	22,095.0	3.0	9,469.0	1.3

a/ The above estimates are based on equations (1) for the IT, (2) for the IS and (3) for the NIT, assuming that the benchmark, real interest rate is 5 percent; i.e. in equations (1) and (2) i () should be replaced by $(1 + i ())/1.05 - 1$ (see Footnote 4.)

D. The Inflation Tax: Evolution and Its Relationship with the Macroeconomic Environment

24. Coinciding with the program of economic liberalization implemented in 1981-84, the inflation tax and the net inflation tax followed a downward trend (only temporarily interrupted in the case of the inflation tax in 1983, see Tables 2-5 and 2-6). This was mainly due to higher interest rates on public financial liabilities (inflation actually rose) and the dollarization of the economy (in 1982-85 the average return on foreign currency deposits was on average 37 percent higher than the rate of inflation, see paragraph 26). Since 1985, the inflation tax rose steadily from 0.3/0.9 percent of GDP in 1984 to 4.2/4.3 percent of GDP in 1987 (according to whether the benchmark real interest rate is 0 or 5 percent respectively). Inflation, together with low nominal interest rates and a dedollarized economy (as measured by the share of foreign currency deposits in total liabilities of the financial system), were the factors to blame for the inflation tax increase.

25. In 1983, as the drop in the conventional tax revenue led to a record fiscal deficit, inflationary taxation grew from 0.4/0.9 percent of GDP to 1.6/2.1 percent. A similar pattern was reproduced in 1986-87. In those circumstances inflation pressures were the result of high public deficits and expansionary financial policies. The exchange rate was frozen in 1985 and lagged behind inflation until the fourth quarter of 1987, and no major adjustments in public sector prices and tariffs were implemented until early 1988. Inflation and the policy of lowering nominal interest rates, i.e., lowering the compensation for the inflation-induced erosion of the principal of debt, propelled a jump in the 1987 inflation tax level to three times its average 1984-85 level (measured as a percent of GDP). Between the same periods the tax revenue of the central government dropped from 11.7 percent of GDP to 8.5 percent.

26. The dollarization of the economy in 1983-85 was the result of the attempt by private agents to escape the inflation tax as well as the liberal measures which allowed foreign currency deposits in the financial system. On the other hand, although since 1985 dedollarization followed mainly from the suspension of convertibility of foreign currency deposits into foreign currency, the policy of fixing the exchange rate (and the subsequent real appreciation) also played a role. This became particularly obvious after the official exchange rate devaluations of the last quarter of 1987 have raised significantly the return on foreign currency deposits. However, by then, the low share of foreign currency deposits in total financial liabilities had left depositors weakly hedged against inflationary taxation.

27. Inflation has also induced financial wealth transfers (implicit subsidies) from the public to the private sector. A measure of these is given by the inflation subsidy estimated in Section C. The inflation subsidy rose from 1.2/1.4 percent of GDP in 1980 to 2.7/3 percent in 1983 (according to whether the benchmark real interest rate is zero or 5 percent). Thereafter, it exhibited an oscillatory behavior reaching a level equivalent to 2.8/2.9 percent of GDP in 1985 and 2.8/3 percent in 1987.

28. However, the on average higher level of the inflation subsidy did not suffice to neutralize the upward trend in the inflation tax. As a consequence, the average net inflation tax (the difference between the inflation tax and subsidy) has risen from -0.4/-0.8 percent of GDP in 1984-85 to 1.5/1.6 percent in 1986-87. Between the same periods the central government tax revenue dropped from 11.8 percent of GDP to 8.8 percent. This suggests that there has been strong substitution between conventional and inflationary sources of taxation. Since the inflation tax is a more regressive kind of tax (from the income distribution point of view), this substitution is bound to have had adverse social effects.

29. Moreover, to the extent that the beneficiaries of the inflation subsidy tend to differ from those who bear the inflation tax burden, inflation may have distributional effects even if the net inflation tax was zero. Since the recipients of subsidized credit are producers (the most important being agricultural producers), inflation is bound to induce transfers of financial wealth from cash holders and bank depositors to poor "campesinos" and other beneficiaries of subsidized CRB credit. Although this could be justified on income distribution grounds if the holders of liquid assets were sufficiently richer than the beneficiaries of subsidized credit, it could not be justified on efficiency grounds since it implies taxing savings and the use of money (a commodity with high productivity that society can produce at negligible cost). Since, in addition, there is evidence that poorer consumers are the main holders of cash, it is not warranted to tax them in order to finance the poor, but perhaps not necessarily poorer "campesinos". Taxing the rich through direct conventional taxes is a more desirable avenue. A similar reasoning could be applied for wealth transfers between private agents through the banking system: low and middle income bank depositors subsidize firms who are large enough to be able to borrow from banks.

30. Under the present circumstances, as further relative price realignments seem inevitable and, given that the nearly depleted level of foreign exchange reserves cannot cushion further demand pressures, the policy of maintaining low nominal interest rates can only enhance the risk of inflationary taxation. Moreover, since the process of financial disintermediation is quite advanced and accelerating, i.e., the inflation tax base is shrinking fast, collecting a similar level of inflation revenue would require ever increasing inflation rates.

31. Unless serious fiscal measures are undertaken the monetary effects of the fiscal and financial imbalance will fuel the inflationary process to even more worrying levels. The socially regressive effects of inflationary taxation are bound to show quickly into a further deterioration of the government's political strength and into greater social disintegration. This, though, may be the cost that society and the government as part of it has to bear in order to be ready to accept the fiscal and financial remedy.

THE CENTRAL BANK'S QUASI-FISCAL DEFICIT

A. Introduction

1. The Central Reserve Bank's (CRB) intervention in Peru's financial and foreign exchange markets has created subsidies to the private sector with budgetary implications. Those subsidies, conventionally referred to as the quasi-fiscal deficit of the CRB, have recently become an important source of primary money creation. The sources of the quasi-fiscal deficit (QFD) examined here are interest rate and foreign exchange losses. Interest rate losses occur when the interest the CRB pays on its liabilities (mainly reserves of the financial system, since currency in hands of the public pays zero interest) is higher than the interest it receives on its assets (mainly credit to the government, credit to the Banca de Fomento, rediscount facilities and international reserves). Foreign exchange losses arise when the average buying price of foreign exchange by the CRB exceeds the average selling price. During the 1985-87 period foreign exchange losses were due to the fact that the average exchange rate paid to exporters and other sellers of foreign exchange (including those offering foreign exchange to the government in the open market) exceeded, on average, the exchange rate charged to importers and financial debtors.

2. Interest rate losses were estimated by two methods: i) directly, from analyzing the movements in the sub-account termed "Costo por Regulacion de Exceso de Liquidez" of the CRB account "Otras Cuentas Netas" (which, reportedly, measures precisely interest rate losses); and ii) indirectly, through measurement of the average return on CRB assets and liabilities. Likewise, foreign exchange losses were also estimated: i) directly, through inspection of the movements in the sub-account termed "Diferencial Cambiario" of the CRB account "Otras Cuentas Netas"; and ii) indirectly, comparing average buying and selling exchange rates. For reasons given below (paragraph 18) the direct measurement of QFD is deemed more reliable than the indirect one. The adequacy of the direct measurement of the QFD hinges on the specific accounting methodology employed by the CRB of Peru. Thus, it cannot be assured that the same approach will be valid for similar studies of other countries. The indirect measurement of QFD, apart from serving as a check for the direct measurement, permits assessing the composition of foreign exchange and interest rate losses (which the direct measurement does not convey). The direct estimate of QFD is performed in Section B and the indirect estimate in Section C. The evolution of QFD is analyzed in Section D.

B. Direct Estimate to The Quasi-Fiscal Deficit (QFD)

Foreign Exchange Subsidies

3. The sub-account "Diferencial Cambiario" of the CRB account "Otras Cuentas Netas" measures: i) foreign exchange losses due to the difference between buying and selling exchange rates; and ii) accounting capital losses/profits arising from changes in the Inti valuation of the CRB's assets (including gold) and liabilities denominated in foreign currencies due to either changes in the inti/US\$ exchange rate or to changes in the

rates of other relevant currencies (and gold) against the US\$. However, here the focus is only on the former losses since they entail a subsidy and its financing leads to monetary expansion. For this reason this item should be added to the public sector deficit. By contrast the latter losses/profits are capital gains/losses on the CRB net position in foreign exchange and therefore do not entail per se monetary expansion. Therefore, the exercise that follows is concerned with estimating which part of the movement in the account "Diferencial Cambiario" reflects losses due to exchange rate subsidies. We refer henceforth to this item as "foreign exchange subsidies" (FES) to distinguish it from the more general term "foreign exchange losses".

4. More precisely, changes in the sub-account "Diferencial Cambiario" (CDC) measure, apart from FES, the change in value of the net foreign exchange position (FEP) of the CRB (termed "Posicion de Cambio III" in CRB publications) at the beginning of the period. Thus, if $FEP(t-1,t)$ is the FEP of time $(t-1)$ valued at exchange rates of time t :

$$(1) \quad CDC = FES - [FEP(t-1,t) - FEP(t-1,t-1)]$$

The FEP measures gross foreign exchange reserves (including gold) minus short and long run foreign liabilities of the CRB (principally with the IMF, i.e. SDR's) and minus foreign currency obligations with domestic residents. The main components of FEP which are not denominated in US\$ are gold reserves and SDR's liabilities to the IMF. It is assumed for simplicity and in the absence of proper information that the rest of the assets/liabilities are stipulated in US\$. Thus FEP can be written:^{1/}

$$(2) \quad FEP'(t,t) = e(t) \times [G^*(t) \times g(t) - S^*(t) \times s(t) + R^*(t)]$$

where:

- $e(t)$ is the inti/US\$ exchange rate at time t .
- $G^*(t)$ is the stock of gold at time t (in physical units).
- $g(t)$ is the CRB accounting price of gold at time t in US\$.
- $S^*(t)$ is the stock of SDR' liabilities with the IMF at time t .
- $s(t)$ is the exchange rate of SDR's at time t in US\$.
- $R^*(t)$ are other net assets/liabilities of the CRB (after deducting foreign currency obligations with residents) at time t in US\$.

^{1/} Note that stocks in Intis bear a " ' " and stocks in other currencies bear a " * "

It thus follows that the change in value between time (t-1) and time (t) of the FEP existing at the beginning of period (t) is:

$$\begin{aligned}
 (3) \text{ FEP}'(t-1,t) - \text{FEP}'(t-1,t-1) &= G^*(t-1) \times [g(t) \times e(t) \\
 &\quad - g(t-1) \times e(t-1)] - S(t-1) \\
 &\quad \times [s(t) \times e(t) - s(t-1) \times e(t-1)] \\
 &\quad + R^*(t-1) \times [e(t) - e(t-1)] \\
 &= e(t) \times G^*(t-1) \times [g(t) - g(t-1)] \\
 &\quad - e(t) \times S^*(t-1) \times [s(t) - s(t-1)] \\
 &\quad + [e(t) - e(t-1)] \times [G^*(t-1) \\
 &\quad \times g(t-1) - S^*(t-1) \times s(t-1) \\
 &\quad + R^*(t-1)] \\
 &= e(t) \times G^*(t-1) \times [g(t) - g(t-1)] \\
 &\quad - e(t) \times S^*(t-1) \times [s(t) - s(t-1)] \\
 &\quad + [e(t) - e(t-1)] \times \text{FEP}'(t-1,t-1)
 \end{aligned}$$

The first term measures the revaluation of gold due to the appreciation of gold with respect to the US dollar; the second term measures the revaluation of SDR's due to the appreciation of SDR's with respect to the US dollar; and the third term captures the revaluation of the FEP of (t-1) due to the inti devaluation with respect to the US dollar. Substituting "changes in the FEP" of equation (3) in equation (1) we arrive at the expression for FES employed for its direct estimate:

$$\begin{aligned}
 (4) \text{ FES}' &= \text{CDC} + e(t) \times G^*(t-1) \times [g(t) - g(t-1)] - e(t) \times \\
 &\quad S^*(t-1) \times [s(t) - s(t-1)] + [e(t) - e(t-1)] \times \\
 &\quad \text{FEP}'(t-1,t-1)
 \end{aligned}$$

5. The official benchmark exchange rate (MUC) is the accounting rate used by the CRB for the inti valuation of foreign exchange assets/liabilities. However, actual transactions take place at a set of premia and discounts on it. Other transactions take place at the rate of the Mesa de Negociacion (MN). These rates constitute the basic system of multiple exchange rates at which trade and capital transactions take place. In order to estimate directly FES arising from multiple exchange rates the other items of equation (4), that is, changes in the dollar valuation of gold and SDR's, and the revaluation of the net foreign exchange position due to domestic devaluations, must be estimated. Annex Table 3.1 reports estimates for each of these items and the resulting direct estimate of FES based on equation (4):

Table 3-1: DIRECT ESTIMATE OF FOREIGN EXCHANGE SUBSIDIES
(in million intis)

	1985-I	1985-II	1986-I	1986-II	1987-I	1987-II
A. Changes in the "Diferencial Cambiario" a/	5,012	4,873	2,870	-365	-2,045	23,011
B. Gold Appreciation vis a vis the US\$ b/ [e(t) x G*(t-1) x (g(t) - g(t-1))]	-616	0	0	0	3305	1640
C. Revaluation of SDR's liabilities vis a vis the US\$ c/ [e(t) x S*(t-1) x (s(t) - s(t-1))]	135	883	887	180	722	2,498
D. Revaluation of foreign exchange position (FEP) due to devaluations of the official exchange rate d/ [(e(t) - e(t-1)) x FEP'(t-1,t-1)]	-3,893	-1,479	0	0	211	-7,528
E. Foreign Exchange Subsidy (FES) [E = A + B - C + D] from equation (4)	368	2,511	2,183	-545	749	14,625

- a/ Obtained from the CRB account "Otras cuentas Netas" I
- b/ Change in the CRB accounting price of gold, in US\$, multiplied by the beginning of period stock of gold reserves and the end of period MUC exchange rate.
- c/ Change in the US\$ value of SDR's and the end of period MUC exchange rate.
- d/ The net foreign exchange position (termed "Posicion de Cambio III" in CRB publications) in US dollars multiplied by the increase in the exchange rate Intis per dollar every month (quarters in 1985-I) when there was a devaluation. The total FEP reported is equal to the sum of all monthly (quarterly) revaluations.

Source: Nota Semanal (various numbers) and "Subgerencia del Sector Monetario" of CRB.

Financial Losses

6. The QFD is also composed of financial, or interest rate, losses. As it was mentioned before these losses derive from the fact that the CRB has an average return on its assets smaller than the average cost of its funds. Financial losses are measured with precision by the sub-account "Costo por Regulacion de Exceso de Liquidez" of the CRB account "Otras Cuentas Netas". Table 3.2 reports both estimates of financial losses (the change in value of the sub-account "Costo por Regulacion de Exceso de Liquidez") and foreign exchange subsidies (derived in Table 3.1). Their sum, QFD, is also reported in Annex Table 3.2 (in nominal terms, in real terms and as a proportion of GDP).

TABLE 3.2: DIRECT ESTIMATES OF QFD a/
(in million Intia)

	85-I	85-II	1985	86-I	86-II	1986	87-I	87-II	1987
A. Financial Losses a/ -mil. I/.	0	899	899	1,641	3,733	5,374	1,763	4,337	6,100
B. Foreign Exchange Subsidy b/ -mil. I/.	368	2,511	2,879	2,183	-545	1,638	749	14,625	15,374
C. Quasi-Fiscal Deficit A + B -mil. I/.	368	3,410	3,778	3,824	3,188	7,012	2,512	18,982	21,474
-% GDP	0.2	1.7	1.9	1.0	0.8	1.8	0.3	2.5	2.8
Memorandum item: Nominal GDP -mil. I/.			199,845			381,022			760,166

Notes: a/ The CRB sub-account "Costo por Regulacion Exceso de Liquidez".
b/ Foreign exchange Subsidy (FES) obtained in Table 3.1.

Source: Nota Semanal (various numbers), INE, Table 3.1 and Subgerencia del Sector Monetario (CRB).

C. Indirect Estimate of the Quasi-Fiscal Deficit

7. In order to provide a double check of the previous estimates, an additional exercise was carried out. In this exercise: a) foreign exchange subsidies were calculated through comparing buying and selling exchange rates of the foreign exchange transactions of the CRB; and b) financial losses, through comparison of interest rates applicable to CRB's financial assets and liabilities.

Foreign Exchange Subsidies (FES)

8. Ideally, if the volume of purchases of foreign exchange by the CRB equalled the volume of sales, FES could be calculated by subtracting the weighted average exchange rate of all purchases from the weighted average exchange rate of all sales, and multiplying that difference by the volume of purchases (or sales). In general, though, the volume of purchases differs from the volume of sales, i.e. the CRB either accumulates or draws down foreign exchange reserves. In this case, a convenient procedure to calculate FES is to select a reference or accounting exchange rate. The measurement of FES will of course vary with the choice made of the reference exchange rate. The reference rate may be, for example, the average historic cost of foreign reserves, some sort of market average exchange rate or, as in the case of the CRB, the official MUC exchange rate.

9. More formally, FES can be measured as follows:^{2/}

$$(5) \text{ FES} = (ep - e) \times P - (es - e) \times S$$

where: P is the volume of purchases
S is the volume of sales
e is the reference exchange rate
ep is the purchase price of foreign exchange
es is the selling price of foreign exchange

i.e. FES arise whenever the CRB buys foreign exchange at a price above the reference exchange rate, or sells foreign exchange at a price below the reference exchange rate. If the first term is positive (the second term is negative) the CRB is purchasing (selling) foreign exchange above the reference price, and is therefore making a loss (gain). Thus, if both the purchase and selling price are above the reference exchange rate there will be FES if the first term is larger than the second one. Note that if the volume of sales equals the volume of purchases, the previous formula becomes the product of the volume of transactions and the difference between the purchase and sale exchange rates.

10. The indirect estimate of FES performed here is based on equation (5). To facilitate comparisons with the direct estimate of FES obtained in the previous section, the accounting exchange rate used by the CRB (that is, the MUC rate) was chosen as the reference exchange rate.

11. The indirect estimate of FES provided here measures only FES originated: in import and export transactions and in CRB direct purchases of foreign exchange from residents in the open market. Due to the lack of data any other balance of payment transaction are excluded. Hence, the calculation here is only partial and it is conducted to identify the main items that explain FES, but in no way are meant to challenge the direct estimates of the previous section. Based on equation 5, total FES were calculated as the difference between the sum of items a) to c) below:

- a) The flow of CRB purchases of foreign exchange from exporters was multiplied by the average spread between the purchase price and the MUC exchange rate (that is, the CRB accounting exchange rate). This captures FES originated in purchases to exporters.
- b) The flow of CRB purchases of foreign exchange from residents in the free market was multiplied by the average spread between the average buying price and the MUC exchange rate. This measures FES originated in purchases to residents.
- c) The flow of CRB sales of foreign exchange to importers was multiplied by the average spread between the sale price and the MUC exchange rate. This measures FES originated in sales to importers. Note that the difference between a) and c) measures FES originated in foreign trade alone.

^{2/} Following the presentation of the Paraguay Country Economic Memorandum (Report No. 7031-PA, Annex III).

12. The indirect estimate of FES, and the corresponding data employed, are reported in Annex Table 3-3. It can be seen that FES in this calculation differ considerably from the direct estimates of FES performed in the previous section. This may be due, apart from the omissions mentioned above, to the lack of proper weighted average exchange rates for items a) to c) as well as to the lack of a reliable figure of CRB purchases of foreign exchange to residents.

Table 3.3: INDIRECT ESTIMATE OF FOREIGN EXCHANGE SUBSIDIES

	85-I	85-II	1985	86-I	86-II	1986	87-I	87-II	1987
A. Flows of Purchases and Sales (million US\$)									
1. Exports	1,493	1,527	3,020	1,210	1,299	2,509	1,254	1,305	2,559
2. Imports	782	788	1,570	1,051	1,474	2,525	1,321	1,582	2,903
3. Purchases to Residents <u>a/</u>	-	351	351	395	82	477	38	202	238
B. Average Exchange Rate Premium over the MUC (intis per US\$)									
4. Exports	-0.03	0.13	0.05	0.32	0.96	0.64	2.77	6.73	4.75
5. Imports	0.00	0.04	0.02	0.17	1.06	0.62	2.50	4.28	3.39
6. Purchases Residents	0.00	3.45	1.72	3.45	3.66	3.56	5.40	22.30	13.80
C. Foreign Exchange Subsidies (FES) <u>b/</u>									
7. Exports (1x4)	-45	198	153	393	1,251	1,644	3,471	8,782	12,253
8. Imports (2x5)	0	-33	-33	-181	-1,559	-1,740	-3,298	-6,771	-10,069
9. Foreign Trade (7 + 8)	-45	165	120	212	-308	-96	173	2,011	2,184
10. Purchases to Residents (3 x 6)	0	1,211	1,211	1,363	300	1,663	194	4,501	4,695
11. Total FES (9 + 10) -as % GDP	-45 (0)	1,376 (0.7)	1,331 (0.7)	1,575 (0.4)	-8 (0)	1,567 (0.4)	367 (0.05)	6,512 (0.86)	6,879 (0.9)
Memorandum item:									
Nominal GDP (million of Intis)			199,845			381,022			760,166

a/ Corresponds to the CRB accounts: "Captacion de Excedentes de la Banca" until July 1987; and "Compras a Residentes" thereafter.

b/ FES originated exclusively in trade transactions, purchases to residents and redemption of reserve requirements on foreign currency deposits.

Source: Nota Semanal (various numbers) and "Subgerencia del Sector Externo" (CRB).

Financial Losses

13. The indirect estimate of financial losses of the CRB was obtained subtracting total interest payments received on its assets from total interests paid on its liabilities:

$$(6) \text{ FIL} = i(1) \times L - i(a) \times A$$

where: FIL are CRB's financial losses.

i(1) is the weighted average interest rate on CRB's liabilities.

i(a) is the weighted average interest rate on CRB's assets.

L is the total stock of CRB's interest bearing liabilities.

A is the total stock of CRB's interest bearing assets.

14. The CRB receives interest on its credit to the financial and public sectors and on its net international reserves, and it pays interest on deposits of the financial institutions in the CRB (primarily reserve requirements of commercial banks). To measure interests received and paid by the CRB the following interest rates were imputed.

Returns on CRB's Assets

- a) On credit to the public sector (including Banco Nacion): a weighted average of the interest rate charged to Banco Nacion and 0.01% (which is the interest rate on the consolidated central government debt at the CRB).
- b) On credit to the financial system: a weighted average of the interest rate of credit to Banca de Fomento ("Fomento Agropecuario"), with a two-thirds weight, and rediscounts to commercial banks and the Banca de Fomento (commercial rediscounting for 1985-I) with a one-third weight.^{3/}

^{3/} A proper weighted average interest rate for credit to the financial system requires considering a large number of interest rates and credit stocks. Since these were not available, the weights were chosen (somehow arbitrarily) taking into account that: a) in 1986-87 more than half of the credit to the financial system went to the "Banco Agrario" and approximately one-third went to commercial banks; b) the interest rate on the "Fomento Agropecuario" line lied somewhere in between the zero interest rate charged to "campesinos" of the "Trapecio Andino" region and the interest rate on other promotional credit lines of the Banco Agrario.

- c) On net international reserves: the LIBOR 3 months interest rate multiplied by one times the rate of devaluation.

Interest costs on CRB's liabilities

- a) On currency in circulation: zero.
- b) On reserve requirements on domestic currency deposits: the remuneration of domestic currency reserves of commercial banks (see Annex 11).
- c) On reserve requirements on foreign currency deposits: the LIBOR 3 months interest rate (minus one percent point for 1986 and minus 3.5 percent points for 1987) multiplied by one times the rate of devaluation.

15. The data employed and the indirect estimate of CRB financial losses (FIL) are reported in Annex Table 3.4. The indirect estimate of FIL, based on equation (6), is equal to the sum of the product of average stocks of liabilities and their corresponding interest rates (according to para. 14) minus the sum of the product of average stocks of assets and their corresponding interest rates.

Table 3.4: INDIRECT ESTIMATE OF FINANCIAL LOSSES

Stocks of:	1985-I	1985-II	1986-I	1986-II	1987-I	1987-II			
A. Average stocks of CRB assets and Liabilities (million Intis)									
a) Assets									
1. Net Credit to Public Sector	471	-852	-1,231	978	5,007	18,148			
2. Credit to the Fin. System	3,910	5,603	7,508	10,723	16,375	26,109			
3. Net Internat. Reserves	8,642	15,844	19,316	15,585	12,952	6,987			
b) Liabilities									
4. Legal Reserves of Fin. System in Domestic Currency	1,425	7,898	17,811	21,366	24,353	33,374			
5. Legal Reserves of Fin. System in Foreign Currency	8,453	8,925	5,996	4,192	3,642	4,998			
B. Interest Rates on CRB Assets and Liabilities (effective annual %)									
a) Assets									
6. Loan to Public Sector	21.4%	22.5%	13.3%	9.2%	13.3%	6.3%			
7. Loans to the Fin. System	95.6%	32.3%	18.2%	14.9%	14.9%	10.4%			
8. Net International Reserves	19.3%	9.3%	7.5%	6.2%	8.4%	15.0%			
b) Liabilities									
9. Legal Reserves in Dom. Currency	101.2%	8.3%	37.8%	37.8%	37.8%	31.2%			
10. Legal Reserves in Foreign Currency	19.3%	9.3%	6.5%	5.2%	4.1%	8.1%			
C. Financial Losses measured as:									
	$(1/2) \times [(4) \times (9) + (5) \times (10) - (1) \times (6) - (2) \times (7) - (3) \times (8)]$						a/		
	<u>1985-I</u>	<u>1985-II</u>	<u>1985</u>	<u>1986-I</u>	<u>1986-II</u>	<u>1986</u>	<u>1987-I</u>	<u>1987-II</u>	<u>1987</u>
11. Financial Losses - mill. I/.	451	3,620	4,071	3,761	3,786	7,547	3,669	4,003	7,672
-as % GDP	0.4	1.5	1.9	1.2	0.9	2.1	0.5	0.5	1.0
Note: Nominal GDP -mil. I/.	199,845			381,022			760,166		

a/ Since all interest rates are expressed in annual terms the semestral level of financial losses was obtained dividing net interest payments by two.

Sources: Nota Semanal (various numbers) for section A; and "Subgerencia del Sector Monetario" and "Superintendencia de Banca y Seguros" (CRB) for section B.

D. Evolution of the Quasi-Fiscal Deficit

16. The discussion below is based on the direct estimate of the QFD. This is bound to be more accurate because data on neither of the following (required for the indirect estimate) was available: i) a proper weighted average interest rate of CRB assets and liabilities; and ii) a weighted average exchange rate for CRB's services and capital transactions. However, the indirect estimate of QFD remains useful for assessing the evolution of several components of foreign exchange subsidies and financial losses.

17. The size of the QFD has varied considerably along the period. It rose from 0.2 percent of GDP in 1985-I to 1.7 percent in 1985-II, mainly as a consequence of foreign exchange subsidies induced by CRB purchases of foreign exchange in the open market (at a premium over the official exchange rate). The QFD dropped slightly to approximately 0.9 percent of GDP during the two semesters of 1986. Foreign exchange subsidies from this source remained important during 1986-I and, financial losses were more important in 1986-II. The downward trend of QFD was drastically reversed in the second half of 1987 when, strongly impelled by foreign exchange subsidies, QFD represented 2.5 percent of GDP (5.0 percent in annualized terms). The latter were caused by a growing spread of the average export exchange rate over the average import exchange rate and, to a lesser degree, by CRB purchases of foreign exchange in the open market.

18. Throughout the period, financial losses (the other component of the QFD) stemmed from CRB financing of the central government and the financial system at an interest rate which, on average, was below the cost of its funds (that is, a weighted average between zero, which is the cost of currency, and the remuneration of reserves of the financial system). Interest rate losses were particularly important in 1986-II and 1987-II when they represented 1 percent and 0.6 percent of GDP respectively.

MAIN CHARACTERISTICS OF THE PERUVIAN TAX SYSTEM

1. The modifications introduced in the past three years reduced the number of taxes that composes the Central Government revenues. Minor taxes were either derogated or transferred to the responsibility of the local governments. A major reform was introduced in income tax following recommendations to broaden its base and reduce exemptions. In addition, special taxes on assets revaluation and the capitalization of profits were derogated. In turn, taxes on the holding or transfer of property (including vehicles and on gambling) were transferred to the municipal sphere). A description of the main components of the present system follows.

A. Income Taxes

Corporate Net Income Tax

2. Net income of private and public enterprises is subject to this tax, which applies to distinct forms of corporations as defined by law (sociedades anonimas, empresas publicas, sociedades de responsabilidad limitada, cooperativas). Unipersonal domestic firms are exempt. Foreign enterprises are subject to the tax on the part of their income generated in Peru. Capital gains receive the same treatment applied to other sources of income. The usual deductions, e.g., expenditures incurred on production, interest, depreciation, carry over of previous year losses, are used to obtain the taxable income.

3. Taxpayers may choose among three options to estimate their monthly obligations:

- (a) percentages of the tax due in previous year, whose values are set annually by Government decree. The percentages applied in 1987 were 10 percent of 1985 tax liabilities (for January and February 1987) and 15, 16 and 25 percent of 1986 tax liabilities for the periods March-June, July-September and October-December of 1986, respectively. These percentages have been rising in the recent years to allow for a greater inflation. For 1988, the two first payments were set at 25 percent of 1986 tax liabilities, and the Government intends to readjust this value at shorter intervals;

- (b) adhere to a monthly balance regime; and
- (c) two percent of the monthly gross income (as defined by law) in cases of enterprises that did not have taxable income in the previous year (including new firms).

Option (a) is generally preferred. The difference among the amount paid in advance and the actual liabilities is cancelled in March of the following year, after the annual balance is completed.

4. **Rates.** The legal rates were unified at 35 percent as of 1987 (different rates according to the amount of profits were applied before).

5. **Exemptions.** Many of the exemptions that were granted in the past were abolished and others are scheduled to end by 1990 (Decreto Supremo No. 185-87). Remain exempt: income from agriculture, forestry, fishing and agroindustrial activities, as well as the capture or raising of direct human consumption products. Total exemption is also granted to new firms located in the Frontera and Selva regions for a given time period, as an incentive to decentralization, and to small mining (up to 5,000 metric tons). Firms located in the Selva benefit from a 50 percent reduction in the tax on a permanent basis. An extensive list of exemptions, including socially oriented activities (including religious), foreign and international delegations, as well as the benefits to non-traditional exports (CERTEX) are granted to 1990.

Personal Income Tax

6. Individual income is classified under five main groups:

- (a) Category 1 - rents;
- (b) Category 2 - dividends, interests, financial gains, and other capital incomes;
- (c) Category 3 - income from commerce, manufacture or similar activities;
- (d) Category 4 - independent workers; and
- (e) Category 5 - salaried workers.

7. Under the personal income tax, all incomes derived from activities not covered by the corporate income tax are taxed. Taxpayers (except in the case of Category 5 incomes) may choose among two alternatives for estimating the advanced payments (pagos a cuenta):

- (a) duodecimos (one-twelfth) of the tax due in the previous year; and

- (b) duodecimos of the estimated tax liabilities for the same year, based on projections made at the moment of the first payment.

Employers are required to withhold duodecimos of the expected taxes due by their respective employees.

8. Rates. The progressive schedule is the following:

<u>Income Level (in UIT) *</u>	<u>Rates (Percent)</u>
Up to 15	8
15 to 20	10
20 to 25	12
25 to 33	16
33 to 41	20
41 to 50	25
50 to 60	31
60 to 72	38
Over 72	45

* UIT stands for Unidad Impositiva Tributaria. One UIT is equal to 27,300 Intis (March 1988).

9. Deductions from gross income are made in the form of credits against the tax. The most important deductions--the limits are shown in parenthesis--are: basic exemption (4 UIT); special deduction for labor income of Categories 4 and 5 (3 UIT); family allowances (2 UIT per capita); donations (10 percent of net income); insurance premiums (50 percent of one UIT); and health expenses (3 UIT). These rules imply that the head of a household composed of four people (wife and two children) who gets only salaried income (Category 5) was exempted from the income tax in 1987 if his annual income was below 5.7 minimum wages.

10. Special provisions are:

- (a) unidentified capital income (interests on "bonos al portador" are taxed at the source at a rate of 45 percent); and
- (b) non-resident incomes are subject to the following rates (1987):
- | | |
|-----------------|------|
| - dividends | 15.4 |
| - royalties | 45.0 |
| - other incomes | 45.0 |

B. Property Taxes

Corporate Net-Worth Tax

11. The base of this tax is the net worth of private and public enterprises, defined as the difference between assets and liabilities. The coverage of this tax is similar to the profit tax, but the number of exemptions is broader (see below). The proportion of each company's asset that represents participation in the capital of other corporations are not included in the tax base. The tax is paid in four quotas--the first three along the fiscal year, and the last in March of the following year--together with the presentation of the legal statements. Prepayments are based on past year's liabilities according to the following scale:

- first quota	40 percent
- second quota	50 percent
- third quota	60 percent

The fourth and last quota accounts for the difference among the actual debt and the advanced payments ("pago de regularizacion"). The percentages of each quota are adjusted in a discretionary way, taking into account the changing rate of inflation.

12. Rates. The rate varies with the total value of the company's property. The schedule for 1987 was the following:

<u>Net Property Value</u>	<u>Percent</u>
Up to 15 UIT	1.0
Over 15 UIT	2.5

13. Exemptions. Agriculture and agroindustry, silviculture, and other activities related--like production of meat, fish, and vegetable goods for human consumption--are exempt. Also exempted are: manufacturing industries located in the Selva and Frontera; educational and cultural centers; small mining (under 5,000 metric tons of annual production); tourism (for enterprises located out of Lima and Callao); public utilities (water and sewage, electricity, telecommunications, etc.). Partial exemptions are granted to manufacturing firms located out of Lima (50 percent) and Callao (37.5 percent). Large- and medium-sized mining companies also get a 30 percent reduction on this tax. The municipal real state tax and the vehicle tax generates credit against the net-worth tax.

Personal Property Tax

14. This tax was introduced in 1988 as part of the "Programa Trienal" fiscal measures. The tax base includes real estate, motor vehicles, financial assets, bank deposits, pieces of art and race horses. Market values, wherever possible, should be considered for assessing total taxable property. Debts incurred in the purchase of any item can be deducted in the process of establishing the base of the tax. The detailed rules and regulations for collecting this tax were still under preparation as of April 1988.

15. **Rates.** The progressive schedule for the tax is the following:

<u>Net Wealth Value</u>	<u>Percent</u>
Up to 200 UIT	0
200 - 500 UIT	1
500 - 1,500 UIT	2
1,500 - 3,500 UIT	3
Over 3,500 UIT	4

16. **Deductions.** The share of the corporation net-worth tax represented by titles in possession of individuals may be deducted in the process of computing the individual property tax liabilities. Taxes paid on real estate and motor vehicles may also be considered as anticipated payments ("pagos a cuenta") against the tax. The tax shall be paid in four quotas according to the rules applied to the corporation property tax.

C. Domestic Taxes on Production and Consumption

General Sales Tax (IGV)

17. This tax is levied on sales of domestic produced and imported goods and services on a value-added basis. The general rules establish a standard procedure for appraising liabilities through the balancing of debts (on sales) and credit (on purchases). In the case of imports, debts are based on the CIF value plus the import taxes. A simplified regime is provided for small firms (annual sales under 200 UIT). Taxpayers who opt for the simplified regime are charged a 1 percent rate on total sales, being allowed no credit for inputs.

18. **Rates.** The basic rate of the IGV was recently (March 1988) set at 10 percent, of which 8.5 percent goes into the Central Government revenues, and the remainder 1.5 percent is shared with municipalities. Total IGV rate were 11 percent in 1985 and 6 percent in 1986.

19. **Exemptions** are the most important items in the consumers' basket (like food and medicaments), as well as agricultural implements, books and newspapers. Also exempt are any transactions within the Selva and Frontera regions and unipersonal firms whose sales did not reach a total of 35 UIT in the previous year. The IGV on imports does not apply in the case of the following activities: agriculture, fishing, land transportation, communications, small- and medium-sized mining, and some state-owned enterprises (ENATRU, ENAFER, PETROPERU).

Selective Consumption Excises (ISC)

20. Subjected to this tax are: production, consumption and import of a special set of goods and services. The tax is imposed on the sales value (excluding IGV) in the case of domestically produced goods; for imports, the base is the CIF value plus import taxes. The most important goods subjected to this tax are: combustible, tobacco, alcoholic beverages (beer), soft drinks, cosmetics, electrical appliances, and vehicles. The taxed services include banking and insurance, telecommunications and tourism.

21. **Rates.** The rates vary according to the nature of the product, the highest one being applied to cigarettes. Table 4.1 provides a detailed breakdown of the rate structure of this tax (general goods) and Table 4.2 rates for fuels.

22. **Exemptions.** The sale of fuels to ENATRU, EPSEP, Instituto del Mar, cement producers in the Department of Puno and the Armed Forces are exempted from the ISC. Also exempted are the sale of taxed products when made by firms located in the regions of Selva and Frontera (except for cigarettes and combustibles). Imports for communication activities (radio and television) are also exempted.

Other Taxes on Services

23. There exists a handful of minor taxes on services that are not significant from the revenue viewpoint. These are:

- (a) **Tax on foreign trips** - Peruvian residents travelling abroad are required to pay a US\$100 tax per trip (employees of international transportation companies, as well as those crossing borders and those living in frontier zones are exempted).
- (b) **Tax on the purchase of international air tickets** - Peruvian residents who travel with tickets bought out of the Country are subjected to a tax of 14 percent double the basic rate applied to sales of air tickets within the Country. (The basic tax is part of the ISC.)
- (c) **Tax on the expedition of passports** - Peruvians are required to pay a tax equivalent to US\$55 each time they ask for a passport (diplomats are exempt and students have lower rates).
- (d) **Special tax on consumption of electricity** - The rates applied to the value of the monthly bills are 10 percent for consumptions below 150 kwh, and 25 percent for higher levels of consumption. Exemptions are granted for Governmental agencies (of all levels), universities and other educational activities, and foreign delegations. Only 20 percent of the proceeds from this tax is included in the general budget, the other 80 percent is earmarked to Electroperu.
- (e) **Tax on the buying and sale of foreign currency** - Applied on foreign currency transactions when related to exports or imports, except those of the Central Bank. The rate is 1 percent.

- (f) **Tax on dollar purchases by Peruvian tourists** - at the rate of percent. This tax was de facto placed out in March 1988 when tourists were sent to purchase parallel market dollars for tourism.

D. Import Taxes

24. **Custom Duties.** Applied on an "ad-valorem" basis to the CIF value of the imports of goods in general. A detailed description of these is provided in Chapter III, Section B. There are a countless number of exemptions and special provisions, the most important granted to the Government, diplomatics, primary production, and some branches of the manufacturing and service industries (cement, radio and telecommunications, etc.). A list of the main beneficiaries of these exemptions with the estimated values for 1986 is presented in Statistical Annex Table 5.6.

25. **Surcharges.** A rate of 17 percent on the CIF value of imports is applied as a surcharge. Goods exempt from the basic duties are also exempted from the surcharge. Another surcharge earmarked to the ICE (7 percent) was instituted as of December 1987.

26. **Minimum Duty ("Arancel Minimo").** Applied to the import of goods for which the basic duty is zero. The rate of 1 percent was raised to 5 percent in December 1987. The only exemptions are books, magazines and other goods imported for universities.

27. **Consular Fees.** Imposed on documents or certificates issued by Peruvian diplomatic missions. The rates are fixed values and vary according to the subject of the document.

28. **Peru-Colombia Special Agreement.** The special agreement allows for a preferential treatment of goods to be traded across the common border.

E. Export Taxes

29. **Taxes on Traditional Exports** are applied to the FOB value of these exports. The most important goods subjected to these taxes are minerals, oil, coffee, sugar, fish and cotton-derived products. There is a basic tax plus surcharges based on the same rules. The rates vary according to the nature of the good and the fluctuation of international prices. Annex Table 4.3 provides the rate structure for 1987.

Table 4.1: AVERAGE RATES FOR THE SELECTIVE CONSUMPTION EXCISES

Goods and Services	1986	1987	March 1988
	-----Percent-----		
Cigarettes	145	205	300
Cheaper Cigarettes	75	75	150
Beer	56	100	200
Wine	18	18	35
Whisky	40	120	250
Rum	24	77	120
Brandy, Vermouth	18	98	250
Cider	32	78	120
Soft Drinks	24	70	150
Mineral Waters	--	46	50
Fruit Juices	--	34	80
Cosmetics	32	34	50
Vehicles			
- Categories A1, A2, A3 and C	18	48	120
- Categories A4	50	107	300
Yacht	50	102	300
Leather Goods	32	53	100
Tapestry	40	55	200
Caviar	40	55	200
Crystal Luminaries	--	30	100
Crystal Decorative Goods	18	34	100
Air Conditioner	18	34	100
Dishwashers	24	36	150
Color TV	10	10	25
Sound and Video Apparatus	18	34	150
Pearls, Diamonds and Jewels	40	55	200
Precious Metal-Covered Pens	40	70	200
Local Phone Calls	10	14	--
Long Distance, Cables, Telex	15	22	--
Insurance	10	10	--
International Air Tickets	14	14	--
Rental Movies	10	10	--
House Rentals	5	5	--

Source: Raul Beltran (1987).

Table 4.2: RATES FOR SELECTIVE EXCISES (FUELS)
(Percentages)

Products	1987				1988	
	January	February DS.025-87-EF	April DS.070-87-EF	July DS.149-87-EF	January DS.013-88-EF	March DS.032-88-EF
Gasoline 95						
Costa-Sierra	211.90	203.40	205.50	206.30	196.60	375.33
Gasoline 84						
Costa-Sierra	211.20	200.90	202.80	203.10	190.70	235.56
Selva	134.80	127.80	129.20	129.40	120.10	235.56
Domestic Kerosene						
Costa-Sierra	43.90	37.60	-	37.90	-	-
Selva	53.60	46.80	-	45.50	-	-
Industrial Kerosene						
Costa-Sierra	143.10	137.80	-	123.40	-	-
Selva	132.70	127.60	-	114.30	-	-
Gran Minería	165.00	-	-	165.50	-	-
Diesel I						
Costa-Sierra	130.00	-	-	-	-	217.73
Gran Minería	129.00	-	-	-	-	227.76
Diesel II						
Costa-Sierra	121.40	116.60	-	-	90.60	43.34
Selva	109.00	104.50	-	-	80.10	43.34
Gran Minería	136.00	-	-	-	-	81.43
Residual 5						
Costa-Sierra	129.00	-	-	-	-	200.60
Gran Minería	127.00	-	-	-	-	209.62
Residual 6						
Costa-Sierra	144.00	-	-	-	-	99.18
Selva	100.00	-	-	-	-	99.18
Gran Minería	141.00	-	-	-	-	105.36
Liquid Gas						
	100.50	63.10	-	59.00	-	-

Source: INP-DGPE-DSP.

Table 4.3: EXPORT TAXES (1987 RATES)
(Percentage)

Products	Traditional Exports Tax	Additional Ad-Valorem	Ad-Valorem FOB	Surcharge	Special Tax
Fish Meal	5.0	1.0	1.0	0.0	3.0
Cotton	0.0	0.0	0.0	0.0	0.0
Sugar	1.0	1.0	1.0	0.0	3.0
Coffee	0.0	1.0	1.0	0.0	3.0
Oil	0.0	0.0	0.0	0.0	3.0
Mining	2.6	0.0	0.0	0.0	3.0

Source: INP-DGPE-DSP.

ANNEX 5

MISALIGNMENT OF PRICES AND TARIFFS OF STATE ENTERPRISES:
A PRELIMINARY CALCULATION

1. In this annex, an attempt is made to estimate the revenue losses of state enterprises as a result of lagging output prices controlled and kept unrealistically low by the Government. An accurate calculation would require detailed knowledge of the general equilibrium level of prices and tariffs, i.e. prices that reflect the opportunity cost (border price for tradeable goods or the long run marginal cost for services not traded internationally). However, this clearly falls beyond the scope of the current study, therefore here a tentative and preliminary approach is followed based on the following methodology:

- (i) the five most important public enterprises in terms of forgone revenues due to price controls were selected: Petroperu, Electroperu, ENCI (marketing of agricultural products and inputs), ECASA (rice marketing) and ENATRU. Although ENTEL (telecommunications) also suffered significant revenue losses, it had to be excluded because of the complexity of its tariff structure;
- (ii) for all these companies, a calculation was made on the difference between the actual 1987 revenue and the revenue that companies would have achieved, had their output prices and tariffs been increased according to the rate of inflation, i.e. parallel with the increase of the consumer price index. Table 5.1 shows the lag of the price and tariff increases of the relevant goods and services compared to the CPI. As we can see from Table 5.1 this lag reached in many cases up to 60-65 percent of the real July 1985 price by the end of 1987 and the situation has, in some cases, worsened further by early 1988. Table 5.2 shows the gap between the real revenues and the revenues that the companies would have received if their 1985 prices would have been increased according to CPI.

Table 5.1: RELATIVE TARIFF AND PRICE INDEXES
(Deflated by the Consumer Price Index, July 1985 = 100)

	July 1985	Dec. 1985	Dec. 1986	Average Price 1987	Jan. 1988	March 1988	August 1988
<u>Petroleum Products</u>							
Gasoline 84	100.00	107.11	65.75	56.84	41.16	45.32	32.28
Gasoline 95	100.00	107.24	65.83	59.09	43.11	52.00	37.04
Kerosene domestic	100.00	67.75	41.59	29.57	19.78	30.92	22.03
Kerosene Industrial	100.00	100.86	55.72	28.37	11.47	8.37	3.77
Diesel Oil 1	100.00	100.72	55.72	36.88	23.05	23.31	16.60
Diesel Oil 2	100.00	100.42	55.41	36.65	22.91	23.14	16.48
Residual 5	100.00	100.82	55.55	36.74	22.96	22.04	15.70
Residual 6	100.00	100.83	55.91	36.97	23.11	21.83	15.55
Liquified gas	100.00	93.13	55.39	33.60	22.31	19.84	24.36
<u>Electricity</u>							
Public	100.00	-	78.33	86.45	86.03	81.59	54.99
Residential	100.00	-	62.92	62.20	54.66	54.15	35.44
Industrial	100.00	-	62.23	59.26	50.30	47.70	38.51
Commercial	100.00	-	75.97	83.68	82.40	78.15	53.80
General use	100.00	-	67.43	69.54	70.42	66.79	45.49
Total General	100.00	-	67.40	63.89	58.05	55.06	41.17
<u>Rice</u>							
Standard	100.00	82.53	72.38	65.32	53.86	54.57	49.20
Integral	100.00	61.99	57.88	37.75	36.71	26.78	n.a.
Superior	100.00	80.18	90.03	79.23	64.51	68.79	65.28
<u>Products marketed through ENCI</u>							
Wheat	100.00	80.18	49.22	41.16	31.26	23.46	10.57
Fertilizers	100.00	76.93	47.23	31.23	19.52	18.99	14.26
Corn	100.00	80.18	93.86	76.33	62.46	103.56	46.68
Sorghum	100.00	80.18	90.60	74.29	60.73	99.70	44.94
Soya Oil	100.00	80.18	42.07	33.52	32.32	27.28	12.46
<u>Bus fares</u>	100.00	103.74	66.01	65.89	57.08	63.03	66.28
<u>Local telephone calls</u>	100.00	96.22	83.66	81.56	77.42	64.95	47.74

Table 5.2: ESTIMATED REVENUE LOSSES IN 1987

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Sales	Average	Total Sales	Potential	Potential	Lost	Lost
	in	Price in	1987	Price in	Revenue in	Revenue	Revenue
	Physical	1987	million I/.	Intia	million I/.	million I/.	(GDP percentage)
	Units		(1 X 2)	(a/)	(1 X 4)	(6 - 3)	
PETROPERU							
	Unit:						
	million gal.	Inti/gal		Inti/gal			
Gasoline 84	395.1	22.88	9,039	40.25	15,903	6,864	
Gasoline 85	70.9	28.50	2,021	48.23	3,419	1,398	
Kerosene domestic	308.3	3.93	1,212	13.29	4,097	2,885	
Kerosene international	15.7	9.12	143	32.14	506	363	
Diesel Oil 1	3.2	13.71	44	37.17	118	74	
Diesel Oil 2	510.6	13.36	6,821	36.45	18,612	11,791	
Residual 5	23.3	11.40	266	31.02	724	458	
Residual 6	458.0	11.20	5,130	30.29	13,874	8,744	
Liquified gas	69.4	7.17	498	21.34	1,482	984	
Total			25,174			33,561	4.4
ELECTROPERU							
	Unit: GWH	(Inti/MWH)		(Inti/MWH)			
Total	8,125	899	7,304	1,407	11,433	4,129	0.5
ECASA (Rice)							
	Unit: tons	(Inti/tons)		(Inti/ton)			
Standard	571,149	6,823	3,896	10,445	5,966	2,070	
Superior	144,297	9,979	1,439	12,595	1,817	378	
						2,448	0.3
ENCI							
	Unit:						
	(000 tons)	(Inti/tons)		(Inti/ton)			
Wheat	1,156	3,361	3,885	8,166	9,440	5,555	
Fertilizers	547	2,650	1,449	8,486	4,461	3,012	
Corn	676	5,042	3,408	6,605	4,465	1,057	
Sorghum	23	4,588	105	6,176	142	37	
Soya Oil	85	9,864	838	29,427	2,501	1,663	
						11,324	1.5
Total			47,498		98,960	51,462	6.7

a/ The price that would have prevailed if the nominal price of each product had been increased at the rate of consumer price inflation throughout since July 1985.

THE WORKING OF THE "MESA DE NEGOCIACION"
OF FOREIGN EXCHANGE CERTIFICATES

1. **Mesa de Negociacion.** The so-called Mesa de Negociacion de Certificados Bancarios en Moneda Extranjera (MN) was introduced in August 1987 in the hope of attracting domestically held foreign exchange (including the considerable revenues from illegal exports) to the formal banking sector, after the legal free market was abolished. This has not been very successful, however, because of the access restrictions imposed and the manner in which the MN is operated. All except incorporated businesses have access to the MN on the supply side, and may supply the foreign exchange that does not have to be surrendered to the Central Bank. The incoming foreign exchange is deposited in a foreign exchange account at a participating domestic bank and a Certificado Bancario en Moneda Extranjera is issued, which earns an interest rate of (Libor - 1) percent. This is the actual instrument traded on the MN. The initial supply of CD was the outstanding stock of foreign currency deposits, which, as it was mentioned before were declared inconvertible to foreign exchange in August 1985. On the demand side, access to participate in the MN is also limited. In practice, the participants allowed to bid on the market are travelers going abroad, domestic importers that have received an import license but either exceeded their foreign exchange budget allocation or were automatically referred to the MN, and firms or individuals wishing to hold the CDs as a saving instrument. Tourists are charged a 25 percent tax over the MN rate on their foreign exchange purchases. Other service importers may receive foreign exchange from the Central Bank, quoted at the rate determined on the MN, but those importers do not submit bids that could influence the market rate. Moreover, the CDs are not automatically redeemable in foreign exchange. Rather, to obtain foreign exchange the holder of the CD must present an import license or a foreign exchange license (in the case of services) together with the corresponding invoices.

2. As for the auction mechanism itself, the MN is operated in the following manner: potential buyers and sellers of foreign exchange submit sealed bids and offers. The market operates five days a week. The managing officials at the Central Bank subsequently eliminate all offers above the highest bid and all bids below the lowest offer. Then the highest priced bids are paired off with the highest offers, and so on down the line until either demand or supply is exhausted. This means that the sellers of foreign exchange capture the consumer surplus from the buyers, similar to a Dutch auction, only that the total volume of transactions is not known beforehand. The rate quoted on the MN represents the average weighted price of all transactions made and is published the next day. The daily volume of transactions on the MN has been on the order of US\$1.0 - 1.2 million. The Central Bank could, but reportedly has not intervened in the MN so far as a buyer or seller. It does, however, control the exchange rate determined in this market by limited access and not accepting bids and offers above a pre-specified rate so that the closing MN exchange rate attains the level targeted by the authorities. The rate, however, has been allowed to move to higher levels since December 1987, and the rate has moved from about 40 Intis/US\$ then to above 70 by March 1988.

ANNEX 7

THE FINANCIAL SYSTEM: INSTITUTIONAL CHARACTERISTICS

1. The organized Peruvian financial system comprises the banking sub-system, the non-banking sub-system and capital markets.

2. **The Banking Sub-System.** The banking sub-system, which in 1987 accounted for 84 percent of the stock of credit provided by the financial system and 90 percent of the stock financial liquidity, is composed of:

- (i) **Central Reserve Bank (CRB).** Besides the typical functions of monetary regulation and exchange rate management, the CRB finances the central government directly or indirectly through the Banco Nacion; provides credit for promotion of specific activities (mainly through the Banca de Fomento); and sets legal reserve requirements and ceilings for saving and lending interest rates. The "Superintendencia de Banca y Seguros" is in charge of supervision and control of the financial system.
- (ii) **National Bank (Banco de la Nacion).** It is the financial and fiscal agent of the state, i.e. it collects taxes and finances the central government deficit during the year generally by drawing funds from the CRB. However, at the end of each year most of the government's debt with the Banco de la Nacion is consolidated into a direct loan from the CRB to the government (the annual interest rate on this consolidated loan is 0.01 percent). Banco de la Nacion also receives deposits, largely from state enterprises; which are required by law to operate with this institution.
- (iii) **Commercial Banks.** In 1987 commercial banks accounted for more than half of the stock of bank credit and captured more than half of the stock of bank deposits. The commercial banking sector is composed of 24 banks of which, prior to the July 1987 bank nationalization (approved by Congress in September, but still being implemented), seven were foreign, nine owned by residents and eight belonged to the government. The group of commercial banks which belonged to the government before the nationalization is referred to as "Banca Asociada". The principal types of deposits received by commercial banks are cash deposits, saving deposits and fixed term deposits in domestic currency. Foreign currency deposits, became important in

1983-85 in the wake of rising inflation and high devaluatory expectations. However, the creation of new foreign currency deposits was ruled out in late 1985. All deposits are subject to legal reserve requirements. Credit usually takes the form of advances or overdrafts in current account and discounting commercial credit and promissory notes; approximately 85 percent of loans are on a short-term basis. Despite binding ceilings on nominal interest rates set by the CRB, the structure of effective active interest rates of banks was, prior to August 1985, quite flexible due to commissions, freedom to alter the period of capitalization of interest rates, and advanced payment of interests. Since mid-1985, though, the CRB fixed maximum effective interest rate ceilings, and commissions were strictly ruled out.

- (iv) **Development Banks (Banca de Fomento)**. Their main function is to channel subsidized credit to promote specific economic activities (approximately two-thirds go to agriculture). During 1987 the Banca de Fomento provided about half of the total stock of bank credit to the private sector. The institutions of the Banca de Fomento are sectorally oriented. The largest ones are the Agrarian Bank (Banco Agrario) and the Industrial Bank (Banco Industrial), and they are followed in order of importance by the Housing Bank (Banco de la Vivienda), the Mortgage Bank (Banco Hipotecario) and the Mining Bank (Banco Minero). The Banca de Fomento is principally funded by the CRB which accounts for more than half of its liabilities, the rest of which are mostly private sector deposits. Typically, credit lines granted by Banca de Fomento bear subsidized interest rates; interest rate subsidies are particularly large in loans granted by Banco Agrario. This responds to the Government objective of improving income distribution in rural areas, especially in the Andean region. A small portion of loans channeled to poor farmers bear few interest rate.

3. **The Non-Banking Sub-System**. The non-banking sub-system, whose share in total financial savings has been growing in the last three years, accounted in 1987 for 16 percent of the total stock of credit and captured one-fifth of the total stock of financial deposits. It is composed of:

- (i) **Financial Corporation for Development (COFIDE)**. COFIDE is a public promotional financial corporation and represents the single most important non-bank financial intermediary. It is funded by bonds sold to the public (some of these bonds are tax-deductible, e.g. bonds "tipo C" are deductible up to

35 percent of the value of the bond from taxable income), by Central Bank's credit and by external loans. Although than 50 percent of COFIDE's financing go to public institutions (mostly public firms), it also provide promotional financing to exporters, small-scale enterprises and other priority sectors.

- (ii) **Financial Firms (Financieras)**. Many of which belong to commercial banks and are the second most important institutions of the non-banking sector. In 1987 they accounted for 53 percent of the savings captured in the non-banking sub-system. Unlike banks, their lending transactions are almost entirely on a mid- to long-term basis. They also differ from banks in that they do not receive cash and saving deposits. Their time deposits are also subject to legal reserve requirements.
- (iii) **Other Intermediaries**. Include credit cooperatives, saving houses of the municipal and rural sectors, mutual saving institutions in the housing sector, and insurance companies.

4. **Capital Markets**. The stock exchange is relatively underdeveloped. Partly as a consequence of subsidized interest rates (which induce formal sector firms to seek credit rather than equity finance) the volume of transactions in the stock exchange (primary and secondary market volume) has dropped from 13 percent of GDP in 1979 to approximately 5 percent in the last years. The share of the public sector (including COFIDE) in primary capital issues has fallen from 47 percent in 1980-81 to 24 percent in 1984-85. However, during periods of tax collection the share of public sector issues increases due to the increase in demand for tax-deductible bonds.

Table 7.1 THE ORGANIZED PERUVIAN FINANCIAL SYSTEM

	1. Commercial Banks	- Private (before July 1987) - Banca Asociada - Foreign - Regional
I. Banking Sub-System	2. Development Banks (Banca de Fomento)	- Agrarian Bank - Industrial Bank - Mining Bank - Mortgage Bank - Housing Bank
	3. National Bank (Banco Nacion)	
	4. Central Reserve Bank	
	1. Financial Development Corporation (COFIDE)	
	2. Financial Firms (Financieras)	
II. Non-Banking Sub-System	3. Credit Cooperatives and Saving Houses	
	4. Insurance Companies	
III. Capital Markets	1. Stock Exchange	

5. **Unorganized Financial Markets.** This encompasses all financial transactions that take place outside the organized or formal financial system described above. Preliminary and rough estimates suggest that unorganized markets might have been in recent years as important as the organized financial system in terms of the volume of financial transactions. There are three types of markets in the unorganized financial system: (i) equity raised outside the stock exchange; (ii) suppliers' credit; and (iii) lending by informals (informal intermediaries per se). Although the available data is conjectural and not truly

representative, interest rates of informal intermediaries seem to have been systematically higher than official ones (and, unlike in the latter case, almost always above inflation). Apart from risk considerations this is mainly due to the absence of ceilings and other restrictions on interest rates. The existence of these restrictions together with high legal reserve requirements in the formal system have provided the crucial incentive for the development of unorganized financial markets.

POPULATION, INCOME DISTRIBUTION AND LABOR MARKET SEGMENTATION

A. Demographic Trends

1. Population and Age Structure. Peru's population, now (1987) numbering more than 20 million people, will grow to more than 22 million in 1990. The average annual rate of growth of population is estimated at 2.5 percent for the five-year period between 1985 and 1990 (Table 8.1). The population is distributed among the country's three major regions as follows:

Coast	52.1 percent
Sierra	36.9 percent
Selva	11.0 percent

2. Forty percent of the population are less than 15 years old and four percent are 65 or more, leaving 56 percent in the "working ages" of 15-64. The dependency rate, now 77 dependents (young and old) per 100 persons in the working ages, will fall to 66 at the end of the century, as the age structure undergo changes associated with projected declines in both the birth and death rates (Table 8.2). Changes in the dependency rate, at least within Peru's prospective ranges, will have a wholly positive effect on potential development, since they imply that a higher proportion of the population will be in the working ages and a corresponding lower proportion will be children and old people, for whom economic dependency is customary and socially desirable.

Table 8.1: POPULATION

<u>Year</u>	<u>Population a/</u>	<u>Rate of Growth b/</u>	<u>Year</u>	<u>Population</u>
1950	7,633		1985	19,697
1955	8,671	2.59 percent	1986	20,207
1960	9,931	2.75 percent	1987	20,727
1965	11,467	2.92 percent	1988	21,256
1970	13,193	2.84 percent	1989	21,791
1975	15,161	2.82 percent	1990	22,332
1980	17,295	2.67 percent		
1985	19,697	2.64 percent		
1990	22,332	2.54 percent		
1995	25,123	2.38 percent		
2000	27,952	2.16 percent		
2005	30,746	1.92 percent		
2010	22,479	1.72 percent		
2015	36,125	1.53 percent		
2020	38,647	1.36 percent		
2025	41,007	1.19 percent		

a/ In thousands

b/ Average annual rates during five-year periods ending that year.

Source: Instituto Nacional de Estadística (INE). "Proyecciones de población". Boletín Especial No. 10, pp. 65-66

3. Vital Rates. Birth rates have fallen from the mid-40's per 1,000 in the 1970's to about 35 at present (Table 8.2). A further decline to 26 is officially projected for the year 2000 although these estimates are sensitive to changes in economic conditions and in the effectiveness of family planning campaigns. The total fertility rate (number of children per mother) now averages 4.5, having fallen from 5.6 in 1975. Consistent with the decline in the birth rate, decreases in the total fertility rate to 3.3 have been projected for the year 2000.

Table 8.2: PERU DEMOGRAPHIC INDICATORS

Year	Dependency Rate <u>a/</u>	Fertility		Mortality CDR <u>d/</u>	Infant Mortality		Life Expectancy <u>f/</u>
		CBR <u>b/</u>	TFR <u>c/</u>		Rate <u>e/</u>		
1975	n.a.	39.4	5.6	12.2	107	56.5	
1980	n.a.	37.9	5.2	11.3	101	57.8	
1985	n.a.	37.9	4.7	10.1	93	60.2	
1987	77	n.a.	4.5	9.4	88	61.4	
1990	75	32.8	4.2	8.3	81	63.4	
1995	71	29.5	3.7	7.1	70	66.1	
2000	66	26.4	3.3	6.3	62	68.1	

n.a. = non available.

a/ The dependency rate is defined as the sum of the number of persons aged 0-14 plus those 65 and older, as a proportion of the number of persons aged 15-64. For convenience the ratio is multiplied times 100.

b/ CBR = crude birth rate.

c/ TFR = total fertility rate.

d/ CDR = crude death rate.

e/ Number of persons who die before reaching their first birthday, per thousand live births.

f/ In years.

Source: Statistics National Institute.

4. If the decline actually occur--and it is too early to assess its plausibility--the pressures on social spending, especially in formal education, would be lessened. Current standards could be achieved with lower expenditures relative to GDP. More desirable, broader coverage and higher quality of state-supported education could be achieved with current real expenditures as a proportion of GDP, given the expected decline in the proportion of the population in the school ages.

5. Mortality rates have also fallen. At present, the crude death rate is 9.4 per 1,000, having declined from 12.2 in 1975. It is expected to reach 6.3 at the turn of the century. Declines in the crude death rate reflect improvements in overall health conditions as well as changes in the age distribution of the population. Rapid population growth leads to a younger population. More formally, the rapid rate of population growth has been accompanied by a set of birth and death rates that concentrate the age distribution of the population in age groups where the probability of mortality is lowest--that is, among the young.

6. More significant than the crude death rate in interpreting improvements in social welfare are the infant mortality rate and life expectancy at birth. Infant mortality now shows an overall average of 88.2 infant deaths per 1,000 live births, having fallen from 107 in 1975 (Table 8.2).

7. These figures motivate three comments. First, the decline in infant mortality has occurred during a period in which the most optimistic hopes for Peruvian development have been largely frustrated. Improvements in infant mortality appear therefore to relate more directly to the size and effectiveness of expenditures devoted to public health and to inexpensive imported techniques of death control among infants rather than to robust economic development. Second, the rates are still excruciatingly high by international standards. Many Latin American countries with similar per capita incomes have mobilized health services that effectively generate rates one-half or even one-third the size of Peru's infant mortality. And third, the nationwide average in infant mortality obscures a distressing variation in the indicator among different regions. Some Andean provinces suffered infant mortality rates in excess of 180 per 1,000 in 1981, a year in which the average rate was 87 and in which some provinces in coastal Peru had rates of 50 or less.

8. Life expectancy at birth has risen from 56.5 years in 1975 to 61.4 years at present. Further increases to 68.1 by the year 2000 are expected (Table 8.2).

9. Labor Force Participation Rates. During the period since 1970, labor force participation rates of men have declined while those of women have increased. Year-to-year changes have not been monotonic (Table 8.3). Nevertheless, the overall decline in male participation rates is consistent with increases in school attendance ratios, while higher female participation in metropolitan Lima reflects (i) worldwide changes in attitudes about the role of women in the labor force; and (ii) the lower labor costs associated with women's lower wages.

Table 8.3: LIMA: LABOR FORCE PARTICIPATION RATES, BY SEX
(percentages)

	1970	1975	1980	1981	1982	1983	1984	1985	1986
Men	80	73	76	74	69	72	72	n.a.	74
Women	38	35	40	36	37	37	40	n.a.	50

Note: Labor force participation rates are shown for persons aged 15 and over

Source: Ministry of Labor, Boletín Mensual de Empleo, No.16, April 1987.

10. Changes since the early 1980s deserve further comment. Focussing on the Lima metropolitan area, the labor force participation of men over 15 years of age reversed its longer term decline and actually rose from 69 percent in 1982 to 74 percent in 1986. For women, the increase which occurred after 1981 was faster than the earlier increases. While in 1981, 36 percent of women in Lima were members of the labor force, the proportion had risen to 50 percent by 1986.

11. Higher participation rates mean that the labor force is growing at a rate faster than the population. The labor force grew at an average annual rate of 2.7 percent between 1981 and 1987, a period during which the population was growing at a rate of 2.6 percent. Needless to say, in a poor labor-surplus economy fast growth in the labor force may do more harm than good. The maintenance of capital labor ratios would necessitate greater savings and investment. Higher government outlays for social services might also be required. In the absence of these conditions a fall in real wages intensifies poverty, unemployment rises, and per capita social services deteriorate.

B. Income Distribution, Rural Poverty and Regional Disequilibrium

12. Calculation of consumption expenditures by population deciles shows that the poorest ten percent of the population spends about two percent of total consumption expenditures (1.80 percent, or adjusted for adult equivalents, 2.01 percent). In the highest-spending tenth of the population, consumption expenditures account for about one-third of national consumption (35.36 percent, or adjusted for adult equivalents, 33.38 percent) ^{1/} In short, consumption by Peruvians in the top decile is 20 times higher than consumption by those in the bottom decile (or 17 times, adjusted for adult equivalents).

^{1/} Derived from Glewe, "Distribution of Welfare in Peru", Table 2, P. 9.

13. Engel's Law suggests that as income increases, the absolute expenditures for food rise at the same time that their proportion in total expenditures falls. Peruvian data are consistent with both halves of the law. Thus inequality in food consumption is less marked than in expenditures overall. Peruvians in the top expenditure decile, for example, spend "only" 11 times as much food per capita as those in the bottom decile (9 times, adjusted for adult equivalents).^{2/}

14. Comparing the expenditures, adjusted for adult equivalents, of two groups of the poorest citizens with the rest of the population allows a bird's eye view of these important measures of welfare.

	<u>Total Exp.</u>	<u>Food Exp.</u>
Poorest 10 percent	2.0 percent	2.7 percent
Poorest 30 percent	9.9 percent	12.9 percent
Remaining 70 percent	90.1	87.1 percent

15. Rural Poverty. Geographical disaggregation is necessary to comprehend fully the nature of Peruvian poverty and under development. While macroeconomic models provide useful insights, they also divert attention from important regional and sectoral patterns.

16. The Bank's Living Standards Measurement Study provides useful data on the regional distribution of poverty. In 1985-86, 31 percent of the population lived in rural districts of the Sierra. Among the poorest ten percent of Peruvians nearly double that proportion (60 percent) were found there.^{3/} Table 8.4 contains additional details that make clear the concentration of poverty in the Andes.

17. These findings are further supported by research performed by the Instituto Nacional de Planificacion on social and economic indicators of poverty at the level of 153 Peruvian provinces. Of 42 provinces in the impacted Trapezio Andino, 33 fall into the strata showing the worst indicators of poverty.^{4/} These provinces are overwhelmingly rural. They depend on subsistence agriculture practiced on tiny plots. These minifarms lack physical and financial inputs in the form of mechanical power, fertilizers, purchased seeds, and credit.

^{2/} Paul Glewwe, "The Distribution of Welfare in Peru in 1985-86", World Bank Living Standards Measurement Study, Working Paper No. 42, December 1987, p.9.

^{3/} World Bank, Living Standards Measurement Study, unpublished data. The most complete description of Peruvian living standards appears in Paul Glewwe, "The Distribution of Welfare in Peru in 1985-86", World Bank Living Standards Measurement Study, Working Paper No. 42, December 1987.

^{4/} Instituto Nacional de Planificacion (INP), Pobreza Critica en el Peru, December 1987. The Trapezio Andino includes the Andean departments of Apurimac, Ayacucho, Huancavelica, Cusco, and Puno along with some high-altitude provinces in the departments of Arequipa and Moquegua.

Table 8.4: LOCATION OF POOR BY REGION, 1985-86

	Poorest 10 percent	Poorest 30 percent	Remaining 70 percent	All
Lima	3.4	8.4	34.6	26.8
Urban Coast	6.0	11.7	16.7	15.2
Sierra	8.7	9.4	11.4	11.0
Selva	2.3	2.2	3.3	3.0
Rural Coast	9.2	9.6	6.2	7.2
Sierra	59.8	48.7	22.8	30.6
Selva	10.6	10.0	4.8	6.3
<u>Total</u>	100.0	100.0	100.0	100.0

Source: World Bank, Peru Living Standards Survey, unpublished data.

18. **Poverty, Employers, and Occupations.** The overwhelming majority of Peru's poor are self-employed farmers. Table 8.5 provides details. The Peru Living Standards Survey reveals clearly the extent to which self-employment is the predominant mode of the nation's economic activity. Nearly three-fifths of the labor force is self-employed rather than working for wages, and more than three-quarters of the poorest 10 percent also find themselves in this category.

19. Equally significant, while 40 percent of Peruvians are occupied in agriculture, more than 70 percent of the poorest ten percent are found there. Of course, the overlap between agriculture and self-employment is great.

20. These findings have clear policy implications. If the poor are largely self-employed farmers (including share croppers, tenants, and landless agricultural laborers), then increases in wage rates paid to the public sector, including state corporations, will have only an indirect effect on poverty, operating through increases in demand for agricultural output. Furthermore, legislation seeking to improve obligatory minimum wage rates would affect only that fraction of the poorest who have regular jobs and work for pay. The World Bank's working paper on the subject, drawing on its mammoth household survey, concludes that "policies to reduce poverty must be aimed at self-employed workers in agriculture Raising agricultural incomes is the key to significantly reducing poverty in Peru."^{5/}

^{5/} Glewe, "The Distribution of Welfare in Peru," p. 40.

**Table 8.5: EMPLOYERS AND OCCUPATION OF HEADS OF HOUSEHOLDS,
INCOME GROUPS, 1985-86**

	Poorest 10 percent	Poorest 30 percent	Remaining 70 percent	All
<u>Employer</u>				
None	5.5	4.8	6.5	6.0
Private firm	12.2	16.9	22.2	20.6
Government	1.3	3.2	11.5	9.0
State Corporation	0.0	0.4	3.6	2.6
Private Household	3.0	3.2	1.5	2.0
Self-employed	78.0	71.5	54.7	59.8
Total	100.0	100.0	100.0	100.0
<u>Occupation</u>				
None	5.5	4.8	6.5	6.0
Professional				
White Collar	0.5	2.2	15.8	10.9
Sales and Service	7.4	13.6	26.0	22.3
Agriculture	70.8	61.2	30.9	40.0
Manufacturing and Construction	15.8	18.2	20.8	20.8
Total	100.0	100.0	100.0	100.0

Source: World Bank, Peru Living Standards Survey, unpublished data.

C. Labor Market Segmentation and Informal Sector Employment

21. Segmentation in the Peruvian labor force between formal and informal parts follows lines familiar from theories of economic development elaborated during the 1950s. For practical purposes, the articles of W. Arthur Lewis on unlimited supplies of labor and Richard Eckaus on technological dualism appear applicable to Peruvian labor market behavior. Many of the hypotheses of these analytical pioneers have been confirmed by observers of the economy during the past decade and have been incorporated in current "heterodox" approaches to Peruvian development.^{6/}

^{6/} The most notable of these is the mammoth two-volume study by Daniel Carbonetto, Jenny Hoyle, and Mario Tueros, El Sector Informal en Lima Metropolitana. Lima: Centro de Estudios para el Desarrollo y la Participación (CEDEP), 1987. The study describes the results of a survey taken in Lima in 1983 encompassing 10,000 households, 3,000 enterprises, and 60 case studies.

22. The following exposition distinguishes between a modern or formal sector and an informal sector. The theoretical literature has engaged in considerable controversy over the definition of formality and informality. The characterizations noted below, while potentially controversial in themselves, allow clear distinctions to be drawn between the two.

23. The most outstanding difference lies in capital intensity, with the formal sector more capital intensive than the informal. Note that this and other differences apply equally to urban and rural sectors. That is, production in the rural formal sector is more capital intensive than in the rural informal sector, analogous to differences between the two in their urban settings. Technological dualism is manifested by high elasticity of factor substitution between labor and capital under informal circumstances and by the more rigid factor proportion (that is, lower elasticity) in the formal sector. Not only does the formal sector use more physical and financial capital per worker than the informal sector, owing simply to the greater creditworthiness of the former, but also a higher concentration of human capital is present in the formal sector as well. Workers that are better educated and bring to the job greater skills than do workers in the informal sector.

24. Accordingly, productivity is higher in formal activities than in informal ones, with estimates of the differential ranging between a multiple of seven (Centro de Estudios para el Desarrollo y la Participacion, CEDEP) and three (Instituto Libertad y Democracia, ILD). Table 8.6 provides additional measurements of the contrasts between modern and informal sectors in the Lima metropolitan area. By contrast, specialized studies of small business in the industrialized countries frequently conclude that their productivity equals or exceeds that of larger enterprises.

Table 8.6: LIMA - MEASURES OF LABOR MARKET SEGMENTATION, 1983

	Modern Sector	Informal Sector	Informal as Percent of Modern
Capital per worker	21,000	469	2 percent
Output per worker	12,000	1,697	14 percent
Monthly income per worker	222	116	52 percent

Source: Daniel Carbonetto, Jenny Hoyle, and Mario Tueros, El Sector Informal en Lima Metropolitana. Lima: Centro de Estudio para el Desarrollo y la Participacion (CEDEP), 1987. 2 vols.

25. In Peru, productivity differences between formal and informal activities are partially reflected in income differences accruing to participants in the two sectors. As a result, workers prefer to be employed in the formal sector, at the same time that the informal sector becomes an "employer" of last resort. It is significant that the vast

majority of jobs in the informal sector are self-generated and therefore are associated with self-employment and with unpaid family workers. Without asserting romanticized generalizations about the energy and ingenuity of workers in the informal sector, the fact that economic activity there results from workers own impulses differs completely from employment in the formal sector, where workers are employed in product lines and occupations over which they have little influence or participation.^{7/}

26. Segmentation between formal and informal activities has been reinforced by Peruvian labor legislation requiring fringe benefits equivalent to 25 percent of the basic wage (or 56 percent of take-home pay) to be paid to workers in the formal sector. These benefits increase labor cost differentials and require, in turn, that private-sector workers have productivity sufficiently high to offset their higher costs. In addition to direct costs of obligatory fringe benefits, inflexibility is increased in labor markets internal to firms in the formal sector by the employment stability law which makes it expensive to discharge workers, even for cause, after a three-month probationary period. Firms that fire workers who have more than three months of seniority must pay them one month of salary for each year of employment, in addition to accumulated vacation pay. Women receive an additional month of salary as a "derecho de mujer." In principle firms in the informal sector are subject to the same legal code. Nevertheless, they are usually sufficiently small to evade such payments completely or to bribe labor inspectors to overlook lack of compliance with the labor laws.

27. The degree of segmentation can, of course, be exaggerated. Market forces, while repressed, can never be altogether extinguished. Many observers have called attention to extensive purchases in the informal market, not only by salaried workers in the formal sector, but also (and less visibly) through sub-contracting by firms in the formal sector. The latter can secure the economies of informal firms without themselves lapsing into informality themselves. The survey by Carbonetto et al. cited earlier indicates that more than half (52 percent) of sales by the informal sector are to firms and individuals in modern sector. In a certain sense, the trickle-down effect posited in more developed economies is present in the Peruvian economy--operating not necessarily between rich and poor but between the formal and the informal sectors. The policy implication is clear. A healthy, productive rapidly growing modern sector is necessary if the economy is to develop broadly. A narrow focus on the low incomes, long hours, and unsafe working conditions in the informal sector, while potentially desirable in itself, is insufficiently comprehensive to ensure national development.

D. Recommendations

28. Because low productivity and low incomes are concentrated in the rural economy (especially in the Trapezio Andino) and in the urban informal sector, focused efforts at economic and social improvement should be targetted there.

^{7/} Carbonetto, Hoyle and Tueros, El Sector Informal provides extensive quantitative documentation of these results.

29. At the most fundamental level, the biggest gaps appear to lie in labor skills, formal managerial know-how, and financial credit. Programs to fill these gaps should have first priority. In this connection, the establishment of decentralized institutes (IDESIS) to supervise loans to small enterprises along with short after-hours courses for their workers and managers have identified the critical problems, are working outside the capital to resolve them, and have achieved an admirable record in a short period.

30. Andean agricultural poverty is likely to continue to be a serious problem. It is important to devote extra resources to improving the low health standards and educational attainment that accompany the region's low incomes. In particular, attempts to decrease the nation's current fiscal deficit should not be made at the expense of cutting attention and expenditures in this seriously deprived region.

31. Rural poverty and its economic roots in low agricultural productivity should continue to receive the most energetic efforts at resolution. The problems are subject to alleviation both by macroeconomic and microeconomic policies. At the macroeconomic level, the most important remaining area is the reestablishment of a set of trade policies and exchange rate policies that make agricultural exports and efficiently produced import substitution crops profitable once again. The increase in agricultural output so stimulated will have beneficial effects both on the balance of payments and on the nutritional status of farm workers.

32. The widespread employment of tramitadores (professional red tape cutters) provides ample evidence of the bureaucratic complexities and delays that face every firm in the formal sector. Since it is agreed that employment and incomes in the economy as a whole are strongly influenced by the productivity of modern firms, every effort to reduce the numbers of signatures, seals, approvals, forms, and other red tape should be made.

33. In much the same vein, current efforts to decentralize governmental productive activity and decision-making deserve reinforcement, both to decrease the geographic income differentials that spur migration and to express tangibly the Government's determination to permit regional authorities to make decisions now excessively centralized in the capital.

34. Official statistics show that public sector and unionized workers enjoyed the fastest rates of increase of real wages after 1985. Most low-income countries seek to focus their wage policies on the poorest workers. To avoid the elements of transfer payments that could result from such a policy emphasis, continued attention to improving the productivity of low-skilled workers should be an integral part of any overall policy measures.

35. The Temporary Income Support Program (PAIT) has reached many unskilled and unemployed workers. It should now shift into a second phase, emphasizing productive labor, skill training, and differential wages according to skill and output. Administered from departmental capitals, its decentralized nature could use simple technology, locally available materials and unskilled workers to provide rudimentary construction materials, low-income housing, health posts, schools, and secondary roads in rural areas, as well as income for its members. In short, a shift toward productive activity and away from an exclusive emphasis on transfer payments is recommended.

THE STATE ENTERPRISE SECTOR

A. The State Enterprise Sector of the Peruvian Economy

1. **Background.** State-owned enterprises play an important role in the economy of Peru. There are 135 non-financial state-owned enterprises, that employ 130,000 people (about 2 percent of the economically active population), their contribution to GDP fluctuates around 10 percent, the book value of their capital is equal to about US\$5.5 billion, 60 percent of which is concentrated in three enterprises and their subsidiaries (which operate in the sectors of electricity, petroleum, telecommunications). In addition, state enterprises provide about 30 percent of the total exports of the country and are a major source of tax revenues. Thus, in 1986 taxes paid by the sector (mainly by the petroleum industry) constituted 29 percent of the revenues of the central government and the sector's net contribution to the budget (taxes minus transfers) was equal to 2.5 percent of the GDP.

2. The state enterprise sector has evolved in various phases, reflecting changing policies of successive governments. A large part of the sector (53 percent in terms of current total value of assets) emerged through establishment of new firms by the state (mostly before 1968), firms totalling 42 percent of total assets became public, mostly under the military regime of Gral. Velasco Alvarado between 1968 and 1975, through nationalization of foreign firms or expropriation of private firms operating in sectors considered by the government as strategic areas (electricity, railways, fishing, cement, chemicals, etc.) and 5 percent were established through takeovers of bankrupt private firms. A side-effect of the nationalizations and takeovers was that the state became owner of a number of subsidiaries of intervened firms too.

3. With these developments, by the end of the 1970s the sector had grown into a very diverse conglomerate of enterprises. They operated, on the one hand, in the traditional areas of infrastructure and exploitation of key natural resources (providing 100 percent of the electricity, drinking water and telecommunication services; controlling the total oil and gas production, representing about 35 percent of mining and 33 percent of transportation); and, on the other hand, in a wide variety of other areas like manufacturing, fishing, agriculture, marketing, news, entertainment, etc. In other words, state enterprises participated in virtually all sectors of the economy. Nevertheless, about half of their total output and capital and two-fifths of their employees are concentrated in three areas: petroleum, power and mining. Firms in these industries are large-scale: up to 17,000 employees. The petroleum company, PETROPERU, is the largest, representing one-third of total revenues of the state enterprise sector. In turn, the power companies, mainly ELECTROPERU and ELECTROLIMA, own close to 40 percent of the total capital of the sector. The state owns 10 of the largest companies of the country and at the same time dozens of very small companies (10-50 employees) too. The

government has 100 percent ownership in most of these enterprises, including the largest ones, but there is a large number of mixed enterprises and 24 companies with minority state ownership.

4. Following the 1968-80 period of military rule and high state involvement in economic activity, the civilian Belaunde administration took office in 1980. At the time, it announced a new policy aimed at reducing the number of state enterprises, limiting the state participation in the economy activity, improving the performance of the remaining state enterprises and providing more support and incentives to the private sector. This new policy was only partially implemented: the expansion of the sector came to a halt, but very little was done to reduce its size and to improve its performance.

5. The policies pursued by the current government during the first half of its tenure (mid 1985-end 1987) were characterized by the preservation (i.e., neither expansion nor reduction) of the size of the non-financial public sector. In this period, as was pointed out before the government heavily utilized the sector for purposes of anti-inflationary and welfare policies through artificially low controlled prices and tariffs. Most of these subsidies had to be financed by the state firms. This policy has led to a sharp reduction in maintenance and investment expenditures. In Table 9.1 the key parameters of states enterprises in the period 1980-87 are presented.

Table 9.1: STATE ENTERPRISES--KEY PARAMETERS

	1980	1981	1982	1983	1984	1985	1986	1987
Real revenues (at 1979 prices)	115.6	99.1	107.4	118.5	100.7	118.4	84.8	73.4
Nominal revenues (as GDP share)	25.3	21.3	22.6	29.0	23.1	26.1	17.5	14.1
Employment (in 1000 workers)	--	100.0	--	--	97.0	--	--	115
Number of Firms	--	--	--	--	--	--	--	135

Source: CONADE.

6. Administration of the Sector and Decision-Making Process. The administrative and legal structure of the sector is in a process of change. In the past the shares of the public enterprises were held either by state-owned banks or by the relevant sectoral ministries. The administration of these enterprises was entrusted to the sectoral ministries, which appointed the boards of directors and made the major business decisions. Very often this meant direct intervention in the operations of the companies concerning issues that could have been better dealt with by their

management. Often sectoral ministries imposed on the enterprises decisions that were based not on purely business strategy but on political considerations.

7. It was decided in 1981 to transfer the "custody" of the shares of all public enterprises to a newly created entity, the National Development Corporation (Corporacion Nacional de Desarrollo - CONADE). CONADE was also charged with the task of coordinating and promoting the activities of the state enterprises, but its sphere of responsibility--especially in relation to the sectoral ministries--was not clearly defined. Until 1985, CONADE had a very small staff and could not, in fact, exercise a meaningful control over the enterprises. Since 1985 both the size and the influence of CONADE have grown substantially. Now it has a staff of about 80 people. It has built up a good monitoring system and provides the Government with a fairly reliable overview of the situation in the sector. CONADE tries to introduce a business-like approach to the management of the sector.

8. Nevertheless, CONADE's authority presently is limited to financial issues of the sector (approval of annual budgets and borrowing limits for the firms) and approval of investment projects (jointly with National Planning Institute). It has little role in the selection of managers, pricing policy and the evaluation of performance.

9. Today the main actors of the administrative superstructure are: CONADE, sectoral ministries, the Ministry of Economy and Finance and the National Planning Institute (INP). The latter formulates the national medium-term (5-year) and annual plans that reflect the macroeconomic objectives and sectoral priorities of the Government. The sectoral ministries elaborate their sectoral policies in accordance with the national plans. On the basis of these documents CONADE gives directives to the enterprises on some strategic issues and on how to put together their investment plans and annual budgets. In turn, the enterprises submit their project proposals, draft budgets and annual plans to CONADE. CONADE screens and consolidates these proposals and: (i) coordinates the medium-term strategy and the concrete investment projects with INP and with the sectoral ministries; (ii) approves the annual budget, the annual investment plan and the financing plan following the guidelines of and in close cooperation with the MEF.

10. **Problems Faced by the Sector.** The main problems confronting state enterprises now are the following:

- (i) As a result of a policy of prices and tariffs lagging behind inflation since 1985, and to a lesser extent of falling international prices of mineral exports, the overall revenues of public enterprises have fallen drastically between 1985 and 1987. This is eroding the financial viability of many firms, constraining required investments and hampering normal maintenance of the current capital stock.

- (ii) Technological levels and technical conditions of a large number of enterprises are critical because either the original investment decision was suboptimal or due to insufficient funds for maintenance and rehabilitation.
- (iii) The management system is not conducive to high performance. Traditionally, state enterprises in Peru have been viewed as a means to provide reliable supply of productive inputs, services and consumer goods at low prices and create additional employment, while their productivity and profitability have been given secondary importance. This philosophy have created conflicting goals between economic efficiency and welfare policy. At the same time the freedom of action of the managers has, in general, been limited, they have had to operate within the framework of detailed annual plans, investment programs, annual investment appropriations, wage and borrowing limits, and controlled prices set by government authorities. There has been no performance evaluation and incentive systems to improve efficiency and the turnover of the top managers has been high.
- (iv) Most of the state firms operate without the competitive pressure of the market, either because they are natural monopolies (electricity, water, railways, etc.) or because the size of the market does not permit operations of more than one supplier and foreign competition has been restricted through trade barriers (e.g. steel production). Other times the state regulation has created monopolies (e.g., ECASA in rice marketing and importing). In other cases, effective competition has been hindered (e.g., AEROPERU vs. Faucett, a private air company) by automatic financing of public firm's deficits.
- (v) Political and legal constraints make the reduction of redundant staff difficult. Excessive import and procurement regulations slow down the purchase of inputs and lead to excessive stockpiling of inventory.

11. **Financial Performance.** As a result of these conditions, financial performance has been poor for a long time and has dramatically deteriorated in 1985-87. Thus, the combined current account savings after being negative in the early 1980s, improved somewhat in 1983-85, but deteriorated markedly since 1985. This deterioration was a result of policy changes introduced since mid 1985: (i) prices and tariffs of state enterprises were used as an instrument to control cost pressures and inflation. Although price controls affect most economic sectors, they are especially strong for state enterprises ; (ii) The growing overvaluation of the Inti in 1985-87 resulted in reduction of the revenues of exporting companies as GDP percentage (minerals, petroleum products, fishmeal, etc.); (iii) Public enterprise wages and salaries were increased faster than inflation, and as a result, the share of wages in current expenditures grew from 12 percent in 1984 to 15 percent in 1987.

Table 9.2: FINANCES OF NON-FINANCIAL STATE ENTERPRISES (1980-87)
(GDP percentages)

	1980	1981	1982	1983	1984	1985	1986	1987*
Current Revenues	25.3	21.3	22.6	29.0	23.1	26.1	17.5	14.1
Current Expenditures	25.5	21.4	22.9	27.1	21.5	23.9	17.4	13.8
<u>Current Account Balance</u>	-0.2	-0.1	-0.3	1.9	1.6	2.2	0.1	0.2
Capital Revenues	1.3	0.8	1.1	1.0	0.8	0.4	0.4	0.3
Capital Expenditures	3.0	3.4	4.8	5.1	4.3	3.1	2.2	1.7
Gross Capital Formation	2.6	3.3	4.7	5.0	4.1	3.0	2.0	1.7
<u>Overall Surplus Deficit</u>	-1.8	-2.7	-4.0	-2.2	-1.9	-0.5	-1.7	-1.1

*Preliminary data

Source: Banco Central de Reserva and CONADE.

12. Due to these factors, combined revenues of state enterprises fell from 26.1 percent of GDP in 1985 to 14.1 percent in 1987 and likewise current account savings dropped from 2.2 percent to 0.2 percent between both years (Table 9.2). The latter despite the fact that state enterprises suspended most interest payments on their external debt. As it is shown in Statistical Annex Table 5.3(B), the situation is very critical in a series of firms which in 1987 experienced negative current savings. In effect, of the 27 largest state enterprises, 9 registered negative current savings, other 10 experienced current savings superior to 5 percent of their sales, and the remaining 8 were close to breaking-even in the current account. The big loss-makers were ECASA (rice marketing), SIDERPERU (steel) and C.P.V. (shipbuilding). Savings-makers were CENTROMIN (minerals), ELECTROPERU (electricity), SEDAPAL (water and sewerage), PARAMONGA (paper and chemicals), and ENCI (agricultural marketing). Although the latter received substantial hidden subsidies through favorable exchange rates for its imports of agricultural products. Other major firms like PETROPERU and MINPECO (mineral marketing) displayed a current saving position close to zero. It must be noted that, in general, even firms with positive savings had problems to cover with them their depreciation allowances. The drop in internal revenues, together with the non-availability of foreign financing, have seriously hampered needed routine expenditures on maintenance and conservation of existing capital stock, let alone new investments. Thus,

gross capital formation in the sector has dropped from 4-5 percent of GDP in 1982-84 to around 2 percent in 1986-87, the lowest level of the decade.

Table 9.3: SOURCES OF FINANCING OF STATE ENTERPRISES

	1980	1981	1982	1983	1984	1985	1986	1987
Current Account Savings	-5.0	-3.3	-7.2	36.6	37.4	70.3	1.1	17.7
Capital Transfers	29.4	5.8	3.3	5.2	7.0	2.7	12.1	43.8
Other Capital Revenues	15.0	16.4	19.8	14.7	11.3	10.2	6.6	0.0
Net External Financing	36.1	13.1	72.2	29.6	28.2	41.7	50.3	13.3
Net Domestic Financing	24.5	68.0	11.9	13.9	16.1	-24.9	29.9	25.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Banco Central de Reserva and CONADE.

13. Between 1982 and 1985 there was a strong improvement in the current account savings: they grew from -0.3 percent of GDP to 2.2 percent (Table 9.2) and their share in investment financing increased from -7.2 percent to 70.3 percent (Table 9.3). These savings were, however, completely wiped out in 1986 by the effects of the policy of depressed public sector prices, lagging exchange rates and substantial wage increases. In 1985 the companies were called upon by the Central Bank to deposit the Inti counterpart of their accrued-unpaid external debt service in Central Bank's blocked accounts. Although this regulation was only partially fulfilled, the companies' net position with the domestic banking system improved. Therefore in that year the financing of investments came from own savings and to a lesser extent from external financing. In 1986-87 the evaporated current savings of the enterprises was replaced by growing borrowing from domestic sources, and also from capital transfers. Thus, while in 1985 the net amortization of the sector's domestic debt was 0.8 percent of GDP, net borrowing in 1986 and 1987 was about 0.6 percent of GDP.

B. Public Enterprise Reform

14. Now the Government is working on a reform package of the state enterprise sector. The package consists of two major parts: (i) improvement of the performance of the state enterprises; (ii) redefinition of the role, scope and size of the sector with a view to liquidation of inefficient companies; sale of non-strategic enterprises; transfer of firms of local interest to regional governments; invitation of private capital through sales of shares in some enterprises.

15. **The Enterprise Reform Program.** The main elements and objectives of the program are as follows:

- a) Change of approach to the state firms. They will be dealt with as real, autonomous enterprises and not as departments of the Government. They will be given clear, business-like objectives.
- b) CONADE will exercise the owner's functions of the state. It will organize special holding groups for each sector (oil, electricity, transport, mining, trade, manufacturing, etc.) Any direct intervention of other government agencies (sectoral ministries) in the operations of individual firms will be channelled through CONADE. CONADE will set the objectives through the holding groups and will establish an efficient system of control and monitoring. The company managers will have more autonomy in the framework of general objectives and they will be responsible for the results of their firms.
- c) Both the sector and each individual enterprise would work on the principle of self-financing. All the current expenditures, maintenance costs, modernization and normal growth of the enterprise would be financed from own savings. Major expansions would be financed by CONADE, channeling excess profits of other enterprises through a special equalization fund, or using domestic or external financing.
- d) Prices should be set at a level that assures profitability of the enterprise. Firms with large debt and high debt/equity ratio will be financially restructured.
- e) In some cases the restructuring will be implemented through contract-program between the Government and the firms.
- f) There will be changes in the legal framework of the sector too. A draft Law of Entrepreneurial Activity of the State has been submitted for approval to the Congress.

16. The program is coherent, logical and comprehensive. If fully implemented, it will dramatically change the performance and financial shape of the state enterprises. The most salient element of the program is its striving to separate and isolate the entrepreneurial activity of the state from the political processes. However, the implementation of the program is expected to be a difficult task. The rehabilitation of the sector requires strong commitment, radical policy changes, management reform, huge investments and significant price increases. One of the crucial issues is going to be the adjustment of output prices and tariffs. The slow and indecisive start suggests that the commitment is not strong enough.

C. Some Suggestions For The Further Development of the Program

17. Presently the program does not comprise an action plan and timetable that would specify the implementation measures. Elaboration and announcement of such an action plan would help to start the implementation

without further delay and to carry it out rapidly in an organized fashion. For the time being the elaboration of the reform package is based on a joint effort of CONADE, Ministry of Finance, National Planning Institute and the Office of the Prime Minister. However the establishment of a Committee with a broader participation of government officials and enterprise managers would probably enhance the reform ideas, and provide more political base for them.

18. It seems to be necessary to complement the program with a set of technical restructuring plans for a large number of firms. These plans might cover inter alia catch up maintenance, rehabilitation, modernization and in some cases closure of facilities. It would be desirable to incorporate them into the medium term National Development Plan.

19. The program proposes elaboration of broad-based action-plans and Government-enterprise "contract programs" for eight firms (two fishing and four mining firms, the largest water and sewerage company and PETROPERU). This "contracts" would define the goals and mutual obligations of both the Government and the enterprise concerned in terms of production, productivity, prices, wages and salaries, reduction of costs, compensations, subsidies, and financial results. This seems to be a good initiative and probably could be used in more than the eight cases proposed in the program.

20. The government may consider strengthening CONADE organizationally and enhancing its role since it has to direct and reform the activity of a large and diverse sector of the economy.

21. Both the autonomy and accountability of the enterprise managers need to be further increased, not only in the day-to-day operations but in the strategic decisions of the firms too. The sphere of competence of the boards of directors could be further clarified. The program needs to be complemented by introduction of a system of material incentives both for the top managers and medium level staff of the firms. In this system CONADE would set clear goals for the managers in terms of profitability, international competitiveness and healthy long-term development of their firms. The performance of the managers would be measured against these goals.

22. The draft "Law of Entrepreneurial Activity of the State" reflects the ideas of the public enterprise reform program of the Government and describes the basic means and ways of its implementation. It would have a positive impact on the reform process if the law was adopted as soon as possible. It is important that the law provide not only clear principles for the management of the sector but also stress the limits of government participation in direct economic activity encouraging further private initiative.

D. Assessment and Recommendations for the Divestiture Program

23. The reform program contains only a rough outline of the proposed divestiture process. It states that about one-third of the public enterprises should be sold or transferred "because of their nature and

objectives" and another one-third should be merged or liquidated because they are "not important" or not viable. It says that many of the enterprises will need pre-sale financial restructuring, increase in output prices, modification of activities and changes in management. But the Program does not specify the size of the divestiture (in terms of value of assets) and the list of the firms slated for sale, nor does it define the strategy and timetable for sales. CONADE has some preliminary proposals on these issues, especially on the list of enterprises to be sold. The following comments refer to the relevant part of the reform program and also CONADE's proposals.

24. As far as the objectives and the expected results are concerned, the divestiture: (i) would rationalize the role of the sector and would make it more manageable; (ii) would free financial and human resources of the Government bogged down in a large number of enterprises operating throughout the whole economy; (iii) would make possible the concentration of these resources in a few key areas, substantially improving their conditions; (iv) would improve the performance of the privatized enterprises; (v) would reduce the public sector deficit; (vi) would draw resources of the private sector into areas presently occupied by the public sector; and (vii) would strengthen the confidence of the private sector.

25. According to CONADE'S tentative proposal, about 16-20 fully or majority owned enterprises (in mining, food, chemical, textile, engineering industries, tourism, shipping and fishery) and the shares of the state in 7 mining, 5 engineering and 6 cement factories would be sold. There would also be a capital increase through public placement of shares in AEROPERU. The book value of the assets to be sold is very modest, between US\$170-210 million, of a total book value of US\$5.5 billion for the whole sector. Additionally, the water and sewerage companies and 2 or 3 other firms will be transferred to local governments; some non viable firms will be liquidated. At this time, the Government does not intend to offer any participation to foreign capital, although there are some thoughts about converting the foreign debt of a mining company into equity.

26. This divestiture program is the first serious attempt to redefine the respective scopes of the public and private sectors, but it is too cautious in terms of the number of firms for sale. It is understandable that the Government intends to preserve its full control of hydrocarbon extraction, power, telecommunication, airport operations and wants to keep under its control the agriculture marketing company. But it could offer for sale a much broader group of enterprises, especially in the manufacturing industry. It could sell all of its participation in the cement, food (except the coca processing), chemical, pharmaceutical, paper, and fish-processing industries. Even SIDERPERU could (after thorough financial and physical restructuring) operate efficiently in the private sector.

27. An additional reason for defining a broader divestiture proposal is that in fact not all companies intended for sale would be really sold. Some of them might not be attractive enough to the private sector, others might be too large to be sold on Peru's capital market and finally there would be a certain limit of the overall absorptive capacity of the market. Nonetheless, these constraints could be by-passed, potentially, by offering

the larger firms on credit terms, if no buyer is sought otherwise. In any event, even if the Government intends to limit the divestiture program to 10-15 percent of the total assets of the sector (as Government officials state), the initiating list of enterprises should perhaps be 2-3 times larger (while now it covers about four percent of the total assets).

28. The Government could also consider sale of enterprises to foreign investors, especially in areas where technology transfer, management methods and additional market possibilities brought by foreign investors may be important. Furthermore, experience in Mexico, Chile and elsewhere shows that divestiture of state enterprises is ideal for debt to equity swaps. This would simultaneously render more viable and profitable the divestiture process, by analyzing the number of potential bidders, and help to solve Peru's foreign debt situation. Although there are certain reservations about the role of foreign firms in Peru, the Government can assure safeguard of national interests through its regulatory policy or joint participation. Of the latter, the experience in the joint-venture of BAYER PERU is outstanding in this respect.

29. A part of the divestiture program is the transfer of enterprises of local interest to regional authorities. The first candidates are the water and sewerage companies. This decentralization brings the decision making authority closer to the users which is a very positive step. At the same time, it is important to assure that (i) the financial position of these firms not deteriorate in the wake of their transfer to local governments; and (ii) no firm that services the national (or international) market be transferred to local authorities just because of its geographical situation.

30. The ideas of partial privatization have been discussed for a long time in Peru. As it was mentioned above, they were proposed already by the previous administration but no practical step has been taken in this area. This fact shows the necessity of urgent elaboration of a sales strategy and action plan including: (i) final list of enterprises slated for sale; (ii) implementation, if necessary, specific pre-sale actions (restructuring and policy changes); (iii) determination of the asking prices, sales methods and channels to be used; and (iv) designation of the agencies responsible together with CONADE for each of the above steps. It is important not to waste time on lengthy technical studies, but to determine the asking price based on simple methods and let the market determine the sale price through open subscription process of bids and/or public placement in the stock exchange.

31. Divestiture will not be a simple administrative-commercial exercise. It will require strong political commitment and readiness to adopt sometime difficult and costly measures (like changes in the policy environment and regulatory framework, assumption of debts of state firms, credit terms to potential buyers). Moreover, there is a need for a clear, unambiguous policy statement of the Government in which it would describe a strategy for the state enterprise sector in the sense of future role and share in the economy and also in the sense of direction and sectoral distribution of its new investments. This strategy would also determine and announce the limits of future entrepreneurial activities of the state, offering assurance to the private sector that it can operate and invest

freely in the rest of the economy without risks of serious Government interference, let alone expropriation. As an additional measure, the Government may encourage the private initiative in some areas presently reserved (explicitly or tacitly) for the public sector. The competition of private firms may exercise a healthy pressure on the state enterprises to improve their performance. Such a strategy and policy statement would be extremely useful both as an orientation for the planners, policy makers and managers of the public sector and as an encouragement and guidance for the private investors. A coordinated effort of the public and private sectors could lead to a boosting of total productive investments, and growth.

LIST OF THE NON-FINANCIAL STATE ENTERPRISES

<u>Title</u>	<u>Acronym</u>	<u>State Ownership (\$)</u>	<u>Profile</u>	<u>Sales 1/</u>	<u>Employees 2/</u>	<u>Equity 1/</u>	<u>Net Profit/ Loss 1/</u>
1. <u>Water and Sewerage</u>							
Servicio de Agua Potable y Alcantarillado de Lima	SEDAPAL	100		681	3364	6991	-78
Servicio Nacional de Abastecimiento de Agua Potable y Alcantarillado	SENAPA	100		127	1756	583	-3
Servicio de Agua Potable y Alcantarillado de Cuzco	SECACUZCO	100		-	212	-	-
Servicio de Agua Potable y Alcantarillado de Lambayeque	SEDALAMBAYEQUE	100		34	838	113	2
Servicio de Agua Potable y Alcantarillado de Loreto	SEDALORETO	100		16	185	49	1
Servicio de Agua Potable y Alcantarillado de Arequipa	SEDAPAR	100		-	513	58	4
Servicio de Agua Potable y Alcantarillado de Trujillo	SEDAPAT	100		-	408	45	-
Servicio de Agua Potable y Alcantarillado de Piura	SEDAPIURA	100		-	-	-	-
Servicio de Agua Potable y Alcantarillado de Puno	SEDAPUNO	100		-	-	-	-
Servicio de Agua Potable y Alcantarillado de Tacna	SEDATAACNA	100		8	115	27	0
Servicio de Agua Potable y Alcantarillado de Tumbes	SEDATUMBES	100		6	69	-	-1

1/ Millon Intis in 1986

2/ Number in 1986

LIST OF THE NON-FINANCIAL STATE ENTERPRISES

<u>Title</u>	<u>Acronym</u>	<u>State Ownership (\$)</u>	<u>Profile</u>	<u>Sales 1/</u>	<u>Employees 2/</u>	<u>Equity 1/</u>	<u>Net Profit/ Loss 1/</u>
2. <u>Agricultural Marketing</u>							
Empresa Nacional de Comercialización de Insumos	ENCI	100	Marketing of basic food and agricultural inputs	5855	1768	1143	890
Empresa Comercializadora de Arroz, S.A.	ECASA	100	Rice marketing	2730	1861	42	-1013
Empresa de Mercados Mayoristas	EMMSA	100	Wholesale marketing	16	272	16	1
Empresas de Comercialización de Productos Pecuarios	ENCOPESA	100	Agricultural marketing	-	70	-	-
Tiendas Afiliadas, S.A.	GRUPO TAS	100	Retail marketing	-	-	-	-
3. <u>Telecommunications</u>							
Empresa Nacional de Telecomunicaciones de Peru	ENTEL	100	Telecommunications	2466	8886	4889	3
Compania Peruana de Telefonos	C.P.T.	45	Telephone	1099	-	1924	-138
4. <u>Electricity</u>							
Empresa de Electricidad de Lima, S.A.	ELECTROLIMA	100		3899	4062	5322	-164
Empresa Electrica del Peru	ELECTROPERU	100		162	2230	20725	26
Energia Hidroelectrica Andina, S.A.	HIDRANDINA	100		635	-	2044	-55
Empresa Electrica del Centro	ELECTRO CENTRO	100		108	995	400	-32

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LIST OF THE NON-FINANCIAL STATE ENTERPRISES

<u>Title</u>	<u>Acronym</u>	<u>State Ownership (\$)</u>	<u>Profile</u>	<u>Sales 1/</u>	<u>Employees 2/</u>	<u>Equity 1/</u>	<u>Net Profit/ Loss 1/</u>
Empresa Electrica del Norte	ELECTRO NORTE	100		148	-	419	-165
Empresa Electrica del Oriente	ELECTRO ORIENTE	100		292	443	861	68
Empresa Electrica del Sur	ELECTRO SUR	100		105	431	466	1
Empresa Electrica del Sureste	ELECTRO SURESTE	100		135	855	425	-42
Sociedad Electrica de Arequipa, S.A.	SEAL	95		249	710	921	-21
Cia. Electrica Yuncan	-	75		-	-	-	-
<u>5. Petroleum and Gas</u>							
Petroleos del Peru	PETROPERU	100	Petroleum production, transportation, refinery and marketing	24498	10137	8460	-(3023)
SOLGAS		85	Gas distribution	374	390	100	11
Petrolera Transoceanica		100	Oil transportation	515	302	347	22
Petromar		100	Off-shore production	-	-	-	-
SERPETED		100		-	-	-	-
<u>6. Agroindustry</u>							
Empresa para el Desarrollo y Explotacion de La Palma Aceltera, S.A.	EMDEPALMA	100	Palm oil	88	1236	405	-82

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LIST OF THE NON-FINANCIAL STATE ENTERPRISES

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Empresa Nacional de Coca	ENACO		Coca	221	447	127	62
Empresa Nacional de Tabaco	ENATA	100	Tobacco	59	190	35	2
Forestales Amazonas	FASA	15	Wood	-	-	-	-
Industria Maderera de Oriente, S.A.	IMOSA	17	Wood	-	-	-	-
Iquitos Plywood, S.A.	IPSA	72	Wood	-	-	-	-
7. Cement							
Cementos Sur		100		103	-	34	-17
Cementos Yura		100		214	264	464	27
Cemento Andino		49		388	-	562	18
Cemento Norte Paccasmayo		49		474	-	569	29
Cementos Lima		49		895	-	1037	89
Lab Carbon		14		-	-	-	-
Nuevas Inversiones, S.A.	NISA	5		-	-	-	-
SIA		14					

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LIST OF THE NON-FINANCIAL STATE ENTERPRISES

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8. Paper and Chemicals							
Sociedad Paramonga		100	Pulp, paper, PVC	2250	3367	1759	36
Fertilizantes Sinteticos S.A.	FERTISA	100	Fertilizers	135	404	118	2
Quimica del Pacifico, S.A.	QUIMPAC	100	Salt, caustic soda	193	269	169	10
Cia. Celulosica y Papelera del Norte		100	Pulp and paper	30	146	5	0
Empresa del Alcohol Industrial, S.A.	EMCOHOL	100	Denatured alcohol	11	45	6	1
Empresa de la Sal	EMSAL	100	Salt	207	565	126	48
Industrias Cachimayo		100		85	249	102	-23
La Papelera Peruana		100	Pulp and paper	145	229	25	15
Bayer Industrial, S.A.	BAYINSA	30	Acrylic fiber	918	-	402	37
Refractorios Peruanos		10	Refractory materials	-	-	-	-
9. Steel							
Empresa Siderurgica del Peru	SIDERPERU	100	Steel and steel products	2491	4321	2800	-383
Siderselva		100	Steel products	57	-	7	5

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LIST OF THE NON-FINANCIAL STATE ENTERPRISES

<u>Title</u>	<u>Acronym</u>	<u>State Ownership (\$)</u>	<u>Profile</u>	<u>Sales 1/</u>	<u>Employees 2/</u>	<u>Equity 1/</u>	<u>Net Profit/ Loss 1/</u>
10. Textile							
Manufacturas Nylon, S.A.	MANYLSA	91	Nylon	-	-	-	-
11. Metalwork and Engineering							
Motores Diesel Andinos, S.A.	MODASA	52	Diesel engines	263	-	93	8
Compresores Andinos	COMPASA	92	Compressors	6	19	4	1
Moraveco, S.A.		89	Refrigerators	-	-	-	-
Fabrica de Equipos de Telefonia	FETSA	40	Telephones	-	-	-	-
Industria Peruana de Alambre	ALAMBRESA	20	Wire	-	-	-	-
Fundacion Andina del Peru, S.A.	FUNAPER	8	Iron pipe fittings	-	-	-	-
Helicoidales y Tubos, C.A.	HELITUBCA	22	Steel tubes	-	-	-	-
Maquinas y Herramientas Andinas, S.A.	MHASA	53	Machinery	-	-	-	-
Pisca Astilleros		100	Shipyard	-	-	-	-
Tractores Andinos, S.A.	TASA	51	Tractors	-	-	-	-
12. Mining							
Empresa Minera de Centro del Peru	CENTROMIN	100	Copper, lead, zinc, silver	4664	16981	1037	-1235

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LIST OF THE NON-FINANCIAL STATE ENTERPRISES

<u>Title</u>	<u>Acronym</u>	<u>State Ownership (\$)</u>	<u>Profile</u>	<u>Sales 1/</u>	<u>Employees 2/</u>	<u>Equity 1/</u>	<u>Net Profit/ Loss 1/</u>
Empresa Minera del Hierro del Peru	HIERROPERU	100	Iron, Ore and concentrates	980	3324	776	-183
Empresa Minera del Peru	MINEROPERU	100	Copper and zinc	1964	3487	739	-131
Empresa de Comercializacion de Productos Mineros	MINPECO	100	Mineral marketing	1677	548	-634	153
Empresa Estatal Minera Asociada Tintaya, S.A.	TINTAYA	100	Copper	775	1132	-17	-268
Consultora Minero Metalurgica	COMMSA	99	Consulting	16	89	4	1
Agentes Navieros San Nicolas		100	Mineral shipping	101	19	11	5
Compania Minera Pesares		67		-	-	-	-
Cia. Minera San Juan de Lucanas		100	Silver	-	537		
Mineros Condestable		100		62	245	21	0
Minpeco, USA, Inc.		100		-	-	-	-
Empresa Promotora Bayovar	PROBAYOVAR	100	Phosphates	-	11	111	-
Empresa Promotora del Carbon	PROCARBON	100	Coal	-	10	0	-
Propiedad Minas Justas		100	Real estate	-	-	-	-
Reactivos Nacionales, S.A.	RENASA	93	Xanthate	81	102	30	5

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LIST OF THE NON-FINANCIAL STATE ENTERPRISES

<u>Title</u>	<u>Acronym</u>	<u>State Ownership (\$)</u>	<u>Profile</u>	<u>Sales 1/</u>	<u>Employees 2/</u>	<u>Equity 1/</u>	<u>Net Profit/ Loss 1/</u>
Soc. Minera Cerro de Pasco		94	Copper, lead, zinc				
Cia. Minera Buenaventura		19	Copper, lead, silver, zinc				
Cia. Minera Condesa		18	Minerales				
Cia. Minera Magistral		20	Copper				
Cia. Minera Recuperados		18					
Soc. Minera Pilar		20					
Mina Aquila, S.A.		40	Copper				
 <u>13. Transportation</u>							
Empresa de Transporte Aereo del Peru	AEROPERU	100	Airline	1273	1653	350	40
Compania Peruana de Vapores	CPV	100	Shipping	817	1588	-749	-267
Corporacion Peruana de Aero- puertos y Aviacion Comercial	CORPAC	100	Airport operation	559	3272	1276	25
Empresa Nacional de Ferrocarriles	ENAFER	100	Railroad	606	5414	1559	-259
Empresa Nacional de Puertos	ENAPU	100	Ports	1203	4632	1721	-41
Empresa Nacional de Transporte Urbano	ENATRU	100	Urban transport	249	3993	78	-144

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LIST OF THE NON-FINANCIAL STATE ENTERPRISES

<u>Title</u>	<u>Acronym</u>	<u>State Ownership (\$)</u>	<u>Profile</u>	<u>Sales 1/</u>	<u>Employees 2/</u>	<u>Equity 1/</u>	<u>Net Profit/ Loss 1/</u>
14. Fish and Fish Processing							
Empresa Nacional Pesquera	PESCAPERU	100	Fish processing	1530	1792	635	-82
Empresa Publica de Certifica- ciones Pesqueras del Peru	CERPER	100	Quality control	35	277	15	6
Cia. Pesquera del Peru	COPES	51	Fish processing	-	614	-	-
Empresa Peruana de Servicios Pesqueros	EPSEP	100	Fishing	251	616	92	1
Flopesca		100	Fishing				
Lilly		100	Fish processing				
Maritimos Balboa		90	Fish processing				
Muelle Centenario		75	Fish processing				
Peruanas de Pesca, S.A.	PEPESCA	100	Fish processing				
Pesquera San Jose		58	Fish processing				
Sindicato Nacional de Produccion de Harina y Aceite de Pescado		89	Fish meal and fish oil				
15. Pharmaceutical Industry							
Ampollas Farmaceuticas		86		41	-	32	7
Laboratorios Unidos, S.A.	LUSA	100		-	-	-	-

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LIST OF THE NON-FINANCIAL STATE ENTERPRISES

<u>Title</u>	<u>Acronym</u>	<u>State Ownership (\$)</u>	<u>Profile</u>	<u>Sales 1/</u>	<u>Employees 2/</u>	<u>Equity 1/</u>	<u>Net Profit/ Loss 1/</u>
16. <u>Defense Industry</u>							
Servicio Industrial de la Marina	SIMA	100	Shipbuilding, metalworks	428	5157	477	14
Empresas Publicas de la Industria Aeronautica	INDAER PERU	100		-	48	84	-2
Industrias Militares del Peru	INDUMIL	100	Ammunition, clothing	339	2534	446	14
17. <u>News Media</u>							
Agencia Peruana de Noticias y Publicidad	ANDINA	100	News agency	25	-	2	1
Empresa Editora Peru	EDITORAPERU	100	Publishing	162	548	21	26
18. <u>Others</u>							
Artesanias del Peru		100	Handicrafts	-	-	-	-
Empresa Nacional de Edificaciones	ENACE	100	Construction	52	779	40	-13
Empresa Nacional de Turismo del Peru	ENTURPERU	100	Tourism	126	-	328	1
Cine Porvenir		100	Movie theater	-	-	-	-
Cine Pericholi		100	Movie theater	-	-	-	-

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J.Malatinski/trc
March 15, 1988

THE INTERACTION OF FISCAL AND MONETARY POLICIES

1. The Switch of Financial Strategy. Liberal-oriented policy measures implemented in the financial system during the 1980-85 period included: upward nominal interest rate adjustments; reductions in legal reserve requirements on domestic currency deposits until late 1984 (from 76 percent in January 1981 to 15 percent in October 1984, later legal reserve requirements were raised);^{1/} deregulation by allowing the entrance of new firms to the industry and widening the spectrum of activities allowed within it (in particular the operation of foreign currency deposits and loans); and greater latitude to financial institutions for determining effective interest rates on loans and deposits through changes in the period of capitalization of interest rates, commissions and advanced interest payments.

2. The liberalizing trend was reversed in August 1985. The new Government established measures, aimed at enhancing the control of financial institutions and of monetary and credit policy in general. On the one hand, the convertibility of foreign currency deposits was suspended initially for 90 days but later extended indefinitely. In addition, deposit and loan interest rates were scaled down (in several steps to approximately one-third of their February 1985 level, Table 10.1). However, since inflation started to decelerate faster, by February 1986 interest rates, although still negative in real terms, became less negative than before. This trend, though, was reversed starting in late 1986 when inflation peaked up again. On the other hand, marginal legal reserve requirements on domestic currency deposits were raised from 50 percent in October 1984 to 75 percent in August 1985 (Table 10.2). In turn, a series of portfolio restrictions to promote lending to specific regions and sectors of the economy were established. Other measures, geared at lowering the cost of credit, were: the exoneration of the excise tax applied on interests and commissions; the prohibition of commissions and fees charged by financial firms on direct credit transactions; and the setting of maximum interest rates expressed in effective terms.

^{1/} Commercial banks are subject to both a basic reserve requirement applicable to the outstanding balance of deposits as of a particular date, and a marginal reserve requirement for the flow increase of deposits from that date on.

Table 10.1: BANK INTEREST RATES
(Maximum annual effective) a/

	Lending Rates			
	Commercial (less than a year)	Commercial Rediscount ^{b/}	Agricultural Promotion	Export (FENT)
February 1, 1985	101.2	101.2	-	-
August 5, 1985	110.0	106.1	23.1	108.0
August 26, 1985	75.0	71.2	20.7	56.3
October 1, 1985	45.0	41.9	13.8	28.1
February 16, 1986	40.0	36.5	7.8	20.0
July 17, 1987	32.0	30.8	4.0	20.0
March 11, 1988	55.0	41.5	5.9	-

	Savings Rates			Inflation ^{c/}
	Savings	Fixed Term (One Year)	Bonds "C" of COFIDE	
February 1, 1985	95.5	107.4	-	267.0
August 5, 1985	58.0	76.4	136.4	250.0
August 26, 1985	35.0	51.5	136.4	250.0
October 1, 1985	21.0	32.8	47.4	156.7
February 16, 1986	20.7	33.2	44.3	51.9
May 16, 1986	20.7	37.8	39.6	69.9
April 16, 1987	24.7	43.3	48.4	97.0
July 17, 1987	24.7	32.8	50.3	95.0
March 11, 1988	35.5	44.0	54.0	270.0

Notes: a/ Interest rates reported apply from the day indicated.

b/ Interest rate on promotional credit line of Banco Agrario:
Fomento Agropecuario.

c/ Consumer price inflation of the previous quarter in annual
terms.

Source: CRB Bulletins.

3. Financial Restraint, Disinflation and Dedollarization: July 1985-July 1986. Impulsed by the balance of payments surplus the stock of base money as a percentage of GDP jumped from 10 to 12 percent the first and second semesters of 1985 (Table 10.4). The balance of payments surplus

was a result of the limitation of public foreign debt service payments and the favorable external situation (1985 registered a record trade surplus for the decade). By contrast, fiscal policy did not put pressure on Central Bank financing, for the public sector deficit for 1985 (including CRB foreign exchange and financial losses) was reasonably moderate, around 4.3 percent of GDP, and most of it was financed through foreign sources either fresh disbursements or else accumulation of arrears on interest payments. To this outcome of relative fiscal austerity contributed the discipline dictated by the existence of "escrow" accounts in the Central Bank where the central government and state enterprises had to deposit accrued unpaid service on external debt.

Table 10.2: LEGAL RESERVE REQUIREMENTS AND THEIR REMUNERATION
(on domestic currency deposits at banks)

	Marginal Reserve Requirements (percent)	Remuneration of Marginal Reserves (nominal in annual terms)
December 10, 1984	50.0	-
February 1, 1985	-	72.0
July 1, 1985	-	87.5
August 5, 1985	75.0	70.0
August 26, 1985	-	54.0
October 15, 1985	-	36.0
February 16, 1986	-	32.5
June 1, 1986	-	-
July 16, 1986	-	27.5
October 15, 1986	64.0	-
March 1, 1987	64.0/50.0 <u>b/</u>	-
March 11, 1988	-	31.0

Notes: a/ For detailed description of basic and marginal legal reserve requirements see Annex 11. Before December 1984 there was a unified basic reserve requirement (of 15 percent); thereafter basic reserve requirements varied for each institution. Rates of marginal reserve requirements, as the name suggests, apply to incremental nominal deposits from the corresponding day onwards.

b/ For banks in the Lima district, 64 percent and for rest 50 percent.

Source: CRB Bulletins.

4. Compensating for the increase of base money, the money supply multiplier dropped from 1.86 in June 1985 to 1.44 in December.^{2/} This was mainly the consequence of the raising of marginal legal reserve requirements which led to an increase in the effective reserve-deposit ratio from 0.48 to 0.62 (Table 10.4). Tighter legal reserve requirements were established so as to neutralize the switch from, high reserve ratio, foreign currency deposits into, lower reserve ratio, domestic currency deposits, and also in an attempt to sterilize monetary expansion resulting from balance of payments surpluses. As a result of this policy of monetary restraint the broad money supply contracted during the second half of 1985 (from 19 percent of GDP in June to 18 percent in December) in spite of the expansion of the monetary base (from 10 percent of GDP to 12 percent) in the same period.

5. The drop in the quantity of broad money as a proportion of GDP also meant that the remonetization of the economy (i.e., the increase in liquidity in domestic currency) was the counterpart to the dedollarization process. Dedollarization begun during the second quarter of 1985 as uncertainty with regards to the treatment of foreign currency deposits by the new government built up. Later, it was fostered by the suspension of convertibility of foreign currency deposits into US dollars. Dollar denominated deposits and certificates dropped by US\$556 million in the second half of 1985 (to US\$918 million in December).

6. The policy of budgetary and monetary moderation continued during the first half of 1986. Thus, during the first year of government, July 1985 to July 1986, the stock of credit to the public sector (excluding CRB's net unclassified assets and CRB financing of development banks) by the financial system did in fact decrease in nominal terms (Table 10.5). The main sources of CRB's primary liquidity creation were: (i) the balance of payments surplus; (ii) the CRB's own quasi-fiscal deficit (which reached 1.7 percent of GDP in the second half of 1985 and 0.9 percent in the first half of 1986); and (iii) CRB credit expansion to development banks (for a total of 0.4 percent and 0.5 percent in the same periods) and in particular to the Banco Agrario. Furthermore, as noted before, the tighter legal reserve requirements reduced the potential for secondary expansion of credit. Consequently, the overall domestic credit expansion (including net unclassified assets) of the financial system during June 1985-June 1986, as a proportion of the stock of broad money of June 1985, was only about 58 percent (Table 10.5). All this indicates that the mix of budgetary and monetary policies followed during the first year of the new government was roughly consistent with the disinflation pursued by the price-cost "freeze". As a result, inflation declined from 88 percent in the first half of 1985 to 38 percent in the second half and to 28 percent in the first semester of 1986. In addition, the moderate domestic credit expansion rendered viable the maintenance of the relatively strong international reserves position achieved through the limitation of debt service payments. Thus, by March 1986 CRB's gross reserves peaked at US\$2.5 billion, or about one year of imports, and net reserves at US\$1.4 billion.

^{2/} The definition of money supply referred to throughout here is the broadest including all internal liabilities of the financial system.

Table 10.3: PUBLIC SECTOR DEFICIT, 1985-1987
(GDP percentages)

	1985-I	1985-II	1985	1986-I	1986-II	1986	1987-I	1987-II	1987
1. Central Government Deficit	0.9	1.2	2.1	0.2	3.2	3.5	1.2	4.3	5.5
2. Public Enterprise Deficit	0.1	0.2	0.3	0.8	0.8	1.4	0.3	0.7	1.0
3. <u>Economic Deficit (1+2)</u>	1.0	1.4	2.4	1.0	3.8	4.9	1.5	5.0	6.5
4. Central Bank Losses	0.2	1.7	1.9	0.9	0.9	1.8	0.3	2.5	2.8
- Foreign Exchange Losses	0.2	1.2	1.4	0.5	-0.1	0.4	0.1	1.9	2.0
- Financial Losses	0.0	0.5	0.5	0.4	1.0	1.4	0.2	0.6	0.8
5. <u>Overall Public Sector Deficit (3+4)</u>	1.2	3.1	4.3	1.9	4.7	6.7	1.8	7.5	9.3
6. Central Bank Flow of Credit to Development Banks	0.4	0.4	0.8	0.5	0.9	1.4	1.0	0.9	1.9
7. <u>Total Public Sector Borrowing Requirements</u>	1.6	3.5	5.1	2.5	5.5	8.1	2.8	8.4	11.2
8. Financing of the Deficit	1.6	3.5	5.1	2.5	5.5	8.1	2.8	8.4	11.2
- Foreign	1.4	2.5	3.9	1.1	1.3	2.4	0.7	0.7	1.4
- Domestic	0.2	1.0	1.2	1.4	4.2	5.7	2.1	7.7	9.8
Memo Item:									
Nominal GDP (million of Intis)			199,845			381,022			760,166

Source: Central Bank and Ministry of Finance

7. The Upsurge of Expansionary Financial Policies. Financial policies turned into expansionary during the second half of 1986. In parallel, the exchange rate freeze, price controls and the scaled down structure of nominal interest rates continued, while the forced dedollarization of the economy went ahead, though at a slower pace since April 1986. Domestic credit of the financial system to the public sector started to increase for the first time in three years as a result of a

growing public sector deficit. Additionally, monetary policy loosened up in the form of a reduction in marginal reserve requirements from 75 percent to 64 percent effected in October 1986. Nominal interest rates stayed throughout the year at the level reached in May 1986, roughly equal to half the rate of inflation for the year. However, domestic currency financial assets continued to rise as a proportion of GDP as a consequence of the forced dedollarization process. The prevailing structure of interest rates privileged the "Banca de Fomento", financial firms (financieras) and COFIDE, by allowing them to offer the most profitable deposit instruments. These were the "Certificados de Deposito de Fomento" and the bonds "Tipo C" of COFIDE respectively. Hence, deposits at non-bank financial institutions increased in real terms during 1986, while real savings and time deposits at banks dropped. For the financial sector as a whole, however, total near-money in real terms declined while, in contrast, real monetary assets--currency and cash deposits--expanded due to the declining inflation and also the negative real return of time deposits.

8. The acceleration in the rate of nominal liquidity creation in the second half of 1986 was due to an increasing recourse of the public sector to CRB financing, fuelled by the now growing budgetary imbalance, continued CRB new lending to development banks, and also to a jump in the money supply multiplier by 19 percent between the first and second halves of 1986 due to lower legal reserve requirements. The quasi-fiscal deficit, (0.9 percent of GDP during both semesters) also was an important factor of primary monetary expansion. However, unlike in the first semester when the quasi-fiscal deficit was largely due to foreign exchange losses, in the second semester financial losses were the driving factor (Annex 3). The latter were due to the fact that the CRB average cost of funds, which is a weighted average between the return on currency (zero) and the cost of reserve requirements and other deposits of banks, was higher than the average return received on its assets (primarily international reserves and subsidized credit).

9. During 1986 the CRB created several promotional funds to support the agricultural sector through the Banco Agrario: the "Fondo Agrario Andino", the "Fondo de Reactivacion de Maquinaria Agricola", and the "Fondo de Desarrollo Rural Comunal". These funds, nonetheless, totalled relatively small amounts compared to the overall flow of CRB credit to the Banco Agrario; the bulk of credit to this institution is channeled under the so-called agrarian facility (linea agraria). During this administration, the provision of large flows of subsidized credit to the peasants has been a key element of an overall policy geared to improving the living conditions in rural areas, in particular in the "Trapeccio Andino". Thus, these are credit lines which are provided at nominal rates as low as zero and 4 percent. In 1985, 45 percent of the total stock of lending by the Banco Agrario originated in primary credit provided by the CRB. That share rose to about 55 percent in 1986-87. Further in 1986 the stock of CRB credit to Banco Agrario totalled 43 percent of total domestic credit (excluding Net Unclassified Assets) by the CRB. As a result, the flow of primary credit from CRB to Banco Agrario has become one of the main sources of monetary growth in recent years.

10. Growing Fiscal Disequilibrium and Financial Disintermediation. Fast decline of CRB's international reserves, and intensification of inflationary measures continued during 1987 in the wake of growing fiscal

imbalance and expansionary financial policies. Interest rates became increasingly more negative due to accelerating inflation, and additional restrictions were established to the allocation of credit. The new monetary policy measures included: (i) a restriction on bank portfolios whereby 45 percent of the increase in deposits had to be allocated to loans in the financial districts in which the additional funds were raised; (ii) the obligation of banks to lend to the agricultural sector a given proportion of their increase in deposits (the proportion depending on the previous share of loans to agriculture in their portfolio); (iii) minor increases to saving interest rate and establishment of commissions on loans of more than 360 days in April, followed later in the year by lower saving interest rates; (iv) marginal reserve requirements for commercial banks outside the Lima region were reduced to 50 percent, while banks in Lima stayed with the 64 percent established in 1986; and (v) excess reserves exceeding 4 percent of legal reserves became non-remunerated.

11. In 1987 inflation started to accelerate. Indeed, after having declined from 88 percent in the first half of 1985 to 27 percent in the second half of 1986, inflation climbed to 40 percent in the first semester of 1987 and to 53 percent in the second (Table 10.5). This upsurge of inflation during the first part of 1987 occurred in a period when nominal interest rates were frozen at levels substantially below inflation, public enterprise prices and tariffs were either frozen, or consistently lagging behind inflation, and the exchange rate and wages were also running behind inflation; therefore cost push pressures or inertial inflation do not provide sufficient rationale to explain the process. That rationale, however, can be found when analyzing the course of nominal aggregate demand growth starting in the second half of 1986. In fact, in the year between September 1986 and September 1987, cost-push pressures only provide explanation for an inflation rate of about 57 percent, roughly equal to the one observed the year immediately before (September 1985 to September 1986), but significantly lower than the 91 percent actually registered. However, in the context of a simple flow of funds model, it can be proven that the acceleration of inflation from 57 percent to 91 percent is fully accounted for by the excessive growth in nominal aggregate demand brought about by the increasing recourse to CRB financing derived from the growing public sector deficit (including CRB exchange and financial losses) and from the development banks' ambitious lending programs.

**Table 10.4: SOURCES OF THE MONETARY BASE AND COMPOSITION
OF THE MONEY SUPPLY
(percentages of GDP)**

	1985-I	1985-II	1986-I	1986-II	1987-I	1987-II
A) MONETARY BASE	10.0	12.3	11.4	9.8	8.9	10.2
a) Net Foreign Assets	5.7	7.8	5.1	2.9	2.0	0.0
b) Domestic Credit	3.6	2.0	2.4	3.7	4.8	7.0
- Non-financial Public Sector	0.4	-0.6	-0.3	0.7	1.3	3.1
- Financial (of which:)						
Development Banks	1.8	1.5	1.7	2.0	2.6	2.6
c) Net Unclassified Assets	0.7	2.5	3.9	3.2	2.1	3.2
(of which:) CRB'S Quasi-Fiscal Deficit	0.2	1.7	1.0	0.9	0.3	2.7
B) BROAD MONEY SUPPLY <u>a/</u>	18.6	17.7	16.3	16.6	15.9	17.0
a) In Domestic Currency <u>b/</u>	8.0	12.3	13.3	14.7	14.5	15.3
b) In Foreign Currency	10.6	5.4	3.0	1.9	1.4	1.7
C) FINANCIAL INDICATORS						
Multiplier <u>c/</u>	1.86	1.44	1.43	1.70	1.80	1.68
Reserve-Deposit Ratio <u>d/</u>	0.48	0.62	0.63	0.46	0.43	0.43
Currency-Deposit Ratio	0.25	0.23	0.24	0.30	0.27	0.40
Income Velocity of Broad Money	5.40	5.60	6.10	6.00	6.30	5.90

Memo Item:

Nominal GDP: e/
-mill. I/.

154,682	240,714	317,506	422,520	619,807	900,114
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Notes: a/ End of period data.
b/ Includes all domestic liabilities of the financial system (banks and non-bank financial intermediaries) with the economic agents.
c/ The ratio of broad money supply and the monetary base.
d/ Total reserves over total deposits of the financial system.
e/ The source of GDP is the "Instituto Nacional de Estadística" (INE). Since INE's estimates of nominal GDP are annual, the semestral level was calculated assuming that semestral GDP grew at the rate estimates by the CRB. Annualized figures were obtained multiplying semestral levels by two.

Source: Nota Semanal (CRB) and own estimates.

12. In this respect, the overall public sector deficit (including foreign exchange and financial losses) reached 9.3 percent of GDP in 1987, up from 6.7 percent in 1986, and the total public sector borrowing requirements (which result from adding to the former the flow of subsidized credit from the Central Bank to development banks) reached 11.2 percent of GDP in 1987 (up from 8.1 percent in 1986). Of this total only a small share, about 1.4 percent of GDP in 1987, was financed by external resources, mostly through capitalization of interest on arrears, and the remainder was financed through recourse to CRB primary credit. Given the current money supply multiplier of around 1.7, an expansion of Central Bank's primary credit of 9.8 percent of GDP, such as the one experienced in 1987, implies a potential overall expansion of the broad money supply of 16.7 percent of GDP. In a country like Peru where the stock of total financial savings to GDP (the ratio of broad money to GDP) is around 14 percent ^{3/} such an expansion of the broad money supply implies more than doubling the stock of broad money. Hence, the doubling of inflation in 1987, as well as the growing balance of payments deficit.

13. Furthermore, inflationary pressures were compounded by the shrinkage of the financial system relative to GDP, or its reverse, the increase in the income velocity of money, in the wake of growing inflation and increasingly negative real interest rates. In this sense, although the jump of velocity between the first half of 1985 and the second half of 1987, from 5.4 to 5.9, might not appear spectacular (Table 10.4), indications are that the trend in the more recent months has substantially worsened. Thus, in the first quarter of 1987 alone the broad money supply dropped by 22 percent in real terms. If this trend is continued in future months the acceleration of inflation during 1988 might be far beyond what a simple financial programming exercise might indicate based on the size of the domestic financing of the deficit. Indeed, the 52 percent inflation rate registered in the first quarter of 1988 is already signalling that the process of financial disintermediation is compounding the already high monetary imbalance propelled by the public sector budget. Moreover, experience in Peru and elsewhere in Latin America shows that acceleration of inflation tends to be perpetuated by widespread wage indexation, exchange rate adjustments and eventually by public prices and tariffs corrections and interest rate adjustments to inflation. The motion of these variables, in turn, confers the system pervasive inflationary inertia.

14. The CRB's quasi-fiscal deficit reached unprecedented levels in the second half of 1987, registering a level of 2.5 percent of GDP, up from 0.9 percent in the second half of 1986 and 0.3 percent in the first half of 1987 (Table 10.3). This jump in the quasi-fiscal deficit was mainly the result of the widening up in the multiple exchange rate structure brought about by the exchange rate adjustments introduced in October and in

^{3/} The arithmetic average of the stocks of broad money of January and December, divided by GDP

December of 1987. In particular, exchange rates applicable to exports were raised substantially while the import rates lagged behind and as a result, dispersion of rates broadened. The CRB ended up buying foreign exchange at prices increasingly higher, while at the same time selling foreign exchange at relatively lower rates. The gap between average buying and selling rates being the exchange rate subsidy to be paid for by the CRB. For the year 1987 as a whole the exchange rate subsidy totalled 2.0 percent of GDP and the financial losses amounted to 0.8 percent of GDP, adding up to a total quasi-fiscal deficit of 2.8 percent of GDP (Annex 3). Based upon the exchange rate structure existing in January-May 1988, the outlook for 1988 is that foreign exchange losses will increase, since as of April 1988 the gap between buying and selling exchange rates has widened to 20 intis per dollar, or 44 percent of the average import rate (45 intis per dollar), compared to a gap of about 11 percent in the second half of 1987. If this trend is not reversed, CRB exchange losses in 1988 could reach 3.5 to 4 percent of GDP.

**Table 10.5: FINANCIAL SURVEY: USES AND SOURCES OF BROAD MONEY ^{a/}
(percent growth) ^{b/}**

	1985-I	1985-II	1986-I	1986-II	1987-1	1987-II
A) BROAD MONEY SUPPLY (USES)	50.7	47.6	21.4	35.4	34.3	57.0
(a) Money	6.4	31.8	12.6	20.5	12.6	36.8
(b) Near Money	44.3	15.8	8.8	14.9	21.7	20.1
- Domestic Currency	7.1	28.2	16.7	17.9	21.8	12.5
- Foreign Currency	37.2	-12.4	-8.0	-3.0	0.0	7.7
B) BROAD MONEY SUPPLY (SOURCES)	50.7	47.6	21.4	35.4	34.3	57.0
(a) Net International Reserves	10.1	27.4	-5.0	-7.1	-2.0	-15.3
(b) Domestic Credit to Public Sector	-13.3	-12.3	-4.1	20.7	11.7	33.2
(c) Domestic Credit to Private Sector	48.4	27.2	22.3	29.2	32.0	39.8
(d) Net Unclassified Assets	5.5	5.3	8.2	-7.4	-7.3	-0.7
Memo Items:						
Base Money ^{c/}	54.8	90.4	23.0	13.3	27.1	67.7
Inflation Rate ^{d/}	87.7	37.6	28.5	26.8	40.1	53.1

- ^{a/} Includes all financial operations of formal sector financial institutions (banks and other non-banks) with economic agents
- ^{b/} Percent changes are calculated with respect to the stock of broad money outstanding at the end of the previous period.
- ^{c/} Growth of the base money is calculated as percent previous year base money.
- ^{d/} Inflation for the semester.

15. The widening of the fiscal gap implied, in addition to monetary expansion, that by the end of 1987 the non-financial public sector received 34 percent of total stock of credit issued by the financial system (compared with 21 percent one year earlier and zero two years earlier). This, combined with the foreign credit constraint and the process of financial disintermediation, suggests that financial crowding out pressures have become important. Likely, crowding out of private economic activity through credit rationing in the organized financial system has put pressure on the unorganized financial system. Since public sector demand for credit is satisfied in the organized market a higher public sector deficit will shift private credit demand to the unorganized market. This, in turn, tends to raise interest rates charged in the latter, thereby shifting savings away from the formal market and towards the unorganized one, and thus deepening financial disintermediation. Evidence supporting this view is that interest rates in the secondary market registered increases in 1987 and 1988. The situation of smaller and medium sized firms which, in view of their higher risk and lack of collateral requirements, had poor access to bank lending is that they faced much higher financial costs in the unorganized market. Reduced availability of credit for the private sector in the organized market, coupled with the higher cost of informal credit, limit production of firms by making scarce and expensive the financing of working capital.

16. The expansionary domestic credit policy followed since mid-1986 had a large cost in terms of international reserve losses. Thus, CRB's net reserves declined progressively since the second quarter of 1986, from US\$ 1.4 billion in March 1986 to zero in December 1987. In gross terms, international reserves fell from US\$ 2.5 billion to US\$ 1.1 billion during the same period.^{4/} Reserve losses were particularly acute during the second half of 1987 as a result of the acceleration of domestic credit growth. Indeed domestic credit grew 73 percent (of the broad money supply outstanding as of end June of the same year), up from 43 percent in the first semester, and the loss on net international reserves was at the rate of 15 percent of broad money, up from 2 percent in the first semester (Table 10.5).

17. A noticeable feature of monetary developments during the second half of 1987 is the increasing preference for cash by the private sector. The demand for cash rose from 27 percent of deposits in June to 40 percent in December. This sudden preference for cash can be explained in light of the alleged increased transaction activity in the parallel market for dollars. Low nominal interest rates in the presence of soaring inflation have prompted economic agents to seek in foreign exchange a safer shelter for their savings. This shift of the liquid portfolio towards dollars explains the overshooting of the parallel market exchange rate in recent months. The latter, in turn, has rendered the profitability of investing in dollars a self-fulfilling prophecy. The relative returns of domestic term deposits and parallel market dollars are compared (Table 10.6). It can be seen there that, since the second quarter of 1987, the nominal return on hoarding dollars has not only been far higher than the deposit

^{4/} Furthermore, the drop in reserves is understated since in the period there were three changes in the dollar valuation of gold, which accounted for a high share of total reserves.

interest rate but in general also significantly above inflation. This indicates that the current expansionary fiscal policy together with the maintenance of the current interest rate and exchange policies imply systematic overshooting of the parallel exchange rate that later translates into higher inflation and so on. Interest rate adjustments effected in March 1988, from 32 percent to 47 percent maximum saving rates, and from 50 percent to 75 percent maximum lending rates, are insufficient to effectively compete with dollar hoarding when inflation runs at an annual rate of 300-plus percent as it has been the case in the period November 1987 to April 1988. It should be pointed out, moreover, that interest and exchange policies alone are no panacea to achieve control of the current inflationary drive and to stabilize the parallel dollar market. Indeed to be effective, exchange and interest rate policies need to be supported by stabilizing nominal demand management, and this inevitably means cutting down the current budgetary deficit.

Table 10.6: RATES OF RETURN OF DOMESTIC BANK DEPOSITS AND BLACK MARKET DOLLARS
(Quarterly percentage Rates)

Quarter	Black Market Exchange Rate (Intis per \$)	Nominal Return (Quarterly Rate)		Quarterly Inflation Rate
		Black Market Dollar	Domestic Time Deposits	
1986 I	17.4	0.0	4.9	15.4
II	17.4	0.0	4.9	11.4
III	17.6	1.1	4.9	12.6
IV	19.9	13.1	4.9	12.6
1987 I	20.3	2.0	4.9	18.5
II	29.6	45.8	5.5	18.2
III	41.4	39.9	5.7	22.7
IV	90.4	118.4	5.7	24.8
1988 I	110.0	21.7	6.2	54.6
II	180.0	63.6	9.3	39.2
III	425.8	136.6	22.1	241.1

Source: Instituto Nacional de Planificacion and Central Reserve Bank.

18. **Nationalization of Banks.** The most salient institutional change in financial policy occurred during 1987 was the government's initiative to nationalize private banks, finance companies and insurance institutions issued in July 1987. Prior to that date, the state already controlled directly around 50 percent of all deposits and 70 percent of overall credit allocation. Of the 24 commercial banks operating in Peru, eight were already government owned, seven were of foreign ownership and nine were privately owned. In addition, the allocation of credit by private banks was

already considerably intervened and regulated by the government in the form of ceilings to interest rates and compulsory sectoral investment coefficients by region or sector. After the government sent the nationalization initiative to Congress, it was discussed thoroughly by both chambers and finally the law was issued in October 1987. Although the original idea was to nationalize 70 percent of the shares of the banks, the article 3 of the law included a provision whereby banks with a 51 percent employee-owned stake could be allowed to remain that way. Based on this, a few banks, including the largest commercial bank (Banco de Credito), rushed to block sell 51 percent of their shares in the stock exchange. The resulting status quo of Banco de Credito was later declared legal by the Courts and accepted by the government in April 1988. As a result, Banco de Credito will operate as a cooperative in the future, and the government will merely maintain a minority ownership stake. Final solutions for other banks are being negotiated on a case by case basis. Several commercial banks have been offered the possibility of becoming regional banks with which, according to the law, 70 percent of the stock would remain in private hands and only 30 percent would be owned by the state. Some of them are expected to follow this course. A formidable challenge facing policymakers is how to minimize the expansionary effects of whatever indemnification payments become due. Suitable mechanisms will have to be devised to avoid payments in cash so as to prevent further inflationary and balance of payment pressures. These mechanisms would include, inter alia: medium term bonds, and swaps of shares for physical assets (firms) formerly owned by banks.

RESERVE REQUIREMENTS AND THEIR REMUNERATION

RESERVE REQUIREMENTS RATIOS
(Percentages)

Date	Commercial Banks and Financial Firms		Official Institutions	
	Basic <u>a/</u>	Marginal <u>b/</u>		
12/10/84		15	50	6-15 <u>c/</u>
	FC	75	90	
08/02/85	DC	<u>b/</u>	75	6-15 <u>c/</u>
06/01/86	DC	<u>b/</u>	70	6-15 <u>c/</u>
10/15/86	DC	<u>b/</u>	64	6-15 <u>c/</u>
	FC	60 <u>d/</u>	100	60 <u>d/</u>
03/01/87	DC	<u>d/</u>	50-64 <u>e/</u>	6-15 <u>e/</u>

REMUNERATION OF BANK'S RESERVES
(Annual Percentages)

Date	Remuneration
02/01/85	72.0
07/10/85	87.5
08/05/85	70.0
08/26/85	54.5
10/15/85	36.0
02/16/86	32.5
03/11/88	31.0

Notation: DC Domestic Currency Deposits (Savings, Fixed Term Deposits and Check Accounts).
FC Foreign Currency Time Deposits

- Notes: a/ Basic reserve requirements are applied to the stock of obligations at corresponding date. Marginal reserve requirements are applied to the increase in that stock of obligations taking place thereafter.
- b/ Since 1985 the basic reserve requirement ratio of each institution is equal to the ratio of legal reserves to total obligations subject to reserve requirements in the previous period (usually the previous two weeks).
- c/ For Banco Nacion and Banco Hipotecario the legal reserve ratio was 15 percent for cash deposits and 6 percent for saving and fixed term deposits. For Saving Houses and the Banca de Fomento the legal reserve ratio is 15 percent for cash and fixed term deposits and 6 percent for saving deposits.
- d/ For financial institutions that have foreign currency obligations with reserve requirements of more than US\$10 million; below that level the minimum legal reserve requirements applies (15 percent for fixed term deposits).
- e/ For banks in the Lima Region, 64 percent; and for banks in the Provinces, 50 percent.

Source: Superintendencia de Banca y Seguros (CRB).

ANNEX 12

BRIEF BACKGROUND ON THE AGRICULTURAL SECTOR

1. Peru is a country that encompasses such a variety of geographic and climatic characteristics that 84 of the 103 possible ecological zones can be found in its territory. This diversity allows the cultivation of a large variety of crops. The agricultural sector represents 12 percent of GDP and is the most important sector in terms of employment, absorbing over 35 percent of the country's labor force. There are three distinct agricultural regions: the Coast (Costa), a desert strip located between the Pacific Ocean and the Andean highlands, which accounts for 11 percent of the territory and 26 percent of cultivated land; the Highlands (Sierra), made up of valleys and western plateaus of the Andean mountains, which accounts for 26 percent of the area of the country and 47 percent of cultivated land; and the Jungle (Selva), composed of valleys and eastern plateaus of the Andes and the Amazon Basin, which is the largest region comprising 63 percent of the territory and 27 percent of cultivated land. Most agriculture in the coast is irrigated, and the main crops are cotton, sugarcane, yellow maize, potatoes and rice. By contrast only a small proportion of sierra farms (27 percent) are under irrigation while the main products are potatoes, white maize, wheat, beans and barley as well as several Andean crops such as quinoa, olluco, oca and kiwicha. In the selva year-round rainfall promotes the cultivation of coffee, rice and yellow maize. Despite the vast heterogeneity of ecological zones and variety of crops, Peruvian agriculture confronts a severe limitation in its endowment: less than 2.5 percent of its territory can be counted as arable land, and almost 20 percent of it is fallow. Thus, Peru's 0.14 cultivable hectares per capita is well below the Latin American average of 0.5 hectares per capita and also below European and Asian averages of 0.3 and 2.2 hectares per capita, respectively.

Table 12.1: MAIN AGRICULTURAL PRODUCTS (1987)
(percentages)

	Share in Demand	Share in Production	Import-Consump. Ratio	Export-Output Ratio	Share in Cultivated Area	Region of Cultivation
Rice	14.7	14.0	15.3	-	8.8	Coast and Jungle
Wheat	11.3	1.5	88.1	-	3.8	Sierra
Potatoes	9.6	10.7	-	-	8.0	Coast and Sierra
Yellow Maize	8.9	5.9	40.4	-	9.3	Coast and Jungle
Sugar	5.8	4.6	33.2	7.2	1.8	Coast
Cotton	5.4	6.3	-	4.3	4.0	Coast
Coffee	2.8	10.9	-	71.2	6.2	Jungle
White Maize	2.2	2.5	-	0.7	7.7	Sierra
Beans	1.0	1.2	-	4.9	3.0	Sierra
Other	38.3	42.4	-	-	47.9	-

Source: Ministry of Agriculture and World Bank staff estimates.

2. Between 1969 and 1976, the military regime of Velasco Alvarado carried out an agrarian reform with the objective of redistributing the highly concentrated land tenure prevailing since colonial times, and accentuated during the 19th century. This agrarian reform, however, failed to meet expectations because the newly-created cooperatives did not operate efficiently. In addition, at that time, a new administrative structure was established, strengthening the role of the public sector in agricultural activity. The Rice Trading Enterprise (ECASA) and the National Input-Trading Enterprise (ENCI) were created to play key roles in policy making and implementation. These institutions came to gradually hold monopoly power in the commercialization of a variety of agricultural products and inputs. In general, agrarian policy during the 70s was marked by a strategy of controlled food prices which kept prices for the rural producers low, thus favoring urban consumers. Furthermore, imports of agricultural products for industry were subsidized, reinforcing the deterioration of agricultural terms of trade. In response, the balance of trade for agricultural products switched from a US\$118 million surplus in 1970 to a US\$135 million deficit in 1980 and agricultural output grew at an average annual rate of 0.1 percent in that period, while global GDP grew at 2.8 percent. In parallel to stagnation of agricultural production, important changes in the crop pattern took place. In particular, changes in consumption patterns as well as the incentive system favored coastal products such as rice, cotton and sugarcane, in detriment of Andean crops like potatoes and white corn.

3. In 1980, the new civilian administration of President Belaunde laid out a new strategy: free market prices and free trade. However, in view of political pressures to curb inflation, it was only possible to release partially existing controls and regulations. ECASA's monopoly over rice commercialization continued as did controlled prices for some agricultural products, and subsidies to agricultural inputs and credit. In general, existing incentives to producers benefitted relatively more coastal and Amazonian producers than Andean farmers. Moreover, the protection granted to the industrial sector and to urban consumers continued to deteriorate the terms of trade of basic agricultural crops.

4. The 1980-85 period can be characterized as one of economic and organizational crisis in the agricultural sector. The former, because of the stagnation of physical productivity and the worsening of the relationship between product and input prices; the latter, because of the chaotic restructuring and parcelling out of the cooperatives, as the agrarian reform collapsed. These troubles were compounded by exogenous factors such as a drought in the southern highlands and floods in the northern coast, which occurred simultaneously during 1983 leading to a 9.6 percent drop in agricultural GDP in that year. For the 1980-85 period as a whole, per capita agricultural production dropped by a cumulative 5 percent, and the agricultural trade account maintained an average deficit close to US\$100 million.

STATISTICAL APPENDIX

Table 1.1 : PERU - TOTAL POPULATION DISTRIBUTION

(Thousands)

	1960	1970	1980	PROJECTED			
				1987	1990	1995	2000
TOTAL POPULATION	9,931.0	13,192.8	17,295.3	20,727.1	22,332.1	25,122.8	27,952.1
Male	5,003.8	6,648.8	8,714.5	10,441.3	11,249.3	12,656.6	14,082.5
Female	4,927.2	6,544.0	8,580.8	10,285.8	11,082.8	12,466.2	13,869.6
GROWTH RATES							
Total population		2.88	2.74	2.62	2.52	2.38	2.16
Male		2.88	2.74	2.62	2.52	2.39	2.16
Female		2.88	2.75	2.62	2.52	2.38	2.16
PERCENTAGE DISTRIBUTION							
Male	50.4	50.4	50.4	50.4	50.4	50.4	50.4
Female	49.6	49.6	49.6	49.6	49.6	49.6	49.6

Source : National Statistical Institute.

Table 1.2 : PERU - DEMOGRAPHIC INDICATORS

	FERTILITY	GROSS MORTALITY RATE (per 1000)	LIFE EXPECTANCY (in years)
1950-1955	6.9	21.6	43.9
1955-1960	6.9	19.7	46.3
1960-1965	6.9	17.6	49.1
1965-1970	6.6	15.6	51.5
1970-1975	6.0	12.8	55.5
1975-1980	5.4	11.7	56.9
1980-1985	5.0	10.7	58.6
1985-1990	4.5	9.2	61.4
1990-1995	4.0	7.7	64.6
1995-2000	3.5	6.7	67.0

Source : National Statistical Institute

TABLE 1.3 : PERU - EMPLOYMENT AND LABOR PRODUCTIVITY, 1970 - 1986.

	Employment a /			Adequate Employment a_ / b_ /	Labor Productivity c /
	Total	Agriculture	Non Agriculture		
1970	3,971.4	1,873.6	2,097.8	2,058.0	613.4
1975	4,581.3	1,950.0	2,631.3	2,538.7	676.2
1980	5,210.7	2,046.0	3,164.7	2,341.4	680.3
1981	5,377.5	2,272.2	3,105.3	2,613.7	684.2
1982	5,540.0	2,328.1	3,211.9	2,567.5	666.7
1983	5,585.7	2,355.1	3,230.6	2,306.9	585.5
1984	5,684.4	2,374.9	3,309.5	2,242.0	603.2
1985	5,781.9	2,392.7	3,389.2	2,235.4	609.0
1986	6,212.9	2,416.1	3,796.8	2,734.3	619.3

a_ / - Thousands of persons.

b_ / - The Ministry of Labor classifies a person as underemployed if weekly working hours are less than 35 and/or the income is less than the 1967 minimum wage adjusted for inflation.

c_ / - Value Added (Intis of 1979) per employed person.

Sources: Ministry of Labor and National Statistical Institute.

Table 1.4: PERU: UN- AND UNDER-EMPLOYMENT, 1970, 1975, 1980-1987

(Percent of Labor Force)

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
Unemployment	4.7	4.9	7.0	6.8	7.0	9.2	10.5	11.8	8.2	n.a
Agriculture labor force	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	n.a
Non-agricultural labor force	8.3	8.1	10.9	10.4	10.6	13.9	16.6	18.4	12.6	n.a
Underemployment a_1	45.9	42.8	51.2	47.9	49.9	57.1	54.2	54.1	51.4	n.a
Agriculture labor force	64.3	68.2	68.2	61.5	60.9	67.5	61.4	60.4	58.7	n.a
Non-agricultural labor force	30.9	24.8	41.4	40.3	43.9	51.6	49.9	50.5	47.4	n.a
Labor force (thousand)	4,167.3	4,817.5	5,605.2	5,779.0	5,958.0	6,136.7	6,351.3	6,555.5	6,767.9	6,989.5
Agriculture labor force (thousand)	1,879.5	1,955.9	2,052.2	2,072.2	2,330.5	2,405.3	2,381.7	2,399.3	2,422.9	2,460.3

a_1/- The Ministry of Labor classifies a person as underemployed if weekly working hours are less than 35 and/or the income is less than the 1967 minimum wage adjusted for inflation.

Sources: Ministry of Labor; National Statistical Institute.

Table 2.1 : PERU - GDP BY SECTORAL ORIGIN, 1970, 1975, 1980-1987

(million 1979 intis)

	1970	1975	1980	1981	1982	1983	1984	1985	1986 a_/	1987 a_/
Agriculture	358.1	371.0	362.6	395.4	404.2	365.2	402.6	414.3	430.1	456.3
Fishing	47.2	15.6	18.9	20.6	24.2	17.0	24.9	29.1	37.4	31.8
Mining	229.8	231.8	468.7	454.3	459.9	414.7	434.5	453.2	432.5	422.6
Manufacturing	626.7	805.2	866.7	872.6	863.9	718.0	757.4	794.6	921.2	1,028.4
Electricity, water	15.1	23.9	39.0	41.9	45.3	38.0	38.2	40.5	45.4	49.3
Construction	133.0	216.4	202.3	225.0	229.5	181.7	183.2	164.0	203.5	235.6
Housing	64.9	79.5	88.6	90.6	92.2	93.2	94.5	95.3	97.9	100.5
Government Services	144.4	191.1	233.5	239.8	241.7	257.9	277.6	279.0	295.4	299.7
Financial Institutions	60.8	83.1	297.5	320.4	318.3	298.1	297.0	329.1	347.7	377.3
Transport	130.2	199.1	235.9	251.5	247.7	230.2	231.4	237.8	258.2	277.3
Commerce	357.9	531.9	528.6	562.0	558.9	458.1	467.7	471.5	538.5	577.8
Others	267.2	350.9	202.6	205.1	207.6	198.5	219.9	212.5	240.2	260.0
Import Duties	83.3	113.5	101.7	128.4	123.9	75.7	77.1	67.6	81.3	84.4
GDP (market prices)	2,518.6	3,213.0	3,646.6	3,807.7	3,817.3	3,346.3	3,505.9	3,588.6	3,929.2	4,200.9

a_/ Preliminary figures.

Source: National Statistical Institute.

Table 2.1(A) : PERU - REAL GDP AVERAGE GROWTH RATES

(percentages)

	1970-1975	1975-1980	1970-1980	1980-1987	1970-1987
Agriculture	0.7	(0.5)	0.1	3.3	1.4
Fishing	(19.9)	3.9	(8.7)	7.7	(2.3)
Mining	0.2	15.1	7.4	(1.5)	3.6
Manufacturing	5.1	1.5	3.3	2.5	3.0
Electricity,water	9.6	10.3	10.0	3.4	7.2
Construction	10.2	(1.3)	4.3	2.2	3.4
Housing	4.1	2.2	3.2	1.8	2.6
Government Services	5.8	4.1	4.9	3.6	4.4
Financial Institutions	6.4	29.1	17.2	3.5	11.3
Transport	8.9	3.4	6.1	2.3	4.5
Commerce	8.2	(0.1)	4.0	1.3	2.9
Others	5.6	(10.4)	(2.7)	3.6	(0.2)
Import Duties	6.4	(2.2)	2.0	(2.6)	0.1
GDP (market prices)	5.0	2.6	3.8	2.0	3.1

Source: Derived from Statistical Appendix Table 2.1

Table 2.2 : PERU - NOMINAL GDP BY SECTORAL ORIGIN, 1970, 1975, 1980-1987

(Million Current Intis)

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
Agriculture	46.7	103.7	580.9	1,041.5	1,621.9	3,276.5	7,583.4	17,434.5	42,630.6	75,807.4
Fishing	5.6	5.3	29.4	57.0	87.5	149.9	399.0	1,199.5	3,205.1	4,552.4
Mining	13.7	22.3	904.4	1,256.9	1,872.8	3,589.1	7,702.1	19,512.5	11,409.5	20,540.4
Manufacturing	55.4	133.3	1,206.4	1,955.7	3,316.6	6,065.6	14,858.3	50,007.5	94,098.1	171,143.0
Electricity, water	2.0	4.9	51.5	110.7	190.7	269.6	824.2	2,344.4	3,701.2	7,432.0
Construction	17.4	50.8	342.3	736.7	1,589.3	2,172.0	4,744.3	14,087.3	28,336.9	54,438.6
Housing	23.7	41.0	121.0	183.0	295.8	477.2	788.4	1,473.3	2,237.5	3,537.6
Government Services	24.4	57.1	461.0	916.7	1,566.8	3,019.7	6,438.0	16,102.8	33,116.4	64,268.4
Financial Institutions	5.5	16.0	469.8	1,054.8	1,952.9	3,358.7	7,329.2	17,981.1	36,911.1	82,741.0
Transport	15.2	44.7	396.2	712.5	1,089.3	1,817.5	4,265.7	12,183.0	23,198.4	40,412.2
Commerce	29.9	94.3	819.1	1,462.8	2,225.4	4,331.3	9,425.3	25,860.5	48,670.8	97,084.0
Others	31.5	71.7	426.6	857.6	1,722.5	3,332.3	7,086.9	17,610.2	46,302.9	126,818.3
Import Duties	9.0	20.3	159.8	312.5	418.9	705.1	1,399.8	4,048.3	7,203.7	11,390.9
GDP (market prices)	280.0	665.4	5,968.4	10,658.4	17,950.4	32,564.6	72,844.6	199,844.7	381,022.3	760,166.2

Source: National Statistical Institute.

Table 2.2(A) : PERU - PERCENTAGE DISTRIBUTION OF GDP, 1970,1975,1980-1986

(Percent of GDP in current intis)

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
Agriculture	16.7	15.6	9.7	9.8	9.0	10.1	10.4	8.7	11.2	10.0
Fishing	2.0	0.8	0.5	0.5	0.5	0.5	0.5	0.6	0.8	0.6
Mining	4.9	3.4	15.2	11.8	10.4	11.0	10.6	9.8	3.0	2.7
Manufacturing	19.8	20.0	20.2	18.3	18.5	18.6	20.4	25.0	24.7	22.5
Electricity,water	0.7	0.7	0.9	1.0	1.1	0.8	1.1	1.2	1.0	1.0
Construction	6.2	7.6	5.7	6.9	8.9	6.7	6.5	7.0	7.4	7.2
Housing	0.5	6.2	2.0	1.7	1.6	1.5	1.1	0.7	0.6	0.5
Government Services	8.7	8.6	7.7	8.6	8.7	9.3	8.8	8.1	8.7	8.5
Financial Institutions	2.0	2.4	7.9	9.9	10.9	10.3	10.1	9.0	9.7	10.9
Transport	5.4	6.7	6.6	6.7	6.1	5.6	5.9	6.1	6.1	5.3
Commerce	10.7	14.2	13.7	13.7	12.4	13.3	12.9	12.9	12.8	12.8
Others	11.2	10.8	7.1	8.0	9.6	10.2	9.7	8.8	12.2	16.7
Import Duties	3.2	3.1	2.7	2.9	2.3	2.2	1.9	2.0	1.9	1.5
GDP (market prices)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: National Statistical Institute.

Table 2.2 (B) : PERU - GDP DEFLATORS

(1979 = 100)

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
Agriculture	13.0	28.0	160.2	263.4	401.3	897.2	1,883.6	4,207.8	9,912.1	16,612.7
Fishing	11.9	34.0	155.6	276.7	361.6	881.8	1,602.4	4,121.6	8,572.8	14,325.2
Mining	6.0	9.6	193.0	276.7	407.2	865.5	1,772.6	4,305.3	2,638.1	4,860.1
Manufacturing	8.8	16.6	139.2	224.1	383.9	844.8	1,961.8	6,293.6	10,214.2	16,642.3
Electricity, water	13.2	20.5	132.1	264.2	421.0	709.5	2,157.6	5,788.4	8,160.7	15,089.2
Construction	13.1	23.5	169.2	327.4	692.5	1,195.4	2,589.7	8,592.0	13,925.3	23,102.0
Housing	36.5	51.6	136.6	202.0	320.8	512.0	834.3	1,545.8	2,284.8	3,520.8
Government Services	16.9	29.9	197.4	382.3	648.2	1,170.9	2,319.2	5,770.8	11,212.6	21,441.1
Financial Institutions	9.0	19.3	157.9	329.2	613.6	1,126.6	2,468.1	5,463.4	10,616.5	21,931.3
Transport	11.7	22.4	168.0	283.3	439.8	789.7	1,843.6	5,123.0	8,986.0	14,575.4
Commerce	8.4	17.7	154.9	260.3	398.2	945.6	2,015.3	5,484.5	9,038.6	16,802.8
Others	11.8	20.4	210.6	418.1	827.7	1,678.4	3,223.2	8,287.6	19,274.2	48,783.8
Import Duties	10.8	17.9	157.1	243.4	339.1	931.4	1,815.6	5,985.6	8,855.4	13,488.4
GDP (market prices)	11.1	20.7	163.7	279.9	470.2	973.2	2,077.8	5,568.9	9,697.1	18,095.1

Source: Derivated from Tables 2.1 and 2.2 .

Table 2.2 (C) : PERU -GDP DEFLATORS, YEARLY PERCENTAGE CHANGES, 1975-1987.

(1979 = 100)

	1970-1975	1975-1980	1981	1982	1983	1984	1985	1986	1987
Agriculture	16.5	41.8	64.4	52.3	123.6	109.9	123.4	135.6	67.6
Fishing	23.4	35.6	77.9	30.7	143.9	81.7	157.2	108.0	67.1
Mining	10.0	82.2	43.4	47.2	112.5	104.8	142.9	(38.7)	84.2
Manufacturing	13.4	53.1	61.0	71.3	120.0	132.2	220.8	62.3	62.9
Electricity, water	9.1	45.1	100.1	59.3	68.5	204.1	168.3	41.0	84.9
Construction	12.4	48.4	93.5	111.5	72.6	116.6	231.8	62.1	65.9
Housing	7.1	21.5	47.9	58.8	59.6	62.9	85.3	47.8	54.1
Government Services	12.1	45.9	93.6	69.6	80.6	98.1	148.8	94.3	91.2
Financial Institutions	16.3	52.3	108.5	86.4	83.6	119.1	121.4	94.3	106.6
Transport	14.0	49.6	68.7	55.2	79.6	133.5	177.9	75.4	62.2
Commerce	16.2	54.3	68.0	53.0	137.5	113.1	172.1	64.8	85.9
Others	11.6	59.5	98.5	98.5	102.3	92.0	157.1	132.6	153.1
Import Duties	10.6	54.4	54.9	38.9	175.5	94.9	229.7	47.9	52.3
GDP (market prices)	13.3	51.2	71.0	68.0	106.9	113.5	168.0	74.1	86.6

Source: Derived from Table 2.2(B).

Table 2.3 : PERU - GDP BY EXPENDITURES , 1979-1987

(Million 1979 intis)

	1979	1980	1981	1982	1983	1984	1985	1986	1987
CONSUMPTION	2,431.4	2,604.2	2,717.8	2,786.6	2,541.3	2,566.2	2,625.4	2,942.7	3,112.5
Private	2,130.7	2,236.4	2,355.8	2,376.4	2,167.1	2,209.1	2,255.7	2,557.2	2,720.9
Public	300.7	367.8	362.0	410.2	374.2	357.1	369.7	385.5	391.6
GROSS INVESTMENT	756.8	1,030.9	1,242.3	1,153.0	716.3	645.4	578.7	855.9	962.6
Gross Fixed Invest	723.6	882.0	1,024.1	1,003.4	712.1	668.1	597.6	742.0	861.3
Construct	412.6	463.1	524.7	533.6	423.4	424.5	377.9	469.8	544.1
Equipment	311.0	418.9	499.4	469.8	288.7	243.6	219.7	272.2	317.4
Change in Stocks	33.2	148.9	218.2	149.6	4.2	(22.7)	(18.8)	113.9	101.1
RESOURCE BALANCE	302.0	11.6	(152.3)	(122.3)	88.7	294.3	384.5	130.6	125.8
Exports	968.2	879.3	853.5	905.7	812.1	886.1	925.1	810.9	832.0
Imports	666.2	867.7	1,005.8	1,028.0	723.4	591.8	540.6	680.3	706.2
GDP (market prices)	3,490.2	3,646.7	3,807.8	3,817.3	3,346.3	3,505.9	3,588.6	3,929.2	4,200.9

Source: National Statistical Institute.

Table 2.4 : PERU - NOMINAL GDP BY EXPENDITURES , 1979-1987

(Million Current Intis)

	1979	1980	1981	1982	1983	1984	1985	1986	1987
CONSUMPTION	2,431.4	4,325.2	7,953.6	13,329.1	25,175.6	53,636.0	145,869.4	296,930.8	586,153.7
Private	2,130.7	3,658.5	6,738.4	11,069.5	21,098.7	45,532.4	123,412.2	254,589.1	506,009.1
Public	300.7	666.7	1,215.2	2,259.6	4,076.9	8,103.6	22,457.2	42,341.6	80,144.6
GROSS INVESTMENT	756.8	1,640.4	3,347.1	5,644.6	7,733.3	16,517.4	44,668.0	92,125.1	186,824.1
Gross Fixed Invest	723.6	1,401.7	2,771.6	4,980.7	7,561.4	16,738.0	44,254.0	82,645.3	154,673.3
Construct	412.6	752.8	1,543.8	3,010.9	4,773.2	10,692.1	28,598.0	55,203.2	105,990.2
Equipment	311.0	648.9	1,227.8	1,969.8	2,788.2	6,045.9	15,656.0	27,442.1	48,683.1
Change in Stocks	33.2	238.7	575.5	663.9	171.9	(220.6)	414.0	9,479.8	32,150.8
RESOURCE BALANCE	302.0	2.7	(642.2)	(1,023.3)	(344.3)	2,691.2	9,307.0	(8,033.6)	(12,811.6)
Exports	968.2	1,331.7	1,735.3	2,805.5	5,879.6	13,485.6	39,611.2	43,708.0	71,885.6
Imports	666.2	1,329.0	2,377.5	3,828.8	6,223.9	10,794.4	30,304.2	51,741.6	84,697.1
GDP (market prices)	3,490.2	5,968.3	10,658.5	17,950.4	32,564.6	72,844.6	199,844.4	381,022.3	760,166.2

Source: National Statistical Institute.

Table 2.5 : PERU - DOMESTIC INCOME , 1979-1987.

(Million Intis)

	1979	1980	1981	1982	1983	1984	1985	1986	1987 a/
WAGES & SALARIES	928.0	1,609.3	2,796.1	4,569.5	8,458.2	16,233.5	39,678.6	84,697.8	174,952.6
Salaries	511.5	887.9	1,504.1	2,417.0	4,415.9	8,165.0	19,556.4	42,810.4	89,515.7
Wages	416.5	721.4	1,292.0	2,152.5	4,042.3	8,068.5	20,122.2	41,887.4	85,436.8
INDEPENDENT WORKERS	607.0	1,017.4	1,827.3	2,943.7	5,363.5	11,912.2	30,137.9	67,991.2	133,206.2
RENT	67.0	97.0	154.1	248.2	545.9	1,169.5	3,552.3	5,105.4	7,232.2
PROFITS	947.0	1,370.1	2,092.4	3,469.4	6,414.0	17,036.2	48,347.9	85,441.4	189,393.2
NET INTEREST	39.1	70.4	176.1	343.4	672.1	1,491.3	3,037.9	3,301.5	6,817.5
TOTAL	2,588.1	4,164.2	7,046.0	11,574.3	21,453.7	47,842.8	124,754.6	246,537.2	511,601.7

a/ Preliminary figures.

Source : Central Bank.

Note : Central Bank National Accounts differ from those of National Statistical Institute.

Table 2.5(A) : PERU - DOMESTIC INCOME , 1979-1987.

(percentage distribution)

	1979	1980	1981	1982	1983	1984	1985	1986	1987
WAGES & SALARIES	35.9	38.6	39.7	39.5	39.4	33.9	31.8	34.4	34.2
Salaries	19.8	21.3	21.3	20.9	20.6	17.1	15.7	17.4	17.5
Wages	16.1	17.3	18.3	18.6	18.8	16.9	16.1	17.0	16.7
INDEPENDENT WORKERS	23.5	24.4	25.9	25.4	25.0	24.9	24.2	27.6	26.0
RENT	2.6	2.3	2.2	2.1	2.5	2.4	2.8	2.1	1.4
PROFITS	36.6	32.9	29.7	30.0	29.9	35.6	38.8	34.7	37.0
NET INTEREST	1.5	1.7	2.5	3.0	3.1	3.1	2.4	1.3	1.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source : Central Bank.

Note : Central Bank National Accounts differ from those of National Statistical Institute.

Table 2.6 : PERU - GROSS CAPITAL FORMATION BY GOODS AND ORIGIN, 1979-1987.

(Million 1979 Intis)

	1979	1980	1981	1982	1983	1984	1985	1986	1987
TOTAL	723.6	881.8	1024.1	1003.3	712.1	668.1	597.6	742.0	861.5
CONSTRUCTION	412.6	463.0	524.6	533.6	423.4	424.6	377.9	469.8	544.1
Buildings	246.8	272.1	299.7	311.3	251.8	249.5	225.3	263.0	307.3
Other Construction	143.1	162.7	192.6	194.9	142.9	148.6	132.0	176.4	201.2
Land Improvements	22.7	28.2	32.3	27.4	28.7	26.5	20.6	30.5	35.6
EQUIPMENT	311.0	418.8	499.5	469.7	288.7	243.5	219.7	272.2	317.4
Transport	62.8	110.1	162.3	143.9	90.8	79.8	73.8	91.8	110.5
Agriculture	10.3	17.3	14.6	12.6	4.5	5.8	6.1	11.3	15.6
Industrial	135.5	150.6	176.7	171.2	114.0	91.7	81.2	103.8	118.1
Other	102.4	140.8	145.9	142.0	79.4	66.2	58.5	65.3	73.2
DOMESTIC	504.9	607.7	674.4	684.5	525.1	533.9	493.4	628.8	730.5
CONSTRUCTION	412.6	463.0	524.6	533.7	423.4	424.6	377.9	469.8	544.1
Buildings	246.8	272.1	299.7	311.3	251.8	249.5	225.3	263.0	307.3
Other Construction	143.1	162.7	192.6	195.0	142.9	148.6	132.0	176.4	201.2
Land Improvements	22.7	28.2	32.3	27.4	28.7	26.5	20.6	30.5	35.6
EQUIPMENT	92.3	144.7	149.8	150.8	101.7	109.3	115.5	159.0	186.4
Transport	49.9	79.0	83.5	87.7	53.7	52.9	54.1	72.7	84.8
Agriculture	3.3	4.6	5.1	4.1	2.0	1.7	2.6	3.8	4.7
Industrial	15.1	18.2	19.3	19.2	17.1	23.4	26.5	44.8	55.1
Other	24.0	42.9	41.9	39.8	28.9	31.3	32.3	37.6	41.8
IMPORTED	218.7	274.3	349.6	319.0	187.0	134.3	104.2	113.2	131.0
EQUIPMENT	218.7	274.3	349.6	319.0	187.0	134.3	104.2	113.2	131.0
Transport	12.9	31.1	78.8	56.2	37.1	27.0	19.7	19.1	25.6
Agriculture	7.0	12.7	9.4	8.5	2.5	4.1	3.5	7.5	10.9
Industrial	120.4	132.5	157.4	152.0	96.9	68.3	54.7	58.9	63.0
Other	78.4	98.0	104.0	102.3	50.5	35.0	26.2	27.6	31.4

Table 2.7: PERU - REAL GDP PER CAPITA, 1970-1987

	Total Population (Million)	GDP (Million 1979 intis)	GDP (Million USA Dollars)	Real GDP per Capita (1979 intis)	Real GDP per Capita (USA Dollars)
1970	13,192.8	2,518.6	11,207.7	190.9	849.5
1971	13,568.3	2,623.9	11,676.2	193.4	860.5
1972	13,954.7	2,699.2	12,011.5	193.4	860.7
1973	14,350.3	2,844.3	12,657.3	198.2	882.0
1974	14,753.1	3,107.4	13,827.8	210.6	937.3
1975	15,161.2	3,213.0	14,298.0	211.9	943.1
1976	15,573.2	3,276.1	14,578.5	210.4	936.1
1977	15,990.1	3,289.3	14,637.5	205.7	915.4
1978	16,414.4	3,298.6	14,678.7	201.0	894.3
1979	16,848.7	3,490.1	15,531.0	207.1	921.8
1980	17,295.3	3,646.7	16,227.5	210.8	938.3
1981	17,754.8	3,807.7	16,944.3	214.5	954.3
1982	18,225.7	3,817.3	16,986.8	209.4	932.0
1983	18,707.0	3,346.3	14,891.1	178.9	796.0
1984	19,197.9	3,505.9	15,601.1	182.6	812.6
1985	19,697.5	3,588.6	15,969.2	182.2	810.7
1986	20,207.1	3,929.2	17,485.0	194.4	865.3
1987	20,727.1	4,200.9	18,694.1	202.7	901.9

Source: National Statistical Institute.

Table 2.8: PERU - PER CAPITA GDP BY DEPARTMENTS

(1979 intis)

	1979	1980	1981	1982	a_/ 1983	a_/ 1984	a_/ 1985
PERU	207.1	210.8	214.5	209.4	178.9	182.6	182.2
Amazonas	87.5	101.8	100.8	96.8	90.4	102.6	95.3
Ancash	125.8	121.9	122.2	125.2	89.4	112.8	112.4
Apurimac	51.9	51.4	50.6	53.5	45.6	51.7	50.4
Arequipa	229.0	234.8	236.2	233.0	203.1	199.1	198.8
Ayacucho	54.2	48.9	53.3	55.0	48.8	45.6	44.8
Cajamarca	66.8	68.6	70.2	61.2	72.1	50.8	66.1
Cuzco	99.4	99.1	100.3	98.3	92.7	99.4	94.7
Huancavelica	92.6	90.2	103.3	92.7	93.2	93.4	88.8
Huanuco	145.6	139.6	137.8	147.4	137.2	128.2	132.5
Ica	198.2	200.1	213.2	208.4	164.8	182.3	194.3
Junin	192.8	184.2	178.8	184.0	170.8	161.1	165.3
La Libertad	158.3	150.9	181.4	164.0	144.0	135.8	137.8
Lambayeque	185.6	173.8	195.7	197.7	157.1	174.2	170.6
Lima & Callao	304.2	317.1	321.9	307.5	257.1	253.3	249.0
Loreto	571.2	562.2	538.9	530.3	447.6	452.0	432.4
Madre de Dios	308.8	297.0	295.0	265.5	259.1	260.1	254.4
Moquegua	1,061.9	934.0	870.7	874.2	779.3	803.7	807.1
Pasco	215.0	218.6	207.4	200.9	197.3	188.1	188.1
Piura	183.1	185.7	179.9	185.6	132.8	176.4	155.2
Puno	70.4	70.1	72.7	73.4	67.7	55.7	60.4
San Martin	122.1	138.4	134.8	129.4	117.8	107.4	103.6
Tacna	347.5	436.7	396.4	393.1	364.0	359.3	370.2
Tumbes	142.2	140.8	141.6	149.3	116.7	226.7	132.2
Ucayali	222.8	232.5	227.9	223.4	185.2	177.0	174.0

a_/ Preliminary figures.

Source: National Statistical Institute.

Table 3.1 : PERU - SUMMARY BALANCE OF PAYMENTS, 1975, 1980-1987

 (million USA \$)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
I. BALANCE ON CURRENT ACCOUNT	-1535	-102	-1729	-1609	-871	-221	125	-1079	-1495
A. Trade Balance	-1097	826	-553	-429	293	1007	1172	-65	-463
1. Exports FOB	1330	3916	3249	3293	3015	3147	2978	2531	2605
2. Imports FOB	-2427	-3090	-3802	-3722	-2722	-2140	-1806	-2596	-3068
B. Financial Services	-284	-909	-1019	-1033	-1130	-1165	-1011	-821	-769
3. Public Sector	-177	-437	-456	-548	-636	-806	-707	-605	-541
4. Private Sector	-107	-472	-563	-485	-494	-359	-304	-216	-228
C. Non Financial Services	-231	-166	-318	-314	-253	-221	-170	-343	-395
D. Transfers	77	147	161	167	219	158	134	150	132
II. LONG TERM CAPITALS	1135	463	565	1194	1384	1189	691	630	793
E. Public Sector	793	371	305	989	1431	1392	814	606	664
5. Disbursements	1077	1208	1620	1934	1530	1026	693	495	570
6. Refinancing	0	372	80	109	1024	499	201	0	0
7. Amortization	-284	-1203	-1394	-1054	-1145	-1441	-1329	-1453	-1591
8. Other Capitals (1)	0	-6	-1	0	22	1308	1249	1564	1685
F. Private Sector	342	92	260	205	-47	-203	-123	24	129
III. BASIC NET BALANCE (I+II)	-400	361	-1164	-415	513	968	816	-449	-702
6. Short Term Capital and Errors and Omissions	-177	361	660	539	-553	-721	-536	-68	-104
IV. CHANGE IN RESERVES (III+6)	577	-722	504	-124	40	-247	-280	517	806

(- indicates increase)									

(1) Arrears

Source : Central Bank

Table 3.1(A) : PERU - BALANCE OF PAYMENTS AS A PERCENT OF GDP, 1975,1980-1987

	1975	1980	1981	1982	1983	1984	1985	1986	1987
I. BALANCE ON CURRENT ACCOUNT	-9.3	-0.5	-6.9	-6.3	-4.4	-1.1	0.7	-4.3	-4.3
A. Trade Balance	-6.7	4.0	-2.2	-1.7	1.5	4.8	6.4	-0.3	-1.3
1. Exports FOB	8.1	19.0	12.9	12.8	15.1	15.0	16.4	10.1	7.5
2. Imports FOB	-14.7	-15.0	-15.1	-14.5	-13.6	-10.2	-9.9	-10.3	-8.8
B. Financial Services	-1.7	-4.4	-4.0	-4.0	-5.7	-5.5	-5.6	-3.3	-2.2
3. Public Sector	-1.1	-2.1	-1.8	-2.1	-3.2	-3.8	-3.9	-2.4	-1.6
4. Private Sector	-0.6	-2.3	-2.2	-1.9	-2.5	-1.7	-1.7	-0.9	-0.7
C. Non Financial Services	-1.4	-0.8	-1.3	-1.2	-1.3	-1.1	-0.9	-1.4	-1.1
D. Transfers	0.5	0.7	0.6	0.6	1.1	0.8	0.7	0.6	0.4
II. LONG TERM CAPITALS	6.9	2.2	2.2	4.6	6.9	5.7	3.8	2.5	2.3
E. Public Sector	4.8	1.8	1.2	3.8	7.2	6.6	4.5	2.4	1.9
5. Disbursements	6.5	5.8	6.4	7.5	7.7	4.9	3.8	2.0	1.6
6. Refinancing	0.0	1.8	0.3	0.4	5.1	2.4	1.1	0.0	0.0
7. Amortization	-1.7	-5.8	-5.5	-4.1	-5.7	-6.9	-7.3	-5.8	-4.6
8. Other Capitals (1)	0.0	-0.0	-0.0	0.0	0.1	6.2	6.9	6.2	4.9
F. Private Sector	2.1	0.4	1.0	0.8	-0.2	-1.0	-0.7	0.1	0.4
III. BASIC NET BALANCE (I+II)	-2.4	1.7	-4.6	-1.6	2.6	4.6	4.5	-1.8	-2.0
G. Short Term Capital and Errors and Omissions	-1.1	1.7	2.6	2.1	-2.8	-3.4	-2.9	-0.3	-0.3
IV. CHANGE IN RESERVES (III+G)	3.5	-3.5	2.0	-0.5	0.2	-1.2	-1.5	2.1	2.3

Source : Central Bank and National Statistical Institute.

Note : GDP converted into \$US at trade weighted nominal average exchange rate.

Table 3.2 : PERU - MERCHANDISE EXPORTS BY COMMODITIES, 1975, 1980-1987

	1975	1980	1981	1982	1983	1984	1985	1986	1987
FISHMEAL Value (\$ million)	168	195	141	202	80	137	118	206	229
Volume (thous. tons)	781	417	315	616	205	401	508	716	742
Price (\$ per ton)	215.8	469.4	448.0	328.5	386.7	342.4	232.6	287.7	308.4
COTTON Value (\$ million)	53	72	63	85	44	23	51	39	19
Volume (thous. quintals)	737	702	685	1287	670	246	624	474	190
Price (\$ per quintal)	71.9	101.8	92.8	66.1	66.4	92.5	82.6	81.6	103.2
SUGAR Value (\$ million)	269	13	0	20	35	49	23	22	15
Volume (thous. tons)	422	53	0	59	89	116	64	55	33
Price (\$ per quintal)	29.3	11.4	0.0	15.2	17.9	19.4	16.8	18.5	20.5
COFFEE Value (\$ million)	49	140	107	114	116	126	151	275	143
Volume (thous. tons)	42	44	46	43	55	52	60	74	71
Price (\$ per quintal)	53.8	146.9	107.4	119.4	96.8	112.7	115.9	169.1	94.2
COPPER Value (\$ million) (a)	183	750	529	460	442	442	476	449	516
Volume (thous. tons)	156	350	324	335	292	337	363	347	351
Price (US cents per lb.)	53.2	97.4	74.1	62.3	68.8	59.5	59.3	58.7	66.5
IRON Value (\$ million)	52	95	93	108	75	58	76	60	58
Volume (thous. tons)	5	5.8	5.3	5.7	4.3	4.2	5.2	4.2	4.3
Price (\$ per ton)	10.4	16.5	17.7	19.1	17.5	13.9	14.6	14.4	13.7
GOLD Value (\$ million) (b)	0	40	74	56	69	67	43	7	1
Volume (thous. troy ounces)	0	65	157	149	164	183	135	20	2
Price (\$ per troy ounce)	0	616.5	472.7	375.6	420.8	366.7	320.6	353.1	363.6
SILVER Value (\$ million)	92	315	312	205	391	227	140	107	93
Volume (thous. troy ounces)	20.7	16	28	26	32.7	26.8	22.3	19.1	13.9
Price (\$ per troy ounce)	4.5	19.7	11.1	7.9	11.9	8.5	6.3	5.6	6.7
LEAD Value (\$ million) (a)	99	384	218	215	294	234	202	172	251
Volume (thous. tons)	142	152	146	177	191	181	174	136	146
Price (US cents per lb.)	31.6	114.4	68.0	55.2	69.6	58.7	52.7	57.4	78.3
ZINC Value (\$ million)	163	211	267	268	307	340	268	246	234
Volume (thous. tons)	358	468	477	491	522	511	459	477	427
Price (US cents per lb.)	20.6	20.4	25.4	24.8	26.7	30.2	26.4	23.4	24.9
PETROLEUM Value (\$ million)	41	792	690	719	544	618	645	232	274
Volume (thous. barrels)	4	22.4	19.9	22.8	20.5	23.5	27.1	21.6	17.8
Price (\$ per barrel)	10.1	35.2	34.6	31.6	26.6	26.3	23.9	10.8	15.4
OTHER TRADITIONAL PRODUCTS (c)	65	64	54	79	63	100	71	71	56
NON TRADITIONAL PRODUCTS	96	845	701	762	555	726	714	645	716
TOTAL MERCHANDISE EXPORTS, F.O.B. (\$ million)	1330	3916	3249	3293	3015	3147	2978	2531	2605

(a) Includes a portion of silver.

(b) Does not include gold concentrate in other mineral products.

(c) Includes mostly small metals.

Source : Central Bank.

Table 3.3 : PERU - MERCHANDISE EXPORTS BY COMMODITIES ,1975,1980-1987

(Million 1978 USA Dollars)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
FISHMEAL	220.5	157.0	109.8	156.5	60.6	102.8	90.4	134.0	134.0
COTTON	69.6	58.0	49.1	65.8	33.3	17.3	39.1	25.4	11.1
SUGAR	353.0	10.5	0.0	15.5	26.5	36.8	17.6	14.3	8.8
COFFEE	64.3	112.7	83.3	88.3	87.9	94.5	115.7	178.9	83.7
COPPER	240.2	603.9	412.0	356.3	334.8	331.6	364.8	292.1	301.9
IRON	68.2	76.5	72.4	83.7	56.8	43.5	58.2	39.0	33.9
GOLD	0.0	32.2	57.6	43.4	52.3	50.3	33.0	4.6	0.6
SILVER	120.7	253.6	243.0	158.8	296.2	170.3	107.3	69.6	54.4
LEAD	129.9	309.2	169.8	166.5	222.7	175.5	154.8	111.9	146.9
ZINC	213.9	169.9	207.9	207.6	232.6	255.1	205.4	160.1	136.9
PETROLEUM	53.8	637.7	537.4	556.9	412.1	463.6	494.3	150.9	160.3
OTHER TRADITIONAL PRODUCTS	85.3	51.5	42.1	61.2	47.7	75.0	54.4	46.2	32.8
NON TRADITIONAL PRODUCTS	126.0	680.4	546.0	590.2	420.5	544.6	547.1	419.6	419.0
TOTAL MERCHANDISE EXPORTS, F.O.B. (\$ million)	1,745.4	3,153.0	2,530.4	2,550.7	2,284.1	2,360.8	2,282.0	1,646.7	1,524.3

Source: Derived from Table 3.2

Table 3.4: PERU - MERCHANDISE IMPORTS, 1975, 1980-1987

(Million USA Dollars)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
I. CONSUMER GOODS	216	372	558	445	335	240	112	378	405
Public Sector	42	108	169	28	82	23	11	142	153
Private Sector	174	264	389	417	253	217	101	236	252
II. INPUTS	1173	1172	1401	1321	1025	949	841	1242	1450
Public Sector	596	420	448	395	441	325	296	346	497
Private Sector	577	752	953	926	584	624	545	896	953
III. CAPITAL GOODS	796	1087	1454	1411	900	771	558	761	923
Public Sector	425	426	511	518	457	400	169	158	143
Private Sector	371	661	943	893	443	371	389	603	780
IV. OTHER AND ADJUSTMENTS	242	459	389	545	462	180	295	215	290
Public Sector	208	398	324	480	362	110	227	159	234
Private Sector	34	61	65	65	100	70	68	56	56
V. TOTAL	2427	3090	3802	3722	2722	2140	1806	2596	3068
Public Sector	1271	1352	1452	1421	1342	858	703	805	1027
Private Sector	1156	1738	2350	2301	1380	1282	1103	1791	2041
MEMO : Principal food products	313	423	503	371	431	295	204	386	414
Wheat	137	141	167	156	151	143	104	114	92
Corn	57	65	50	55	61	18	32	33	36
Rice	33	93	60	17	40	11	0	31	36
Sugar	0	32	99	0	63	34	0	46	59
Milk products	39	44	55	60	39	29	22	50	60
Soya oil	40	35	44	39	55	39	33	40	50
Meat	7	13	28	44	22	21	13	72	81

Source: Central Bank

Table 3.5: PERU - MERCHANDISE IMPORTS, 1975, 1980-1987

(Million 1978 USA Dollars)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
I. CONSUMER GOODS	283.5	299.5	434.6	344.7	253.8	180.0	85.8	245.9	237.0
Public Sector	55.1	87.0	131.6	21.7	62.1	17.3	8.4	92.4	89.5
Private Sector	228.3	212.6	303.0	323.0	191.7	162.8	77.4	153.5	147.5
II. INPUTS	1,539.4	943.6	1,091.1	1,023.2	776.5	711.9	644.4	808.1	848.4
Public Sector	782.2	338.2	348.9	306.0	334.1	243.8	226.8	225.1	290.8
Private Sector	757.2	605.5	742.2	717.3	442.4	468.1	417.6	583.0	557.6
III. CAPITAL GOODS	1,044.6	875.2	1,132.4	1,093.0	681.8	578.4	427.6	495.1	540.1
Public Sector	557.7	343.0	398.0	401.2	346.2	300.1	129.5	102.8	83.7
Private Sector	486.9	532.2	734.4	691.7	335.6	278.3	298.1	392.3	456.4
IV. OTHER AND ADJUSTMENTS	317.6	369.6	303.0	422.2	350.0	135.0	226.1	139.9	169.7
Public Sector	273.0	320.5	252.3	371.8	274.2	82.5	173.9	103.4	136.9
Private Sector	44.6	49.1	50.6	50.3	75.8	52.5	52.1	36.4	32.8
V. TOTAL	3,185.0	2,487.9	2,961.1	2,883.0	2,062.1	1,605.4	1,383.9	1,689.0	1,795.2
Public Sector	1,668.0	1,088.6	1,130.8	1,100.7	1,016.7	643.7	538.7	523.7	600.9
Private Sector	1,517.1	1,399.4	1,830.2	1,782.3	1,045.5	961.7	845.2	1,165.3	1,194.3
MEMO : Principal food products	410.8	340.6	391.7	287.4	326.5	221.3	156.3	251.1	242.2
Wheat	179.8	113.5	130.1	120.8	114.4	107.3	79.7	74.2	53.8
Corn	74.8	52.3	38.9	42.6	46.2	13.5	24.5	21.5	21.1
Rice	43.3	74.9	46.7	13.2	30.3	8.3	0.0	20.2	21.1
Sugar	0.0	25.8	77.1	0.0	47.7	25.5	0.0	29.9	34.5
Milk products	51.2	35.4	42.8	46.5	29.5	21.8	16.9	32.5	35.1
Soya oil	52.5	28.2	34.3	30.2	41.7	29.3	25.3	26.0	29.3
Meat	9.2	10.5	21.8	34.1	16.7	15.8	10.0	46.8	47.4

Source : Derived from Table 3.4

Table 3.6 : PERU - EXPORT, IMPORT AND TERMS OF TRADE INDEXES ,1975,1980-1987

(1978 = 100)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
Export Price Index	91.4	189.5	160.4	133.0	146.0	134.6	118.2	101.4	109.2
Import Price Index	76.2	124.1	128.4	129.1	132.0	133.3	130.5	153.7	170.9
Terms of Trade Index	119.9	152.7	124.9	103.0	110.6	101.0	90.6	66.0	63.9
Percentage Change		27.3	-18.2	-17.5	7.4	-8.7	-10.3	-27.2	-3.1

Source: Central Bank

Note : Terms of trade differ from those presented in Table III-16 of report, due to methodological differences.

Tables 4.1: PERU - TOTAL EXTERNAL DEBT OUTSTANDING AND DISBURSED, 1975, 1980-1987

(Million USA Dollars)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
MEDIUM AND LONG TERM DEBT	4,352	8,126	8,090	9,197	10,925	11,976	12,629	13,200	14,050
Non financial Public Sector	3,066	6,043	6,127	6,825	8,256	9,648	10,462	11,068	11,732
Central Bank	0	710	455	707	1,089	862	825	788	870
Private Sector	1,286	1,373	1,508	1,665	1,580	1,466	1,342	1,344	1,448
SHORT TERM ,PUBLIC AND PRIVATE	1,905	1,469	1,516	2,268	1,520	1,362	1,092	1,277	1,391
Commercial & Financial Cred	1,553	902	920	1,842	1,134	978	760	789	901
Banking System	352	567	596	426	386	384	332	488	490
IMPUTED INTEREST ON ARREARS (accumulated)	0	0	0	0	1	77	249	494	919
TOTAL EXTERNAL DEBT	6,257	9,595	9,606	11,465	12,446	13,415	13,970	14,971	16,360
MEMO :									
ACCUMULATED ARREARS	0	0	0	0	22	1,330	2,494	4,208	6,140
- PRINCIPAL	0	0	0	0	0	778	1,464	2,653	4,141
- INTEREST	0	0	0	0	22	552	1,030	1,555	1,999

Source : Central Bank and World Bank estimates

Table 4.2 : PERU - SERVICE PAYMENTS, DISBURSEMENTS AND OUTSTANDING AMOUNTS OF EXTERNAL PUBL

(Million USA Dollars)

	1980	1981	1982	1983	1984	1985	1986	1987
Disbursements (1)	1,580	1,700	2,043	2,554	1,525	894	475	480
Service Payments	1,695	1,919	1,605	1,791	2,275	2,067	2,059	2,107
- Principal (1)	1,203	1,394	1,054	1,145	1,441	1,329	1,453	1,591
- Interest	492	525	551	646	834	738	606	516
Other Capitals (2)	0	0	0	22	1,308	1,164	1,714	1,932
Adjustments	(68)	(368)	(298)	n.a	n.a	n.a	n.a	n.a
Outstanding External Public Debt (3)	6,043	6,127	6,825	8,256	9,648	10,462	11,068	11,732

(1) Includes refinancings

(2) Arrears ; it does not include interest on arrears

(3) Excludes Central Bank and excludes imputed interest on arrears.

Source : Central Bank and World Bank estimates

Table 5.1 : PERU - NON FINANCIAL PUBLIC SECTOR OPERATIONS, 1975,1980-1987

(Million Intis)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
CURRENT REVENUES	201	2,700	4,108	7,022	13,991	28,213	85,400	122,125	195,954
1. Taxes	83	947	1,392	2,272	3,401	8,083	25,450	42,531	65,328
2. Social Security Contrib.	17	110	216	319	502	1,125	3,251	6,948	15,291
3. Other Revenues	101	1,642	2,500	4,431	10,074	18,980	56,687	72,646	115,135
4. Transfers	0	1	0	0	14	25	12	0	200
CURRENT EXPENDITURES	201	2,549	4,059	7,031	14,707	27,571	79,194	121,972	214,529
1. Remunerations	60	487	922	1,655	3,082	6,505	15,826	32,063	66,161
2. Purchases of good and services	103	1,321	2,002	3,531	7,540	10,946	33,878	44,940	75,305
3. Interests	16	284	504	780	1,855	4,041	10,789	12,013	19,617
4. Transfers	22	457	631	1,065	2,230	6,079	18,701	32,956	53,446
CURRENT ACCOUNT BALANCE	0	151	49	(9)	(716)	642	6,206	153	(18,575)
CAPITAL REVENUES	0	32	72	202	273	438	1,000	1,134	2,284
1. Repayments of loans	0	4	1	1	2	5	12	25	41
2. Other	0	28	71	201	271	433	988	1,109	2,243
CAPITAL EXPENDITURES	54	418	838	1,508	2,744	5,557	11,943	19,969	33,104
1. Capital Formation	49	361	771	1,484	2,703	5,411	11,634	18,597	29,579
2. Financial Investment	1	14	12	24	15	128	190	310	8
3. Other	4	43	55	0	26	18	119	1,062	3,517
OVERALL DEFICIT	(54)	(235)	(717)	(1,315)	(3,187)	(4,477)	(4,737)	(18,682)	(49,395)
FINANCING (NET)	54	235	717	1,315	3,187	4,477	4,737	18,682	49,395
1. External	28	102	180	1,033	1,808	3,307	7,831	9,261	10,456
1.1 Long Term	28	103	235	671	2,313	3,707	8,223	7,545	11,341
Utilization	38	329	583	1,322	4,080	8,486	21,895	26,926	36,537
Amortization	10	226	348	651	1,767	4,779	13,672	19,381	25,196
1.2 Short Term	n.a	(1)	(55)	362	(505)	(400)	(392)	1,716	(885)
2. Internal	26	133	537	282	1,379	1,170	(3,094)	9,421	38,939

Source : Central Bank

Table 5.1(A) : PERU - NDN FINANCIAL PUBLIC SECTOR OPERATIONS, 1975,1980-1987

(As a percent of GDP)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
CURRENT REVENUES	30.21	45.24	38.54	39.12	42.96	38.73	42.73	32.05	25.78
1. Taxes	12.47	15.87	13.06	12.66	10.44	11.10	12.73	11.16	8.59
2. Social Security Contrib.	2.55	1.84	2.03	1.78	1.54	1.54	1.63	1.82	2.01
3. Other Revenues	15.18	27.51	23.46	24.68	30.94	26.06	28.37	19.07	15.15
4. Transfers	0.00	0.02	0.00	0.00	0.04	0.03	0.01	0.00	0.03
CURRENT EXPENDITURES	30.21	42.71	38.08	39.17	45.16	37.85	39.63	32.01	28.22
1. Remunerations	9.02	8.16	8.65	9.22	9.46	8.93	7.92	8.41	8.70
2. Purchases of good and services	15.48	22.13	18.78	19.67	23.15	15.03	16.95	11.79	9.91
3. Interests	2.40	4.76	4.73	4.35	5.70	5.55	5.40	3.15	2.58
4. Transfers	3.31	7.66	5.92	5.93	6.85	8.35	9.36	8.65	7.03
CURRENT ACCOUNT BALANCE	0.00	2.53	0.46	-0.05	-2.20	0.88	3.11	0.04	-2.44
CAPITAL REVENUES	0.00	0.54	0.68	1.13	0.84	0.60	0.50	0.30	0.30
1. Repayments of loans	0.00	0.07	0.01	0.01	0.01	0.01	0.01	0.01	0.01
2. Other	0.00	0.47	0.67	1.12	0.83	0.59	0.49	0.29	0.30
CAPITAL EXPENDITURES	8.12	7.00	7.86	8.40	8.43	7.63	5.98	5.24	4.35
1. Capital Formation	7.36	6.05	7.23	8.27	8.30	7.43	5.82	4.88	3.89
2. Financial Investment	0.15	0.23	0.11	0.13	0.05	0.18	0.10	0.08	0.00
3. Other	0.60	0.72	0.52	0.00	0.08	0.02	0.06	0.28	0.46
OVERALL DEFICIT	-8.12	-3.94	-6.73	-7.33	-9.79	-6.15	-2.37	-4.90	-6.50
FINANCING (NET)	8.12	3.94	6.73	7.33	9.79	6.15	2.37	4.90	6.50
1. External	4.21	1.71	1.69	5.75	5.55	4.54	3.92	2.43	1.38
1.1 Long Term	4.21	1.73	2.20	3.74	7.10	5.09	4.11	1.98	1.49
Utilization	5.71	5.51	5.47	7.36	12.53	11.65	10.96	7.07	4.81
Amortization	1.50	3.79	3.27	3.63	5.43	6.56	6.84	5.09	3.31
1.2 Short Term	0.00	-0.02	-0.52	2.02	-1.55	-0.55	-0.20	0.45	-0.12
2. Internal	3.91	2.23	5.04	1.57	4.23	1.61	-1.55	2.47	5.12

Source : Central Bank and National Statistical Institute

Table 5.2 : PERU - CENTRAL GOVERNMENT OPERATIONS ,1975,1980-1987

(Million Intis)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
CURRENT REVENUES	88	1,019	1,523	2,485	3,738	9,554	27,963	45,191	66,424
CURRENT EXPENDITURES	91	898	1,504	2,456	5,065	10,306	27,255	47,755	91,238
CURRENT ACCOUNT BALANCE	(3)	121	19	29	(1,327)	(752)	708	(2,564)	(24,814)
CAPITAL REVENUES	0	0	0	9	3	92	272	140	0
CAPITAL EXPENDITURES	28	263	439	595	1,019	2,360	5,052	10,968	17,064
OVERALL DEFICIT	(31)	(142)	(420)	(557)	(2,343)	(3,020)	(4,072)	(13,392)	(41,878)
FINANCING (NET)	31	142	420	557	2,343	3,020	4,072	13,392	41,878
1. External	17	35	124	409	1,257	2,312	5,003	4,957	5,817
1.1 Long Term	17	42	114	400	1,213	2,098	4,878	4,479	5,458
Utilization	23	224	388	925	2,676	6,188	15,627	19,604	25,860
Amortization	6	182	274	525	1,463	4,090	10,749	15,125	20,402
1.2 Short Term	n.a	(7)	10	9	44	214	125	478	359
2. Internal	14	107	296	148	1,086	708	(931)	8,435	36,061
2.1 Banking System	15	90	312	444	1,207	1,131	53	10,652	31,991
2.2 Others	(1)	17	(16)	(296)	(121)	(423)	(984)	(2,217)	4,070

Source : Central Bank

Table 5.2(A) : PERU - CENTRAL GOVERNMENT OPERATIONS ,1975,1980-1987.

(As a percent of GDP)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
CURRENT REVENUES	13.23	17.07	14.29	13.84	11.48	13.12	13.99	11.86	8.74
CURRENT EXPENDITURES	13.68	15.05	14.11	13.68	15.55	14.15	13.64	12.53	12.00
CURRENT ACCOUNT BALANCE	-0.45	2.03	0.18	0.16	-4.07	-1.03	0.35	-0.67	-3.26
CAPITAL REVENUES	0.00	0.00	0.00	0.05	0.01	0.13	0.14	0.04	0.00
CAPITAL EXPENDITURES	4.21	4.41	4.12	3.31	3.13	3.24	2.53	2.88	2.24
OVERALL DEFICIT	-4.66	-2.38	-3.94	-3.10	-7.19	-4.15	-2.04	-3.51	-5.51
FINANCING (NET)	4.66	2.38	3.94	3.10	7.19	4.15	2.04	3.51	5.51
1. External	2.55	0.59	1.16	2.28	3.86	3.17	2.50	1.30	0.77
1.1 Long Term	2.55	0.70	1.07	2.23	3.72	2.88	2.44	1.18	0.72
Utilization	3.46	3.75	3.64	5.15	8.22	8.49	7.82	5.15	3.40
Amortization	0.90	3.05	2.57	2.92	4.49	5.61	5.38	3.97	2.68
1.2 Short Term	n.a	-0.12	0.09	0.05	0.14	0.29	0.06	0.13	0.05
2. Internal	2.10	1.79	2.78	0.82	3.33	0.97	-0.47	2.21	4.74
2.1 Banking System	2.25	1.51	2.93	2.47	3.71	1.55	0.03	2.80	4.21
2.2 Others	-0.15	0.28	-0.15	-1.65	-0.37	-0.58	-0.49	-0.58	0.54

Source : Central Bank and National Statistical Institute.

Table 5.3 : PERU - NON FINANCIAL PUBLIC ENTERPRISE OPERATIONS, 1975,1980-1987

(Million Intis)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
CURRENT REVENUES	95	1,510	2,271	4,048	9,429	16,852	52,184	66,496	106,919
1. Sales of goods and services	86	1,453	2,135	3,825	8,963	16,051	49,491	62,207	97,450
2. Current Transfers	5	5	3	1	0	0	0	1,057	1,115
3. Other Revenues	4	52	133	222	466	801	2,693	3,232	8,354
CURRENT EXPENDITURES	99	1,519	2,283	4,110	8,820	15,656	47,775	66,353	105,071
1. Remunerations	13	117	208	460	828	1,849	4,680	8,847	15,837
2. Purchases of good and services	77	984	1,445	2,397	5,699	8,923	27,085	33,495	55,980
3. Interests,Commissions	6	66	111	198	409	920	2,436	3,070	6,015
4. Taxes	1	273	343	668	1,318	3,148	11,953	16,656	18,824
5. Others	2	79	176	387	566	816	1,621	4,285	8,415
CURRENT ACCOUNT BALANCE	(4)	(9)	(12)	(62)	609	1,196	4,409	143	1,848
CAPITAL REVENUES	8	80	80	199	331	587	819	1,406	2,406
1. Capital Transfers	7	53	21	29	86	225	172	508	255
2. Other	1	27	59	170	245	362	647	898	2,151
CAPITAL EXPENDITURES	33	180	359	860	1,664	3,197	6,273	8,177	12,900
1.Capital Formation	32	153	352	845	1,638	3,007	6,025	7,669	12,900
2. Financial Investment	1	6	5	12	14	125	186	304	0
3. Capital Transfers and others	0	21	2	3	12	65	62	204	0
OVERALL DEFICIT	(29)	(109)	(291)	(723)	(724)	(1,414)	(1,045)	(6,628)	(8,646)
FINANCING (NET)	29	109	291	723	724	1,414	1,045	6,328	8,646
1. External	11	65	47	621	492	900	2,615	4,077	4,403
1.1 Long Term	11	61	115	261	1,041	1,511	3,151	2,870	5,600
1.2 Short Term	n.a	4	(68)	360	(549)	(611)	(536)	1,207	(1,197)
2. Internal	18	44	244	102	232	514	(1,570)	2,251	4,243

Source : Central Bank

Table 5.3(A) : PERU - NON FINANCIAL PUBLIC ENTERPRISE OPERATIONS, 1975,1980-1987

(As a percent of GDP)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
CURRENT REVENUES	14.28	25.30	21.31	22.55	28.95	23.13	26.11	17.45	14.07
1. Sales of goods and services	12.92	24.34	20.03	21.31	27.52	22.03	24.76	16.33	12.82
2. Current Transfers	0.75	0.08	0.03	0.01	0.00	0.00	0.00	0.28	0.15
3. Other Revenues	0.60	0.87	1.25	1.24	1.43	1.10	1.35	0.85	1.10
CURRENT EXPENDITURES	14.88	25.45	21.42	22.90	27.08	21.49	23.91	17.41	13.82
1. Remunerations	1.95	1.96	1.95	2.56	2.54	2.54	2.34	2.32	2.08
2. Purchases of good and services	11.57	16.49	13.56	13.35	17.50	12.25	13.55	8.79	7.36
3. Interests, Commissions	0.90	1.11	1.04	1.10	1.26	1.26	1.22	0.81	0.79
4. Taxes	0.15	4.57	3.22	3.72	4.05	4.32	5.98	4.37	2.48
5. Others	0.30	1.32	1.65	2.16	1.74	1.12	0.81	1.12	1.11
CURRENT ACCOUNT BALANCE	-0.60	-0.15	-0.11	-0.35	1.87	1.64	2.21	0.04	0.24
CAPITAL REVENUES	1.20	1.34	0.75	1.11	1.02	0.81	0.41	0.37	0.32
1. Capital Transfers	1.05	0.89	0.20	0.16	0.26	0.31	0.09	0.13	0.03
2. Other	0.15	0.45	0.55	0.95	0.75	0.50	0.32	0.24	0.28
CAPITAL EXPENDITURES	4.96	3.02	3.37	4.79	5.11	4.39	3.14	2.15	1.70
1. Capital Formation	4.81	2.56	3.30	4.71	5.03	4.13	3.01	2.01	1.70
2. Financial Investment	0.15	0.10	0.05	0.07	0.04	0.17	0.09	0.08	0.00
3. Capital Transfers and others	0.00	0.35	0.02	0.02	0.04	0.09	0.03	0.05	0.00
OVERALL DEFICIT	-4.36	-1.83	-2.73	-4.03	-2.22	-1.94	-0.52	-1.74	-1.14
FINANCING (NET)	4.36	1.83	2.73	4.03	2.22	1.94	0.52	1.66	1.14
1. External	1.65	1.09	0.44	3.46	1.51	1.24	1.31	1.07	0.58
1.1 Long Term	1.65	1.02	1.08	1.45	3.20	2.07	1.58	0.75	0.74
1.2 Short Term	0.00	0.07	-0.64	2.01	-1.69	-0.84	-0.27	0.32	-0.16
2. Internal	2.71	0.74	2.29	0.57	0.71	0.71	-0.79	0.59	0.56

Source : Central Bank and National Statistical Institute.

Table 5.3(B) : PERU - NON FINANCIAL PUBLIC ENTERPRISE OPERATIONS BY COMPANY, 1987.

(Million Intis)

	PETRO PERU	ENCI/ ECASA	ELECTRO PERU	MINERO PERU	CENTROMIN ECASA	SIDER PERU	PESCA PERU	RESTO	TOTAL
CURRENT REVENUES	33,107	19,939	3,721	3,521	8,658	4,000	2,607	31,366	106,919
1. Sales of goods and services	31,640	17,846	2,664	3,206	8,457	3,869	2,117	27,651	97,450
2. Current Transfers	0	1,115	0	0	0	0	0	0	1,115
3. Other Revenues	1,467	978	1,057	315	201	131	490	3,715	8,354
CURRENT EXPENDITURES	32,294	23,689	2,951	3,169	7,471	5,033	3,082	27,382	105,071
1. Remunerations	2,596	493	1,043	525	1,993	957	360	7,870	15,837
2. Purchases of good and services	12,717	15,668	1,135	2,145	4,242	3,555	2,400	14,118	55,980
3. Interests, Commissions	890	1,056	630	138	918	273	113	1,997	6,015
4. Taxes	15,372	898	63	108	318	128	159	1,778	18,824
5. Others	719	5,574	80	253	0	120	50	1,619	8,415
CURRENT ACCOUNT BALANCE	813	(3,750)	770	352	1,187	(1,033)	(475)	3,984	1,848
CAPITAL REVENUES	529	0	858	0	0	419	0	600	2,406
1. Capital Transfers	255	0	0	0	0	0	0	0	255
2. Other	274	0	858	0	0	419	0	600	2,151
CAPITAL EXPENDITURES	1,914	113	5,431	200	478	67	13	4,684	12,900
1. Capital Formation	1,914	113	5,431	200	478	67	13	4,684	12,900
2. Financial Investment	0	0	0	0	0	0	0	0	0
3. Capital Transfers and others	0	0	0	0	0	0	0	0	0
OVERALL DEFICIT	(572)	(3,863)	(3,803)	152	709	(681)	(488)	(100)	(8,646)
FINANCING (NET)	572	3,863	3,803	(152)	(709)	681	488	100	8,646
1. External	576	511	2,958	59	(510)	(46)	(9)	864	4,403
1.1 Long Term	849	512	2,938	64	288	(11)	5	955	5,600
1.2 Short Term	(273)	(1)	20	(5)	(798)	(35)	(14)	(91)	(1,197)
2. Internal	(4)	3,352	845	(211)	(199)	727	497	(764)	4,243

Source : Central Bank

Table 5.4 : PERU - CURRENT REVENUE OF THE CENTRAL GOVERNMENT BY SOURCE, 1975, 1980-1987

(Million Intis)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
TAX REVENUES	82	1,022	1,480	2,423	3,647	8,617	26,878	43,748	66,788
1. Income Taxes	24	298	303	480	649	1,422	3,459	9,853	13,126
Taxes on	16	263	237	369	435	931	2,602	9,726	13,020
Persons	5	16	41	34	n.a	n.a	n.a	n.a	n.a
Corporations	11	247	196	335	n.a	n.a	n.a	n.a	n.a
Wages & Salary Taxes	3	34	65	109	211	487	846	120	106
Other	5	1	1	2	3	4	11	7	0
2. Wealth Taxes	4	33	61	96	135	281	666	2,064	2,759
Business Assets	2	23	46	71	101	226	636	2,057	2,759
Stamps, Registration	1	8	14	23	32	37	0	0	n.a
Other	1	2	1	2	2	18	30	7	0
3. Import Taxes	18	158	321	475	714	1,779	5,592	8,757	14,069
4. Export Taxes	2	123	116	119	98	81	576	653	239
5. Taxes on Production and Consumption	32	379	629	1,170	1,933	4,518	15,479	21,236	34,670
Good and Services	22	250	409	674	914	1,797	4,785	5,228	7,973
Internal	15	159	223	327	469	922	2,496	3,079	5,193
External	7	91	186	347	445	875	2,289	2,149	2,780
Fuel and Gasoline	3	91	156	306	676	1,780	8,088	10,808	13,001
Other	7	38	64	190	343	941	2,606	5,200	13,696
6. Other Tax Revenues	2	31	50	83	118	536	1,106	1,185	1,925
Amnesties	1	2	16	9	39	272	532	231	96
Revaluation of assets	0	25	27	53	53	119	159	107	6
Other	1	4	7	21	26	145	415	847	1,823
NON TAX REVENUES	8	78	141	236	377	1,597	3,201	4,391	4,476
FISCAL CREDIT DOCUMENTS	(2)	(81)	(98)	(174)	(286)	(660)	(2,116)	(2,948)	(4,840)
TOTAL CURRENT REVENUES	88	1,019	1,523	2,485	3,738	9,554	27,963	45,191	66,424

Source : Central Bank

Table 5.4(A) : PERU - CURRENT REVENUE OF THE CENTRAL GOVERNMENT BY SOURCE, 1975, 1980-1987

(As a percent of GDP)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
TAX REVENUES	12.32	17.12	13.89	13.50	11.20	11.83	13.45	11.48	8.79
1. Income Taxes	3.61	4.99	2.84	2.67	1.99	1.95	1.73	2.59	1.73
Taxes on	2.40	4.41	2.22	2.06	1.34	1.28	1.30	2.55	1.71
Persons	0.75	0.27	0.38	0.19	n.a	n.a	n.a	n.a	n.a
Corporations	1.65	4.14	1.84	1.87	n.a	n.a	n.a	n.a	n.a
Wages & Salary Taxes	0.45	0.57	0.61	0.61	0.65	0.67	0.42	0.03	0.01
Other	0.75	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00
2. Wealth Taxes	0.60	0.55	0.57	0.53	0.41	0.39	0.33	0.54	0.36
Business Assets	0.30	0.39	0.43	0.40	0.31	0.31	0.32	0.54	0.36
Stamps, Registration	0.15	0.13	0.13	0.13	0.10	0.05	0.00	0.00	0.00
Other	0.15	0.03	0.01	0.01	0.01	0.02	0.02	0.00	0.00
3. Import Taxes	2.71	2.65	3.01	2.65	2.19	2.44	2.80	2.30	1.85
4. Export Taxes	0.30	2.06	1.09	0.66	0.30	0.11	0.29	0.17	0.03
5. Taxes on Production and Consumption	4.81	6.35	5.90	6.52	5.94	6.20	7.75	5.57	4.56
Good and Services	3.31	4.19	3.84	3.75	2.81	2.47	2.39	1.37	1.05
Internal	2.25	2.66	2.09	1.82	1.44	1.27	1.25	0.81	0.68
External	1.05	1.52	1.75	1.93	1.37	1.20	1.15	0.56	0.37
Fuel and Gasoline	0.45	1.52	1.46	1.70	2.08	2.44	4.05	2.84	1.71
Other	1.05	0.64	0.60	1.06	1.05	1.29	1.30	1.36	1.80
6. Other Tax Revenues	0.30	0.52	0.47	0.46	0.36	0.74	0.55	0.31	0.25
Amnesties	0.15	0.03	0.15	0.05	0.12	0.37	0.27	0.06	0.01
Revaluation of assets	0.00	0.42	0.25	0.30	0.16	0.16	0.08	0.03	0.00
Other	0.15	0.07	0.07	0.12	0.08	0.20	0.21	0.22	0.24
NON TAX REVENUES	1.20	1.31	1.32	1.31	1.16	2.19	1.60	1.15	0.59
FISCAL CREDIT DOCUMENTS	-0.30	-1.36	-0.92	-0.97	-0.88	-0.91	-1.06	-0.77	-0.64
TOTAL CURRENT REVENUES	13.23	17.07	14.29	13.84	11.48	13.12	13.99	11.86	8.74

Source : Central Bank

Table 5.5 : PERU - CURRENT EXPENDITURES OF THE CENTRAL GOVERNMENT ,1975,1980-1987

(Million Intis)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
CURRENT EXPENDITURES	91	898	1,504	2,456	5,065	10,306	27,255	47,755	91,238
1. Wages and Salaries	32	239	448	732	1,368	2,928	7,412	14,750	29,955
2. Goods and Services	6	36	65	96	234	579	1,741	3,367	4,987
3. Transfers	18	165	237	285	708	1,683	3,460	10,195	21,463
a) Non Financial									
Public Enterprises	n.a	5	3	1	0	0	0	2,062	991
b) Public Institutions & Local Governments	n.a	55	90	127	266	548	1,047	2,649	6,629
c) Pensions and other	n.a	105	144	157	442	1,135	2,413	5,484	13,843
4. Interest Payments	9	214	382	557	1,411	3,060	8,140	8,723	13,131
a) Internal Debt	4	92	204	259	492	724	2,255	2,018	6,473
b) External Debt	5	122	178	298	919	2,336	5,885	6,705	6,658
5. Defense	26	244	372	786	1,344	2,056	6,502	10,720	21,702
CAPITAL EXPENDITURES	28	263	439	595	1,019	2,360	5,052	10,968	17,064
1. Capital Formation	16	178	351	541	901	2,075	4,579	8,335	11,024
2. Transfers	12	85	86	43	106	279	443	2,539	4,290
a) Non financial									
Public Enterprises	7	53	21	29	86	225	172	508	255
b) Financial Public Enterprises	4	22	52	0	0	0	57	335	978
c) Public Institutions, Local Governments and others	1	10	13	14	20	54	214	1,696	3,057
3. Other	0	0	2	11	12	6	30	94	1,750
SUB TOTAL	119	1,161	1,943	3,051	6,084	12,666	32,307	58,723	108,302
AMORTIZATION	13	211	335	582	1,578	4,298	12,007	17,962	22,678
1. Internal Debt	7	29	61	57	115	208	1,258	2,837	2,276
2. External Debt	6	182	274	525	1,463	4,090	10,749	15,125	20,402
TOTAL EXPENDITURES	132	1,372	2,278	3,633	7,662	16,964	44,314	76,685	130,980

Source : Central Bank

Table 5.5(A): PERU - CURRENT EXPENDITURES OF THE CENTRAL GOVERNMENT, 1975, 1980-1987

(As a percent of GDP)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
CURRENT EXPENDITURES	13.68	15.05	14.11	13.68	15.55	14.15	13.64	12.53	12.00
1. Wages and Salaries	4.81	4.00	4.20	4.08	4.20	4.02	3.71	3.87	3.94
2. Goods and Services	0.90	0.60	0.61	0.53	0.72	0.79	0.87	0.88	0.66
3. Transfers	2.71	2.76	2.22	1.59	2.17	2.31	1.73	2.68	2.82
a) Non Financial									
Public Enterprises	n.a	0.08	0.03	0.01	0.00	0.00	0.00	0.54	0.13
b) Public Institutions & Local Governments	n.a	0.92	0.84	0.71	0.82	0.75	0.52	0.70	0.87
c) Pensions and other	n.a	1.76	1.35	0.87	1.36	1.56	1.21	1.44	1.82
4. Interest Payments	1.35	3.59	3.58	3.10	4.33	4.20	4.07	2.29	1.73
a) Internal Debt	0.60	1.54	1.91	1.44	1.51	0.99	1.13	0.53	0.85
b) External Debt	0.75	2.04	1.67	1.66	2.82	3.21	2.94	1.76	0.88
5. Defense	3.91	4.09	3.49	4.38	4.13	2.82	3.25	2.81	2.85
CAPITAL EXPENDITURES	4.21	4.41	4.12	3.31	3.13	3.24	2.53	2.88	2.24
1. Capital Formation	2.40	2.98	3.29	3.01	2.77	2.85	2.29	2.19	1.45
2. Transfers	1.80	1.42	0.81	0.24	0.33	0.38	0.22	0.67	0.56
a) Non financial									
Public Enterprises	1.05	0.89	0.20	0.16	0.26	0.31	0.09	0.13	0.03
b) Financial Public Enterprises	0.60	0.37	0.49	0.00	0.00	0.00	0.03	0.09	0.13
c) Public Institutions, Local Governments and others	0.15	0.17	0.12	0.08	0.06	0.07	0.11	0.45	0.40
3. Other	0.00	0.00	0.02	0.06	0.04	0.01	0.02	0.02	0.23
SUB TOTAL	17.88	19.45	18.23	17.00	18.68	17.39	16.17	15.41	14.25
AMORTIZATION	1.95	3.54	3.14	3.24	4.85	5.90	6.01	4.71	2.98
1. Internal Debt	1.05	0.49	0.57	0.32	0.35	0.29	0.63	0.74	0.30
2. External Debt	0.90	3.05	2.57	2.92	4.49	5.61	5.38	3.97	2.68
TOTAL EXPENDITURES	19.84	22.99	21.37	20.24	23.53	23.29	22.17	20.13	17.23

Source : Central Bank

Table 5.6 : PERU - FISCAL COST OF EXEMPTIONS ON IMPORT TARIFFS, BY SECTORS, 1986-1987.

(Million Intis)

SECTOR / ITEM	1986	1987 (Jan.-June)
AGRICULTURE	464.5	321.3
Capital goods	242.0	182.6
Soya and yellow corn	150.1	90.5
Inputs and fertilizers	46.9	36.7
Others	25.5	11.5
FISHING	44.9	36.6
Capital goods	37.9	36.6
Others	7.0	0.0
MINING	71.7	26.8
Capital goods	71.7	26.8
PETROLEUM	0.5	8.4
Capital goods	0.5	8.4
MANUFACTURING	547.9	331.4
Imports for Editors and Newspapers	276.7	176.4
Machinery for Cement Industry	137.9	43.1
Imports for Paper Factories	108.6	101.6
Automobile parts	4.8	2.9
Others	19.9	7.4
ELECTRICITY	4.9	0.0
WATER	14.6	1.4
TRANSPORTATION	148.8	70.9
Equipment for Ports and Storages	25.1	2.1
Imports for Television and Broadcasting Corporations	70.4	25.8
Others	53.3	43.0
CENTRAL, LOCAL AND REGIONAL GOVERNMENTS	1,481.6	1,181.1
DIPLOMATICS	444.6	405.8
GRANTS		
Public Sector	273.2	136.9
Private Sector	185.9	107.0
OTHERS	532.9	369.1
TOTAL	3,756.9	2,752.8

Source : Ministry of Finances (MEF).

Table 6.1 : PERU - SUMMARY ACCOUNTS OF THE CONSOLIDATED FINANCIAL SYSTEM ,1975,1980-1987

(Million Intis)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
I. NET INTERNATIONAL RESERVES	5.2	436.1	391.1	886.9	1,943.9	6,281.9	19,278.0	12,074.1	1,977.7
a. Assets	21.0	872.3	923.8	2,008.4	4,715.4	13,033.3	34,491.5	29,401.6	46,856.5
b. Liabilities	15.8	436.2	532.7	1,121.5	2,771.5	6,751.4	15,213.5	17,327.5	44,878.8
II. OTHER NET INTERNAT. OPERATIONS	(20.0)	(118.3)	(308.3)	(786.7)	(2,103.3)	(3,763.0)	(6,910.0)	(5,443.0)	(11,209.3)
III. INTERNAL CREDIT	251.8	1,035.9	2,304.3	4,126.3	8,247.1	16,641.8	30,248.5	63,430.9	156,987.3
a. Private Sector	138.6	938.3	1,937.0	3,736.6	7,246.8	16,073.5	33,202.1	57,842.8	117,750.7
b. Public Sector	63.0	474.4	974.4	1,363.5	3,159.9	5,173.1	4,412.9	13,360.7	52,780.0
c. Net Unclassified Assets	50.2	(376.8)	(607.1)	(973.8)	(2,159.6)	(4,604.8)	(7,366.5)	(7,772.6)	(13,543.4)
IV. LIABILITIES TO PRIVATE SECTOR	153.2	1,353.7	2,387.1	4,226.5	8,087.7	19,160.7	42,616.5	70,062.0	147,755.7
a. Currency	42.4	272.7	432.6	624.7	1,104.3	2,487.8	8,089.1	16,174.5	41,939.8
b. Demand Deposits	36.3	251.4	331.2	424.0	887.7	2,049.1	6,846.4	14,775.3	32,500.0
c. Time Deposits	15.7	111.1	211.2	426.3	846.6	1,756.8	6,047.5	12,837.0	23,708.7
d. Savings Deposits	20.5	176.9	434.2	822.9	1,396.0	2,676.6	6,905.2	13,337.5	24,527.2
e. Foreign Currency Deposits	0.5	380.1	653.8	1,480.8	3,264.8	9,392.4	12,928.9	7,988.2	15,199.9
f. Mortgage Bonds	17.6	106.3	241.5	321.5	421.2	540.0	1,101.3	1,962.1	3,693.3
g. Others	20.2	55.2	82.6	126.3	167.1	258.0	698.1	2,987.4	6,186.8

Source : Central Bank

Table 6.2 : PERU - SUMMARY ACCOUNTS OF THE CONSOLIDATED BANKING SYSTEM ,1975,1980-1987

(Million Intis)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
I. NET INTERNATIONAL RESERVES	5.2	436.1	391.1	886.9	1,943.9	6,281.9	19,278.0	12,074.1	1,977.7
a. Assets	21.0	872.3	923.8	2,008.4	4,715.4	13,033.3	34,491.5	29,401.6	46,856.5
b. Liabilities	15.8	436.2	532.7	1,121.5	2,771.5	6,751.4	15,213.5	17,327.5	44,878.8
II. OTHER NET INTERNAT. OPERATIONS	(14.7)	(76.8)	(197.2)	(418.2)	(1,245.6)	(1,712.9)	(2,594.3)	(1,409.9)	(1,166.4)
III. INTERNAL CREDIT	139.3	884.5	2,002.7	3,357.9	6,834.4	13,862.8	24,319.0	52,914.2	132,631.0
a. Private Sector	108.6	748.9	1,586.6	3,106.2	6,274.5	14,299.9	28,790.3	48,408.4	97,611.9
b. Public Sector	52.2	385.9	772.0	951.4	2,349.1	3,246.4	(209.8)	8,118.4	41,944.6
c. Net Unclassified Assets	(21.5)	(250.3)	(355.9)	(699.7)	(1,789.2)	(3,683.5)	(4,261.5)	(3,612.6)	(6,925.5)
IV. LIABILITIES TO PRIVATE SECTOR	129.8	1,243.8	2,196.6	3,826.6	7,532.7	18,431.8	41,002.7	63,578.4	133,442.3
a. Currency	42.6	273.4	436.2	627.6	1,114.4	2,502.3	8,133.0	16,244.0	42,094.6
b. Demand Deposits	37.2	268.5	367.8	464.1	969.9	2,176.8	8,318.6	17,078.9	35,893.0
c. Time Deposits	9.7	60.8	114.5	223.2	526.6	1,167.8	4,014.9	7,735.2	14,534.0
d. Savings Deposits	15.0	137.8	355.7	684.5	1,154.9	2,227.7	5,900.5	11,136.4	19,493.6
e. Foreign Currency Deposits	0.7	387.0	666.4	1,484.8	3,314.7	9,758.6	13,215.6	8,230.4	15,974.1
f. Mortgage Bonds	18.2	107.1	242.4	322.3	422.6	540.3	1,101.3	1,963.9	3,693.4
g. Others	6.4	9.2	13.6	20.1	29.6	58.3	318.8	1,189.6	1,759.6

Source : Central Bank

Table 6.3 : PERU - SUMMARY ACCOUNTS OF THE CENTRAL RESERVE BANK ,1975,1980-1987

(Million Intis)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
I. NET INTERNATIONAL RESERVES	18.3	505.9	402.1	904.7	2,019.6	6,408.2	20,813.8	13,351.9	1,422.5
a. Assets	19.2	756.9	644.8	1,642.9	3,966.1	11,347.2	31,831.5	25,942.6	37,290.5
b. Liabilities	0.9	251.0	242.7	738.2	1,946.5	4,939.0	11,017.7	12,590.7	35,868.0
II. OTHER NET INTERNAT. OPERATIONS	(1.0)	(7.4)	(13.8)	(68.7)	(576.5)	(639.7)	(2,093.7)	(1,269.0)	(1,684.9)
III. INTERNAL CREDIT	36.1	248.3	759.4	1,002.1	2,473.0	4,262.0	10,844.4	29,093.5	88,034.2
a. Public Sector	9.3	200.9	365.1	539.0	1,403.3	988.0	(2,277.3)	1,319.0	22,378.1
b. Private Sector	0.0	0.0	0.7	3.0	11.0	31.1	136.4	166.7	243.4
c. Banking Sector	30.3	152.6	367.9	387.0	1,164.5	3,099.5	6,999.1	14,220.1	37,346.9
Banco de la Nacion	5.9	35.3	139.6	(25.0)	24.0	226.8	846.8	1,667.1	4,132.4
Commercial Banks	10.0	9.8	39.6	60.6	259.1	972.0	2,660.2	4,000.4	10,553.7
Development Banks	14.4	107.5	188.7	351.4	881.4	1,900.7	3,492.1	8,552.6	22,660.8
d. Capital and Reserves	1.7	5.7	3.5	4.6	54.6	233.4	42.3	70.1	216.7
c. Net Unclassified Assets	(1.8)	(99.5)	29.2	77.7	(51.2)	376.8	6,028.5	13,457.8	28,282.5
IV. LIABILITIES TO PRIVATE SECTOR	53.4	746.8	1,147.7	1,838.1	3,916.1	10,030.5	29,564.5	41,176.4	87,771.8
a. Currency	48.4	318.3	526.2	734.0	1,333.1	2,838.3	9,304.3	18,415.0	46,724.8
b. Bank Deposits	4.7	217.8	262.8	189.9	485.3	665.3	12,789.6	18,898.7	32,020.8
e. Foreign Currency Deposits	0.3	200.1	352.0	895.2	2,056.7	6,386.6	7,274.8	3,682.3	7,868.8
e. Foreign Currency Certificates	0.0	10.6	6.7	19.0	41.0	140.3	195.8	180.4	1,157.4

Source : Central Bank

Table 7.1 : PERU - AGRICULTURAL PRODUCTION ,1975,1980-1987

(Thousand Tons.)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
COTTON	226	256	286	256	105	203	291	304	202
RICE	537	420	712	776	798	1,156	878	726	1,169
COFFEE	65	95	95	90	91	11	91	96	98
SUGAR CANE	8,958	5,598	5,129	6,509	6,381	6,988	7,329	6,273	6,099
BEANS	49	39	44	43	35	45	46	54	59
MAIZE	634	453	587	631	585	776	703	876	914
POTATOES	1,640	1,380	1,705	1,800	1,200	1,463	1,557	1,658	1,709
SORGHUM	29	35	44	38	12	44	23	38	24
SOYA	2	11	14	8	2	2	2	4	6
WHEAT	126	77	119	101	76	84	92	121	133
POULTRY	130	144	183	205	206	182	201	230	281
SHEEP	21	21	19	20	21	19	17	17	19
PORK	55	55	59	59	58	55	54	59	65
BEEF	86	84	90	91	111	103	101	90	107
EGGS	50	60	64	65	68	65	78	95	97
FRESH MILK	813	780	785	805	752	780	809	819	830

Source: Central Bank

Table 7.2 : PERU - VOLUME INDEX OF MANUFACTURING PRODUCTION ,1975,1980-1987

(1979 = 100)

	1975	1980	1981	1982	1983	1984	1985	1986	1987
TOTAL MANUFACTURING	98.2	105.1	108.7	103.4	84.0	90.4	96.0	113.1	127.5
Food and Others	103.3	105.6	106.8	105.1	94.2	98.7	100.7	124.1	140.2
Processed Products	106.9	100.3	102.8	101.4	86.3	96.5	95.8	106.5	117.1
Sugar Industry	148.3	80.7	72.0	87.0	63.3	86.1	102.4	n.a	n.a
Beverages	101.7	110.7	114.1	110.8	110.7	102.8	115.5	171.2	207.2
Textile,Clothing	108.6	98.0	102.6	106.8	90.5	96.1	105.8	114.6	123.2
Textiles	92.5	95.4	100.8	108.1	91.2	97.9	112.4	120.8	132.2
Clothing	126.2	105.9	102.7	115.1	103.0	112.2	102.6	112.0	n.a
Leather goods	139.4	120.2	125.3	102.2	90.0	82.8	77.0	96.2	105.3
Footwear	133.6	111.4	103.7	81.9	60.4	58.3	59.7	65.0	36.5
Paper ,Printing	143.2	120.8	120.3	102.8	83.5	90.3	87.6	96.8	120.7
Paper,Paper Products	100.6	121.8	107.4	78.1	70.6	71.2	65.6	80.1	98.1
Printing	168.7	119.8	133.6	128.3	96.9	110.1	110.4	114.0	n.a
Chemical Products	97.0	110.8	114.6	108.5	89.9	95.4	98.4	120.8	140.1
Basic Chemicals	74.5	105.5	112.8	107.3	81.2	102.4	102.5	123.2	135.6
Medicines and others	107.3	125.2	132.3	132.4	100.7	72.1	87.5	n.a	n.a
Other chemicals	112.7	118.1	114.0	103.3	89.0	76.3	85.1	115.5	150.5
Petroleum refinig	86.6	103.0	111.4	112.5	104.9	118.9	116.3	119.8	130.8
Non Metal Mineral Products	108.2	108.4	115.6	109.0	90.1	78.7	78.8	106.7	136.0
Basic Metals	47.8	97.8	91.8	89.0	78.5	87.6	93.6	89.2	91.9
Ferrous metals	89.8	112.2	81.2	67.6	55.3	66.3	74.0	91.6	110.9
Non ferrous metals	40.9	94.5	94.5	94.6	84.6	93.1	98.7	88.6	86.9
Metal Products	127.8	124.1	146.7	115.2	67.7	69.8	82.6	118.6	153.4
Metal Products	113.8	120.6	121.7	99.4	66.0	70.3	73.9	105.5	155.1
Non Electrical Machinery	111.4	121.2	138.5	105.9	60.6	48.0	57.6	101.3	119.2
Electrical Machinery	128.8	117.5	138.0	116.5	79.7	85.7	104.8	138.4	169.8
Transport Equipment	149.9	154.7	206.8	143.9	53.5	57.0	74.2	114.8	146.6

Source : National Statistical Institute.

Table 8.1 : PERU - CONSUMER PRICE INDEXES FOR METROPOLITAN LIMA, 1970-1987

(1979 = 100)

Year	End of period		Period average	
	Rate	% change	Rate	% change
1970	11.7	5.6	12.0	5.0
1971	12.6	7.6	12.9	6.8
1972	13.1	4.3	13.8	7.2
1973	14.9	13.8	15.1	9.5
1974	17.8	19.2	17.6	16.9
1975	22.0	24.0	21.8	23.6
1976	31.8	44.7	29.1	33.5
1977	42.2	32.4	40.2	38.0
1978	73.2	73.7	63.4	57.8
1979	122.1	66.7	100.0	67.7
1980	196.3	60.8	159.2	59.2
1981	339.0	72.7	279.2	75.4
1982	586.3	72.9	459.2	64.5
1983	1,319.6	125.1	969.5	111.1
1984	2,790.4	111.5	2,038.0	110.2
1985	7,206.4	158.3	5,368.2	163.4
1986	11,739.1	62.9	9,551.1	77.9
1987	25,181.9	114.5	17,750.4	85.8

Source : National Statistical Institute.

Table B.2 : PERU - EXCHANGE RATES, 1970-1987

(Intis/ US\$)

Year	Official Market				Financial Market			
	End of period		Period average		End of period		Period average	
	Rate	% change	Rate	% change	Rate	% change	Rate	% change
1970	0.039		0.039		0.000		0.000	
1971	0.039	0.0	0.039	0.0	0.000	0.0	0.000	0.0
1972	0.039	0.0	0.039	0.0	0.000	0.0	0.000	0.0
1973	0.039	0.0	0.039	0.0	0.000	0.0	0.000	0.0
1974	0.039	0.0	0.039	0.0	0.000	0.0	0.000	0.0
1975	0.045	16.3	0.040	4.4	0.000	0.0	0.000	0.0
1976	0.069	54.2	0.056	38.1	0.000	0.0	0.000	0.0
1977	0.130	87.9	0.084	50.9	0.000	0.0	0.000	0.0
1978	0.196	50.5	0.156	85.7	0.208	0.0	0.172	0.0
1979	0.250	27.5	0.225	43.7	0.253	21.3	0.228	32.6
1980	0.342	36.6	0.289	28.6	0.344	36.0	0.295	29.6
1981	0.507	48.4	0.422	46.2	0.510	48.4	0.426	44.4
1982	0.990	95.2	0.698	65.2	0.996	95.4	0.707	65.8
1983	2.271	129.5	1.629	133.5	2.307	131.6	1.659	134.9
1984	5.696	150.8	3.467	112.9	5.820	152.3	3.652	120.1
1985	13.950	144.9	10.980	216.7	17.380	198.7	12.620	245.6
1986	13.950	0.0	13.950	27.0	19.530	12.4	17.760	40.7
1987	33.000	136.6	16.707	19.8	63.000	222.6	31.348	76.5

Source : Central Bank

Table B.3 : REAL EXCHANGE RATE INDEX

(Base Dec.1978 = 100)

MONTH	Trade weighted	Imports weighted	Exports weighted	Parallel Market
12-78	100.00	100.00	100.00	100.00
12-79	121.73	121.73	121.73	127.72
12-80	127.78	127.82	127.73	136.14
12-81	145.88	145.95	145.83	154.70
12-82	133.08	133.13	133.04	137.71
12-83	126.35	126.61	126.12	130.75
12-84	115.80	115.88	115.74	112.44
7-85	97.84	97.92	97.77	95.22
8-85	91.29	91.73	90.93	79.94
9-85	93.61	94.04	93.24	81.87
10-85	94.97	95.91	94.16	83.34
11-85	96.61	97.56	95.78	84.88
12-85	98.34	99.31	97.50	86.50
1-86	102.28	103.29	101.41	89.92
2-86	103.51	104.95	102.27	91.41
3-86	106.78	108.27	105.51	94.31
4-86	113.04	114.62	111.69	99.72
5-86	115.82	117.44	114.43	102.17
6-86	119.59	121.27	118.16	105.51
7-86	121.49	124.01	119.33	107.95
8-86	123.88	126.69	121.85	109.47
9-86	114.47	107.88	122.92	111.58
10-86	119.33	112.46	128.14	111.66
11-86	123.91	116.78	133.06	112.54
12-86	123.43	121.14	127.48	110.85
1-87	125.69	123.35	129.81	114.28
2-87	128.60	126.21	132.82	119.62
3-87	131.66	129.21	135.98	122.25
4-87	135.24	132.72	139.67	101.29
5-87	139.09	136.50	143.66	85.20
6-87	138.07	133.10	136.78	88.96
7-87	142.51	144.19	136.37	77.93
8-87	153.00	154.81	146.42	75.76
9-87	160.80	162.81	153.98	71.71
10-87	131.56	141.27	122.97	61.19
11-87	136.01	146.05	127.13	61.51
12-87	97.84	102.74	93.72	44.86
1-88	106.45	115.98	99.06	52.06
2-88	112.78	131.01	100.17	51.60
3-88	119.70	136.32	108.18	60.90
4-88	123.42	159.61	102.73	49.74
5-88	121.35	172.14	96.14	45.75
6-88	110.50	153.34	88.62	50.09
7-88	123.52	144.65	109.34	58.51
8-88	94.44	86.77	102.40	51.61
9-88	102.11	91.53	113.79	72.68
10-88	135.02	116.17	157.76	84.19
11-88	90.85	84.99	96.75	75.04
12-88	98.59	75.35	135.77	44.40

Note : A drop in the indexes means real depreciation. The indexes refer to the weighted averages of all exchange rates applicable to the different exports and imports categories, adequately adjusted by the relation between Peru Consumer Price Index and that of Peru's seven main trading partners. The base is December 1978 = 100.

Source : World Bank staff estimates.

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