March 2001
IMF Country Report No. 01/51

Peru: Selected Issues

This Selected Issues paper on Peru was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on **February 23, 2001.** The views expressed in this document are those of the staff team and do not necessary reflect the views of the government of Peru or the Executive Board of the IMF.

The policy of publication of staff reports and other documents by the IMF allows for the deletion of market-sensitive information.

To assist the IMF in evaluating the publication policy, reader comments are invited and may be sent by e-mail to Publicationpolicy@imf.org.

Copies of this report are available to the public from
International Monetary Fund • Publication Services
700 19th Street, N.W. • Washington, D.C. 20431
Telephone: (202) 623 7430 • Telefax: (202) 623 7201
E-mail: publications@imf.org • Internet: http://www.imf.org

Price: $15.00 a copy

International Monetary Fund
Washington, D.C.

INTERNATIONAL MONETARY FUND

PERU

Selected Issues

Prepared by Saul Lizondo (Head), Andrew Wolfe, Dale Chua, (all WHD), Juan Pablo Córdoba (FAD), and Andrea Richter (PDR).

Approved by the Western Hemisphere Department

February 23, 2001

Contents Page

Statistical Appendix Tables

National Accounts and Production

Public Sector

Banking System

External Sector

Peru: Basic Data

I. Social and Demographic Indicators

Area (sq. km)	1,285,215	Nutrition (1996)	
Arable land (percent of land area)	1.0	Calorie/protein intake (per capita a day)	2,310
Population (2000)		Health (1996)	
Total (million)	25.7	Population per physician	971
Annual rate of growth, recent period (percent a year)	1.7	Population per hospital bed	559
Density (per sq. km.)	20.0	Population per nurse	1,493
GDP per capita (US$), 2000	2,107		
		Access to electricity (2000)	
		Percent of dwellings	77.6
Population characteristics (2000-2005)		Urban	--
Life expectancy at birth (years)	69.8	Rural	--
Crude birth rate (per thousand)	22.6		
Crude death rate (per thousand)	6.2	Access to safe water (2000)	
Infant mortality (per thousand live births)	37.4	Percent of dwellings	74.1
Under 5 mortality rate (per thousand) (1998)	47.0	Urban	--
		Rural	--
Income distribution (most recent year)			
Percent of income received:		Education (1998)	
By highest 20 percent of households	51.3	Adult literacy rate (1998)	92.3
By lowest 20 percent of households	4.4	Gross enrollment rates, in percent	--
Gini coefficient (1997)	0.484	Primary education	121.9
		Secondary education	71.9
Distribution of labor force, in percent (1997)		Tertiary education	--
Agriculture and fishing	26.4		
Industry, mining, and construction	16.5	GDP (2000)	S/. 188.7 billion
Services	57.1		US$54.1 billion

II. Economic Indicators, 1996–2000

	1996	1997	1998	1999	2000
	(In percent of GDP)				
Origin of GDP					
Agriculture and mining	12.4	12.4	12.9	14.2	14.4
Manufacturing and construction	21.1	21.3	20.9	20.0	20.1
Services	66.5	66.2	66.2	65.8	65.5
	(Annual percentage changes, unless otherwise indicated)				
National accounts and prices					
Real GDP	2.5	6.7	-0.4	1.4	3.6
Real GDP per capita	1.8	4.9	-2.1	-0.3	1.8
GDP deflator	10.6	7.6	6.8	3.8	3.6
Consumer price index (period average)	11.5	8.5	7.3	3.5	3.8
Consumer price index (end of period)	11.8	6.5	6.0	3.7	3.7
Unemployment rate (in percent) 1/	7.0	7.7	7.8	8.0	n.a.
	(Ratios to GDP)				
Gross domestic investment	23.4	24.6	24.2	22.0	20.6
Of which : public investment	4.3	4.4	4.5	4.8	3.8
Gross national savings	17.2	19.4	17.8	18.5	17.6
External savings	6.2	5.2	6.4	3.5	3.0
Private consumption	71.5	70.0	70.6	69.4	70.1
Public consumption	10.1	9.9	10.5	10.9	11.0
Public finances					
Central Government					
Total revenue	16.2	16.1	16.0	14.8	14.8
Total expenditure	17.6	16.9	17.1	17.8	17.4
Of which : interest	2.4	1.8	1.9	2.1	2.2
Savings	1.9	2.7	2.0	-0.1	-0.3
Primary balance	1.1	1.0	0.8	-1.0	-0.4
Overall balance	-1.3	-0.8	-1.0	-3.1	-2.6
Consolidated public sector					
Primary balance	1.7	1.9	1.3	-0.8	-0.7
Overall balance	-0.9	0.0	-0.6	-3.0	-3.0

Peru: Basic Data

	1996	1997	1998	1999	2000
	(12-month percentage changes, unless otherwise indicated)				
Money and credit					
Liabilities to private sector 2/	28.0	15.0	0.2	4.3	2.2
Of which:					
Money	18.1	19.3	0.5	12.7	-3.3
Quasi money	30.5	13.7	0.0	3.1	3.2
Net domestic assets of the banking system 2/	14.2	76.0	13.2	3.2	6.2
Of which:					
Credit to the public sector (net)	70.8	6.7	-3.7	-15.0	12.9
Credit to the private sector	35.5	27.4	7.8	-2.3	-1.9
Liabilities to private sector, in percent of GDP	19.7	21.4	23.1	25.1	24.6
Deposit rate in domestic currency (end-period, in percent)	10.5	9.9	12.6	10.6	9.4
	(In billions of U.S. dollars, unless otherwise indicated)				
Balance of payments					
Current account	-3.4	-3.1	-3.6	-1.8	-1.6
Merchandise trade balance	-2.0	-1.7	-2.5	-0.6	-0.4
Exports	5.9	6.8	5.8	6.1	7.0
Imports	7.9	8.6	8.2	6.7	7.4
Services, factor income and transfers (net)	-1.4	-1.3	-1.2	-1.2	-1.3
Capital and financial account	4.6	5.0	2.3	1.0	1.5
Foreign direct investment (including privatization)	3.2	1.7	1.9	2.0	0.7
Portfolio investment	0.2	0.3	-0.3	-0.3	-0.3
Other capital (net)	0.3	3.0	0.1	-1.0	0.6
Errors and omissions	0.9	0.0	0.6	0.4	0.5
Change in net international reserves (increase -)	-1.9	-1.7	1.0	0.8	0.2
Exceptional financing	0.9	-0.2	0.4	0.0	0.0
Exports (in percent of GDP) 3/	13.1	14.2	13.1	14.7	16.0
Imports (in percent of GDP) 3/	17.9	18.4	18.5	17.0	17.8
Current account (in percent of GDP)	-6.2	-5.2	-6.4	-3.5	-3.0
Merchandise exports (in US$, annual percentage change)	5.5	15.8	-15.7	6.2	14.8
Merchandise imports (in US$, annual percentage change)	1.7	8.3	-3.9	-18.2	9.6
Terms of trade (annual percentage change)	-3.7	5.6	-13.8	-6.6	-0.6
Real effective exchange rate (12-month percentage change) 4/	0.9	7.4	-11.1	-2.5	9.8
International reserve position and external debt (at end-period)					
Gross official reserves	9.3	10.8	9.7	8.7	8.3
(in months of imports) 3/	11.2	12.3	13.1	10.8	9.9
Net official reserves 5/	4.7	6.2	5.9	5.2	4.9
Net reserves of the banking system	8.6	7.8	6.9	7.4	7.5
Outstanding external debt, in percent of GDP	55.5	48.6	51.6	53.8	50.5
Public	43.1	33.3	35.7	38.7	36.1
Private	12.4	15.3	15.9	15.1	14.3
Total debt service ratio (in percent of exports of gds. & serv.)	43.6	43.4	55.0	49.0	45.4
Of which: interest	25.0	19.3	23.7	22.6	21.0
Gross reserves/short-term debt (in percent)	118.0	124.8	115.1	122.8	142.7

IMF data (as of January 31, 2001)	
Membership status:	Article VIII
Intervention currency and exchange rate	U.S. dollar, New soles 3.53 per U.S. dollar
Quota	SDR 638.4 million
Fund holdings of national currency	SDR 1,066.7 million
(as percent of quota)	167.1 percent
Outstanding purchases and loans	SDR 428.3 million
Extended arrangements	SDR 428.3 million
SDR department	
Net cumulative allocation	SDR 91.3 million
Holdings	SDR 1.2 million

Sources: Central Reserve Bank of Peru, and staff estimates.

1/ Urban unemployment.
2/ Flows in foreign currency are evaluated at program exchange rate.
3/ Numerator includes goods and services.
4/ Based on Information Notice System.
5/ Program definition. Includes financial system's foreign currency deposits in central bank as reserve liability.

Overview

1. This paper presents four studies on selected issues of the Peruvian economy. The first study analyzes developments in the labor market during the 1990s. The second assesses the relationship between the orientation of economic policy and export performance, in particular, export diversification over the last four decades. The third looks at the two-tier pension system and evaluates the long-term fiscal burden of this system. The last study reviews the design and implementation of monetary policy in Peru over the last decade.

2. Chapter I reviews labor market developments in Peru in the 1990s and observes that strong output growth in this period generated high growth in the level of employment and reduced the rate of total underemployment, defined as the sum of unemployment and underemployment (the latter includes those working few hours a week or receiving very low wages). However, owing to growing rates of labor-force participation, total underemployment remained at very high levels by the end of the decade. The study notes that the high rate of labor taxation in Peru and costly legal requirements on severance pay are likely to have adversely affected the level of employment and have contributed to the maintenance of a large informal sector. The degree of labor market informality, however, has not changed substantially over the 1990s. The paper also finds that in the 1990s there has been a significant widening of the earnings gap between skilled and unskilled labor.

3. The chapter argues that to reduce total underemployment and improve wages for lower-skilled workers, policies should be aimed at promoting high growth and increasing the employment-growth elasticity. This would require the maintenance of sound macroeconomic policies, the elimination of structural impediments to growth in labor-intensive industries, the development of human capital through better education, the reduction in high labor taxes, and the abolition of costly labor-market regulations.

4. Chapter II notes that dependence on traditional exports has long been a concern of Peruvian policymakers, who have introduced a variety of measures aimed at reducing this dependence over the last four decades. Efforts in the 1970s and 1980s to diversify exports relied on protectionist policies and did not work, as traditional products still represented roughly two-thirds of total exports by the start of the 1990s. The study argues that rich endowment of natural resources shapes Peru's comparative advantage, and that targeted public sector efforts to diversify the export base which run counter to the underlying characteristics of the Peruvian economy will likely fail. In fact, Peru's exports have generally performed better under conditions of liberal economic policies, rather than when restrictive trade and industrial policies attempted to promote particular sectors or industries.

5. The research concludes that a further diversification of Peru's exports would require Peru to raise the level of education and training, which would only in time translate into a sustained rise in productivity that would allow Peru's manufacturing sector to become internationally competitive.

6. Chapter III analyzes the Peruvian two-tier pension system, which includes a defined-benefit, pay-as-you-go, public system together with a defined-contribution, fully-funded, private system. The chapter highlights pending issues in the pension reform agenda such as improving transparency of the special public-sector arrangements, limiting the expected fiscal costs of the present system over the next few decades, and the need for the private pension system to provide adequate retirement income to participants.

7. The paper compares the expected benefits under the present public and private systems and quantifies the expected fiscal cost of current pension arrangements through 2050. The projections point to an increase in public outlays for pensions, from 2.5 percent of GDP in 1999 to around 3–3.5 percent of GDP over the next few decades. The study recommends that the public system be closed to new entrants to limit the future fiscal cost, that the contribution rate to the private system be increased to improve expected replacement rates, and that some administrative changes be introduced to reduce the operating costs of the private pension funds.

8. Chapter IV reviews the design and implementation of monetary policy in the 1990s and finds that the central bank was largely successful in reducing inflation during the period. However, there was a lack of transparency in monetary policy, and local-currency interbank interest rates were highly volatile in reflection of the central bank's decision to conduct monetary policy by targeting base money. This volatility is seen to be an impediment to the development of a market for long-term sol-denominated financial instruments in the highly dollarized Peruvian economy.

9. The central bank's recent effort to make monetary policy more transparent in 2001 is welcomed. The paper notes that publishing monthly monetary reports and updates of the annual monetary program report in May and September is a major step forward. The study argues that this improvement in transparency is consistent with the central bank's consideration of a move to a formal inflation-targeting framework for monetary policy. In this connection, the chapter mentions some benefits that could be derived from adopting inflation targeting.

I. Peruvian Labor Markets and the Impact of Economic Activity in the 1990s[1]

A. Introduction

10. At the time of the Board discussion for the 1999 Article IV consultation with Peru, Directors expressed concern that in Peru in the 1990s, industrial employment fell, the rate of unemployment was little changed, and underemployment remained high, despite high rates of output growth.[2] All the while, real wages were falling. This paper attempts to explain this apparent anomaly. The paper is divided in three sections. The second section discusses the evolution of employment, unemployment, underemployment, and real GDP growth over the course of the decade. The final section presents some recommendations in light of the paper's conclusions that:

- In the 1990s there was only a weak correlation between output growth and unemployment during the course of the decade. However, there was a much stronger correlation between output growth and employment performance, and between output growth and total underemployment (defined as the sum of underemployment and unemployment).

- The latter correlations became stronger after 1993, in reflection of the greater degree of labor market flexibility in this period following the labor law reforms of the early 1990s.

- Over the course of the decade, the relatively strong performance in output and employment growth, together with a more modest reduction in total underemployment, reflected a sharp increase in the rate of labor-force participation.

- The increase in labor force participation was most pronounced since 1994, a period in which real wages for blue-collar workers were declining. The drop in real incomes of these workers is likely to have motivated additional household members to seek employment.

- The degree of labor market informality seems to have changed little over the 1990s, except for a modest rise since the middle of the decade that may have arisen because

---

[1] Prepared by Andrew Wolfe. The research would not have been possible without the help of Ms. Teresa Lamas of the Central Reserve Bank of Peru and Mr. Jaime Saavedra of the Grupo de Análisis para el Desarollo (GRADE).

[2] Underemployment is defined as the number of individuals working less than 35 hours a week, or working more than 35 hours a week but earning less than half the cost of the standard family consumption basket, IMR. For definitions of the labor market performance measures used in this chapter, see Appendix I.

the majority of labor shed during the downsizing of the public sector in the first half of the decade could not find work in the formal sector.

11. The analysis in this paper concentrates on total underemployment, rather than just unemployment, because the size of the underemployment problem dwarfs that of unemployment, and because movements in the unemployment rate were often offset by changes in the underemployment rate (Table 1). The rate of underemployment has exceeded that of unemployment by at least five-fold in the 1990s, and surveys of workers' concerns on Peruvian labor markets point to two main issues that are directly linked to the level of underemployment: (a) the instability of employment status (which has meant that workers are facing variable hours of work, temporary layoffs, and job loss),[3] and (b) the lack of adequate-paying jobs (currently, about one-third of those employed earn less than one-half the IMR).[4]

12. The relatively high rate of labor taxation in Peru, of around 50 percent of the base wage, has no doubt affected the level of employment and total underemployment, albeit not the trends in these indicators (see Appendix II for details on the structure of labor taxation and regulation). The impact of this level of taxation on employment is more likely to be greater on unskilled labor, owing to the failure of the market wage to absorb part of the tax burden, as the supply curve of unskilled labor is very elastic. Also, the high rate of labor taxation and costly severance payments regulations are likely to have contributed to the maintenance of the relatively large informal sector (Table 2).

13. The analysis in this paper focuses on labor market developments in Lima only (which according to the latest data contains 30 percent of the economically-active population and is where more than 50 percent the country's output is produced). Labor market series data for employment outside of Lima are only available since 1997 and data for labor force participation, unemployment, and underemployment rates are only available since 1996. Appendix III describes in detail the problems of labor-market data in Peru. Where possible,

---

[3] In part this uncertainty has risen from the growing use of temporary contracts. Firms are exempt from certain charges and regulations (e.g., mandatory amortization payments) for temporary workers; thus, they prefer to rollover temporary contracts to offering full-time contracts.

[4] Also, over 90 percent of the unemployed in Peru are out of work for less than six months. In 1998, the average duration of unemployment was around ten weeks, with chronic unemployment (more than one year out of work) affecting only 0.1 percent of the working age population. Additionally, the demographics underlying the overall unemployment rate were little changed in the 1990s. Women had the highest rates of unemployment along with young workers (14–24 years of age). Nevertheless, the dispersion between male and female rates of unemployment has closed somewhat over the course of the decade, from more than 75 percent to 50 percent.

nationwide labor market performance is noted. Also, where appropriate, the paper makes use of comparisons with other countries in the Andean region.

B. Employment, Unemployment, Growth, and Labor Market Participation in Peru in the 1990s

14. The analysis that follows focuses on labor market developments in two distinct time periods: 1991–93 and 1994–99.[5] Over the first period, there were significant reforms that increased the flexibility of labor markets, and thus, modified the response of labor-market variables, such as employment, to economic developments.[6]

1991–1993

15. In this period, the economy grew a cumulative 6.7 percent, and the level of employment grew by 26.2 percent (Table 1). Employment growth was most pronounced in enterprises operating in the informal sector (Table 2). On the other hand, labor force participation grew so that the rate of employment was steady at around 41.5 percent, and the rate of total underemployment was basically unchanged at 58.7 percent; albeit, the rate of unemployment rose 4 percentage points, while that of underemployment fell by a similar amount. Real wages fell slightly for blue-collar workers and rose sharply for white-collar workers (Table 3).

1994–1999

16. This period, which was characterized by substantial labor market flexibility, also covered two distinct periods in terms of economic performance. Between 1994 and 1997, the Peruvian economy experienced high rates of growth, spurred by prudent macroeconomic policies, the normalizing of relations with external creditors, and the implementation of major structural reforms that included the privatization of most state enterprises.[7] In this circumstance, labor market performance improved. However, owing to a series of external shocks beginning in 1998 and a slowdown in the implementation of structural reforms, economic activity slowed considerably in 1998–99 with an adverse impact on the labor market.

---

[5] No growth rates for labor market statistics can be calculated for 1990, owing to the lack of published data for 1989.

[6] For a complete description of these labor market reforms, and other structural reforms that have taken place in Peru and are likely to have affected labor market conditions, see Appendix IV.

[7] The employment impact of the privatization program is discussed in Appendix IV.

17. Between 1994 and 1997, output grew a cumulative 34 percent, and the level of employment grew by 51 percent. Over the same period, the employment rate rose from 41.3 percent to 50.5 percent, while the total underemployment rate fell from 58.7 percent to 49.5 percent (with the unemployment rate falling from 9.9 percent to 7.7 percent). While a significant reduction took place, the level of total underemployment remained very high after four years of growth well in excess of any plausible assumption on its long-term trend (Figure 1). In 1994, real wages of both blue- and white-collar workers rose sharply, but then fell through 1997, with blue-collar wages declining faster.

18. In this period, the substantial downsizing of the public sector led to a drop in the public sector's share of total employment from 12 percent in 1993 to 7 percent by 1997, resulting in a significant number of new job-seekers. While some found formal employment in the private sector, the majority that found work did so in the generally lower-paying informal sector. Employment growth in this period was again most pronounced in enterprises operating in the informal sector, but employment also rose in the formal private sector (Table 2).

19. The rate of total underemployment in the period 1994–97 did not fall faster because the labor-force participation rate rose from 57.4 percent to 64.5 percent.[8] Decomposing the change in total underemployment into the impact from changes in employment and labor-force participation[9] shows that the increase in employment of 9.2 percentage points in 1994–97 (calculated as the increase in the average level of employment in the period with respect to the level of employment at the start of the period) was offset to some degree by the 2.3 percentage point rise in labor-force participation, such that the reduction in total underemployment in this period was 6.8 percentage points.[10]

20. The rise in labor-force participation would appear to be related to the fall in real wages in this period, especially among blue-collar workers, which may have induced new entrants into labor market, mainly women (Table 5), to recoup real household income.[11] Moreover, the decision to enter the labor market was likely buoyed by the positive employment picture; albeit, the jobs available for many were relatively low-paying. While,

---

[8] The economically-active population rose on average by 159,000 individuals a year between 1993 and 1997.

[9] The formal methodology to carry out the decomposition is described in Appendix V and the results are summarized in Table 4.

[10] Moreover, looking year-by-year in the period 1994–97, the pace of employment increases was about the same or exceeded that of the improvement in total underemployment, owing to growing labor-force participation.

[11] The only year in the period when real wages rose, 1994, was also the only year in the period when the labor force participation rate fell.

the majority of new entrants found full-time employment, enough did not so that the total underemployment rate did not fall as fast as it would have had labor-force participation rates remained unchanged.[12]

21. As noted earlier, in 1998–99 economic activity slowed sharply (with negative growth in 1998 and only a slight recovery the following year). In this period, the rate of unemployment rose only slightly, the total rate of underemployment rose by 2 percentage points and the rate of employment fell 2 percentage points. Participation rates rose further, reaching 66 percent by 1999, 10 percentage points above the level at the start of the decade. Decomposing the change in underemployment into its employment and labor-force participation effects shows that the 2.3 percentage point rise in average total underemployment in 1998–99 (compared with the rate at the start of this period) reflected both a drop in employment (that contributed 1.7 percentage points) and a continued rise in labor-force participation (that contributed 0.6 percentage points). Over this period, real wages declined for blue-collar workers, but rose for white-collar workers. Also, in this period, real wages of independent workers in the informal sector fell sharply, after having been basically flat between 1990 and 1997 (independent workers are mainly low-skilled, low-wage earners). In this circumstance, labor-force participation continued to rise despite the more gloomy employment picture.[13]

22. The performance of wages in Peru, especially between 1994 and 1999, appears to have reflected the growing rate of return to labor with appropriate human capital and skills for the changing economy, while labor whose skills had become less productive or obsolete faced growing competition for low-skill work from new entrants. Wages declined 17 percent in real terms between 1994 and 1999 for blue-collar workers, but wages for white-collar workers rose six percent in real terms in the same period. As a result, the gap between blue-collar salaries and white-collar salaries in the economy widened from 19.5 percent in 1994 to 52.1 percent in 1999. This is consistent with several studies of supply and demand models of labor markets in Peru that point to a dual labor market structure. In the skilled labor market, demand has outstripped supply, such that there has been upward pressure on wages. In the low-skilled labor market, falling wages has induced increased participation that has raised the supply of labor at a rate in excess of the demand; thus putting downward pressure on the unskilled wage. Moreover, a similar pattern of wage developments took place in the informal market (Table 3). Real wages of independent workers fell between 1994 and 1999, while real

---

[12] In comparison with other countries in the region (Colombia, Venezuela, and Ecuador) in the period 1990–97, Peru had the highest employment rate, with a significantly higher female employment rate (Table 6). In addition, between 1990 and 1997, Peru was the only country in which the rate of unemployment did not rise. Also, Peru had the highest rate of labor market participation for both men and women.

[13] Nationwide employment data for 1998–99 show that the rate of employment fell 4.8 percent in 1998 and another 3 percent in 1999.

wages in informal enterprises, which include professional services providers (generally white-collar workers), have soared since 1994.

23. The informal labor market in Peru in the 1990s has provided employment to workers that might not otherwise have been available in the formal sector because of the high cost of hiring labor. While the degree of labor market informality changed little over the 1990s, there was a modest rise beginning in the middle of the decade that may have arisen because the majority of labor shed during the downsizing of the public sector in the first half of the decade could not find work in the formal sector. [14] Of the 5 percentage point decline of public sector (formal) employment as a share of total employment between 1993 and 1997 (the last year for which data is fully available), the share of informal employment rose by about 3–4 percentage points and private-sector formal employment rose by around 1–2 percentage points (Table 2).

C. Policy Recommendations

24. The major policy challenge that follows from the above analysis is how to reduce the high level of total underemployment and improve wage conditions of lower-skilled and blue-collar workers. Under current demographic trends, and the latest estimate of the long-term employment-growth elasticity of 0.5,[15] it would take six-percent growth of the economy for 20–25 years to reduce total underemployment to low levels. An increase in the employment-growth elasticity to 0.75 (a feasible number, which is below the 1.00 level in Chile[16]) would reduce the time period roughly in half. Thus, policies should aim at both high growth and increasing the employment-growth elasticity. Regarding the former, to sustain high rates of economic growth for an extended period of time would require the maintenance of sound macroeconomic policies and continued efforts in structural reform in the economy to encourage investment. This policy stance would also raise labor productivity and therefore wages. To raise the employment-growth elasticity in the economy, the government could:

---

[14] This is true regardless of the choice of measure of informality: the traditional ILO definition bases the classification of formal/informal in part on the size of an enterprise (those with less than five or ten workers, depending on data availability, are classified as informal) and GRADE, a private think-tank in Lima, defines informality on the basis of legal criteria (i.e., firms are in the informal sector if they do not comply with any legal contribution requirements such as social security or health insurance). Comparing informality in the Andean region shows that between 1990 and 1997, the degree of labor market informality rose in three of the four countries for which data are available (Table 7).

[15] Ministry of Labor and Social Protection (MTPS, 1999).

[16] González, J.A. (1998).

- Eliminate structural impediments to growth in labor-intensive industries, such as agriculture (by increasing the pace of land titling and registration and implementing legislation to provide for the adequate pricing of water usage in rural areas) and tourism (by improving regional airport and highway infrastructure through private sector operating concessions).

- Foster human capital development through improved education services in the country. Planned outlays in 2001 on education amount to 2.5 percent of GDP (below the 4 percent average in Western Hemisphere countries). Over the near term, fiscal resources would need to be shifted away from nonproductive areas in order to improve public education services.

- Finally, reducing the direct taxation on labor and eliminating cost-increasing regulations (e.g., generous severance payments rules) would lead to an increase in employment, especially for unskilled labor.

Appendix I. Glossary of Labor Market Definitions in Peru

Unemployed: not employed by a third party nor worked independently in the week before the survey was carried out, and were physically able to work and looked for work in the period in question.

Visibly underemployed: employed in the period in question but working less than 35 hours a week, despite being able to work more and desiring to work more.

Invisibly underemployed: employed for more than 35 hours a week in the period in question, but earning less than half the cost of the standard consumption basket.

Underemployment: the sum of visible underemployment and invisible underemployment.

Employed: working more than 35 hours a week and earning more than one-half the standard consumption basket.

Working age population (WAP): the population over the age of fourteen (there is no upper limit).

Economically active population (EAP): the working age population that is actively seeking employment or is currently employed in some capacity.

Standard Consumption Basket (Ingreso Minimo Referencial, IMR): monthly level of income needed to purchase the requisite items to maintain a family of five. As of January 2001, the IMR was around US$315.

Appendix II. Labor Market Regulatory Environment

Taxation and regulatory charges in Peru are significant; amounting to between 49 and 54 percent of the base wage pay (albeit, labor taxation has fallen somewhat in the 1990s). Recently, the minimum wage seems to have become binding, which would have had an adverse effect on employment.

There are five major taxes and regulatory charges on labor. First, there is a 5 percent payroll tax levied on most wage earners, the solidarity wage tax (IES). Second, there is an employer contribution to the national health plan of 9 percent of the base wage. Third, firms must pay an extra salary into a worker's account as a form of unemployment insurance (an effective tax rate of 9.7 percent);[17] in addition, workers have the right to a severance payment of 1½ salaries for each year of work up to 12 salaries. Fourth, firms must pay one month of vacation pay (which adds another 9.7 percent to the effective monthly wage bill). Fifth, there are obligatory biannual bonuses and special school bonuses that add 19 percent to the wage bill.[18]

In March 2000, the minimum wage was raised to S/. 410 a month (US$116 as of January 2001).[19] At this rate, the staff estimates that the minimum wage may be beginning to reach a level earned by some 20 percent of those employed in either the formal or informal sectors.[20] On top of the minimum wage, workers receive the aforementioned legal bonuses,

---

[17] The Service Time Compensation Scheme (CTS) is a substitute for unemployment insurance, which in the standard design does not exist in Peru. Firms pay one half a salary every six months (May and October) into an interest earning account of workers. Workers can withdraw up to 50 percent of the accumulated contributions made to the account at any point in time. If they leave their job for voluntary reasons or are laid off, they can withdraw the balance.

[18] There are also several lesser charges for industrial training programs (0.75 percent), protection from arbitrary layoff (0.38 percent), and labor contract registration fees.

[19] In the 1990s the minimum wage was raised from US$58 in early 1992 to US$60 in April 1994, US$83 in October 1996, US$100 in April 1997, US$113 in May 1997, and US$127 in September 1997. Notwithstanding these increases, the purchasing power of the current minimum wage is only about one-third of the minimum consumption basket. The monthly average wage for blue-collar workers in Lima was S/. 819 (about US$235) as of September 1999.

[20] The staff estimate is derived from information in the last household study of wage distribution, which was carried out in Lima in 1996. Inflating the 1996 structure of wages by accumulated inflation between 1996 and end-2000 implies that about 20 percent of today's labor force would be earning around S/. 400 a month, or roughly the minimum wage.

(continued)

CTS, health insurance contributions, and vacation pay (less pension system contributions), such that the cost to the employer of hiring someone at the minimum wage is as much as 54 percent higher, or S/. 615 a month.[21]

The level of taxation and regulation of labor in Peru raises the question as to the international competitiveness of Peruvian labor. As noted in Appendix III, productivity data and, therefore, unit labor cost data are scarce. Notwithstanding, ILO data (1996) revealed that the very low salaries in Peru were not offset by nonwage costs and that unit labor costs are among the lowest in Latin America. Salaries were estimated at less than US$1.5 per hour in industry (compared with US$4 per hour in Argentina, US$3 per hour in Brazil and US$2.5 per hour in Chile). Unit labor costs in Peru were estimated at US$0.07 compared with US$0.09 in Chile, US$0.09 in Argentina, and US$0.10 in Colombia and Brazil.

However, Macroconsult, a Lima consulting group, estimates that minimum wage is binding on only about 8 percent of workers in Lima.

[21] In Peru, there is little indexation of social benefits or other contractual obligations to the minimum wage. Constitutionally, a tripartite commission of workers, government, and employers is to set the minimum wage. The minimum wage in Peru is defined on the basis of a 40-hour workweek, pro-rated for part-time workers. Also, there are special rates for mining workers (25 percent premium) and experienced journalists (200 percent premium).

Appendix III. Statistical Issues in Peruvian Labor Market Analysis

The analysis of Peruvian labor markets is hampered by changes in the definitions and coverage of labor market statistics over the years.[22] There are two main sources of labor market statistics: *employment data* since the 1950s has been based on monthly surveys of firms, while data on *unemployment*, *underemployment*, and *labor participation* have been based on annual household surveys, which are carried out in the third quarter of the year.

Until 1994, the *employment survey* covered only manufacturing firms in Lima that employed at least 100 workers, and the survey was rarely revised to incorporate new enterprises. Since then, the Lima survey has been expanded to the services sector and to include new enterprises. Also, beginning in October 1997, an additional survey has been carried out that covers ten national urban areas and enterprises with as few as 10 employees. In discussions with ILO officials and labor market analysts in Lima, their general view was that the latest survey is well constructed and the results accurately depict the employment situation nationwide.

Nationwide labor market data on *labor participation, unemployment, and underemployment* comes from the annual household survey. Quarterly unemployment and underemployment data for Lima has become available recently. Generally, the National Statistics Institute (INEI) has been in charge of designing and conducting the survey, but there have been years in which the Ministry of Labor and Social Protection (MTPS) has been in charge (the latest year being 1997). The ILO and labor market analysts view the INEI survey as solid, but the coverage of the survey has changed over time. Until 1995, the survey was carried out only in Lima. Thereafter, it has covered all urban centers (towns with a population of at least 2,000) and concentrated rural areas (rural population zones of at least 14,000).

The increase in labor force participation since the 1970's may in part reflect the impact of rural migration to Lima that was spurred by the poor economic performance of the agricultural sector and security problems in rural areas.[23] As these rural workers moved to the city and were likely to have a relatively high labor force participation rate (as a principal motive for the migration was to find work), the participation rate in Lima would have increased, albeit for the country as a whole, this shift would not have implied a rise in labor market participation rates.

---

[22] For a summary of the sources, coverage, and type of labor market data collected, see the table at the end of this appendix.

[23] In this circumstance, the urbanization rate rose (according to Egger and Garatz, ILO, 1999) from 58 percent in 1970, to 64 percent in 1980, to 69 percent in 1990 and to 71 percent in 1995.

With respect to unemployment and underemployment, until 1995, data was limited to the once-a-year, third-quarter survey of households. Since then, the quarterly survey shows that unemployment and underemployment tend to have seasonal patterns, higher in the first half of the year, which could imply that historical unemployment series are downward biased as they reflect third quarter conditions.

Notwithstanding the improvement in the surveys and data coverage since the mid-1990s, figures for unemployment, especially for 1998 and 1999, may be underestimated. Until the most recent publication of revised labor market data in December 2000, official labor market data beginning in 1998 did not square with macroeconomic developments. For example, in 1998, the data showed that the unemployment rate fell from 9 percent in 1997 to 6.9 percent in 1998, in a year when economic activity was severely impacted by the El Niño weather phenomenon and the Asian financial crisis. ILO staff in Lima pointed out that they were unable to confirm these unemployment numbers as they were not given access to the raw data from the government's household surveys (they also pointed out that as of end-1999, Peru was the only Latin American country that did not provide the ILO with such information). Moreover, even with the publication of revised data, the official estimate for the unemployment rate in 1999 in Peru of 8 percent may be too low—the ILO has made its own estimate for the year and shows the unemployment rate to have been around 14 percent (the ILO has not published a 1998 unemployment rate estimate).

Finally, there is a lack of published official data on labor-market productivity. Estimates of productivity growth in Peru by the ILO, central bank staff, and private market analysts, suggest that from 1990–98 average labor productivity grew at an annual rate of between 2.5 to 3.5 percent. The publication of labor market productivity and unit labor costs should be made a regular part of the reporting of labor market statistics by the MTPS.

Summary Table of Peruvian Labor Market Statistics

Statistic	Survey	Geographic coverage	Start of Period of coverage	Frequency	Source
Employment	Firms with 10 or more workers	Ten major urban centers	Oct. 1997	Monthly	MTPS
Employment	Firms with 100 or more workers	Metropolitan Lima	1950	Monthly	MTPS
Labor force participation	Household survey	Lima National	1950 1996	Annual (QIII)	INEI and MTPS
Unemployment and Under-employment	Household survey	Lima Lima National	1950 1995 1996	Annual (QIII) Quarterly Annual (QIII)	INEI and MTPS INEI and MTPS INEI and MTPS
Wages & salaries	Household survey	National	1950	Quarterly	INEI and MTPS

Appendix IV. Labor Market Legislative Changes in the 1990s and the Impact of Structural Reform on Employment

Reforms to labor market legislation, principally implemented between 1991–93, have profoundly improved the flexibility of Peruvian labor markets. According to the ILO (1999), in 1990 Peru had one of the most rigid, protectionist, and interventionist labor policy frameworks in Latin America. By 1998, however, the World Bank (González, 1998) concluded that Peruvian labor markets were sufficiently flexible, allowing both quantity and wage responses to changes in economic conditions.

Labor market reform began in July1991 with a legislative decree that allowed employers to modify work schedules in line with the type of industry (such as Sunday shifts for retailers). In November of that year, the Law on Employment Promotion was approved that allowed various types of labor contracts, including temporary contracts[24] and expanded benefits for youth labor contracts.[25] It also ended the constitutional protection for labor stability (the guarantee that one could not be laid off in the event of an economic downturn) for new labor-force entrants. In 1993, the new constitution eliminated the previous constitutional rights that all workers should have a job if desired and redefined the concept of "protection from arbitrary dismissal".[26] Finally, in July 1995 a law was passed that eliminated labor stability for all workers and required that laid-off workers receive severance pay of 1½ months of salary for each year of work, up to a maximum of 12 monthly salaries. The law also lengthened the probation period to six months for skilled workers and to one year for workers in "confidential" jobs, and eased conditions for hiring young workers under youth-labor contracts by extending the maximum age from 21 to 25 and the length of the contracts from 3 to 5 years.

---

[24] This change in legislation has led to a sharp increase in the use of workers hired under temporary contracts. According to the ILO (1999), 74 percent of Peruvian workers are now hired under these contracts (compared with 35 percent in Argentina, 30 percent in Chile, and 38 percent in Colombia). They are mainly used in small firms and in the services and trade sectors as a means of avoiding the high severance payments. In large firms, 22–25 percent of workers are hired under temporary contracts.

[25] Youth labor contracts allow for a training wage that is below the minimum wage and firms are exempted from paying payroll and health insurance taxes. The maximum number of workers allowed to be employed under the youth-labor contract program remained at 30 percent.

[26] The 1979 constitution only allowed for the firing of workers with at least three months of experience for "just" causes, which did not include the economic cycle. Under the 1993 constitution, the State remained obliged to protect workers from "arbitrary dismissal", but the factors that could be found as grounds for "arbitrary dismissal" were to be determined at the firm level (i.e., negotiated between workers and employers) and could not include misconduct or lost productivity.

In addition to the legislative changes noted above, the Peruvian economy has undergone fundamental structural changes since 1992. The changes that have affected the employment situation most directly include the downsizing of the public sector (mainly through privatization), the reduction in trade protection, especially for the industrial sector, and the more recent restructuring of other sectors in the context of increased global integration (e.g., financial sector).

While the public sector was a major source of job creation between 1960 and 1990, since 1990, the public sector has undergone a fundamental restructuring, with the largest change having occurred in the public enterprises. Between 1991 and 1998, 80 state enterprises were privatized, with employment in these firms falling initially by 77,000 (out of 120,000 total workers). The decline was mainly effected through voluntary retirement programs that were offered to workers in soon-to-be privatized firms. However, over time, employment picked up in the privatized firms. Looking at a subset of 11 major firms sold (for which detailed employment data are available)[27], employment rose from a total of 15,359 workers (all directly employed as there was no employment sub-contracting) at the time of privatization to 19,255 at end-1998 (including direct and sub-contracted employment).

During September 1990-March 1991 significant changes were made to the trade regime, and effective protection for industry was sharply reduced, but this did not lead to a reduction in the level of employment in the manufacturing sector. In September 1990, the average tariff (including surcharges) was reduced from 66 to 26 percent. In March 1991, all quantitative trade restrictions were eliminated and tariff rates were reduced further from three tiers (with rates of 15, 35, and 60 percent) to two (with rates of 15 and 23 percent). In a six-month period, average tariff and effective protection rates were reduced from 66 to 17 percent and from 123 to 34 percent, respectively. While it is difficult to isolate the impact of these trade measures on employment, as general labor market reform was taking place concurrently, the table below shows that between 1993 and 1997 employment rose in all sectors, including manufacturing (albeit, employment in the manufacturing sector fell as a percentage of total employment). Moreover, Saavedra and Torero (2000) did not find statistically significant variation in the labor demand behavior of firms that were exposed to different changes in effective protection.

[27] These are mainly firms with high growth potential in the telecommunications, electricity generation and distribution, mining, and oil refining sectors.

Percentage of the Labor Force and Number Employed By Sector

Year	Agriculture	Fishing	Mining	Manufacturing	Construction	Trade	Other
				Percentage of labor force			
1972	39.7	0.9	1.4	12.7	4.5	10.5	30.3
1981	36.2	0.8	1.9	11.1	3.9	12.6	33.5
1993	27.0	0.7	1.1	11.4	3.7	17.0	39.1
1997	25.5	0.9	0.9	10.4	5.2	17.3	40.0
				Number Employed (1,000s of workers)			
1972	486	11	17	156	55	129	371
1981	487	11	26	149	52	169	450
1993	757	20	31	320	104	477	1096
1997	847	30	30	346	173	575	1329

Source:

The restructuring of the manufacturing sector was not an isolated event in the 1990s. The most recent sector to undergo a significant downsizing was financial services. Bank employment, which first rose in the mid-1990s from 17,196 at end-1995 to 26,854 by mid-1998, in reflection of the recovery in economic activity, fell thereafter to 17,890 at end-November 2000 as the banking system underwent a significant consolidation.

Appendix V . Employment, Unemployment, Underemployment and Labor Participation

To analyze the impact that changes in the rate of employment and the rate of labor force participation have on the unemployment rate, standard labor market analysis decomposes the change in the later in the following manner:

Let U = level of unemployment,
E = level of employment,
EAP = economically active population, and
WAP= working age population.

Then EAP = U + E. Dividing both sides of the equation by WAP and multiplying terms by EAP/EAP yields:
EAP/WAP = (U/EAP) (EAP/WAP) + (E/WAP) or p = p u + e, where,
p = participation rate (measured in terms of the working age population),
u = the unemployment rate, and
e = the level of employment expressed as a percentage of the working age population.

Rearranging,

$u_t = 1 - e_t/p_t$ and $\Delta u = e_t/p_t - e_{t+1}/p_{t+1}$ for any time period t.

Rearranging we have terms in Δe and Δp:

$\Delta u = e_{t+1} \quad (p_{t+1} - p_t)/(p_t \quad p_{t+1}) - (e_{t+1} - e_t)/p_t$, where:

$e_{t+1} \quad (p_{t+1} - p_t)/(p_t \quad p_{t+1})$ is the component of the change in the unemployment rate owing to the change in the rate of labor force participation, and

$(e_{t+1} - e_t)/p_t$ is the component of the change in the unemployment rate owing to the change in employment.

In order to incorporate the effect of underemployment into this analysis, let us redefine the variable U to equal to the level of unemployment plus underemployment, or total underemployment.

Then the above mathematics still hold with a different interpretation, that being that the change in the rate of total underemployment can be decomposed into changes in the labor force participation rate and changes in employment.

Table 4 reports the results of this decomposition for Peru between 1990 and 1999.

Table 1. Peru: Employment, Unemployment, Underemployment, and Real Wages 1/

Year	Working-age Population (WAP)	Economically Active Population (EAP)	(1) Employed	(2) Underemployed Visible	(3) Underemployed Invisible	(2)+(3) Underemployed Visible plus Invisible	(4) Unemployed	(2)+(3)+(4) Total Underemployed	Indices 1994=100 White-collar Wage	Indices 1994=100 Blue-collar Wage	Indices 1994=100 Real GDP
						(In thousands)					
1990	4279	2416	879	334	1002	1336	201	1537	66	78	83
1991	4423	2355	978	315	923	1238	139	1377	69	90	85
1992	4512	2452	1080	379	762	1141	231	1372	71	87	85
1993	4682	2688	1109	408	904	1312	267	1579	83	86	89
1994	4801	2734	1191	379	922	1301	242	1543	100	100	100
1995	4908	2920	1400	475	837	1312	208	1520	97	92	109
1996	5023	2999	1508	528	753	1281	210	1491	97	87	111
1997	5151	3323	1678	565	824	1389	256	1645	98	86	119
1998	5251	3392	1625	495	1007	1503	265	1767	102	85	118
1999	5356	3534	1714	481	1057	1537	283	1820	106	83	120
						(Rates) 2/					
1990		56.5	36.4	13.8	41.5	55.3	8.3	63.6	...	...	...
1991		53.2	41.5	13.4	39.2	52.6	5.9	58.5	...	...	...
1992		54.3	44.0	15.5	31.1	46.5	9.4	56.0	...	...	...
1993		57.4	41.3	15.2	33.6	48.8	9.9	58.7	...	...	...
1994		56.9	43.6	13.9	33.7	47.6	8.9	56.4	...	...	...
1995		59.5	47.9	16.3	28.7	44.9	7.1	52.1	...	...	...
1996		59.7	50.3	17.6	25.1	42.7	7.0	49.7	...	...	...
1997		64.5	50.5	17.0	24.8	41.8	7.7	49.5	...	...	...
1998		64.6	47.9	14.6	29.7	44.3	7.8	52.1	...	...	...
1999		66.0	48.5	13.6	29.9	43.5	8.0	51.5	...	...	...
						(Annual growth rates)					
1991	3.4	-2.5	11.3	-5.7	-7.9	-7.3	-30.8	-10.4	5.8	15.4	2.2
1992	2.0	4.1	10.4	20.3	-17.5	-7.8	66.2	-0.4	3.0	-3.6	-0.4
1993	3.8	9.6	2.7	7.7	18.6	15.0	15.6	15.1	16.4	-0.9	4.8
1994	2.5	1.7	7.4	-7.1	2.0	-0.8	-9.4	-2.3	20.3	15.8	12.8
1995	2.2	6.8	17.5	25.2	-9.2	0.8	-14.0	-1.5	-3.1	-7.6	8.6
1996	2.3	2.7	7.7	11.2	-10.1	-2.4	0.9	-1.9	-0.4	-5.7	2.5
1997	2.5	10.8	11.2	7.0	9.5	8.5	21.9	10.4	1.4	-0.9	6.7
1998	1.9	2.1	-3.2	-12.3	22.2	8.2	3.4	7.4	4.6	-1.9	-0.4
1999	2.0	4.2	5.5	-2.9	4.9	2.3	6.9	3.0	3.5	-1.7	1.4

Source: BCRP and Fund staff estimates.

1/ Data is for metropolitan Lima only.
2/ In accordance with standard rate definitions, all rates are expressed as a percentage of the EAP, except the EAP which is a percentage of the WAP.

Table 2. Peru: Informal and Formal Employment

(In Percent of Employment)

	Formal Employment			Informal Employment 1/ 2/			
	Public	Private	Total	Independents 3/	Domestic	Firms	Total
ILO definition							
1990	15.3	36.6	51.9	37.4	5.2	5.5	48.1
1991	13.7	38.7	52.4	37.8	4.8	5.0	47.6
1992	12.3	37.0	49.3	39.4	4.9	6.4	50.7
1993	12.0	39.1	51.1	36.7	4.6	7.6	48.9
1994	10.3	41.6	51.9	37.1	4.6	6.4	48.1
1995	10.0	39.6	49.6	38.1	4.7	7.5	50.3
1996	8.4	39.7	48.1	38.7	4.2	9.0	51.9
1997	7.1	41.2	48.3	34.9	5.0	11.8	51.7
1998	8.6	44.2	52.8	30.2	5.4	11.6	47.2

Source: ILO.

	Formal Employment			Informal Employment 1/ 4/			
	Public	Private	Total	Independents 3/	Domestic	Firms	Total
Legal Definition							
1990	15.3	28.0	43.3	34.5	4.3	18.0	56.8
1991	13.7	31.1	44.8	33.7	4.0	17.5	55.2
1992	12.3	28.4	40.7	35.8	4.1	19.4	59.3
1993	12.0	34.5	46.5	30.2	3.8	19.6	53.6
1994	10.3	35.9	46.2	31.6	3.6	18.6	53.8
1995	10.0	34.4	44.4	31.1	3.8	20.6	55.5
1997	7.1	35.1	42.2	33.2	4.3	20.3	57.8

Source: GRADE.

1/ Informal sector data on employment are based on household surveys that are independent of formal employment data that is based on surveys of firms.

2/ ILO definition of informality is based on size of the firm (mainly firms with less than five employees).

3/ Independents include family-run operations.

4/ GRADE definition of informality is based on compliance with regulations.

Table 3. Peru: Real Wage Developments

Year	Formal Sector 1/							Informal Sector 1/				Real Minimum wage
	White Collar Salaries	Blue Collar Salaries	Industrial Wages	Public Sector	Large Firms	Micro-firms	Total	Inde-pendent	Micro-firms	Domestic	Total	
					(Indices)							
1990	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1991	105.8	115.4	121.7	76.3	101.0	72.2	94.0	111.1	90.9	112.0	108.9	65.4
1992	108.9	111.3	117.1	95.4	120.5	99.2	113.7	94.5	113.0	139.8	94.3	68.5
1993	126.8	110.3	114.4	88.5	106.3	80.9	101.3	103.2	94.9	129.6	99.5	53.2
1994	152.6	127.7	135.3	106.7	133.7	90.0	127.1	102.6	111.5	168.5	101.6	63.0
1995	147.9	117.9	130.2	120.4	147.6	107.3	141.0	100.5	120.2	167.6	100.0	64.5
1996	147.4	111.3	126.9	107.4	122.7	115.6	118.8	103.9	125.7	191.7	103.3	66.7
1997	149.5	110.3	126.6	139.1	159.3	193.3	152.1	89.5	188.9	384.3	92.7	117.1
1998	156.3	108.2	118.9	122.8	196.1	174.9	173.8	90.3	224.9	370.4	100.5	129.8
1999	161.8	106.4	...	...	...	...	...	...	...	...	...	...
					(Cumulative percentage change since 1990)							
1991	5.8	15.4	21.7	-23.7	1.0	-27.8	-6.0	11.1	-9.1	12.0	8.9	-34.6
1992	8.9	11.3	17.1	-4.6	20.5	-0.8	13.7	-5.5	13.0	39.8	-5.7	-31.5
1993	26.8	10.3	14.4	-11.5	6.3	-19.1	1.3	3.2	-5.1	29.6	-0.5	-46.8
1994	52.6	27.7	35.3	6.7	33.7	-10.0	27.1	2.6	11.5	68.5	1.6	-37.0
1995	47.9	17.9	30.2	20.4	47.6	7.3	41.0	0.5	20.2	67.6	0.0	-35.5
1996	47.4	11.3	26.9	7.4	22.7	15.6	18.8	3.9	25.7	91.7	3.3	-33.3
1997	49.5	10.3	26.6	39.1	59.3	93.3	52.1	-10.5	88.9	284.3	-7.3	17.1
1998	56.3	8.2	18.9	22.8	96.1	74.9	73.8	-9.7	124.9	270.4	0.5	29.8
1999	61.8	6.4										
					(Cumulative percentage change since 1994)							
1995	-3.1	-7.6	-3.8	12.8	10.4	19.2	10.9	-2.0	7.8	-0.5	-1.6	2.4
1996	-3.4	-12.9	-6.2	0.7	-8.2	28.4	-6.5	1.3	12.7	13.8	1.7	5.9
1997	-2.1	-13.7	-6.4	30.4	19.1	114.8	19.7	-12.8	69.4	128.1	-8.8	85.9
1998	2.4	-15.3	-12.1	15.1	46.7	94.3	36.7	-12.0	101.7	119.8	-1.1	106.0
1999	6.0	-16.7	...	...	...	...	...	...	...	...	...	...

Source: ILO and Central Bank.

1/ ILO definition of informality.

Table 4. Peru: Determinants of the Total Underemployment Rate 1/

Year	EAP	Ratio of Employment to WAP	Rate of Under- and Un-employment	Change in the Rate of Total Under-Employment	Contribution to change in Total Underemployment		Real GDP Growth	Real In-vestment Growth	Real Credit Growth
					Employ-ment Com-ponent	Participation Compo-nent			
	(In percent)			(In percentage points)			(In percent)		
1990	56.5	20.5	63.6	...	...	...	-5.1	8.2	-27.2
1991	53.2	22.1	58.5	-5.1	-2.8	-2.4	2.2	1.5	78.2
1992	54.3	23.9	56.0	-2.5	-3.4	0.9	-0.4	0.9	36.1
1993	57.4	23.7	58.7	2.8	0.5	2.3	4.8	11.1	41.4
1994	56.9	24.8	56.4	-2.3	-2.0	-0.4	12.8	33.7	51.4
1995	59.5	28.5	52.1	-4.4	-6.5	2.1	8.6	21.8	32.8
1996	59.7	30.0	49.7	-2.4	-2.5	0.2	2.5	-2.9	34.0
1997	64.5	32.6	49.5	-0.2	-4.3	4.1	6.7	15.3	24.8
1998	64.6	30.9	52.1	2.6	2.5	0.1	-0.4	-1.0	15.5
1999	66.0	32.0	51.5	-0.6	-1.6	1.0	1.4	-12.8	5.0
	Averages			Change with Respect to Previous Period Average			Average		
1990-94	55.7	23.0	58.6	...	...	...	2.8	11.1	36.0
1995-99	62.9	30.8	51.0	-7.7	-14.0	6.3	3.8	4.1	22.4
				Change with Respect to Last Year of Previous Period					
1990-93	55.4	22.6	59.2				0.4	5.4	32.1
1994-97	60.2	29.0	51.9	-6.8	-9.2	2.3	7.7	17.0	35.8
1998-99	65.3	31.5	51.8	2.3	1.7	0.6	0.5	-6.9	10.3

Source: BCRP and Fund Staff estimates.

1/ Over this period, staff estimates suggest an annual labor productivity growth rate of 2.5-3.5 percent.

Table 5. Peru: Demographics of the Rate of Labor Force Particpation 1/

(In percent of working age population) 2/

	1990	1991	1992	1993	1994	1995	1996	1997	1998	Averages 1990-93	Averages 1994-98
Total labor force participation	61.5	57.8	58.9	61.4	61.2	63.8	61.1	65.4	66.2	59.9	63.5
15-24 yrs	48.3	43.1	45.0	52.1	48.3	52.5	48.1	55.3	55.4	47.1	51.9
25-54 yrs	75.5	73.2	73.4	74.3	75.8	77.1	75.3	78.8	79.0	74.1	77.2
>55 yrs	39.7	35.9	35.7	33.8	37.4	39.0	38.7	41.6	41.1	36.3	39.6
Male labor force participation	76.7	72.9	75.4	77.4	77.2	78.9	75.4	78.6	79.3	75.6	77.9
15-24 yrs	56.4	48.2	52.7	60.6	55.6	60.3	53.9	61.8	60.3	54.5	58.4
25-54 yrs	94.6	95.0	94.5	94.7	96.3	95.7	94.9	95.2	95.6	94.7	95.5
>55 yrs	55.9	53.9	55.7	50.2	57.0	57.6	56.1	58.4	58.1	53.9	57.4
Female labor force participation	47.8	43.8	43.8	46.3	46.6	50.0	48.1	53.8	54.8	45.4	50.7
15-24 yrs	41.1	38.0	37.8	44.4	41.3	45.3	42.3	49.3	51.4	40.3	45.9
25-54 yrs	58.0	53.8	54.6	55.2	57.4	60.5	58.4	64.7	64.5	55.4	61.1
>55 yrs	24.8	18.3	17.4	16.9	20.4	22.0	23.4	26.7	25.5	19.4	23.6

Source: ILO.

1/ Data is for metropolitan Lima. Total, male, and female labor force particpation are in terms of working age population.

2/ Total, male, and female labor force particpation rates are in terms of working age population, all sub-categories are expressed as a percentage of the working age population in that particular cohort.

Table 6. Peru: Labor Market Comparators with Andean Community 1/

	1990	1994	1997	1990	1994	1997	1990	1994	1997	1990	1994	1997
	Participation Rate (Urban)			Employment Rate			Visible Underemployment			Unemployment Rate		
Colombia	56.5	57.0	57.6	50.2	52.2	50.6	13.8	13.0	15.1	11.1	8.3	12.1
Ecuador	52.3	55.6	56.6	49.2	51.6	51.4	1.4	1.9	2.1	6.1	7.1	9.2
Peru	61.5	61.2	65.4	56.3	55.7	59.8	13.2	13.3	14.8	8.6	8.9	8.6
Venezuela	59.7	58.9	64.4	53.5	53.9	57.6	...	...	...	10.4	8.5	10.6
	Male Particip. Rate (Urban)			Male Employment Rate			Male Underemployment Rate			Male Unemployment Rate		
Colombia	75.0	72.9	71.7	68.8	68.9	64.8	14.0	13.3	15.8	8.3	5.5	9.6
Ecuador	68.4	70.4	70.9	65.5	66.3	66.0	...	1.6	1.9	4.3	5.8	7.0
Peru	76.7	77.2	78.6	71.6	71.7	73.1	8.2	10.1	10.0	6.5	7.0	7.1
Venezuela	81.6	81.0	82.7	73.1	74.2	75.3	...	...	...	10.5	8.4	9.0
	Female Particip. Rate (Urban)			Female Employment Rate			Female Underemployment Rate			Female Unemployment Rate		
Colombia	40.2	43.3	45.4	33.9	37.8	38.4	13.5	12.5	14.2	15.6	12.5	15.4
Ecuador	37.3	41.9	43.1	33.9	38.0	37.6	...	2.4	2.5	9.1	9.3	12.7
Peru	47.8	46.6	53.8	42.3	41.1	48.1	21.2	18.7	21.6	11.5	11.9	10.5
Venezuela	37.7	36.8	46.2	33.8	33.5	39.9	...	...	...	10.3	8.8	13.6

Source: ILO.

1/ Data for Colombia and Ecuador are for major urban centers; for Peru are for Lima, and for Venezuela are national.

Table 7. Peru: Additional Labor Market Comparators with Andean Community 1/

I. Percent of Unemployed by Duration

	1990	1994	1997	1990	1994	1997
	(less than 6 months)			(more than one year)		
Colombia	53.5	59.6	50.6	28.2	23.6	27.4
Ecuador	50.0	51.6	47.7	16.6	17.0	19.8
Peru	93.1	92.9	94.8	3.2	3.0	1.4
Venezuela	59.2	65.6	57.3	24.4	26.5	35.6

II. Percentage of Employment in the Informal Sector

	1990	1994	1997
Bolivia	54.3	50.0	60.1
Colombia	...	...	...
Ecuador	49.1	49.3	47.0
Peru	48.1	48.1	51.7
Venezuela	39.4	45.7	45.6

III. Average Growth Rates 1991-98

	EAP	GDP	Total	Informal	Formal
Bolivia	5.1	4.2	5.4	7.0	3.7
Colombia	1.9	3.8	2.2	2.1	2.3
Ecuador	4.6	2.8	3.8	3.1	4.4
Peru	3.7	5.5	4.0	3.7	4.2
Venezuela	4.2	2.6	4.0	6.5	1.9

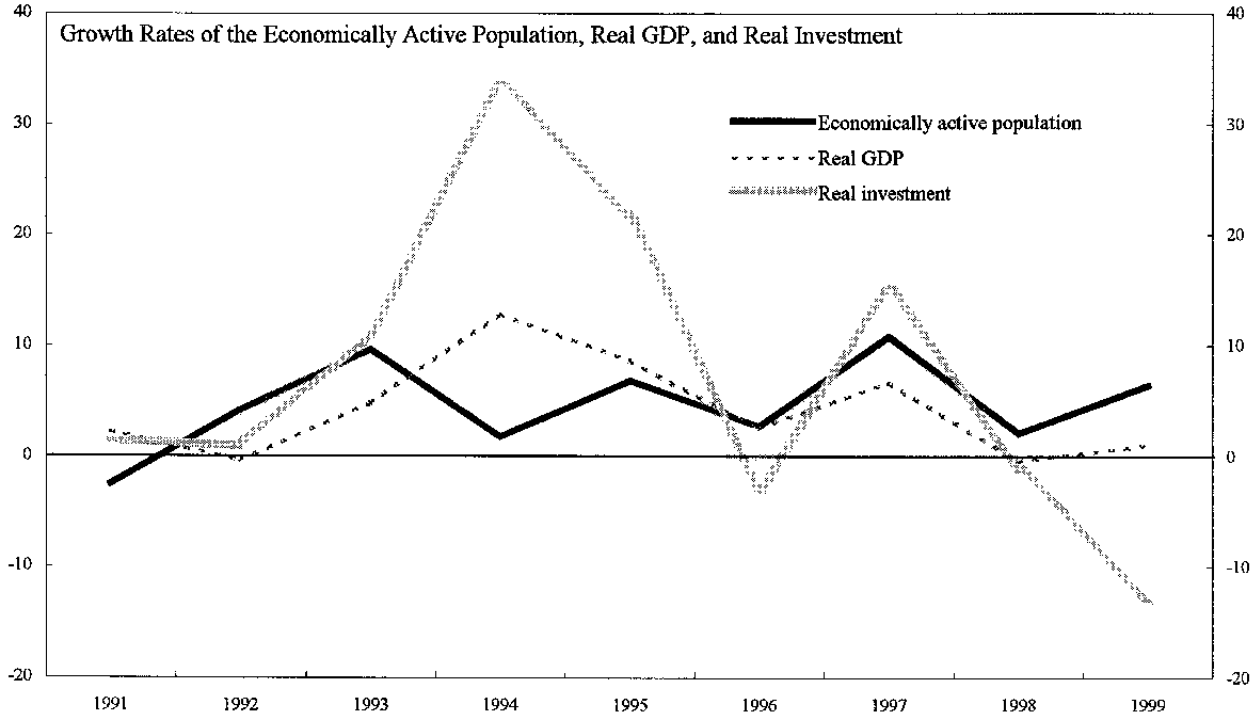
IV. Percentage of EAP with: 2/	Bolivia	Colombia	Ecuador	Peru	Venezuela
No education	3.3	1.5	1.8	...	3.7
Incomplete primary	...	8.1	6.5	4.1	...
Complete primary	21.0	14.4	24.9	7.1	57.0
Total up until and including primary	24.4	24.0	33.2	11.2	60.7
Secondary incomplete	15.2	24.1	20.0	20.2	...
Secondary complete	34.5	28.2	22.9	36.0	22.5
High-school incomplete	5.2	20.8	12.8	12.0	...
Total through high-school incomplete	79.2	97.1	88.9	79.4	83.2
High-school completed or over	20.8	3.0	11.1	20.7	16.8

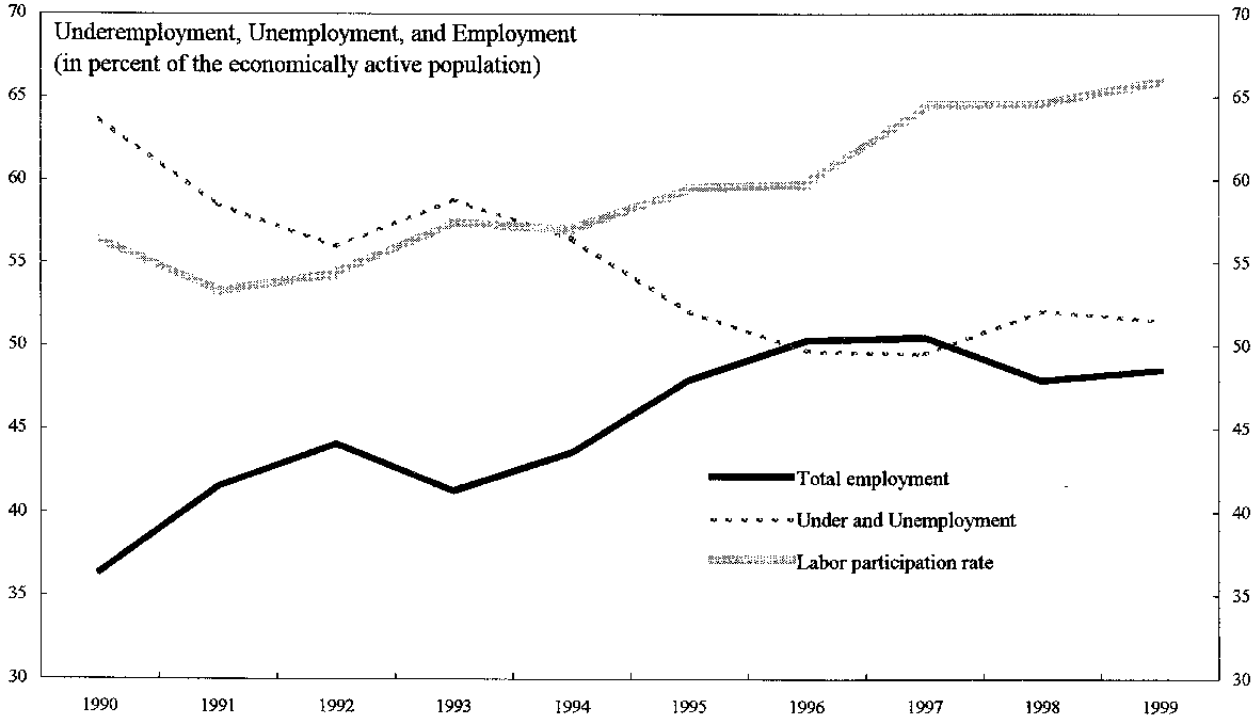
Source: ILO.

1/ Data for Colombia and Ecuador are for major urban centers; for Peru are for Lima, and for Venezuela are national.

2/ Data are for 1998, except in Bolivia where the data are for 1996.

Figure 1. Peru: Labor Market and Real Sector Indicators





Source: ILO; Central Reserve Bank of Peru; and Fund staff estimates.

List of References

Confederación Nacional de Instituciones Empresariales Privadas (CONFIEP), "*El Problema del Empleo en el Perú*," Lima, 1997.

Egger, P. and Garatz, W. "*El Mercado Laboral en los Paises Andinos: Un Compendio de Datos sobre Empleo y Salarios,*" ILO Working Paper 121, 1999.

González, J.A. "*Labor Market Flexibility in 13 Latin American Countries and the United States: Stylized Facts about Structural Relationships Between Output and Employment-Unemployment-Wages,*" Draft IBRD Working Paper, 1998.

González-Izquierdo, J. "*Hacia una Interpretación del Problema del Empleo en el Peru*", Speech by the Minister of Labor and Social Protection to the 39th Annual IDB Board of Governors Meeting, Cartegena, March 1998.

International Labor Organization. "*Latin America and the Caribbean, 1999 Labour Overview,*" ILO, Peru, 1999.

Katz, J. "*Cambios Estructurales y Evolución de la Productividad Laboral en la Industria Latinoamericano en el Período 1970-1996,*" ILO-Serie Reformas Economicas, ILO, Peru, February 1999.

Ministry of Labor and Social Protection (MTPS). "*Informe Estadistico Mensual,*" MTPS, Lima, (Various Issues).

Ministry of Labor and Social Protection (MTPS). "*La Dinámica del Desempleo en el Peru: Evidencia de Datos Panel,*" Boletín de Economía Laboral, MTPS, Lima, July 1998.

Ministry of Labor and Social Protection (MTPS). "*La Mujer en el Mercado Laboral Peruano: Capacitación y Participación Laboral,*" Boletín de Economía Laboral, MTPS, Lima, October 1997.

Ministry of Labor and Social Protection (MTPS). "*Migración y Empleo: El Caso de Lima Metropolitana,*" Boletín de Economía Laboral, MTPS, Lima, October 1998.

Ministry of Labor and Social Protection (MTPS). "*Costos Laborales, Competitividad y Empleo en el Peru,*" Boletín de Economía Laboral, MTPS, Lima, January 1999.

Ministry of Labor and Social Protection (MTPS). "*Síntesis de la Legislación Laboral,*" Ministerial Resolution 033-2000-TR, Lima, May 5, 2000.

Revilla Vergara, A.F. "*La Modernización del Sector Informal y las Cargas Tributarias y Administrativas a las Empresas en el Peru,*" ILO Working Paper 92, ILO, 1999.

Saavedra Chanduví, J. *"Crisis Real o Crisis de Expectativas? El Empleo en el Perú antes y después de las Reformas Estructurales,"* Grupo de Análisis para el Desarollo (GRADE) Working Paper 25, GRADE, Lima, November 1998.

Saavedra Chanduví, J. and Maruyama Sasaki, E. *"Estabilidad Laboral e Indeminizacion: Efectos de los Costos de Despido sobre el Funcionamiento del Mercado Laboral Peruano,"* Grupo de Análisis para el Desarollo (GRADE) Working Paper 28, GRADE, Lima, February 2000.

Saavedra Chanduví J. and Torero, M. *"Trade Liberalization, Labor Market Reforms, and Labor Demand,"* Grupo de Análisis para el Desarollo (GRADE) Unpublished manuscript, GRADE, Lima, June 2000.

Tokman, V. and Martínez D. *"Costo Laboral y Competitividad en el Sector Manufacturero de América Latina, 1990-1998,"* Revista de La CEPAL, December 1999.

Vallejos, L. and Valdívia, L. *"Productividad en el Perú: 1950-1998,"* BCRP unpublished working paper, Lima 1999.

II. Export Performance and Economic Policy in Peru[28]

25. This chapter discusses the relationship between the orientations of economic policy and the performance of Peru's exports, looking in particular at the effect on export diversification. Peru's exports exhibit a considerable concentration in primary and semi-processed primary products, mainly from mining and fishing activities, which leaves the country exposed to significant variability both in terms of export volume (especially of fish) and export prices. A recent example of Peru's exposure to exogenous shocks was the 1998 decline of total export earnings by 16 percent, due to a sharp decline in some metals prices (especially copper and gold) and the effects of the *El Niño* climatic disturbance on the volume of agriculture- and fish-related exports.

26. Peru's dependence on traditional exports has long been of concern to Peruvian policymakers, and a variety of measures aimed at reducing this dependence have been implemented over the last four decades. Traditional products still play a key role in the economy (despite efforts in the 1970s and 1980s to diversify the export base through protectionist policies), reflecting Peru's rich endowment of natural resources. Peru's experience, similar to that of many other countries, has shown that exports have generally performed better under conditions of liberal economic policies that grant exporters access to needed capital and intermediate goods, than when restrictive trade and industrial policies attempted to promote particular sectors or industries. Moreover, in order to support the growth of nontraditional exports, improving the labor skills base through better education and training is necessary to raise productivity and thus improve competitiveness.

27. The structure of this chapter is as follows: Section A examines the relationship between the policy framework and export performance from the early 1960s to the late 1980s, including policies promoting export diversification. Section B provides a similar analysis for the 1990s, while Section C considers the evolution of export diversification over the last four decades. Section D looks at the experience of other countries in using policies to promote exports, with a view to finding relevant policy implications for Peru. It also considers the question of whether a strong natural resource endowment represents a limit to export diversification. Section E summarizes the paper's conclusions.

---

[28] Prepared by Andrea Richter Hume. The provision of data and insightful comments on earlier drafts of this paper by Ms. Gladys Choy Chong and Ms. Teresa Lamas of the Central Reserve Bank of Peru are gratefully acknowledged, as is the provision of research papers by Mr. Daniel Martinez of the ILO (Lima).

A. Policy Framework and Export Performance During the 1960s to 1980s

28. ***The policy framework.***[29] Until the late 1950s, Peru pursued export-led growth, based on its rich endowment of natural resources including fish, oil, gold, copper, and other metals. In the 1960s, however, Peru began to move towards an increasingly protectionist trade regime with the goal of supporting import-substitution industrialization. The level of protection in Peru for manufacturing activities during this period was very high.[30] Initially the new strategy coincided with high rates of industrial and economic growth, including for nontraditional exports. Nevertheless, increasingly protectionist measures in the late 1960s and early 1970s led to an overprotected industrial sector and introduced severe anti-export and anti-agricultural biases into the economy. These policy-induced distortions were compounded by macroeconomic mismanagement, which led to a progressive real appreciation of the Peruvian currency.

29. ***Export performance.*** Peru's exports grew slowly for much of the 1960s and 1970s (Figure 1). For the 1962–78 period, total export growth in volume terms averaged only 1.8 percent per year. According to Paredes (1992), nontraditional exports, which started the period representing less than 5 percent of total exports, benefited somewhat from the protectionist policies of this period. They grew considerably faster than traditional exports, averaging 13.3 percent annual real growth over this period. After the bumper years of 1979 and 1980, when the total volume of exports rose 40 percent (primarily due to favorable climatic conditions affecting fishing and agriculture, as well as the boom in commodity prices which stimulated mining production), exports contracted over the following decade, at an average annual rate of 1.1 percent, both in traditional and nontraditional exports. This coincided with the period of most intensive government intervention.

---

[29] This section is based on Paredes (1992).

[30] Peru had an average tariff rate of over 60 percent for most of this period. In the short liberalization episode of the early 1980s, the average tariff rate dropped to below 40 percent still much higher than the rates prevailing in the 1950s, but rose from 1981 onwards to peak at roughly 70 percent in 1988.

B. Policy Framework and Export Performance During the 1990s

30. ***The policy framework.***[31] By 1990, the Peruvian economy was marked by large macroeconomic imbalances. The stabilization program initiated in August 1990 had the eradication of hyperinflation as its central objective. The program included the lifting of price controls, the unification and stabilization of the exchange rate, sound monetary policy, and tight fiscal policy. Wide-ranging structural reforms were introduced, including a sweeping privatization program, trade reform, and the lifting of restrictions on outward capital transfers.

31. *Trade liberalization* simplified the tariff system, which currently entails a two-level ad-valorem tariff (12 and 20 percent) applied on the c.i.f. value of imports. The average MFN tariff rate was 13.0 percent in 2000, only slightly lower than in 1994.[32] At least 84 percent of all tariff lines are subject to the 12 percent duty rate. Peru's membership in the Andean Community entails a progressive schedule of intra-pact tariff reductions, so that by 2003 tariffs will be reduced to zero. Although Peru retains the right to maintain its own external tariff, it will be under pressure to reduce its external rates further in coming years, given that trade diversion through other Andean Community nations would allow goods to be imported at lower rates in any event.

32. One area in which Peru has maintained protection during the 1990s is agriculture. *Variable specific duties* have been applied since 1991 to imports of several agricultural products. The recent fall in international commodity prices have reactivated the tax-collection aspect of the variable specific duty mechanism, and have afforded considerable protection to Peruvian producers through relatively high tariffs.[33] In early 2001, these reference prices were updated and protection levels reduced, and an automatic six-month adjustment mechanism is due to be introduced in early 2001. In 1997, an additional 5 percent *tariff surcharge* was introduced for 350 agricultural products, and in August 1999, two more lines were added and the surcharge was increased to 10 percent for selected meat products (56 items).[34] Although this protection may have helped domestic producers in the short term, by reducing competition from abroad, over the medium and long term this higher rate of protection has had deleterious effects on the competitiveness of the Peruvian agricultural sector (see below).

---

[31] Information on the recent policy framework in Peru draws heavily on the WTO's recent Trade Policy Review of Peru (2000).

[32] This falls to 12.6 percent when surcharges and variable specific duties are excluded.

[33] Based on August 1999 prices, the WTO has estimated that ad valorem equivalents for 1999 were 6 percent for rice, 12 percent for maize, 27 percent for milk and 54 percent for sugar.

[34] In January 2001, the surcharge for selected meat products was rolled back to 5 percent.

33. *Fiscal incentives* constitute an important instrument of Peru's regional, sectoral, and social policies. Established through a multitude of laws and regulations, numerous partial or complete exemptions apply to specific activities in many sectors.[35] In order to attract foreign investment, the government has offered *stability agreements* to investors, which entail a pledge by the government that the investment covered will not be affected by changes to national treatment; the tax regime in force on the date when the agreement is signed; or to the regime of free availability of foreign currency and of unrestricted remittance of profits, dividends, capital or other income received by the investor. These stability pacts were modified in mid-2000 and are now granted in exchange for a 2 percent surcharge on the general income tax rate.

34. There are no state programs in force for *export finance, insurance, or guarantees.* These services are currently supplied by the private sector at prevailing market conditions. *Export promotion activities* are shared between public and private institutions. Since 1996, government activities for export promotion have been centralized within PROMPEX and aim at expanding export markets through participation in international shows and commercial events.

35. ***Export performance.*** Export growth picked up considerably in the 1990s, averaging 9.2 percent per year in volume terms (Figure 2), but with large fluctuations (ranging from a high of 17.5 percent in 1994, to a low of 3.1 percent in 1998 resulting from the effects of El Niño on fish stocks and agriculture). With highly variable export prices (Figure 3), the value of exports has fluctuated even more significantly.[36] The 7.9 percent average growth rate of Peru's exports in dollar terms during 1990–2000 was considerably higher than the average growth rate of 5.1 percent for the major Latin American economies (Argentina, Brazil, Colombia, and Venezuela) during this period. However, it was significantly below the 12.3 percent average rate attained by Mexico, which reflected Mexico's accession to NAFTA in 1994.

36. Performance has varied considerably across Peru's export categories, although on average the volume of traditional exports grew significantly faster (10.6 percent) than did the

---

[35] Income tax benefits have included the reduction of taxable income for mining activities, in particular for reinvested profits (only recently withdrawn for future projects), as well as the reduction of the tax rate from 30 percent to 10, 5 or zero percent for enterprises in selected industries located in various departments of the Amazon region.

[36] Peru's export price index declined by nearly 5 percent during the 1990s. Except in the case of fishmeal, which represented roughly 13 percent of Peru's exports during the period 1990–2000, Peru lacks market power in its major exports.

volume of nontraditional exports (5.1 percent) during 1990–2000.[37] Among traditional products, mining exports expanded significantly, with the best performer being gold exports, which increased nearly 170 times over the decade to become the single-largest export category by 2000. Other mining products expanded rapidly as well (Table 1). Fishing also had healthy (albeit very variable) growth (10.9 percent annually), while agricultural and petroleum-related exports stagnated over the 1990s.

37. In the 1990s, mining regained its leading role in the economy, and the sector now generates nearly half of Peru's merchandise exports. Mining resurgence can be explained to a considerable degree by the restoration of internal security, which made mining areas safe for business. In addition, institutional reforms aimed at promoting private activity succeeded in attracting substantial investment to the sector (privatization in the mining sector has reached 90 percent). The General Mining Law of 1992 established a set of clear and predictable fiscal and administrative rules. In addition, the law provided for a variety of incentives that may have increased investment in this sector at the margin, but were unlikely to have been the main reason for the surge in investment. More important explanatory factors are likely to have been the unrestricted availability of foreign currency; the free remittance of profits, dividends, and other funds; the simplification of administrative procedures; and the nondiscriminatory treatment with respect to other sectors. In addition, the provision of "stability contracts" for mining activities (for 10–15 years) guaranteed across-the-board tax stability.

38. Peru has developed an important *fishing industry* based on the exploitation of its rich fishing grounds in the Pacific Ocean. Peru is the world's largest producer and exporter of fish meal and fish oil. The privatization of Pesca Peru, the main state-owned conglomerate, which began in 1994, generated substantial investment that was directed mainly towards the replacement of run-down boats, and the construction of new fishmeal processing plants. Fish-farming activities have also been developed, in particular to produce a variety of seafood such as oyster, scallop, and shrimp. New investment has also spurred exports of canned fish.

39. Due to the El Niño weather pattern, the sector's output is highly variable. The most recent downturn, in 1998, resulted in a substantial drop in catches, which in turn reduced fishing export earnings by some 60 percent. Such downturns are often followed by bountiful years, and fish exports reached a record level of US$976 million in 2000. To preserve Peru's fishing resources, the Ministry of Fisheries imposes control measures such as total allowable fishing limits; closed-end fishing seasons; fish-size limitations; and prohibited or protected zones. However, over-fishing is recognized as a serious threat to the industry, in particular for anchovy and sardines, the staple species. Fishing licenses are not based on individual

---

[37] The volume of nontraditional exports is estimated by deflating the U.S. dollar value of nontraditional exports by a trade-weighted index of the consumer prices in Peru's major trading partners.

catch quotas. As a result, once a license is granted, the incentive is to build capacity to catch as much fish as possible within the overall limits of the open fishing period.

40. Peru's agricultural sector is characterized by a dual structure: a relatively small modern sector producing high-value crops largely for export markets and a large number of subsistence farmers. Half of the area under cultivation is devoted to products mostly grown in small plots by farmers, such as coffee, cotton, maize, potatoes, rice, and sugar. There has been slow movement to date to implement structural reforms, including land titling and an adequate regulation of water usage and pricing, that would increase private sector activity in the sector.[38]

41. Moreover, the sector has retained higher tariff barriers than those applied to industrial goods. Additional protection is granted to a limited set of staple crops—maize, rice, sorghum, and sugar—as well as dairy products through the aforementioned variable specific duties. The producer subsidy equivalent (PSE) of support provided by the government for cotton, maize, sugar, wheat, and dairy products was positive over the whole period of 1991–97. Despite this protection, between 1990 and 2000, export volumes for some of these products fell dramatically: for cotton, from 17 to less than 1 thousand tons; and for sugar, from 88 to 21 thousand tons. On the other hand, coffee, Peru's principal recorded agricultural export, was not afforded protection through trade policy; nevertheless, the volume of coffee exports rose from 64 thousand tons in 1990 to 134 thousand tons in 2000. Similarly, other agricultural exports that have performed well, for example asparagus, have done so despite not having received special protection through policies.

42. *Nontraditional exports* have also exhibited a variable growth pattern during the 1990s. This is partly because some goods in this category are semi-processed versions of Peru's traditional exports. Food-related exports, for example, were the best performing subsector in the 1990s, with an average annual growth rate of 15.2 percent in value terms. However, during the El Niño year of 1998, exports in this category fell 11 percent. The same was true for fish-related nontraditional exports, which collapsed by over 30 percent during 1998–99. A more stable nontraditional export subsector is textiles (especially clothing), with an average growth of 7 percent in export value over the decade; this sector performed particularly well in 2000, with growth of 16.5 percent.

43. Since the early 1990s and the abandonment of trade measures as instruments of industrial policy, the Peruvian manufacturing sector has been largely open to international competition. Peru applies only a few nontariff barriers to manufacturing imports, although several trade measures (such as antidumping and countervailing duty investigations) have

---

[38] Delays in the adoption of a law on water pricing have maintained incentives, in the form of underpriced water, for the cultivation of irrigation-intensive crops, such as rice, in the noncoastal regions, so that downstream coastal areas receive less water; thus, resources are allocated away from more efficiently grown crops on the coast.

44. recently been taken against products competing with domestic manufactures of foodstuffs, textiles, clothing, and footwear; iron and steel; and electrical goods. Specific measures affecting industrial activities include a fiscal regime for small and medium enterprises, and incentives directed to specific zones aimed at employment creation. According to Boloña and Illescas (1997), the average effective rate of tariff protection (ERP) fell from 85 percent in 1990 to just below 15 percent in 1997. Subsectors for which estimated ERPs were above average included dairy products (38 percent), footwear (26 percent), other food products (24 percent), textiles (21 percent), and clothing (20 percent).

45. The increased exposure of Peruvian industry to import competition has induced important restructuring in manufacturing since the early 1990s. Industries such as radio and television equipment, electrical appliances and housewares, and paper and paperboard have contracted severely over the decade; in contrast, others such as pottery and china, soft drinks and mineral waters, cordage and rope, knitted and crocheted fabrics, and basic industrial chemicals grew at annual average rates of over 10 percent in volume terms.

46. Manufacturing sector export growth may have been hampered by poor competitiveness. According to a recent study by Tokman and Martinez (1999), Peru's competitiveness in the manufacturing sector has weakened during the 1990s, as the increase in the average cost of labor has exceeded the growth in productivity. As shown in Table 2, Peru's labor costs in manufacturing rose at an average annual rate of roughly 10 percent, whereas productivity only grew by 3.4 percent. This resulted in an average loss in competitiveness of 5.9 percent per year. Other major Latin American economies have fared better during the 1990s. Argentina and Chile, for example, enjoyed an average annual increase in competitiveness of 3 percent. Nevertheless, unit labor costs in Peru were still the lowest of the large Latin American economies.

C. How Diversified Have Peru's Exports Become Since the 1960s?

47. As mentioned in the introduction, the diversification of exports has been considered a key goal of economic development in Peru. As can be seen in Table 3, which shows the composition of Peru's exports at SITC two- or three-digit levels for the period 1962–99, export concentration has indeed declined over the last four decades, although not by a significant degree. Whereas in the 1960s the top ten export items accounted for over 90 percent of export earnings, by the 1990s this share had fallen to roughly 75 percent. Although there has been some increase in the number of products whose share in total exports is more than 0.5 percent (from fewer than 20 in the 1960s and 1970s to around 25 during the 1990s), the top three export items still represented over 40 percent of export earnings in the 1990s.

48. Table 4 shows which of Peru's exports have had the most dynamic growth (been the least "traditional") in recent years, by ranking them according to their traditionality index.[39] According to this indicator, gold has been Peru's least traditional export, and cotton its most traditional. In the case of the former, the export share has shot up from roughly 1 percent in 1985, to 20 percent in 1999. In Table 5, a few additional measures of export diversification are shown. The Hirschman-Lorenz Index (HLX), for example, measures the concentration of exports.[40] As a higher value of HLX implies a more concentrated export structure, the HLX for Peru shows that although there have been years when the HLX has fallen considerably, on the whole it was not much lower in the late 1990s than in the early 1960s.

49. An interesting example of diversification within an export category is presented by the experience of textile-related exports, which comprise exports of raw cotton, textiles and clothing (Figure 4). In the upper panel the dramatic reduction in raw cotton's share in total exports is shown, from roughly 17 percent in 1962 to less than 1 percent in 1999. Beginning in the early 1970s, the share of textile products and in particular clothing increased significantly. The lower panel of Figure 4 shows how concentrated the growth in clothing's export share has been in total exports during the 1990s, when more market-oriented policies were pursued.

50. The analysis presented in this section indicates that although Peru's exports underwent some structural change between the 1960s and the 1990s, considering broader classifications of export goods shows that the composition of Peru's merchandise exports has remained remarkably stable during the 1990s (Table 6). Although there is considerable variation from year to year, reflecting in particular the biological variations of the fish stock, traditional products still account for roughly two-thirds of Peru's total exports. The share of

---

[39] Using a methodology presented in Guttiérez de Piñeres and Ferrantino (2000), a "traditionality index" T_i is calculated for Peru's exports. The value of T_i is the mean of the cumulative export function C_{it} for each commodity between the beginning-of-period year t_0 and the end-of-period year t_1:

$$T_i = \frac{\sum_{i,t=t_0}^{t_1} C_{it}}{t_1 - t_0 - 1}, \quad \text{where} \quad C_{it} = \frac{\sum_{i,t=t_0}^{t} e_{it}}{\sum_{i,t=t_0}^{t_1} e_{it}} \quad \text{and } e_{it} \text{ is the export value of good } i \text{ in year } t.$$

Commodities for which exports were concentrated earlier in the time period have a higher value of T.

[40] The Hirschman-Lorenz index (HLX) equals the sum of the squares of each export product's share in total exports.

mining has crept up to nearly half of total exports, while petroleum and agricultural exports have fallen in weight. Given the continued importance of traditional goods for Peru's exports, the fact that the prices of its major export commodities (agricultural, mineral, and fishing products) have not exhibited perfect positive correlation provides some natural hedging for its export earnings.

51. Peru's experience with export diversification has been fairly similar to that of other resource-rich Latin American economies. Gutiérrez de Piñeres and Ferrantino (2000) find that the Latin American experience has been characterized more by a diversification *among* primary-products exports than an increase in manufacturing exports, reflecting the rich endowment of natural resources of Latin American economies. Moreover they find that this has occurred regardless of whether import substitution or more liberal, nonprotectionist economic policies have been followed, which implies that the potential gains from policies deliberately aimed at bringing about diversification may be limited, as such policies would only accelerate trends which are taking place anyway, and would likely be less efficient in selecting new export sectors than an undirected market mechanism.

D. Can Other Policies be Effectively Used for Promoting Export Growth and Export Diversification?

52. Given the historic predominance of primary products in Peru's exports, the promotion of manufactured exports has never been far from the policy debate. The objective of export diversification has been a common one for resource-rich developing countries, given their generalized belief that economic growth has been held back by excess specialization in primary products. This has increased their exposure to price and income volatility, with attendant effects on economic growth. There had also been earlier concerns that the terms-of-trade of primary exporters would decline over time (e.g. Prebisch, 1950). Another major reason for the policy focus on promoting manufactured exports is the role they are seen to play in stimulating overall economic growth, especially based on the East Asian experience.

53. However, the success of the East Asian economies in attaining export-led growth provides lessons regarding the importance of policies that enhance the economic environment in which enterprises operate, rather than in policies aimed at promoting particular industries.[41] The Asian experience shows that low tariff rates, in particular for capital goods and intermediate inputs, the absence of trade quotas, and easy entrance for firms into export-related activities were important factors in supporting competitiveness of exporters in international markets. Open economies had greater access to new technologies and were less likely to misallocate labor and capital to inefficient industries.

---

[41] This section is based on Radelet et al. (1997).

54. The policy conclusions that emerge from the East Asian experience suggest that an open trade regime is the key element to successful export promotion. Having an open trade regime that facilitates the transfer of technology, for example through foreign direct investment, may be an important tool for diversification into activities which are based on technology that can both be easily transferred internationally and absorbed by the domestic labor force. However, as argued by Mayer (1997), appropriate trade policies are not the only necessary condition for a country to export manufactures. It is also necessary that the resource endowments of the country concerned should give it the comparative advantage in manufacturing. In practice, this resource condition may be the far more important of the two.[42]

55. Even if technology could be easily transferred internationally, many developing countries would not be able to use it effectively because of the relatively low level of skills of the labor force, i.e. insufficient absorptive capacity. Thus, an optimal diversification policy would strengthen efforts to raise the level of formal education and training of the labor force to obtain a blend of skills that is best suited to a country's endowment of natural resources. This means that natural-resource rich developing countries may wish to give greater importance to indigenous research and development activities in their agricultural sector with a view to developing commercially applicable techniques, however without striving for technological autarky.

E. Concluding Remarks

56. If diversification *across* major export sectors alone had been the goal of policymakers in Peru, the continuing large weight of traditional products such as fish and minerals in the export base of the 1990s would lead to the conclusion that they had failed in their endeavors. But if one considers the diversification that has occurred *within* traditional exports, a picture of dependence on the country's endowment of natural resources remains, but with some natural hedging due to the nonperfect correlation of international price movements for agricultural, mineral, and fishing products.

57. The ability to diversify the export base depends crucially on the level of human capital. Without a well-educated labor force that can absorb new technologies and can increase productivity growth, a further attempt at diversification (for example by increasing manufacturing exports) through fiscal incentives and distortionary protectionist policies, will

---

[42] As argued by Wood and Berge (1994), too much of the advice that has been given to Latin America and to Africa, and too much of the disappointment about the poor results of implementing this advice, has been based on the false premise that East Asian trade policies will yield East Asian trade outcomes, regardless of resource endowments.

prove to be quite expensive and extremely inefficient. In order to attain greater export diversification, Peru would need to strengthen education and training on a sustained basis, which in time would provide the conditions for an expanded economic and export base with an internationally competitive industrial sector.

58. Finally, the institutional environment in which business is conducted, and its effects on the competitiveness of the Peruvian economy, should not be forgotten. Although Peru's relatively open trade regime helps foster a fairly competitive environment, the state of domestic institutions that affect market conditions—weak regulatory agencies, tax system instability, a weak judiciary, and poor protection of property rights—all contribute to raising the costs of doing business in Peru both directly (in terms of time and effort in taking care of administrative aspects of business) as well as indirectly, in the form of increased uncertainty surrounding business ventures.

Table 1. Peru: Growth Rates of Exports, 1991-2000

(In percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Average
Total exports (volume)	**8.1**	**4.8**	**3.6**	**17.5**	**4.0**	**5.1**	**13.2**	**3.1**	**13.9**	**10.5**	**9.2**
Traditional exports (volume)	15.0	9.6	4.3	20.1	3.5	1.2	5.2	5.8	21.9	10.9	10.6
Mining											
Copper	15.3	6.0	2.3	8.3	8.0	13.7	5.4	-3.0	7.1	-1.7	6.7
Tin	52.5	65.6	20.8	63.9	-11.5	15.4	38.5	-12.0	12.0	30.1	27.8
Iron	-28.9	14.8	54.8	33.3	-4.7	-32.8	-7.3	21.1	-17.4	5.3	0.6
Gold	1571.5	185.3	-50.0	51.0	35.1	23.5	0.6	111.8	34.2	-1.8	76.8
Silver	5.0	4.8	-0.6	8.0	12.8	7.8	-3.3	6.3	37.9	10.2	9.4
Steel	26.2	-14.1	15.3	-8.3	9.3	2.0	5.5	2.7	2.1	9.7	5.0
Zinc	-15.8	0.2	20.7	1.1	-6.2	18.4	8.8	0.7	1.9	11.4	4.0
Petroleum and derivatives	4.5	8.6	-9.1	-12.5	24.3	17.8	21.5	4.0	-32.4	-6.9	0.6
Agriculture											
Cotton	35.5	-67.2	-70.7	0.0	268.2	43.2	17.2	-88.2	-43.8	200.0	-18.4
Sugar	-16.8	-41.8	-2.3	67.3	-7.2	27.7	-3.9	-24.2	-64.7	-1.4	-14.8
Coffee	12.3	-13.2	-22.3	40.2	54.0	-4.7	-2.2	18.1	25.7	-8.1	8.5
Fishing	4.0	-13.5	65.7	48.1	-17.0	-11.8	18.5	-67.7	147.4	65.5	10.9
Nontraditional exports (volume) 1/	-7.9	-7.9	2.0	11.5	5.2	15.0	30.2	-2.0	-4.0	9.6	5.1
Nontraditional exports (value, in U.S. dollars)											
Food processing	25.3	11.6	11.9	20.9	22.0	17.4	5.1	-11.2	34.2	4.9	15.2
Textile	7.6	-12.5	-5.5	22.0	11.3	3.1	26.0	-6.9	7.8	16.5	7.0
Fishing	-9.2	-3.8	46.9	46.3	11.5	-5.2	30.9	-19.0	-15.3	3.3	7.0
Metal-mechanical	-6.1	8.4	-3.4	-5.9	0.3	22.5	16.5	83.3	-27.9	16.8	8.3
Chemical	-3.0	-14.5	0.1	37.1	30.4	25.7	23.5	-5.1	-0.6	6.0	9.7
Sidero-metallurgical	-17.3	0.1	-1.8	-2.6	21.1	-2.6	65.5	-3.5	-12.3	7.5	3.9
Nonmetallic mierals	16.7	25.3	10.1	17.1	2.0	24.3	37.6	0.4	-0.4	-9.9	12.8
Other	-14.0	14.5	6.5	-1.8	55.1	30.6	49.9	7.3	-44.1	6.6	8.0

Sources: Central Reserve Bank of Peru, and Fund staff estimates.

1/ Estimated by using the trade-weighted external consumer price index of Peru's trade partners as the deflator.

Table 2. Selected Latin American Countries: Changes in Manufacturing Sector Competitiveness

(Average annual percentage change)

	Unit Labor Cost	Productivity	Competitiveness	
			With Structural Change 1/	Without Structural Change 2/
Argentina, 1991-97	5.9	9.4	3.3	2.7
Brazil, 1989-1997	9.0	5.3	-3.4	-3.7
Chile, 1990-97	4.7	7.8	3.0	...
Colombia, 1988-1997	8.8	3.5	-4.9	-4.7
Peru, 1989-1997	9.9	3.4	-5.9	-7.8

Source: ILO.

1/ This refers to the actual growth in competitiveness.

2/ This estimates what competitiveness growth would have been if the sectoral structure of the not changed between the beginning and the end of the observation period.

Table 3. Peru: Composition of Exports, 1962-1999

(In percent of total)

SITC Category	1962-1971	1972-1981	1982-1991	1992-1995	1996	1997	1998	1999
031 Fish: fresh and simply preserved	0.4	1.0	1.6	2.7	2.8	3.1	3.1	2.5
032 Fish: tinned, prepared, etc.	0.5	1.1	0.7	0.6	0.6	0.9	0.7	0.7
004 Cereals	0.0	0.2	0.1	0.2	0.1	0.2	0.2	0.2
005 Fruits and vegetables	0.3	0.4	1.2	3.0	3.4	3.1	3.4	4.5
006 Sugar	7.3	6.2	0.7	0.6	0.6	0.5	0.5	0.2
071 Coffee	4.0	5.6	4.6	3.3	3.6	5.7	4.9	4.5
072 Cocoa	0.0	0.2	0.7	0.3	0.3	0.3	0.3	0.3
008 Fish meal	22.2	10.8	8.0	13.7	13.5	14.9	6.7	9.5
262 Wool and animal hair	1.1	1.0	0.6	0.4	0.3	0.2	0.3	0.6
263 Cotton	9.9	3.5	1.3	0.3	0.5	0.5	0.1	0.0
266 Synthetic fibre	0.0	0.5	1.1	0.9	0.4	0.6	0.4	0.3
276 Crude minerals	0.1	0.3	0.1	0.1	0.1	0.2	0.2	0.2
281 Iron ore	6.5	3.8	1.1	2.0	1.4	1.1	1.6	1.1
283 Nonferreous base metals	9.7	13.6	15.6	12.0	11.5	11.6	10.3	10.3
285 Silver and platinum	0.0	0.0	0.8	0.4	0.4	0.3	0.2	0.0
028 Other nonferrous metals	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1
291 Crude animal material	0.1	0.1	0.2	0.1	0.5	0.4	0.2	0.2
292 Crude vegetable material	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.3
331 Crude oil	0.8	5.1	3.9	0.6	3.8	3.5	2.1	2.3
332 Petroleum products	0.4	2.0	8.8	4.3	2.4	2.3	2.1	1.9
041 Animal oils and fats	2.7	1.0	0.3	1.0	1.2	1.4	0.3	1.2
051 Organic chemicals	0.1	0.4	0.7	0.7	0.8	0.8	1.0	0.9
053 Paints	0.0	0.0	0.3	0.4	0.7	0.6	0.4	0.5
055 Soaps, etc.	0.1	0.1	0.2	0.4	0.4	0.4	0.5	0.5
059 Chemicals	0.0	0.2	0.1	0.1	0.1	0.4	0.3	0.2
061 Leather, skins, etc.	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
651 Textile yarn and thread	0.0	0.8	2.7	2.0	1.4	1.3	1.3	1.0
653 Noncotton textiles, woven	0.0	0.1	0.7	0.6	0.5	0.5	0.5	0.4
655 Special textiles, etc.	0.0	0.1	0.1	0.5	0.1	0.1	0.1	0.1
656 Textile products	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1
065 Other SITC 65 (tapestry, etc.)	0.0	0.8	1.4	0.6	0.6	0.8	0.8	0.4
066 Cement, glass products, etc.	0.1	0.4	0.3	0.5	0.5	0.5	0.7	0.6
067 Iron and iron products	0.0	0.2	0.1	0.2	0.2	0.4	0.5	0.7
681 Silver and platinum	3.2	4.3	3.5	2.1	2.0	1.8	3.4	3.0
682 Copper	20.5	19.7	18.3	19.4	17.1	15.8	13.3	12.2
685 Lead	5.9	7.8	7.0	4.1	4.4	3.4	3.6	1.1
686 Zinc	1.7	2.5	3.8	3.2	3.1	3.2	3.3	3.6
687 Tin	0.0	0.1	0.8	1.5	1.8	1.9	2.0	0.3
068 Other nonferrous metals	0.8	0.4	0.2	0.1	0.1	0.2	0.2	0.1
693 Nonelectrical wire production	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0
698 Metal manufactures	0.0	0.1	0.4	0.5	0.1	0.0	0.1	0.1
069 Other SITC 69 (metal products)	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.2
071 Other SITC 71 (machinery and equipment)	0.0	0.3	0.4	0.4	0.4	0.3	0.6	0.5
723 Electrical distribution machines	0.0	0.1	0.3	0.1	0.0	0.1	0.3	0.1
735 Boats and ships	0.0	0.5	0.2	0.0	0.0	0.0	0.1	0.0

Table 3. Peru: Composition of Exports, 1962-1999
(In percent of total)

SITC Category	1962-1971	1972-1981	1982-1991	1992-1995	1996	1997	1998	1999
084 Clothing	0.0	0.6	2.0	3.6	4.2	4.7	5.7	7.0
893 Plastic articles	0.0	0.2	0.0	0.1	0.1	0.1	0.2	0.3
897 Gold, jewelery, etc.	0.0	0.3	1.5	1.7	2.1	1.9	2.5	1.0
089 Other SITC 89 (manufactured goods, art, etc.)	0.0	0.2	0.1	0.2	0.2	0.2	0.5	0.4
097 Gold	0.0	0.6	1.3	8.0	9.4	7.2	15.7	20.1
Subtotal	99.2	98.2	98.8	98.3	98.2	97.9	95.9	96.2
Other	0.8	1.8	1.2	1.7	1.8	2.1	4.1	3.8
Total fromTARS (w. some adjustments)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median					0.49	0.52	0.50	0.47
Standard deviation					3.5	3.5	3.3	3.8
Max					17.1	15.8	15.7	20.1
Number of items > 0.5 percent of total					24	25	26	24
Number of items to get 50 percent of total					4	5	5	4
Number of items to get 75 percent of total					11	11	12	10
Share in total exports of:								
Top 3 items	55	47	46	45	42	42	39	43
Top 6 items	77	69	65	62	60	60	57	64
Top 10 items	92	84	79	75	74	73	70	77

Source: UN Trade Statistics (TARS). Calculations based on current dollar prices.

Table 4. Peru: Exports Ranked by Traditionality Index, 1962-99

Export Product Ranked by Traditionality Index	Cumulative Exports 1962-99		Tradition-		Share in Exports (Actual prices)			
	In mn. of US$	At 1985 Price	ality Index 1/	Variance	1962	1975	1985	1999
Cotton	1,859	3,178	0.76	0.06	17.2	4.2	1.6	0.0
Sugar	1,917	3,268	0.72	0.08	9.6	20.9	0.8	0.2
Other nonferrous metals	251	358	0.63	0.08	0.7	0.3	0.2	0.1
Iron ore	2,219	3,385	0.61	0.08	5.8	3.9	1.6	1.1
Animal oils and fats	899	1,310	0.56	0.06	2.3	2.7	0.2	1.2
Wool and animal hair	642	778	0.54	0.08	1.6	0.8	0.8	0.6
Boats and ships	179	237	0.53	0.17	0.1	0.8	0.1	0.0
Leather, skins, etc.	106	120	0.51	0.12	0.1	0.1	0.1	0.0
Silver, platinum	3,094	4,031	0.49	0.07	3.5	5.7	4.3	3.0
Fish meal	11,427	13,486	0.49	0.07	17.7	11.8	3.6	9.5
Lead	5,833	4,367	0.45	0.10	5.1	7.0	6.1	1.1
Crude minerals	3,749	4,835	0.43	0.10	1.2	0.9	7.6	2.3
Coffee	191	176	0.42	0.10	0.2	0.3	0.1	0.2
Crude oil	4,638	5,981	0.42	0.08	4.3	3.5	4.4	4.5
Other SITC 69 (metal products)	113	121	0.42	0.14	0.0	0.0	0.2	0.1
Plastic articles	18,489	14,482	0.41	0.09	16.3	12.9	14.5	12.2
Textile products	108	115	0.41	0.12	0.1	0.0	0.1	0.2
Copper	837	604	0.40	0.10	0.9	0.3	0.5	0.7
Fish: tinned, prepared, etc.	143	149	0.39	0.14	0.0	0.0	0.0	0.3
Zinc	13,218	13,915	0.39	0.10	7.9	15.7	17.7	10.3
Nonferrous base metals	3,144	2,806	0.39	0.09	1.3	3.4	3.4	3.6
Crude vegetable material	309	358	0.37	0.08	0.7	0.2	0.3	0.3
Chemicals	187	188	0.37	0.11	0.0	0.0	0.0	0.2
Cement, glass products, etc.	898	902	0.35	0.13	0.0	0.1	1.5	0.4
Other SITC 65 (tapestry, etc.)	442	494	0.34	0.10	0.0	0.1	0.2	0.6
Other SITC 89 (manufactured goods, art, etc.	78	77	0.34	0.09	0.0	0.0	0.1	0.1
Other nonferrous metals	95	92	0.33	0.16	0.0	0.0	0.0	0.0
Petroleum products	4,504	6,262	0.33	0.11	1.1	0.6	13.2	1.9
Nonelectrical wire production	199	202	0.32	0.08	0.1	0.1	0.2	0.4
Other SITC 71 (machinery and equipment)	152	147	0.32	0.12	0.0	0.0	0.3	0.1
Cereals	358	363	0.32	0.09	0.0	0.2	0.4	0.5
Electrical distribution machines	693	626	0.31	0.12	0.0	0.1	1.2	0.3
Organic chemicals	125	117	0.31	0.07	0.1	0.1	0.1	0.2
Synthetic fiber	657	631	0.30	0.09	0.1	0.2	0.5	0.9
Iron and iron products	1,735	1,671	0.30	0.12	0.1	0.1	2.5	1.0
Soaps, etc.	183	201	0.30	0.08	0.0	0.2	0.2	0.2
Crude animal material	253	239	0.29	0.13	0.0	0.0	0.3	0.1
Textile yarn and thread	303	284	0.29	0.08	0.1	0.0	0.1	0.5
Metal manufactures	151	144	0.28	0.11	0.0	0.0	0.1	0.1
Special textiles, etc.	390	518	0.28	0.11	0.0	0.0	0.8	0.3
Cocoa	244	252	0.27	0.07	0.0	0.0	0.2	0.7
Fish: fresh, and simply preserved	1,959	1,354	0.26	0.08	0.6	0.8	2.4	2.5
Noncotton textiles, woven	490	460	0.26	0.11	0.0	0.1	0.4	0.4
Gold, jewelery, etc.	1,313	1,201	0.24	0.09	0.0	0.1	1.5	1.0
Fruits and vegetables	374	439	0.24	0.13	0.0	0.1	0.5	0.0

Table 4. Peru: Exports Ranked by Traditionality Index, 1962-99

Export Product Ranked by Traditionality Index	Cumulative Exports 1962-99		Tradition-ality		Share in Exports (Actual prices)			
	In mn. of US$	At 1985 Price	Index 1/	Variance	1962	1975	1985	1999
Silver and platinum	1,937	1,845	0.21	0.07	0.4	0.3	0.7	4.5
Clothing	307	264	0.20	0.08	0.0	0.0	0.2	0.5
Paints	2,796	2,555	0.19	0.07	0.0	0.1	0.7	7.0
Tin	910	1,661	0.16	0.08	0.0	0.0	0.9	0.3
Gold	5,166	5,034	0.12	0.05	0.0	0.0	1.3	20.1
Subtotal/average	95,099	101,247	0.37	0.10	99.1	99.0	98.5	96.2
Other items	1,898	2,026	0.36	0.08	0.9	1.0	1.5	3.8
Total from TARS (with some adjustment)	96,997	103,273	0.41	0.08	100.0	100.0	100.0	100.0

Source: UN Trade Statistics (TARS).

Table 5. Peru: Additional Indicators of Export Diversification, 1962-99 (SITC3 digit level)

Year	Exports (in millions of US$)		HL Index 1/	Number of Items With an Export Share Larger than 0.5 percent of Total Exports
	Actual Prices	1985 Prices		
1962	565	1,717	33.66	18
1963	566	1,643	33.75	17
1964	699	1,810	33.27	15
1965	708	1,697	34.72	15
1966	815	1,830	37.36	15
1967	796	1,915	37.17	14
1968	904	2,128	37.45	14
1969	949	1,965	39.77	14
1970	1,120	2,269	39.24	13
1971	948	2,061	38.45	12
1972	992	2,085	35.39	14
1973	1,180	1,785	37.09	16
1974	1,571	1,773	33.17	14
1975	1,419	1,718	33.74	16
1976	1,392	1,688	30.71	18
1977	1,770	2,058	31.57	19
1978	2,021	2,234	30.74	21
1979	3,729	3,379	29.55	23
1980	3,803	3,154	31.29	25
1981	2,865	2,475	29.72	28
1982	3,201	2,926	28.05	25
1983	2,759	2,485	29.93	23
1984	3,074	2,758	28.96	23
1985	3,288	3,288	29.76	24
1986	2,473	2,699	30.10	23
1987	2,840	2,848	31.57	27
1988	2,940	2,716	34.99	24
1989	3,388	2,848	32.29	25
1990	3,456	2,853	31.38	23
1991	3,425	2,926	30.72	24
1992	3,722	3,344	30.44	26
1993	3,449	3,323	29.94	25
1994	4,621	4,064	29.52	24
1995	5,816	4,766	30.17	23
1996	6,168	5,452	28.62	24
1997	6,927	6,074	28.24	25
1998	5,871	5,649	27.08	26
1999	5,932	5,905	30.02	24

Source: U.N. trade data (TARS), Central Reserve Bank of Peru, and staff calculations and estimates.

1/ This series is relatively unchanged if SITC2 level data are used.

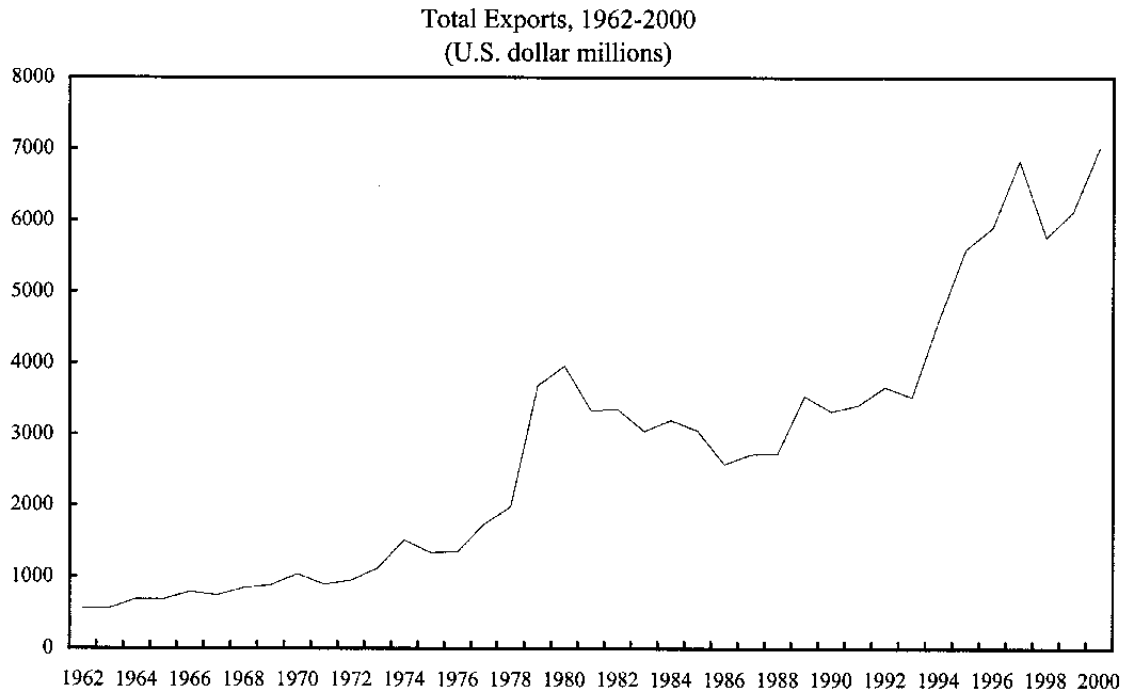
Table 6. Peru: Composition of Exports, 1990-2000

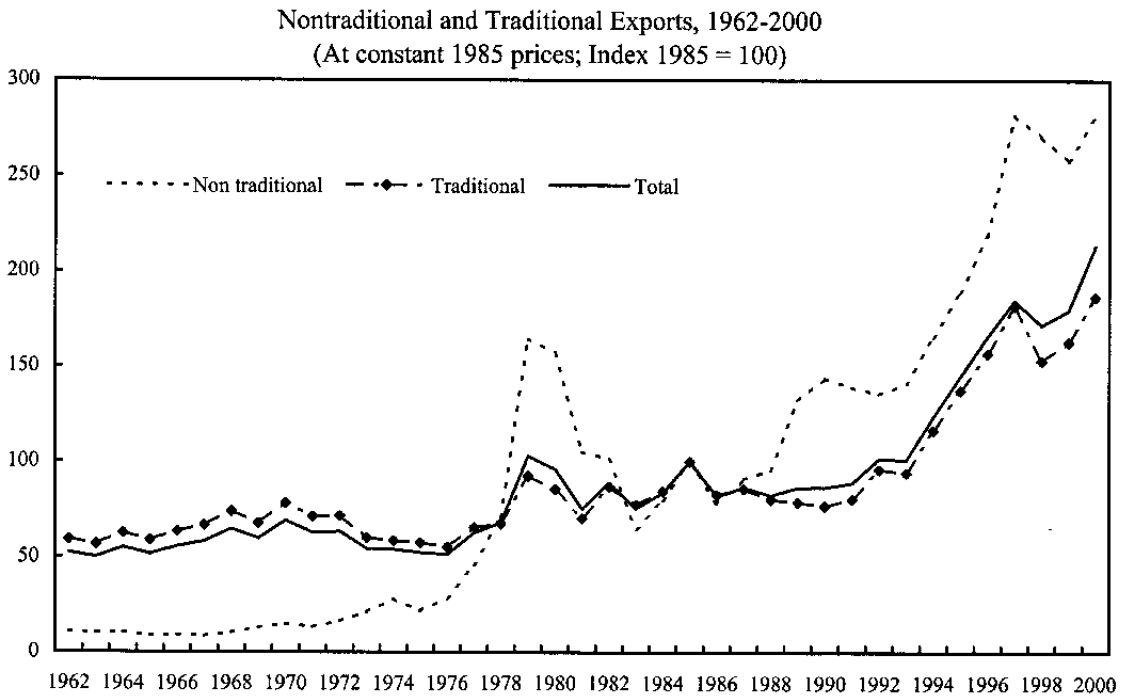
(In percent)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Traditional	**68.0**	**69.3**	**70.0**	**65.9**	**68.8**	**71.4**	**71.4**	**68.9**	**64.3**	**67.7**	**68.6**
Mining	44.6	45.1	49.7	41.9	42.9	46.8	45.0	40.0	47.7	49.2	45.5
Petroleum and derivatives	7.8	5.0	5.4	5.2	3.6	4.3	6.0	5.5	3.9	4.0	5.8
Agriculture	5.3	5.9	3.0	2.4	5.4	6.2	5.0	6.9	5.6	4.6	3.4
Fishing	10.4	13.3	11.9	16.5	17.0	14.1	15.4	16.5	7.1	9.8	13.9
Nontraditional	**32.0**	**30.7**	**30.0**	**34.1**	**31.2**	**28.6**	**28.6**	**31.1**	**35.7**	**32.3**	**31.4**
Food related	3.6	4.4	4.6	5.3	4.9	4.9	5.5	5.0	5.3	6.6	6.1
Textile	11.0	11.5	9.4	9.2	8.6	7.9	7.7	8.4	9.3	9.4	9.5
Fishing	3.2	2.9	2.6	3.9	4.4	4.0	3.6	4.1	3.9	3.1	2.8
Metal-mechanical	1.3	1.2	1.2	1.2	0.9	0.7	0.8	0.8	1.8	1.2	1.3
Chemical	2.7	2.5	2.0	2.1	2.2	2.4	2.8	3.0	3.4	3.2	2.9
Sidero-metallurgical	4.6	3.7	3.4	3.5	2.6	2.6	2.4	3.4	3.9	3.2	3.0
Nonmetallic mineral	0.5	0.5	0.6	0.7	0.6	0.5	0.6	0.8	0.9	0.8	0.7
Other	5.2	4.1	6.3	8.1	7.0	5.6	5.1	5.7	7.1	4.7	5.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Central Reserve Bank of Peru; Fund staff calculations.

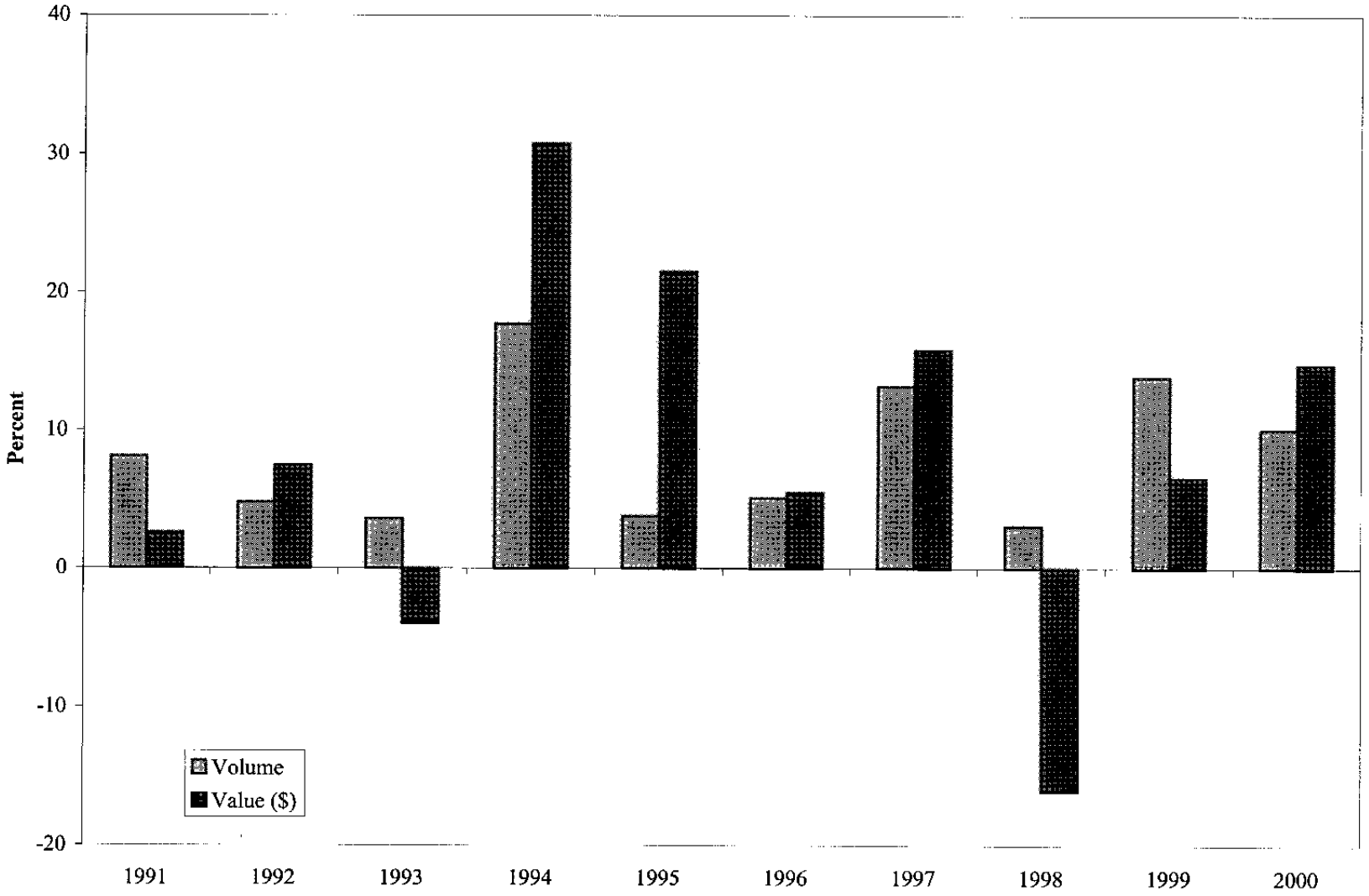
Figure 1. Peru: Exports, 1962-2000





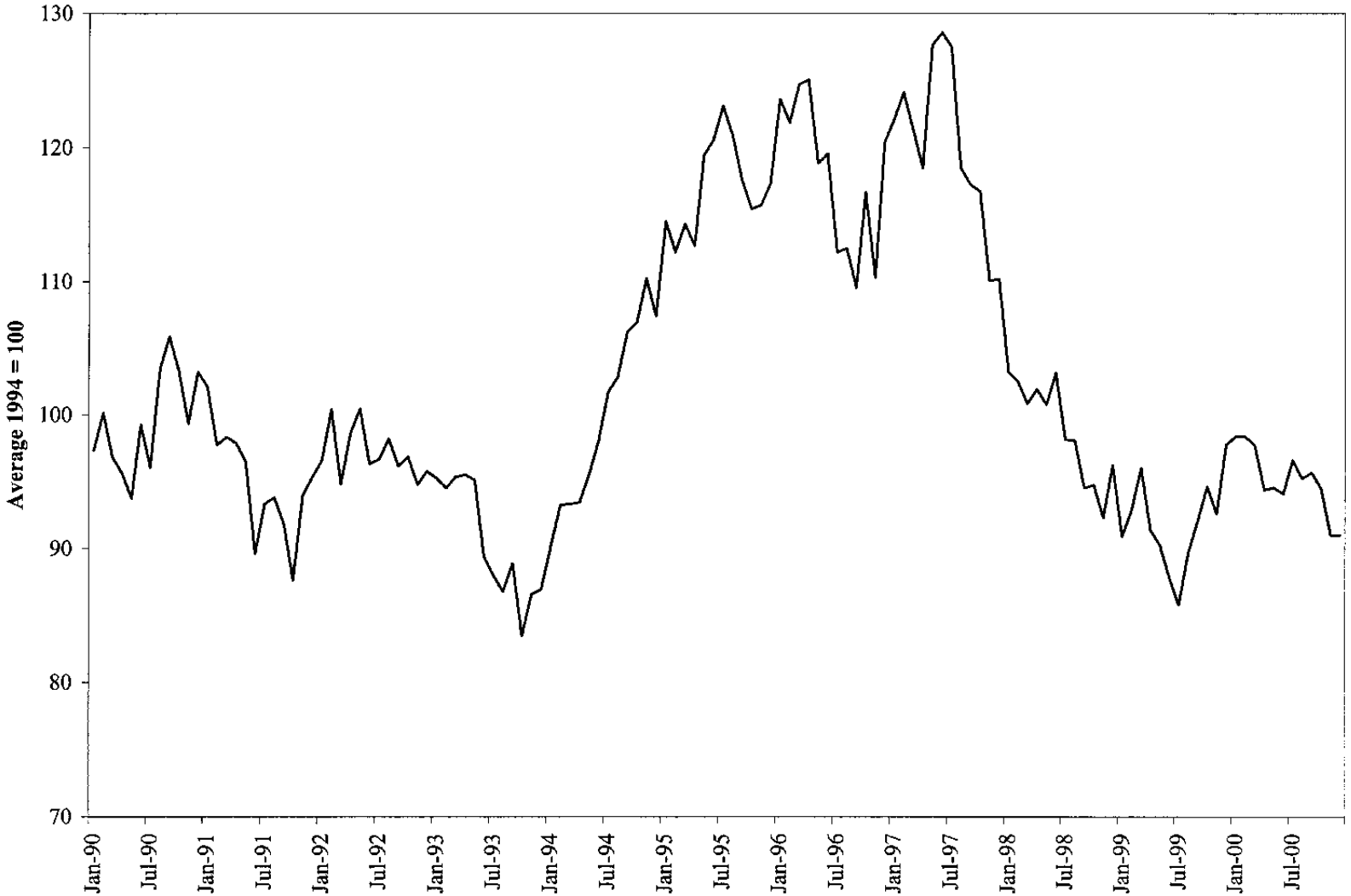
Sources: UN Trade Database, Central Reserve Bank of Peru, and staff estimates. The definition of nontraditional exports mirrors the definition used by CBRP, and includes metal extraction products, gold, petroleum products, fish meal, cotton, sugar, and coffee.

Figure 2. Peru: Annual Export Growth, 1991-2000



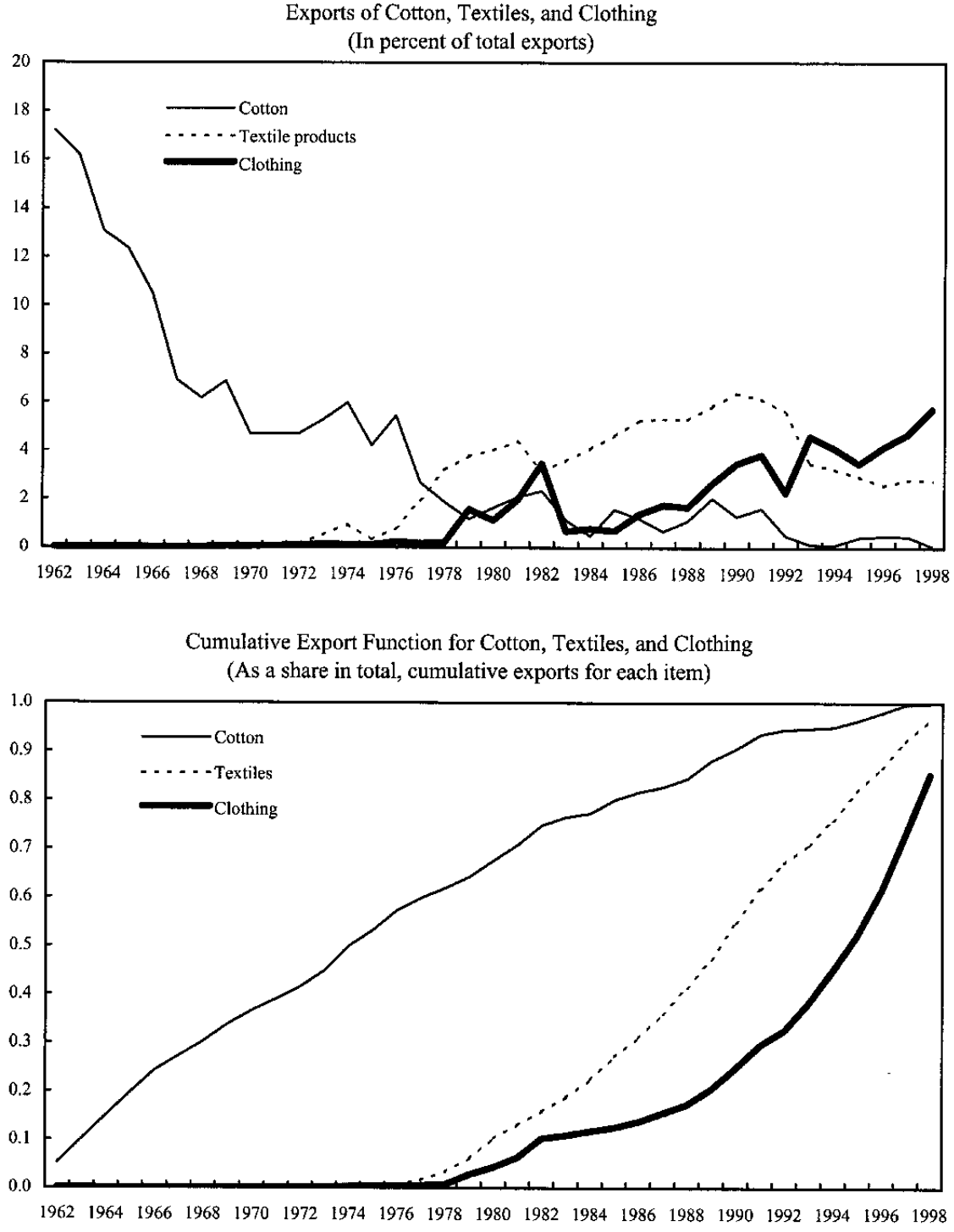
Sources: BCRP, and Fund staff estimates.

Figure 3. Peru: Export Price Index, 1990-2000



Sources: BCRP, and Fund staff estimates.

Figure 4. Peru: Exports of Textile Sector Products, 1962-98



Sources: TARS, and staff calculations.

List of References

Boloña, Carlos and J. Illescas (1997), "*Políticas Arancelarias en el Perú, 1980–1997,*" Instituto de Economía de Libre Mercado, Lima.

Guttiérrez de Pinieres, Sheila Amin and M. Ferrnatino (2000), "*Export Dynamics and Economic Growth in Latin America: A Comparative Perspective*," Brookfield: Ashgate Publishing Company.

Mayer, Jörg (March 1997), "*Is having a Natural-Resource Rich Endowment Detrimental to Export Diversification?,*" UNCTAD Discussion Paper No. 124.

Paredes, Carlos (1992), *"Trade policy, industrialization and productivity growth: The case of Peru,"* Brookings Discussion Papers in International Economics, No. 94.

Prebisch, Raul (1950), "*The Economic Development of Latin America and Its Principal Problems*," New York: United Nations.

Radelet, Steven, J. Sachs and J. Lee (November 1997), *"Economic Growth in Asia,"* Development Discussion Paper No. 609, Harvard Institute for International Development.

Tokman, Viktor and D. Martinez (December 1999), *"Costo Laboral y Competitividad en el Sector Manufacturero de América Latina, 1990–1998,"* Revista de la CEPAL 69.

Wood, Adrian and K. Berge (1994). *"Exporting Manufactures: Trade Policies or Human Resources?,"* Institute of Development Studies (Sussex University), Working Paper No. 4.

World Trade Organization (April 2000), *"Trade Policy Review – Peru: Report by the Secretariat,"* WT/TPR/S/69.

III. The Fiscal Burden of the Peruvian Pension System [43]

A. Introduction

59. The reforms of the Peruvian pension system during the 1990's addressed some of the most difficult issues of social security reform, namely rationalizing benefits and increasing contributions of all workers in the private sector and most workers in the public sector, thereby substantially improving the financial position of the pension system. However, there remain pending issues in the agenda of pension reform that entail limiting the expected fiscal costs of the reformed system and ensuring that current arrangements under the private pension funds provide adequate retirement income to participants.

60. This paper compares the expected benefits under the reformed public pay-as-you-go (PAYG) system and the private pension funds (AFP) and estimates the fiscal cost of current pension arrangements through 2050. The results point to an increase in public outlays for pensions, from 2.5 percent of GDP in 1999 to around 3–3.5 percent of GDP over this period. To limit the fiscal costs, the paper proposes closing the public system to new entrants. It also recommends improving transparency in the public system and reducing costs and increasing contributions in the private system to improve expected replacement rates.

B. Background

61. Reform of the Peruvian pension system during the early 1990's included the introduction of a fully-funded, privately-administered pension system, an increase in contribution rates to the public PAYG system from 3 to 11 percent (the same rate as in the private funds); an increase in the retirement age from 60 for men and 55 for women to 65 for both; and the introduction of a minimum period of contribution (20 years) to qualify for a pension in the public pension system (PPS). In 1997, to provide additional incentives for individuals to join the private system and discourage participation in the public system, the contribution rate to the PPS was increased to 13 percent. New entrants to the labor market can join the PPS but they have to exercise this option within 10 days of employment; if they fail to do so, they are enrolled in a private fund. Workers can leave the PPS for an AFP at any point, but once they do so they cannot return to the PPS. To compensate individuals who switch to the AFPs for pension rights they had accumulated while in the PPS, the government

---

[43] Prepared by Juan Pablo Córdoba. This research would not have been possible without the valuable assistance of Ms. Aida Amézaga, former head of the Oficina de Normalización Previsional (ONP). I would also like to thank Mr. Jorge Estrella of the Central Reserve Bank of Peru for his insights.

authorized the issuance of recognition bonds.[44] These bonds are nontransferable, zero-coupon bonds, indexed to the CPI and redeemable at retirement.[45]

62. The PPS has two components: the general PAYG system, which is administered by ONP, and the special public-sector regimes that include the military and police, teachers and the Cédula Viva (CV) pension plans.[46] The PAYG system has approximately 500,000 contributors, 250,000 old-age pensioners and 100,000 survivors' and disability pensioners. The Defense and Police systems have 135,000 contributors and 92,200 pensioners, the teachers' system has 200,000 contributors and 150,000 pensioners, and the civil servants' CV has 55,000 contributors and 265,000 pensioners.[47]

63. The public sector has two pension reserve funds funded by privatization receipts: the Consolidated Reserve Fund (FCR), which was created to back ONP liabilities and currently holds US$2.3 billion in assets; and the National Public Savings Fund (FONAHPU), whose original objective was to provide supplemental pensions to all low-income pensioners in the PPS, currently holds US$0.4 billion in deposits and an estimated US$1 billion of stock in the country's largest electricity plant.[48] The creation of this fund further complicates the

---

[44] To receive a bond, one must file a claim, which is then verified by the Office of Pension Regularization (ONP). If the claim is found to be valid, then ONP issues a recognition bond that is held by the claimant's AFP. Claims for bonds can be filed at any point in time after leaving the PPS.

[45] The face value of the recognition bond is computed by multiplying the number of monthly contributions made under the PPS by the average of the last 12 monthly contributions and a coefficient of 0.1813, with a cap of S/. 60,000, all as of 1992; from that date onward, all values are indexed by inflation. The face value reflects a compromise between recognizing fully accrued benefits, which would have been too costly, and the benefits accumulated through the historical rate of return, which, due to hyperinflation, had been negative for a number of years. Also, the lack of records on past contributions required an objective formula based on available information.

[46] Only judges and magistrates with over 10 years of service at the time the CV was finally closed in the early 1990s are still eligible for it. The system had been closed for nonmilitary civil servants since 1974, but it was reopened during the 1980s and a substantial number of workers gained access to it.

[47] Of the 135,000 contributors to the Defense and Police systems, 110,000 belong to the police as only officers in the defense sector participate in the pension program. The teachers' system has been administered by ONP since January 2000 and receives separate budgetary transfers to cover the teachers' pensions.

[48] In practice the fund only pays a supplement to those pensioners that applied to FONAHPU before the program was closed to new entrants in the first half of 2000.

administration of the pension system, as there are no explicit rules to administer the fund and benefits are determined on a discretionary basis. Currently, the supplemental pension is S/. 600 per year (approximately US$170), which is paid semi-annually and is financed from the fund's income.

64. The private pension system consists of 4 AFPs and has 2.2 million affiliated workers. Few people are receiving pensions in the private pension system given that the system is relatively young. Total assets under administration amount to S/. 8.4 billion (4.8 percent of GDP) and the average real return on the system's assets was 5.3 percent per year between 1993 and 2000 (7 percent through end-1999).

C. Demographic Transition

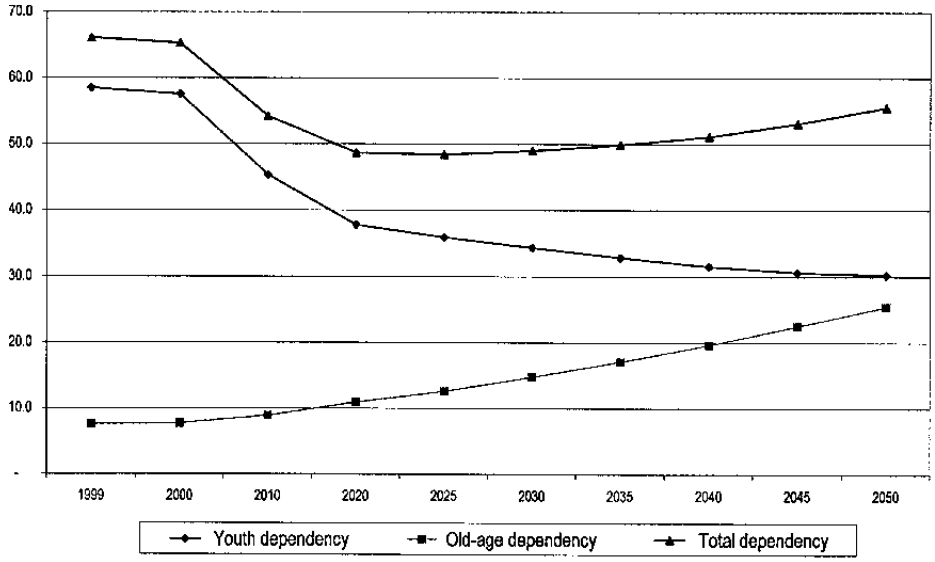
65. The Peruvian population is relatively young, and the demographics are favorable for the pension system well into this century. The median age is 22, the old-age dependency ratio is only 7 percent, and the youth dependency ratio is 55 percent.[49] The population projections that are available for Peru anticipate that the working age population will grow by more than the total population through 2025.[50] This will result in a decline in total dependency through 2025, at which time total dependency will follow an upward trend, led by the rapid increase in old age dependency, but will still remain below the level in 2000. For the public pension system, this means that under current enrollment rules, the rapid growth in the economically active population until 2025 could reduce the pressure on the system's finances, moderating the transition costs of the PPS.

---

[49] Old-age dependency is defined as the ratio of persons over 65 to persons aged 15–64; youth dependency is defined as the ratio of persons under 15 to persons aged 15–64; and total dependency is the sum of youth and old-age dependency.

[50] Two sets of population projections are available: those of the National Institute of Information and Statistics INEI (www.inei.gob.pe) and those published by the US Census Bureau in its International Database Base (IDB) (www.census.gov). In the simulations we try to replicate the population projections of INEI through 2025 and extend them to 2050 using the parameters in the U.S. Census projections.

Figure 1. Peru-Estimated Dependency Ratios 2000-2050
INEI vs. US Census Poluation Projections



Source: ONP and Fund staff estimates.

D. Public Versus Private System Pensions

The PPS is more attractive than the AFPs for low-income individuals, but enrollment in the PPS is relatively low owing to the short (ten-day) time limit for subscribing to the PPS (which must be done in person) and the poor availability of information regarding pension system choice. The private system is more attractive for middle- and upper-income individuals owing to the presence of a cap on public pensions. Under the ONP system, a person making contributions for 20 years is entitled to a pension equivalent to 50 percent of the average salary of the last 5 years. For each additional year of contributions, the replacement rate increases by 4 percentage points up to a maximum of 100 percent, and a cap of S/. 807 per month (about US$230). The reference period used to calculate the initial pension is shortened to 4 and 3 years for contribution periods of 25 and 30 or more years, respectively. Thus, a person contributing more than 32 years can expect to receive close to 100 percent of his/her final salary, provided the resulting pension is below the cap.[51] These replacement rates are in sharp contrast with those obtained in the private pension system.

[51] The fact that pensions are based on the last few years of contributions and not the entire work history creates an incentive to declare very low wages until the last 3 to 5 years prior to retirement, which increases the pension fund deficit. This incentive is reinforced by the fact that contributions to the national health insurance system (ESSALUD)—an additional 9 percent of wages—are also reduced by under-declaring wages, without any loss of benefits.

Table 1 presents a summary of indicative replacement rates in the AFPs for given average real returns and years of contribution. As can be seen, replacement rates of 50 percent or more in the private system are only likely for individuals making contributions for more than 35 years and obtaining real rates of return above 7 percent (which, while being the average real rate of return of the AFPs through 1999, are unlikely to be sustained over the long run).

Table 1. Perú: Private Pension System
Estimated Replacement Rates for an 8 percent Contribution[52]
By Rates of Return and Years of Contribution

Years	4	5	6	7	8
20	12	14	17	23	24
25	15	18	23	28	34
30	18	23	29	36	45
35	21	27	35	46	59
40	24	32	42	57	76

Source: ONP and Fund staff estimates.

66. The average person in ONP retires with 22 years of contributions. If this person were affiliated with an AFP, and assuming an average annual real rate of return of 7 percent, the expected replacement rate would be 26 percent of the last wage. While in the public system, this individual would retire with a replacement rate of 58 percent.[53, 54] Thus, for individuals

[52] We use 8 percentage points of the contribution to the AFPs since this is the portion that actually goes to build the retirement account (the other 3–4 percentage points are spent on disability and survivors' insurance and administrative costs). Real wages are assumed to grow at 4 percent per annum, which is the assumption in the authorities' medium-term projections.

[53] The results are sensitive to the assumption on real wage growth but the differential returns between the public and the private system remain large. For a sensitivity analysis with a reasonable range of real rates of wage growth, see Appendix I.

[54] The higher contribution rate in the public system explains only one fifth of the difference in replacement rates. The differential in contribution rates and replacement rates, however,

(continued)

not affected by the cap on pensions, the PPS would provide higher pensions over the AFPs, especially if real returns are expected to remain in the 4–7 percent range over the long-run.[55] Nevertheless, at this point in time, new enrollment in the PPS is low; currently, only some 7,000 new workers join ONP per year compared with some 250,000 that join the AFPs. However, affiliations to the ONP system could grow over time as the benefits of the ONP system over the AFPs for lower-income workers become apparent.

E. Estimating the Fiscal Costs of the Public Pension System

67. The fiscal cost of the public pension system has three components: a) the recognition bonds that have been issued or will be issued to workers who have switched to the private system; b) the additional unfunded liabilities accrued under the ONP system of both current and future workers; and c) the budget costs of the special public pension regimes.

68. It is assumed that some additional recognition bonds will be issued for workers who have already moved to the private system. The value of outstanding recognition bonds as of end-1999 was S/. 8.8 billion (5 percent of GDP) and it is estimated that amortization of these bonds will peak around 2010 at 0.2 percent of GDP. However, when the reforms took place in the early 1990's, the authorities had estimated to issue twice as many bonds as the 375,000 they have issued so far. We assume that an additional 187,500 bonds are eventually issued, and thus, amortization payments will peak in 2010 at about 0.3 percent of GDP. [56] This amount is relatively small and by itself unlikely to pose undue pressure on the fiscal finances.

69. In Table 2 we present the expected costs to the budget of ONP through 2050. Budget transfers to ONP amounted to S/. 1.2 billion (0.6 percent of GDP) in 2000.[57] To estimate future budget transfers to ONP, the baseline simulation assumes that there are no new affiliations to ONP after 2001 and that the system maintains its current contributors until they

---

makes it difficult for individuals to compare the benefits of the two systems, except for those with relatively low incomes (who would prefer the PPS) or relatively high incomes (for whom the cap in the PPS implies the AFP pension would be better).

[55] With a 10-percent contribution rate for the retirement fund, the replacement rates would be between 29 and 47 percent for 20 years of contributions and between 35 and 61 percent for 25 years of contribution (see Appendix I).

[56] As mentioned earlier, there is no deadline to request the bond and there is no benefit in doing so before retirement, given that they are nontransferable and nonnegotiable. Were they to be negotiable securities, individuals who expect higher real returns would have an incentive to request the bonds and have their AFPs discount them in the secondary market.

[57] These transfers exclude the transfers for the special regimes that ONP administers on behalf of the budget. These costs are included directly in the budget.

retire.[58] Real wage growth is assumed to be 4 percent per annum. Given that currently the ONP system has no explicit indexation rule, we assume that pensions would be indexed to inflation. Under these assumptions, by 2010 budget transfers to ONP would be around 0.3 percent of GDP higher than their current levels. ONP deficits would remain at around 0.9 percent of GDP until 2040 and gradually decrease afterwards.

Table 2. Peru-Estimated Fiscal Costs of the ONP
Baseline Simulation 1999–2050

(in percent of GDP)

	1999	2000	2010	2020	2030	2040	2050
Total	0.5	0.6	1.0	0.9	0.8	0.9	0.8
ONP 1/	0.4	0.5	0.7	0.7	0.8	0.9	0.8
Bonds 2/	0.1	0.1	0.3	0.2	0.0	0.0	0.0

Source: ONP, DGPN, MEF and Fund staff estimates.

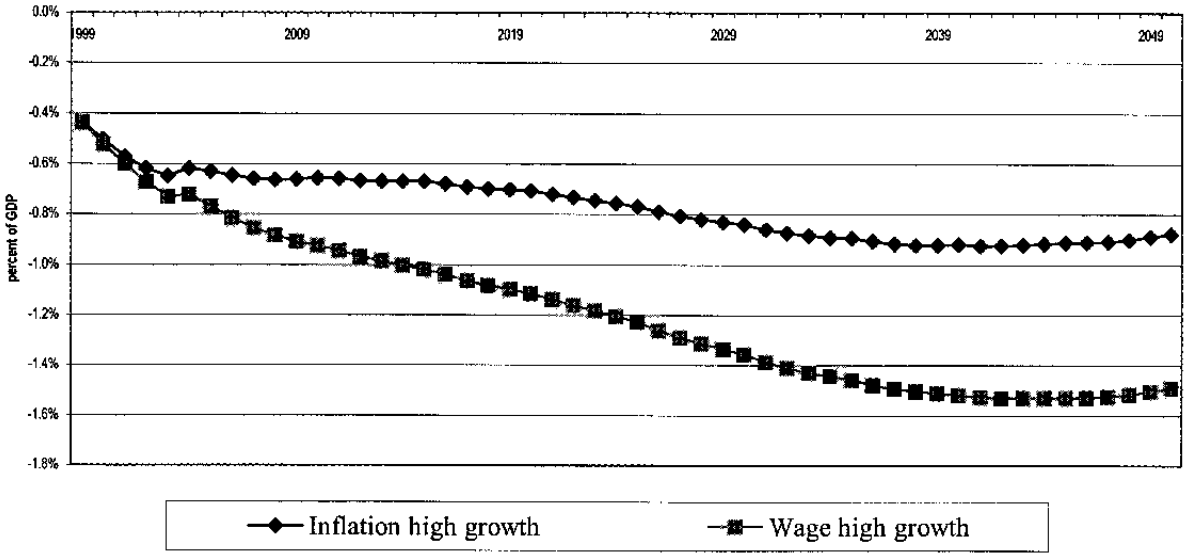
1/ Deficits before government transfers.
2/ Considers bonds issued to date plus half of the projected remaining stock of pending bond requests.

70. These costs are relatively low compared with pension system costs in other countries. This is due to the low coverage of the public pension system in Peru (15 percent of the labor force) and also to the fact that the reforms in the 1990s took place before the system had matured. However, these low costs are also due to the fact that average benefit is currently very low (75 percent of the minimum wage)[59], and is maintained at this level given our assumption of indexing to inflation; thus resulting in the expected decline in replacement rates (from 83 percent to 48 percent of the average wage of affiliated workers). This option may not be politically sustainable in the medium-term and some form of realignment of pensions may need to take place in the future to better reflect the evolution of average wages in the economy. In fact, the creation of FONAHPU in 1997 to pay a supplemental pension is evidence that pensions are perceived to be too low.

[58] If some workers continue to join ONP, this would marginally dampen the short-term deficits but would increase the present value of ONP liabilities.

[59] The minimum wage is S/. 410 per month (US$117).

Figure 2: Peru - ONP Balance 2000-2050
Alternative Indexation Rules



Source: ONP and Fund staff estimates.

71. To illustrate the possible effect of such realignment, in Figure 2 we present an alternative simulation with pensions indexed to the growth rate of average wages. The ONP deficit would be on average almost 40 percent higher throughout the simulation period and would peak at 1.5 percent of GDP in 2040 under wage indexation, as opposed to 0.9 percent under inflation indexation.

72. Despite the relatively low benefit offered in the ONP system, benefits are high relative to contribution histories and, given that it is still legally open to new entrants, it may end up attracting more workers than assumed in the baseline simulation. Increasing affiliation would improve ONP balances in the short-run but the accrued liabilities would be higher, as would be the expected long-term deficits.[60] Given that the ONP system is actuarially unbalanced, the authorities are correct in discouraging affiliation in order to contain as much as possible the system's fiscal costs. Nevertheless, maintaining obstacles to join ONP and differential contribution rates is not a first-best solution. Rather, the system should be closed to new entrants and further adjustments to the benefit rule for existing contributors should be considered.

---

[60] In a simulation with affiliations to ONP constant as a share of the labor force, the expected deficits are on average 20 percent lower for the first 50 years due to the long demographic transition in Peru. However, the accrued liabilities of the system by 2050 would be 3 times higher than under our baseline simulation.

73. To complete the assessment of the expected fiscal costs of the PPS, we need to establish the future pattern of outlays for the special public sector regimes that are paid directly from the budget. Unfortunately, public information about these regimes is scant and there is no information on the average age and wage of beneficiaries, nor are there estimates of accrued benefits for these systems.[61] Furthermore, there is no public information on the operations of the pension funds of the military and police, nor are there publicly available guidelines to determine pension benefits for these sectors.

74. As a working hypothesis, we assume that current budget payments for all the special public sector regimes remain constant at about 2 percent of GDP over the next 10–20 years. Given that there are still contributors under the CV, it is likely that these payments will remain at current levels, or even increase in the next 10–20 years and decline afterwards. One would expect however, that payments for the special regimes would decline earlier than for ONP payments, because the average age of beneficiaries must be higher under the former. Under these assumptions, the estimated fiscal cost of the PPS will likely increase from 2.5 percent of GDP in 1999 to around 3–3.5 percent of GDP over the next few decades. Although this increase is relatively small by international standards, the authorities will still need to plan ahead to accommodate this additional spending.

F. Conclusions and Recommendations

75. In order to improve the functioning of the Peruvian pension system, enhance transparency and limit future fiscal costs, the authorities should consider the following reform options.

76. *In the Public Pension System:*

a. Close the PAYG to new entrants. Given the authorities' desire to discourage participation in the ONP system for new entrants and the relatively small benefits that keeping it open will provide in terms of smoothing the transition costs to a fully-funded system, the ONP system should be closed. This would be a more transparent policy than the cumbersome procedures used today to discourage affiliation. It would also eliminate the confusion in the system regarding the competition of ONP with the AFPs. ONP staff are considering a reform proposal that would transform the ONP system to a system of notional accounts, whereby all individuals under 59 years of age would switch to an AFP and would be given a recognition bond for accrued benefits and would earn interest on their notional

[61] For the CV regime, eligible public sector workers contribute only 6 percent of their wages, and are eligible for a pension equivalent to 50 percent of their last wage after only 15 years of service (12 years for women) with no minimum retirement age. After 20 years of service the replacement rate increases to 2/3 of the last wage and with 25 years of service or more, the replacement rate is 100 percent.

account balances until retirement. This reform would be an important first step, as it would effectively close the current system and have the added benefit of preventing any further accrual of public liabilities from this system. Setting the cut-off age somewhat lower—at age 50, for example—could serve to limit opposition to the proposal from individuals close to retirement. However, the proposed reform within ONP would make the transition costs larger over the next 10–20 years, as contributions to ONP would be reduced and thus transfers from the budget would need to be increased accordingly (by an estimated 0.3 percent of GDP).[62] [63]

b. *Improve transparency of the PPS.* An explicit indexation rule for ONP pensions should be established (preferably inflation indexation, to contain the fiscal cost). Also, information on the pension system of the Military and Police should be made public, including the result of an independent audit of their pension funds. Similarly, an actuarial study of benefits accrued under Cédula Viva and other public pension regimes should be prepared and the amount of these liabilities should be published on an annual basis. All the special regimes should be closed to new entrants.

c. *Merge FONAHPU with the FCR.* FONAHPU should be merged with the FCR and the supplemental pensions should be integrated into general pension benefits. This would enhance transparency, improve equity (as new low-income pensioners do not benefit from the funds), and make rules about future pension income more predictable to present and future pensioners.

77. *In the Private Pension System*

a. *Increase contributions to the AFPs.* Currently only 8 percent of wages is used to build the pension fund. At this rate, for historic real interest rates and contribution histories, the expected replacement rate will be relatively low—around 30 percent of the last wage. The contribution rate has been kept 2 percentage points below that of the ONP to encourage individuals to join the AFPs. If the ONP system is closed, this incentive is no longer needed. The contribution rate should be increased by at least 2 percentage points.

b. *Reduce administrative costs.* It is argued that administrative costs of the AFPs are high (3 percentage points of the 11 percent contribution rate). However, these costs include the premium for disability and survivors insurance. On the other hand, as a share of assets under management, the 3 percentage points of the contribution rate are relatively high, but

---

[62] The proposal would also introduce a universal minimum pension benefit which currently only benefits ONP contributors. The costs of this benefit need to be estimated and rules governing the minimum pension carefully designed before any move to generalize this benefit takes place.

[63] To reduce costs, the authorities could consider modifying the benefit formula in order to reduce the minimum replacement rate from 50 to 25 percent for example, which would make expected benefits better match current contributions.

will decline as the system matures.[64] After reviewing current charges for the insurance premia, the base for the administrative fee could be changed to a percentage of assets under management and the rate could be set in a range that is in line with general market practice. Nevertheless, perhaps the highest savings to the system could be obtained by consolidating collections and information management. If only one firm, instead of four, develops and administers the necessary information systems for collections and control of benefits, and the funds specialize in asset management, substantial savings could be obtained for the system and pensioners.

c. *Issue negotiable recognition bonds.* Currently, recognition bonds are nonnegotiable, and thus, beneficiaries and AFPs have no incentive to submit requests for issuance of the bonds. If bonds are negotiable, a market for these bonds could be developed and participants could take advantage of market conditions to improve returns on their pension savings. Also, as most beneficiaries that have not requested their bonds would do so, it would help quantify the fiscal cost of the transition.

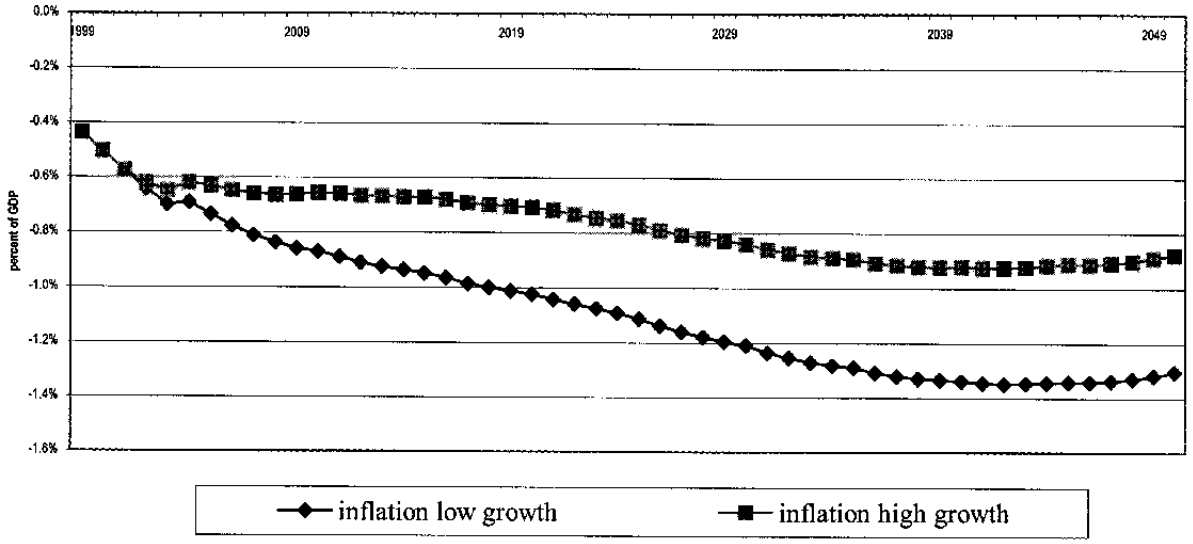
[64] Many private pension systems have used a percentage of the affiliates' wages because it helps finance the relatively high start-up costs of the system, as the assets under management during the first few years tend to be small.

Appendix I. Sensitivity Analysis

Figure 1 presents two simulation results: the base case scenario, which is presented in text, is a high-growth scenario consistent with the authorities' medium-term outlook of sustained 6 percent real GDP growth and real wage growth of 4 percent per annum. We also present a low-growth scenario, in which the economy grows only 2 percent per annum and real wages remain constant in real terms. Due to the fact that the real growth of pension liabilities is determined by the demographics of the ONP system, and given the assumption of inflation indexation, ONP deficits would be on average some 30 percent higher under the low growth simulation than in the high growth case. Nonetheless, even under the low growth simulation, the net increase in ONP deficits is moderate and the deficit peaks at only 1.3 percent of GDP in 2040.

We also present a sensitivity analysis of the replacement rates for the AFPs under alternative wage growth assumptions and contribution rates. Although these results are more standard, they illustrate that even under plausible assumptions, the ONP system remains highly attractive in terms of replacement rates, especially for those individuals not subject to the cap on pensions. Table 1 presents replacement rates for alternative real wage growth rates for the current 8 percent contribution rate and Table 2 for a 10 percent contribution rate.

Figure 1: Peru - ONP Balance 2000-2050
Alternative Growth Assumptions



Source: ONP and Fund staff estimates.

Table 1 - Estimated Replacement Rates in AFP under 8% Contribution 1/

Real wage growth 4%

Years	Real Rate of Return (percent) 4	5	6	7	8
20	12	14	17	23	24
25	15	18	23	28	34
30	18	23	29	36	45
35	21	27	35	46	59
40	24	32	42	57	76

Real wage growth 3%

Years	Real Rate of Return (percent) 4	5	6	7	8
20	13	16	19	23	27
25	17	21	26	32	39
30	21	26	33	42	54
35	25	32	42	55	73
40	29	39	53	71	97

Real wage growth 2%

Years	Real Rate of Return (percent) 4	5	6	7	8
20	15	17	21	25	30
25	19	24	29	36	45
30	24	31	39	50	64
35	30	39	52	68	90
40	36	49	66	91	125

Real wage growth 1%

Years	Real Rate of Return (percent) 4	5	6	7	8
20	16	19	23	28	34
25	22	27	34	42	52
30	28	36	47	60	78
35	36	48	64	85	113
40	45	62	85	117	163

Real wage growth 0%

Years	Real Rate of Return (percent) 4	5	6	7	8
20	18	22	26	32	38
25	25	31	39	49	61
30	34	44	56	73	94
35	44	59	79	106	143
40	57	79	110	154	215

Sources: ONP and Fund staff estimates.

1/ For comparison, the average replacement rate for an individual contributing 22 yers in the public PAYG system is 58 percent.

Table 2 - Estimated Replacement Rates in AFP under 10% Contribution 1/

Real wage growth 4%

	Real Rate of Return (percent)				
Years	4	5	6	7	8
20	15	18	21	29	30
25	19	23	28	35	42
30	23	28	36	45	57
35	26	34	44	57	74
40	30	40	53	71	95

Real wage growth 3%

	Real Rate of Return (percent)				
Years	4	5	6	7	8
20	16	20	24	33	34
25	21	26	32	39	49
30	26	33	42	53	67
35	31	40	53	69	91
40	36	49	66	89	121

Real wage growth 2%

	Real Rate of Return (percent)				
Years	4	5	6	7	8
20	18	22	26	37	38
25	24	30	37	45	56
30	30	39	49	63	80
35	37	49	64	85	113
40	45	61	83	114	156

Real wage growth 1%

	Real Rate of Return (percent)				
Years	4	5	6	7	8
20	20	24	29	41	42
25	27	34	42	52	65
30	36	46	59	75	97
35	45	60	80	106	141
40	56	77	106	147	204

Real wage growth 0%

	Real Rate of Return (percent)				
Years	4	5	6	7	8
20	22	27	33	47	48
25	31	39	49	61	76
30	42	54	70	91	118
35	55	74	99	133	179
40	71	99	138	192	269

Sources: ONP, and Fund staff estimates.

1/ For comparison, the average replacement rate for an individual contributing 22 years in the public PAYG system is 58 percet.

IV. The Design and Challenge of Monetary Policy in Peru[65]

78. In the last decade, Peru has adopted significant financial reform. It privatized public banks, adopted Basle-consistent prudential standards, enacted a new central banking law, embraced universal banking, fostered a competitive financial system, strengthened banking supervision, and introduced special legislation for the stock market and pension system. These sweeping changes have fundamentally altered the conduct of monetary policy since the early 1990s. This chapter discusses monetary policy in this new environment.

79. The first section outlines the design of monetary policy in the post-reform period. Section B discusses its implementation. Section C assesses its effectiveness against the central bank's mandate of preserving monetary stability. It argues that the central bank has been effective, but that monetary policy could be more transparent, and views the volatility of the sol-denominated interbank rate as an inevitable consequence resulting from the central bank's decision to conduct monetary policy by targeting base money. The last section concludes that a formal inflation targeting policy framework could help overcome these concerns.

A. The Design of Monetary Policy

Objective of monetary policy

80. The sole objective of the Central Reserve Bank of Peru (BCRP) established under the Central Reserve Bank Act of 1993 is to preserve monetary stability. The central bank interprets this mandate as a call to "defend the acquisitive power of the currency"[66], translating it into the need to continue reducing inflation in Peru to developed countries' level in the medium term. The act allows the central bank to set the inflation target and choose the instruments to achieve it, and prohibits it from earlier practices of financing the public sector, providing guarantees, directing credit to selected sectors, and establishing a multiple exchange rate regime.[67] In addition, the act does not place on monetary policy the objectives of promoting high growth of output and employment, another departure from the previous

---

[65] Prepared by Dale Chua. I am grateful to Adrian Armas of the Central Reserve Bank of Peru for his helpful comments on an earlier version of the paper.

[66] Central Reserve Bank of Peru (2000), p. 2.

[67] A Board comprising seven members governs the central bank. The executive branch nominates four members, including the president. Congress ratifies the appointment of the president and elects another three. Each member serves a 5-year term that coincides with the President of the Republic's term in office. The incumbent president of the central bank, appointed to office in 1992, has been reappointed twice.

law. To ensure consistency in economic policies, however, the central bank coordinates closely with the Ministry of Finance to formulate the annual monetary program.

Control of inflation

81. **The central bank's record on inflation has been reasonably strong since the act came into force**. At the outset of each year, the central bank announces a target range for end-year inflation. Annual inflation has fallen within the targeted range twice, was lower than expected four times, and slightly overshot the targeted range once, see Figure 1. The target range for 2001 is set at 2.5–3.5 percent.

82. **Given its control over base money, the central bank considers that a narrow concept of money is the appropriate immediate target for conducting monetary policy.** Thus, the central bank uses a monetary model that is based on domestic currency aggregate only, although more than three-quarters of total bank deposits are held in dollars and about four-fifths of total bank credit are denominated in U.S. dollars. There are two justifications for this. First, central bank research shows that the demand for foreign currency (U.S. dollars) has been motivated largely for reasons of portfolio management while the demand for domestic currency was used mainly for transactions.[68] Second, research also shows that since 1994 the demand for a narrow concept of money (i.e., excluding foreign currency aggregates) has been more stable than a broader concept of money, which can be used to bear on the rate of inflation.[69] Thus, in the absence of currency substitution and with a reasonably stable demand for narrow money, targeting the quantity of narrow money would provide a basis for attaining the inflation target.

B. Monetary Policy Implementation

Monetary policy formulation and instruments

83. **The Board of the central bank approves a monetary program that includes an end-period inflation target range and an average rate of growth for base money.** The central bank establishes monthly paths for inflation target and base money, but does not publish them, because these paths need to be adjusted (in reflection of the impact on prices

---

[68] The BCRP study looked at the velocity of withdrawal for different types of deposits in domestic and foreign currencies and concluded that the rate of withdrawal for domestic currency deposits significantly exceeded the rate of withdrawal for foreign currency deposits. See, for example, Quispe (1998), p.6.

[69] Quispe (1999) shows that the demand for currency is the most stable, followed by the demand for narrow money (currency and all deposits in soles), and lastly broad money (domestic money plus all deposits in U.S. dollars). However, Berg and Borensztein found evidence that the inclusion of foreign currency deposits improves the tracking for inflation.

stemming from the strength of internal demand, growth of bank credit, changes in the fiscal position of the public sector, adjustments of inflation expectations, and the depreciation of the currency).[70] Like many central banks, the BCRP also does not publish an explicit model linking the inflation target range and the average rate of growth for base money. In the monetary program for 2001, however, the BCRP has provided a diagrammatic exposition of the monetary transmission mechanism for inflation and base money.

84. **The BCRP uses three types of instruments for monetary policy and liquidity management**: (a) market based instruments such as the auctions and repurchase operations of BCRPCDs (deposit certificates), the purchase and sale of foreign exchange, overnight swaps in foreign currency, and the auction of funds of Banco de la Nación (the government's fiscal agent) deposited at the central bank, (b) BCRP-based facilities such as the rediscount window and overnight deposits in soles and dollars, and (c) regulatory instruments such as reserve requirements.[71]

Market based instruments

85. **Central bank deposit certificates.** The BCRP is increasingly active in using BCRPCD auctions to regulate excess liquidity, even though this is not carried out with regular periodicity. Bank bids are accepted on a best price offer basis (from highest to lowest price until the desired auction amount is satisfied). During tax payment periods (usually lasting about 2 weeks in the middle of the month), the central bank conducts repurchase operations to inject liquidity into the system. Repo bids are also accepted based on best price offers (from lowest to highest price until the desired repurchase amount is satisfied).

86. **Foreign exchange intervention and swap operations.** Prior to 2000, through the unsterilized purchase (sale) of foreign exchange in the interbank market, the BCRP injected (withdrew) domestic currency liquidity in the banking system. However, beginning in 2000, the monetary authorities no longer intervene in the foreign exchange market for the objective of injecting or withdrawing liquidity.[72] The BCRP also injects temporary liquidity by swapping soles for foreign exchange from banks. These swap operations are normally for

---

[70] Notas de Estudios, No. 6 (1999), p. 7.

[71] Notas de Estudios, No. 6 (1999), p. 10–15.

[72] The BCRP may enter the exchange market to buy foreign exchange for servicing the public sector external debt or sell foreign exchange received by the Treasury from privatization proceeds. Most often, however, sales and purchases of foreign exchange to and from the Treasury are made outside of the foreign exchange market, but at the prevailing market rate.

24 hours. The cost of the swap to banks is either the commission established by the BCRP or the depreciation of the sol during the swap, whichever is higher, so that exchange rate risk is borne entirely by banks.

87. **Auction of Banco de la Nación funds.** The auctioning of funds from Banco de la Nación deposited at the BCRP as a liquidity management instrument is rare. Nevertheless, when the choice of instruments for the central bank is limited, as for example when the stock of outstanding BCRPCDs was low during the liquidity crunch in December 1998, the central bank injected liquidity by auctioning these deposits.

BCRP-based facilities

88. The central bank can extend domestic or foreign currency credit to banks with temporary liquidity problems. The BCRP credit rate in soles is set deliberately high, and never lower than the average interbank market rate, so that banks needing sol-denominated liquidity are encouraged to approach the interbank market first and access this credit facility as a last resort. For February 2001, the Board of the central bank set the sol-credit rate at 12.5 percent or the average of the top decil of interbank interest rates, whichever is higher. In the case of the U.S. dollar credit facility, which is infrequently used, a flat rate is set. In February, this rate was 8.5 percent. The Banking Law limits bank access to this "rediscount" window to no more than 90 days over a period of 180 days before triggering mandatory surveillance by the banking supervisor.

89. The central bank created a facility in 1998 for dollar funds in an overnight account that remunerates deposits at the average interest rate which it receives from investing such funds overseas (approximately LIBOR). The central bank extended the overnight facility to soles funds in September 2000. In February 2001, the interest rate for this facility was 4.5 percent.

Regulatory instruments

90. All deposits in domestic currency are subject to a 6 percent reserve requirement (reduced from 7 percent in September 2000), which are not remunerated. Deposits in foreign currency, remunerated at LIBOR minus a small fraction of one percent, are subject to a marginal reserve requirement of 20 percent. An average reserve requirement of 34 percent (following a three percentage point reduction in September 2000) is levied on the average stock of dollar deposits as of end-October 2000.

91. For a highly dollarized economy such as Peru, the reserve requirement on foreign currency has acted to reduce the upward pressure on the sol at times of strong capital inflow and moderated the ensuing monetary growth in foreign currency. It also provides the central

bank with substantial reserves that cushion the financial system from the risk of capital outflow.[73]

92. While the BCRP does not generally rely on the reserve requirement on sol-denominated or dollar-denominated deposits to inject or withdraw liquidity, there have been exceptional cases where this has been done. For example, in late 1998, the BCRP reduced the average reserve ratio on dollar deposits on three occasions (reducing required reserves by US$420 million in total) to help offset the cutback in foreign lines of credit (of a similar amount) at the time of the Russian and Brazilian crises.

Daily monetary management

93. **The central bank's daily monetary management is based on a daily estimate of banking system liquidity**. This estimate is based on a set of indicators such as banks' cash balances, bank reserves (required reserves as well as those freely available) in domestic currency held at the central bank, the level of interbank interest rates, and the net check-clearing position of banks.[74] The central bank then attempts to influence the level of bank reserves through open market operations and foreign currency swaps, while accounting for other factors such as the expected level of tax payments and public sector expenditures during the day, which are outside its control.

94. **The BCRP makes a daily projection of bank reserves that is consistent with its monthly base money target and compares this with the estimated daily bank reserves.** The latter is obtained by adding the observed bank reserves of the previous day and the net change in bank reserves estimated for the day (before open market operations). The decision to inject or withdraw liquidity during the day is made after comparing the projected bank reserves and the estimated bank reserves. To get an indication of the daily change in bank reserves (before open market operations), the BCRP looks at bank transactions that have a major impact on their reserve positions. Outflows from banks that reduce their reserve position would include transfers (in soles) to Banco de la Nación, the expiration of sol-denominated loans from the central bank rediscount window, the unwinding of repo transactions in BCRPCDs, reverse swaps in foreign exchange, and repayments of deposits of the Banco de la Nación auctioned by the central bank. Inflows to banks that increase their reserve positions would include the expiration of BCRPCDs, transfers of cash in bank vaults

---

[73] On the other hand, reserve requirements can create an interest rate wedge (when they are remunerated at below market rate) that tends to discourage deposit formation. At end-1998, the Superintendency of Banks introduced a minimum liquidity requirement of 20 percent for all bank liabilities while the central bank reduced the marginal reserve requirement on dollar deposits from 45 percent to 20 percent. This eliminated the bias that until then had favored the use of short-term foreign lines of credit for financing bank credit.

[74] Choy Chong, M. (1998), p. 190.

to reserve accounts in the central bank, net purchases of foreign exchange by the BCRP, auctions of Banco de la Nación funds held at the central bank, repo transactions in BCRPCDs, access to the central bank's rediscount window, and swaps in foreign currency.

95. **Interest rates and the exchange rate are market determined.** As monetary management is geared at controlling a monetary aggregate, the central bank does not target any particular interest rate, even though it has from time to time expressed concerns about its level and volatility. The central bank lets market forces determine the level of the exchange rate, and does not have, as an objective, a particular target exchange-rate level. However, it has managed liquidity as needed, to smooth out sudden and sharp fluctuations in the exchange rate when the authorities considered that pressures in the exchange market were not reflecting underlying fundamentals; at times, this resulted in long periods of significant stability in the exchange rate.

C. Effectiveness of Monetary Policy

96. **The conduct of monetary policy has been reasonably effective, but lacked transparency and has had an unintended impact on interbank interest rate volatility.** Together with fiscal consolidation and wide-ranging structural reforms (including privatization, liberalization of the exchange rate and interest rates, and the elimination of various distortionary measures that stifled financial intermediation), prudent monetary policy management since the early 1990s has led to a sustained reduction in inflation, a significant accumulation of net international reserves, and an increase in financial intermediation. Real interest rates which were negative in the late 1980s and 1990 turned positive, and extremely high nominal sol-denominated interest rates of the early 1990s fell as inflation declined (see Table 1).

Table 1. Peru: Selected Financial Indicators, 1990–2000

	Inflation (end-period)	NIR (U.S. dollar millions)	Credit (%GDP)	Broad Money (%GDP)	Soles Lending Rate
1990	7,650.0	531	10.1	17.2	481.8
1991	139.2	1,304	7.5	11.6	230.7
1992	56.7	2,001	9.3	13.5	135.3
1993	39.5	2,741	10.3	14.6	72.3
1994	15.4	5,718	12.5	16.1	39.0
1995	10.2	6,641	14.9	17.0	33.5
1996	11.8	8,540	19.6	21.0	30.6
1997	6.5	10,169	22.2	21.3	30.4
1998	6.0	9,183	25.4	22.2	37.1
1999	3.7	8,404	25.2	22.8	32.0
2000	3.7	8,180	25.5	24.2	26.5

Source: BCRP.

Monetary policy transparency

97. **Recently the central bank took steps to improve transparency and accountability of monetary policy.** Monetary policy procedures and transparency in goals, instruments, and decisions in the past fell short of the best practices recommended by the Code of Good Practices on Transparency in Monetary and Financial Polices. In previous years, apart from the publication of an annual monetary program, the central bank did not systematically report and account for its policy decisions.[75] However, in early 2001, it has taken steps to address this deficiency.

[75] Research papers published by the staff of BCRP have shed light on the conduct of monetary policy by the central bank, but they are only a weak substitute for a timely and more open presentation of monetary policy.

a. In January, details of the monetary program for the year were published that make the formulation of monetary policy more transparent. In addition, the central bank will also publish in May and September an update of the annual monetary program.

b. Beginning in February, monthly information is being provided to guide the market on monetary operations for the month. On the first Friday of every month, the central bank will publish a report[76] providing: (a) the daily average target range on the reserve balance banks held at the central bank and (b) interest rates that the central bank will charge for monetary regulation credits and the interest rate it will pay on overnight deposits held by banks at the central bank.

98. While this increase in transparency is welcomed, more could be done. For example, the central bank could announce the base money target for the month. It could explain in the monthly report how the evolution of financial indicators, such as interest rates, credit growth, and the exchange rate, affected its operations. In updating the monetary program in May and September, the central bank could comment on the outcome of the inflation and base money paths and explain any modifications to monetary policy, if any, as conditions change. These steps will further help the market anchor inflation expectations and enhance market confidence that the BCRP is committed to keeping inflation low.

99. **Limited publicly available information in the past impeded a rigorous scrutiny and evaluation of monetary policy.** In the past six years, even though yearly inflation has been broadly in line with the target, the (ex ante) intermediate targets for average base money growth have largely been out of line with the monetary growth outturns that, supposedly, ought to have been consistent with the inflation target. While the central bank was clearly more concerned with meeting the inflation target than the base money intermediate target, explaining why the latter had to be readjusted would have improved transparency.

100. **The relationship linking the average growth rate for base money and the end-period inflation target (or the relationship between the daily operational target, bank reserves, and inflation target) has not been made public.** Independent verification of whether the average base money growth rate target had been met was not possible because this target was not announced prior to 2000. Ex-post comparisons of the upublished targets for 1994–99 reveal sizeable deviations from their outturns; albeit, with a decreasing margin over time (see Table 2).

[76] In the central bank weekly statistical bulletin and website.

Table 2. Peru: Unpublished Average Annual Base Money Growth Target vs. Outturn

	Target Rate (In percent)	Actual Rate (In percent)	Deviation
1994	19.0	39.0	20.0
1995	30.0	41.0	11.0
1996	14.0	15.3	1.3
1997	9.0	13.7	4.7
1998	15.0	12.5	-2.5
1999	6.0	6.7	0.7
2000	8.0–10.0*	6.0	2.0–4.0

Source: BCRP.

* In 2000, the BCRP announced, for the first time, the average base money growth rate.

101. In the absence of information on the target for average growth of base money, the public may have been tempted in the past to evaluate monetary policy by comparing the publicly available end-period base money projection and its outcome; however, actual base money growth (end-of-period basis) also deviated significantly from the projection (see Table 3).

Table 3. Peru: Publicly Available End-Period Annual Base Money Growth Target vs. Outturn

	Target Rate (In percent)	Actual Rate (In percent)	Deviation
1994	20.0	48.2	28.2
1995	15.0	36.9	21.9
1996	10.0	9.2	- 0.8
1997	5.0	19.2	14.2
1998	9.7	5.5	- 4.2
1999	5.9	17.0	11.1
2000	0.0[77]	-4.0	-4.0

Source: BCRP.

Interbank interest rate volatility

102. **The second concern regarding the conduct of monetary policy relates to the volatility of sol-denominated interbank interest rates (both over the course of the month and on a daily basis).** Sol-denominated interbank rates exhibit a clear intramonthly pattern. The fluctuation is closely linked to the monthly tax payment schedule. In the two weeks when the main taxes are paid (starting around the 9th working day of each month), the fall in sol-denominated bank liquidity (as proxied by a decline in bank reserves at the central bank) is accompanied by an increase in the average interbank rate in soles. The cycle is reversed after taxes are paid (around the 18th working day of the month). Figure 2 shows that from October 1997–June 2000, average bank reserves increased in the first part of the month leading up to the tax payment period, followed by a decline in the days when taxes were paid, and then rose slightly again toward the end of the month. Figure 3 shows the inverse relationship of the average interbank rate in soles over the month.

103. **The daily interbank rate in soles exhibited considerable volatility in the last decade, even though reducing its volatility has long been a concern of monetary**

[77] End-period base money growth rate for 2000 was projected at zero mainly because Y2K liquidity growth in late 1999 had led to an increase in the money base at end-1999 which was expected to be reversed in early 2000.

policy.[78] To help achieve this objective, the central bank started to remunerate overnight sol-denominated deposits of commercial banks for the first time in September 2000, in an effort to set a floor for the overnight sol-denominated interbank rate. Stability in the interbank rate in soles should help lower the average sol-denominated lending rate and increase financial intermediation in soles.[79] The dollar-denominated interbank rates were more stable than their sol-denominated counterpart (Figure 4 and Table 4).

Table 4. Peru: Interbank Rate Volatility, 1997–2000

	Soles		U.S. Dollars	
	Average	Std. Dev.	Average	Std. Dev.
1997 Q2	13.2	3.6	5.7	0.1
1997 Q3	10.2	2.1	6.1	0.2
1997 Q4	12.9	2.0	7.2	0.4
1998 Q1	14.9	4.9	7.3	0.1
1998 Q2	16.6	3.7	8.0	0.5
1998 Q3	27.8	8.6	9.2	1.2
1998 Q4	15.9	4.2	12.6	1.0
1999 Q1	20.0	4.8	9.4	1.9
1999 Q2	13.1	1.9	7.3	0.2
1999 Q3	9.2	4.0	6.9	0.2
1999 Q4	17.8	1.0	6.5	0.3
2000 Q1	12.0	3.5	7.1	0.8
2000 Q2	14.9	2.3	7.4	0.4
2000 Q3	10.8	2.3	7.5	0.2
2000 Q4	13.5	1.9	8.0	0.7

Source: BCRP.

104. **Interbank interest rate volatility has declined in recent months, presumably reflecting an effort by the BCRP to reduce its fluctuation.** The standard deviation of this rate has fallen from 6.7 percent in 1998 to 4.9 percent in 1999 and to 2.7 percent in 2000.

[78] Choy Chong, M. (1998), p191.

[79] Friedman (1982) finds evidence that interest rate volatility has negatively affected the volume of long-term corporate funding and increased the cost of this funding. Amato and Laubach (1999) argue that interest rate smoothing is beneficial because a monetary policy move today will be more effective if it is expected to persist over time given that the private sector, which is forward-looking, bases its decision on expectations of the future. Interest-rate smoothing implies that the change in the size of interest rate that is required to reduce economic fluctuations can be smaller than otherwise necessary.

Fluctuation in the sol-denominated interbank rate cannot be totally eliminated because the use of bank reserves (quantity) as the daily operating instrument for achieving the monthly base money target affects the price of these reserves, namely, the interbank rate, which is freely determined in the interbank market. Thus, if eliminating sol-interbank-rate volatility is an important goal of monetary policy, an alternative to targeting base money in the form of directly targeting the interbank rate should be considered.[80]

105. **High volatility in sol-denominated interbank rates can lead to volatility in sol-denominated lending rates; thus, discouraging borrowing in the domestic currency, even as inflation falls.**[81] Furthermore, in 1998 and 1999, sol-denominated lending remained below 20 percent of total lending and was significant[82] only in sectors dominated by the public sector (public administration, health, and electricity and water services). The share of total bank credits extended to these sectors was less than five percent (see Table 5).

---

[80] Many countries have succeeded in maintaining price stability while targeting a form of the interbank rate in their daily management of monetary policy. Nearly all developed countries now target interest rates and, increasingly, more developing countries are also doing so.

[81] A simple regression analysis reveals that the one-period lag interbank sol-denominated rate (an independent variable) was positively correlated with the 90-day prime lending rate in soles (the dependent variable) over the period January 1998-June 2000. Even though the adjusted R-square for the regression was low (0.13), the t-statistic (2.3) was significant at the 95 percent confidence level.

[82] Defined as comprising 25 percent or more of total outstanding credits extended to a sector.

Table 5. Peru: Percent of Outstanding Bank Credits to Sectors by Types of Currency

Sector	1998			1999		
	Soles	U.S. dollar	Weight*	Soles	U.S. dollar	Weight *
Agriculture	9.3	90.7	2.5	6.8	93.2	2.6
Livestock	35.4	64.6	0.6	23.3	76.7	0.6
Fishing	3.1	96.9	2.7	2.3	97.7	2.9
Mining	6.3	93.7	3.2	4.2	95.8	4.1
Industry	15.7	84.3	25.4	16.4	83.6	26.3
Electricity and Water	39.0	61.0	1.5	29.4	70.6	2.6
Construction	23.3	76.7	4.3	20.8	79.2	4.4
Commerce	16.3	83.7	14.6	15.1	84.9	16.3
Hotels	7.2	92.8	1.5	4.5	95.5	1.4
Transportation	21.1	78.9	5.4	17.0	83.0	4.5
Financial services	27.4	72.6	5.4	24.6	75.4	3.0
Rental services	13.9	86.1	6.7	14.7	85.3	5.6
Public administration	57.1	42.9	0.8	42.5	57.5	0.7
Education	29.4	70.6	0.6	23.9	76.1	0.5
Health	34.5	65.5	0.5	29.7	70.3	0.3
Other community services	14.7	85.3	4.5	14.1	85.9	4.4
Others (including consumer loans)	24.0	76.0	19.8	23.5	76.5	19.9
Total	18.5	81.5	100.0	17.2	82.8	100.0

* Share of total outstanding bank credits accounted for by each sector.

Source: SBS.

106. **The lack of long-term lending in soles is influenced by the volatility of the interbank interest rates in soles.** Confronted with the frequent need to roll over loans, whose future interest rates are uncertain, investors may choose to borrow in dollars, where there is less interest-rate volatility. Smoothing the sol-denominated interbank rate can, therefore, reinforce the authorities' recent efforts to lengthen the sol-denominated yield curve (for the first time in August 2000, the central bank issued one year CDs while COFIDE, a second-tier public financial institution, issued two-year, fixed-interest-rate instruments in soles).

D. Inflation Targeting as a Framework for Monetary Policy

107. **The authorities have expressed interest in inflation targeting and, together with the Fund, they are organizing a seminar on the topic to assess the suitability of this approach for Peru.** Without prejudging the conclusion of the seminar, it is widely recognized that inflation targeting is an approach that would increase transparency and strengthen accountability, as well as providing an anchor for inflationary expectations and increasing the predictability of market reactions to monetary policy announcements. Also, countries adopting formal inflation targeting normally use the interbank interest rates as a daily operational target of monetary policy. In the case for Peru, this would lead to lower volatility in interest rates.[83]

108. **Peru has already met the main prerequisites for inflation targeting,** namely, central bank independence and policy effectiveness in controlling inflation.[84] On transparency, the central bank through its monthly report is moving in the direction of establishing a forum to explain the design and implementation of monetary policy. The May and September reports would update the annual monetary programs as conditions change in the course of the year. Over time, these reports could be expanded and form a basis of a future inflation report.[85]

109. **The central bank is in a good position to tackle nearly all technical issues of inflation targeting, but needs to strengthen its inflation-forecasting model**. The central bank would have no problems addressing the choices of a relevant price index (general or

---

[83] Of course, the BCRP could also reduce interest rate volatility without adopting an inflation targeting framework; this, however, could be misinterpreted as a general change in monetary policy away from the maintenance of low inflation in support of other objectives.

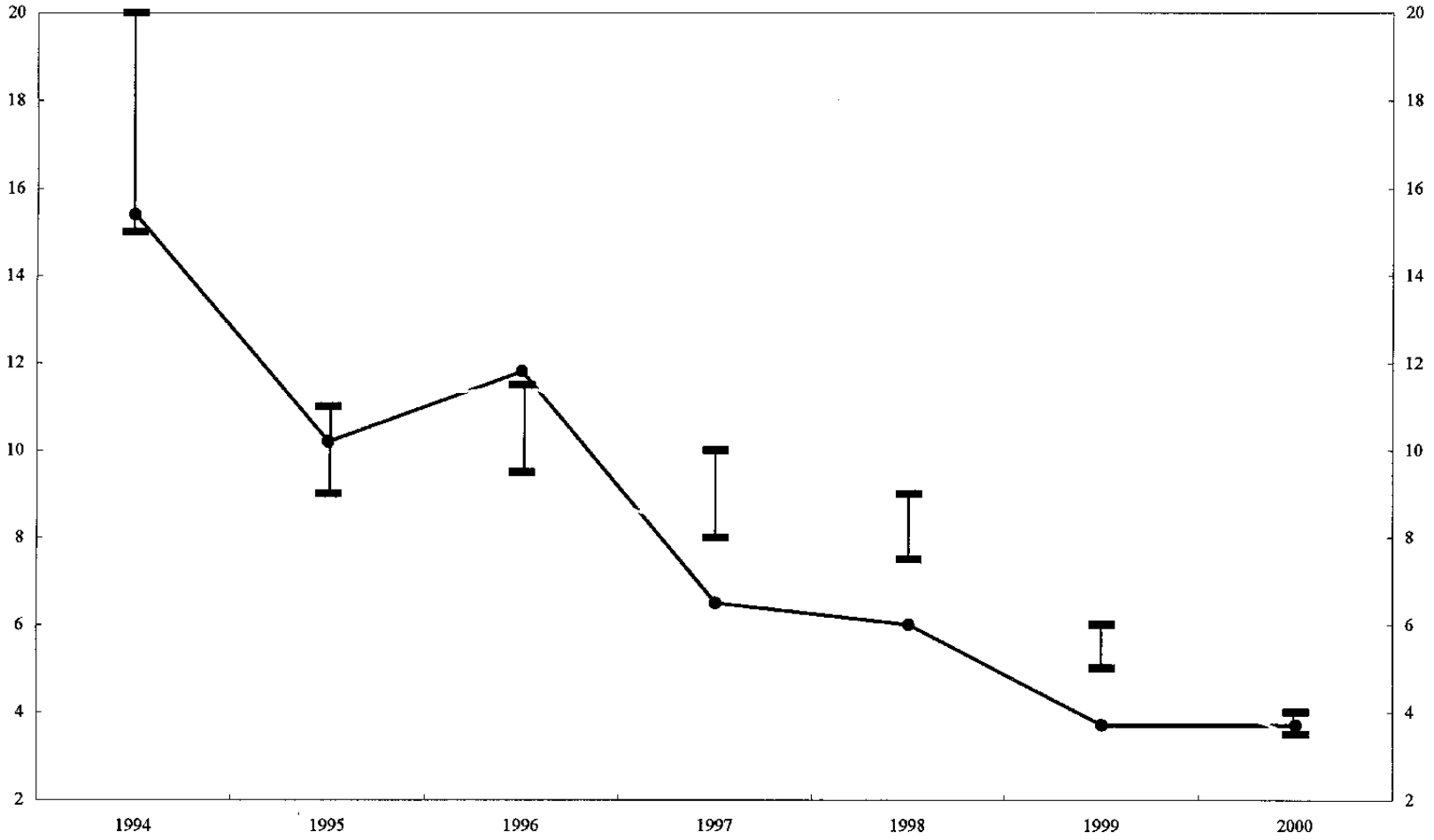
[84] For a summary of design and implementation issues for inflation targeting in developing countries, see Blejer, M., Ize, A., and Leone, A. (eds), 2000.

[85] Such a report, which the central bank could present with the same regularity to the Economic Policy Commission in congress, would include inflation projections and general economic forecasts, and a full accounting for inflation.

core inflation), an inflation target range (point target or band), and a target horizon (one or more years), and the central bank has a firm understanding of the transmission mechanism of monetary policy.[86] However, as inflation targeting uses a forward-looking framework to predict the lagged impact of monetary policy and sets conditional inflation forecasts as intermediate targets, the ability to produce a path of credible inflation forecasts is vital. Such forecasts would be used to judge, ex-post, the effectiveness of monetary policy actions. More needs to be done in this area as work on a highly reliable inflation model is still at an early stage.

[86] For example, see Bringas, P. and Tuesta. V., *El superavit de encaje y los mecanismos de transmisión de la política monetaria en el Peru*, BCRP, 1996.

Figure 1. Peru: Target vs. Measured CPI, 1994 - 2000



Source: Central Reserve Bank of Peru.

Figure 2. Average Bank Reserves at BCRP in Soles
(October 1997-June 2000)

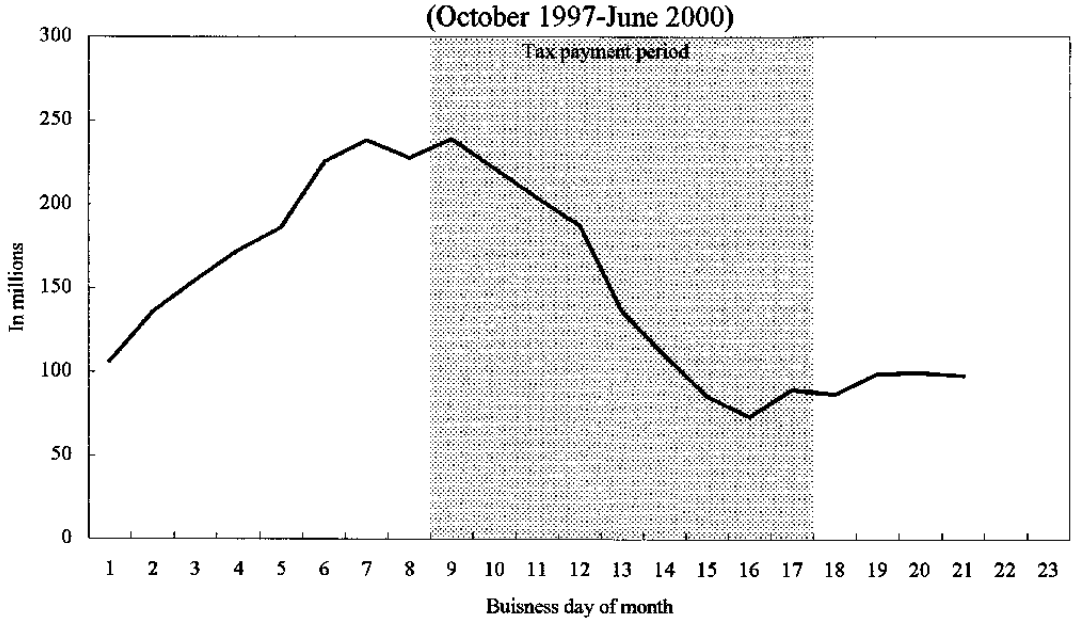
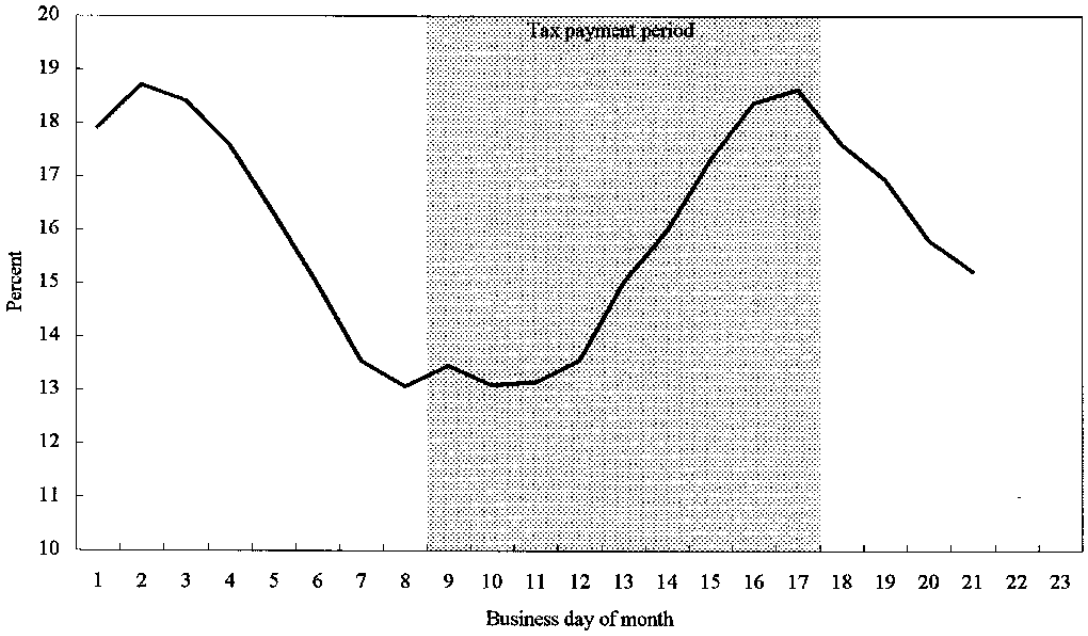
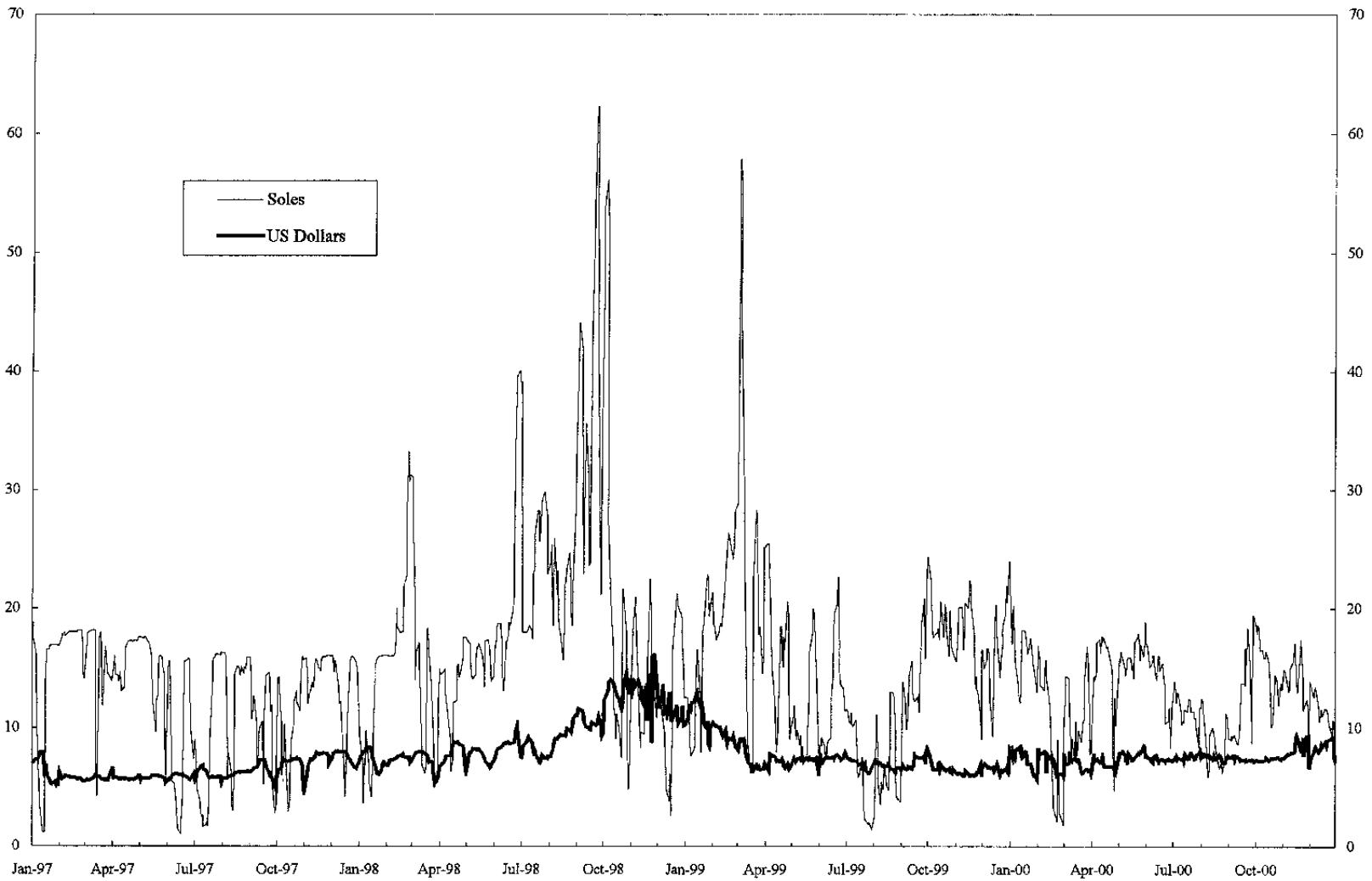


Figure 3. Average Interbank Rate in Soles (October 1997-June 2000)



Source: BCRP; and Fund staff estimates.

Figure 4. Peru: Interbank Overnight Rates, 1997 - 2000



Source: BCRP.

List of References

Amato, J. and T. Laubach, "*The Value of Interest Rate Smoothing: How the Private Sector Helps the Federal Reserve,*" Economic Review—Federal Reserve Bank of Kansas City, pp. 1–13, 1999.

Berg, A. and E. Borensztein, "*The Choice of Exchange Rate Regime and Monetary Target in Highly Dollarized Economies,*" IMF Working Paper (WP/00/29), 2000.

Blejer, M., Ize, A., and Leone, A. (eds), *Inflation Targeting in Practice: Strategic and Operational Issues and Application to Emerging Market Economies*, IMF, 2000.

Bringas, P. and Tuesta. V., *El Superavit de Encaje y los Mecanismos de Transmision de la Politica Monetaria en el Peru*, Central Reserve Bank of Peru, 1996.

Central Reserve Bank of Peru, Notas de Estudios, No. 6, *La Politica Monetaria del Banco Central de Reserva del Peru*, December 1999.

Central Reserve Bank of Peru, *Programa Monetario para el año 2000*, 2000.

Choy Chong, M., *Monetary Policy Operating Procedures: the Peruvian Case*, Bank of International Settlement, 1998.

De la Rocha, J., *The Transmission of Monetary Policy in Peru*, Bank of International Settlement, 1998.

Friedman, B., "*Federal Reserve Policy, Interest Rate Volatility, and the U.S. Capital Raising Mechanism,*" Journal of Money, Credit, and Banking, pp. 721–745, 1982.

Quispe, Z., *Monetary Policy in a Dollarized Economy: The Case of Peru*, Central Reserve Bank of Peru, 1998.

Quispe, Z., *Una Aproximacion a la Demanda de los Principles Agregados Monetarios en el Peru: junio 1991–mayo 1997,* Central Reserve Bank of Peru, 1999.

Peru: Summary of the Tax System (December 2000)

Tax	Rate	Taxable Base	Exemptions	Remarks
1. Income tax				
A. Corporate income tax (Category 3)				The following are not subject to the tax: - The National Public Sector, except public enterprises. - Legally established cultural, research, welfare, social assistance, and hospital foundations. - Mutual aid entities. - Communal associations of farmers and indigenous groups.
i. Residents				
a. General Regime	20 percent	Worldwide income of enterprises legally regarded as domiciled in Peru. Expenses necessary for generating and maintaining the source of income may be deducted.	The following are exempt (until 12/31/2002): - Religious institutions and nonprofit institutions dedicated to social assistance, charity, education, cultural, science, art, literature, sports, politics and housing. - Interest on development lending granted by international organizations or foreign governmental institutions. - Interest and other gains on loans granted to the National Public Sector. - Interest on savings in the domestic financial system. - Royalties for technical assistance provided from abroad by state or international agencies. - Capital gains from the sale of securities. - Interest and adjustments to principal from mortgage instruments. - Private (nonprofit) universities. - Interest collected or paid by savings and loan cooperatives.	In December 2000, the general tax rate was reduced from 30 percent to 20 percent. As a transitory measure, during 2001 the rate would remain at 30 percent for corporations but a 10 percent investment tax credit on reinvested profits will be allowed. Agriculture is taxed at a rate of 15 percent (Agricultural Promotion Law). In December 1998, the depreciation rates for data processing equipment and for machinery and equipment acquired after 1991 were changed from 20 percent to 25 percent and 10 percent, respectively. Accelerated depreciation is allowed in mining, hydrocarbons, tourism, agriculture and agri-business; Also, in 2000 some restrictions to leasing contracts were introduced, but accelerated depreciation under leasing contracts is still possible. Category 3 advance payments (general regime): - On the basis of a coefficient applied to monthly receipts. This coefficient is calculated yearly (and may be revised once during the year), as the quotient between the total tax for the previous year and net income during the same period. - Two percent of net income for new businesses or businesses that had no income (paid no tax) in the previous year.

Peru: Summary of the Tax System (December 2000)

Tax	Rate	Taxable Base	Exemptions	Remarks
b. Special Regime (RER)	2.5 percent	Net monthly revenue derived from the Category 3 income of individuals or legal entities domiciled in Peru whose net revenue in the previous fiscal year did not exceed S/. 216,000.		Losses generated in a taxable year may be carried forward from year to year, until their full amount has been offset against the net income obtained in the four immediately subsequent fiscal years following the year of the loss (effective 2001). The balance which cannot be offset once this time period has lapsed may not be offset in subsequent years. Previously, the offset began in the first year in which profits were generated. In 2000, limitations on expenses incurred in countries with low or no taxation (tax-havens), or paid through persons or entities domiciled in such locations were introduced. The rate of the Special Income Tax Regime (RER) has been reduced from 3 percent to 2.5 percent (Law 27304 of 12/30/98).
ii. Nonresidents		**Peruvian-source** income of enterprises not legally domiciled in Peru (branches, agencies, or permanent establishments).		Beginning in 2001, the tax rate is increased from 1 percent to 5 percent for interest derived from external loans in cash and posted as a credit to Peru's foreign currency income, or loans at a discounted annual interest rate lower than the prevailing preferential interest rate in the source market plus 3 points. Interest deriving from the use of external credit lines by banks or financial institutions continue to be taxed at 1 percent. Other interest is taxed at a rate of 30 percent.
- Interest on lines of credit abroad from banks and financial institutions established in Peru	1 percent			
- Interest on external loans subject to registration requirements and a preferential interest rate	5 percent			
- Leasing of ships and aircraft	10 percent			
- Royalties and other income	30 percent			
B. Individuals				Advance payments: - Category 1 and 2 income: 15 percent monthly. - Category 4 income: 10 percent monthly. - Category 5 income: on the basis of 1/12 of projected annual income. Law 27356 (10/18/2000) eliminated the exemption from income tax of the gross income collected by professional athletes, sporting clubs, and artists not domiciled in Peru.

Peru: Summary of the Tax System (December 2000)

Tax	Rate	Taxable Base	Exemptions	Remarks
2. General sales tax (IGV)				
General regime				
Total rate		The tax is levied on:	The following are exempt until 12/31/2001:	Tax credit:
Of which:	18 percent	- Domestic sales of movable goods.	a. Goods	Tax credit is accorded for IGV paid on purchases of goods, services, and construction contracts, or paid on imported goods. The tax credit is limited to purchases representing an enterprise expense or cost, in accordance with the income tax legislation, and which are intended for use in operations relating to taxable activities.
- National Treasury		- The provision or use of services in Peru.	- Fish and seafood	
- Municipal budgets (IPM)	16 percent	- Construction contracts.	- Cochinilla (red dye)	Treatment of exports:
	2 percent	- The first sale of structures by their builders. The registered vaule of the land is excluded from the tax base (Supreme Decree 150/2000 which modified a previous provision that established a reference value of the land to 50 percent of the value of the property).	- Bull semen	Exporters may apply the balance of the tax credit against the income tax or other tax liabilities representing income for the National Treasury. Any residual amount may be refunded in the form of marketable tax certificates *(Notas de Crédito Negociables--NCN)* or in cash.
			- Whole raw milk	
			- Potatoes and other root vegetables, vegetables, dried vegetables, and other vegetables and fruits	
			- Cereal seeds	
			- Rice (which is taxed by the IEV)	
			- Raw coffee, tea, cocoa, and unprocessed tobacco	
			- Wools and pelts, not carded or combed	
			- Raw cotton	
			- Nonmonetary gold, unrefined or dust	
			- Vehicles for diplomatic use	
			- Books for educational institutions	
			- The first sale of structures valued at less than 35 UITs	
		- Imports of goods. The taxable base is the c.i.f. price plus customs duties, surcharges, and the excise tax.	b. Services	The following are regarded as exports of services:
			- Financial services	- Consulting and technical assistance
			- Public passenger transportation (except air transport)	- Leasing of movable property
			- International cargo transport	- Advertising, market research, and public opinion survey services
			- Live shows declared of cultural value by the National Institute of Culture	- Personnel placement and administration
			- Sale of beverage and food at snack bars and universities	- Commissions on the provision of credit
			- Construction and repair of foreign ships	- Financing, insurance, and reinsurance operations
			- Interest on transferable securities issued by enterprises pursuant to the Securities Market Law	- Telecommunications
			- Life insurance policies	- Tourism operators (only for sales abroad)
			- Postal services intended to complete such services originating abroad	Withholding system:
			Exports of goods and services, as well as construction contracts performed abroad, are not subject to the IGV.	DU 87-2000 (10/5/2000) created the tax obligations payment system, which consists in the withholding of the IGV by the purchaser. The activities included in this system include exporting fish meal and gold, as well as the production of ethyl alcohol.
Special sales tax	4 percent	The tax is levied on: - The value of domestic sales of rice (all varieties). - The c.i.f. customs value of imports plus import duties on rice (all varieties). This cascading tax is levied at all stages of the production cycle.		This tax was created by Law 27350 (10/6/2000), which also created a tax obligation payment system applicable to agricultural transactors engaging in the sale of rice. This system consists in the withholding of the tax stemming from the purchase of rice by the persons subject to that tax, designated by the SUNAT, for subsequent deposit in authorized bank accounts. It bears noting that this tax measure revoked Law 27168 establishing the IGV on the sales of rice producers at a rate of 5 percent.

Peru: Summary of the Tax System (December 2000)

Tax	Rate	Taxable Base	Exemptions	Remarks
3. Excise tax (ISC)				
Ad valorem rate system:		The tax is levied on:		Effective October 2000, noncarbonated mineral water is taxed at a rate of 17 percent.
- Soft drinks, carbonated and noncarbonated mineral water	17 percent	- The sale value, for sales of goods.		
- Low grade alcoholic beverages	20 percent	- The c.i.f. customs value, plus import duties, for imports.		Vehicle imports through CETICOS are not subject to ISC.
- High grade alcoholic beverager	40 percent			
- Vehicles (new)	10 percent	The base excludes the IGV.		
- Vehicles (used)	30 percent			
- Games of chance		For soft drinks the base is the ex factory price.		
- Lotteries	10 percent			
- Equestrian events	2 percent			
Specific rate system:		The tax is levied on:	The following are exempt until December 31, 2003:	
S/. per gallon		- The volume sold or imported, expressed in units of measurement established by the Ministry of Economy and Finance.	- Imports or sales of diesel or residual fuel to enterprises engaged in the generation, marketing, and distribution of electrical power, authorized by supreme decree.	
- Gasoline				
Up to 84 octane	2.15			
85 – 90 octane	2.81			
91 – 95 octane	3.10			
Over 95 octane	3.41			
- Kerosene	0.49			
- Diesel 2	1.38			
- LPG	0.49			
S/. per unit				
- Beer	1.49			
- Cigarettes				
Black tobacco	0.025			
Blonde tobacco, standard	0.050			
Blonde tobacco, premium	0.100			
4. Import taxes				
Number of customs items affected		The c.i.f. value of imports.	The following are exempt from this tax:	There are two duty rates (12 percent and 20 percent) as well as surtaxes (5 percent and 10 percent), which, taken together, make up the customs duty structure in question.
5,780	12 percent		- Imports by universities and by cultural and educational institutions.	
52	17 percent		- Imports covered by international agreements.	
752	20 percent		- Grants to the public sector and private charitable institutions.	
299	25 percent		- Passengers' personal baggage.	
4	30 percent		- Imports by diplomatic personnel and official representatives of international organizations.	
			- Imports of arms for the Armed Forces and national defense.	
			- Samples without commercial value.	

Peru: Summary of the Tax System (December 2000)

Tax	Rate	Taxable Base	Exemptions	Remarks
5. Simplified Consolidated Regime (RUS)				
Category: Monthly revenue up to: / Gross tax of S/. - Special 2,200 / 0 - A 2,200 / 80 - B 4,600 / 255 - C 7,000 / 560 - D 8,600 / 910 - E 9,700 / 1,190 - F 12,000 / 1,520 - G 15,000 / 2,040 - H 18,000 / 2,700		Individuals domiciled in Peru who generate Category 3 income and whose gross monthly income does not exceed S/. 18,000. Taxpayers may deduct from their monthly installments 20 percent of the total amount of purchases subject to IGV, to the extent that these do not extend the Maximum Deductible Credit for the category concerned (approximately 80 percent of gross tax).		Taxpayers concerned pay only the amount of their monthly installment, and are not affected by the income tax, IGV and IES. Special Regime: The special regime applies to sellers of fruits, vegetables, and other items exempted under Appendix I to the law on the IGV and ISC, whose incomes do not exceed S/. 2,200 per month. The gross tax for this category is currently nil.
6. Extraordinary Solidarity Tax (IES)	5 percent	Compensation to workers subject to income tax on Category 4 and 5 income, excluding national holiday and Christmas bonuses.	The following are not covered: - Compensation for time of service - Bonuses for national holidays and at Christmas (Law 27349 of 10/4/2000). - Payments to household employees - Annual profit sharing allocations Category 4 workers may avail themselves of the monthly deduction of 1/12 of 7 UITs.	

Peru: Summary of the Tax System (December 2000)

Tax	Rate	Taxable Base	Exemptions	Remarks
7. **Amazon Investment Promotion Law** (Law 27037 of 12/30/98)				
Tax benefits are granted to enterprises located in the forest area (area includes 5 departments and selected provinces or districts of another 10 departments) for a period of 50 years (from 1/1/99).				
I. Income tax:		Income of enterprises engaged in agriculture, aquaculture, fishery, tourism, and manufacturing activities associated with the processing, transformation, and marketing of commodities from the aforementioned activities, the processing of forestry products, and forest extraction.	Taxpayers located in Amazonía who are engaged principally in agriculture and/or the transformation or processing of products described as native and/or alternative crops in this area are exempted.	A taxpayer benefiting from this tax advantage must meet domiciliation requirements for the head office, and at least 70 percent of total assets and/or total production must be situated or take place within Amazonía.
Taxpayers in the Departments of Loreto, Madre de Dios, and some districts of Ucayali.	5 percent			
Taxpayers located in the rest of Amazonía.	10 percent			
II. General sales tax			The sale of goods, services, and construction contracts within the area for own consumption.	
III. Natural gas, petroleum, and derivatives			The sale of such products within the Departments of Loreto, Ucayali and Madre de Dios is exempt from IGV and ISC.	
IV. Special solidarity tax			Enterprises located in this zone are exempt.	

Table 1. Peru: Aggregate Supply and Demand

	1996	1997	1998	1999	2000
I. Annual percentage changes (At constant 1994 prices)					
Aggregate supply	2.2	7.5	-0.2	-1.6	3.8
Gross domestic product	2.5	6.7	-0.4	1.4	3.6
Imports of goods and services	0.6	11.4	0.7	-17.1	4.9
Domestic demand	1.3	6.7	-0.9	-2.6	2.9
Public sector	0.9	8.6	2.9	4.8	-2.6
Consumption	4.4	7.6	2.9	3.6	4.7
Fixed investment 1/	-5.7	10.9	3.0	7.2	-17.2
Private sector	1.4	6.4	-1.4	-3.7	3.3
Consumption	2.4	4.2	-1.0	-0.2	4.3
Fixed investment	-2.2	16.3	-1.9	-16.3	-1.1
Change in stocks 2/	-3.3	-19.6	-30.5	-5.4	110.6
Exports of goods and services	9.3	13.4	4.5	5.4	9.5
(At current prices)					
Aggregate supply	13.2	15.3	6.3	3.9	8.0
Gross domestic product	13.3	14.9	6.3	5.3	7.3
Imports of goods and services	12.6	18.0	6.1	-3.5	11.9
Domestic demand	12.5	14.3	7.3	2.2	6.7
Public sector	12.6	13.8	11.7	10.3	1.6
Consumption	17.3	12.0	13.3	9.2	8.6
Fixed investment 1/	2.9	18.0	8.1	13.1	-14.3
Private sector	12.5	14.3	6.6	0.9	7.2
Consumption	14.3	12.5	7.3	3.5	8.3
Fixed investment	6.3	22.8	4.9	-8.6	2.5
Change in stocks 2/	-6.6	-22.5	-31.9	-7.1	109.8
Exports of goods and services	18.9	23.9	-0.9	17.3	16.7
II. In percent of nominal GDP					
Aggregate supply	118.1	118.7	118.6	117.0	117.7
Domestic demand	105.0	104.5	105.4	102.3	101.7
Public sector	14.4	14.3	15.0	15.7	14.9
Consumption	10.1	9.9	10.5	10.9	11.0
Fixed investment 1/	4.3	4.4	4.5	4.8	3.8
Private sector	89.8	89.6	90	86.2	86.1
Consumption	71.5	70.0	70.6	69.4	70.1
Fixed investment	18.3	19.6	19.4	16.8	16.0
Change in stocks 2/	0.8	0.6	0.4	0.4	0.8
Exports of goods and services	13.1	14.2	13.2	14.7	16.0
Imports of goods and services	18.1	18.6	18.6	17.0	17.7

Sources: Central Reserve Bank of Peru.

1/ Investment of central government and nonfinancial public enterprises.
2/ Computed as a percentage of domestic demand.

Table 2. Peru: Saving, Investment, and External and Fiscal Balances

(In percent of GDP, unless otherwise indicated)

	1996	1997	1998	1999	2000
I. Saving and Investment					
Gross domestic investment	23.4	24.6	24.2	22.0	20.6
Nonfinancial public sector	4.3	4.4	4.5	4.8	3.8
Private sector	19.1	20.2	19.7	17.2	16.8
Saving	23.4	24.6	24.2	22.0	20.6
External	6.2	5.2	6.4	3.5	3.0
National	17.2	19.4	17.8	18.5	17.6
Nonfinancial public sector	3.9	5.2	4.0	1.9	0.8
Financial public sector	0.0	0.1	0.1	0.1	0.1
Private sector	13.3	14.1	13.7	16.5	16.7
II. Balance of Payments					
Current account balance	-6.2	-5.2	-6.4	-3.5	-3.0
Trade balance	-3.6	-2.9	-4.3	-1.2	-0.7
Investment income	-2.9	-2.5	-2.6	-3.0	-3.0
Services and current transfers	0.4	0.2	0.6	0.7	0.7
Capital and financial account	9.6	8.1	4.6	2.0	2.7
Nonfinancial public sector 1/	0.9	-0.4	0.5	0.8	0.5
Private capital 2/	8.7	8.5	4.1	1.2	2.2
Change in central bank net international reserves (increase -)	-3.5	-2.9	1.8	1.5	0.3
III. Nonfinancial Public Sector					
Nonfinancial public sector savings	3.9	5.2	3.9	1.8	0.9
Central government current balance (including interest)	1.9	2.7	2.0	-0.1	-0.3
Revenue 3/	15.7	15.9	15.7	14.4	14.5
Expenditure (including interest)	13.9	13.2	13.7	14.5	14.7
Rest of nonfinancial public sector current balance (including interest)	2.0	2.5	2.0	1.8	1.2
Public sector capital expenditure	5.0	5.1	4.9	5.0	4.0
Fixed investment	4.3	4.4	4.5	4.8	3.8
Other	0.8	0.7	0.4	0.2	0.2
Capital revenue	0.2	0.1	0.2	0.1	0.1
Overall surplus or deficit (-)	-0.9	0.2	-0.7	-3.1	-3.0
Financing	0.9	-0.2	0.7	3.1	3.0
Foreign	0.8	-0.4	0.4	-0.1	1.1
Domestic	0.1	0.2	0.4	3.1	1.8
Memorandum items:					
Nominal GDP					
(In billions of new soles)	136.8	157.1	167.0	175.9	188.7
(In billions of U.S. dollars)	55.7	59.0	57.1	52.0	54.1

Sources: Central Reserve Bank of Peru.

1/ Includes exceptional financing.
2/ Includes net borrowing by the financial public sector, and errors and omissions.
3/ Excludes grants.

Table 3. Peru: National Accounts at Current Prices

(In millions of new soles)

	1996	1997	1998	1999	2000
Consumption expenditure	111,567	125,399	135,499	141,258	153,027
General government	13,827	15,487	17,546	19,156	20,794
Private sector	97,740	109,912	117,953	122,102	132,233
Gross domestic investment	31,988	38,636	40,465	38,629	38,949
Fixed capital formation	30,940	37,708	39,787	37,985	37,508
Public sector 1/	5,850	6,904	7,464	8,440	7,235
Private sector	25,091	30,804	32,323	29,545	30,273
Change in stocks	1,048	928	678	643	1,440
Domestic demand	143,555	164,035	175,963	179,887	191,976
Foreign balance	-6,779	-6,947	-8,938	-4,031	-3,257
Exports of goods and services	17,975	22,272	22,076	25,900	30,228
Imports of goods and services	24,754	29,219	31,014	29,931	33,485
Gross domestic product at market prices	136,776	157,088	167,025	175,856	188,719

Source: Central Reserve Bank of Peru.

1/ Central government and nonfinancial public enterprises.

Table 4. Peru: National Accounts at Constant Prices

(In millions of 1994 new soles)

	1996	1997	1998	1999	2000
Consumption expenditure	89,748	93,838	93,286	93,503	97,605
General government	9,820	10,562	10,864	11,260	11,785
Private sector	79,928	83,276	82,422	82,243	85,820
Gross domestic investment	25,620	29,274	28,744	25,342	24,727
Fixed capital formation	24,730	28,511	28,218	24,857	23,676
Public sector 1/	4,621	5,124	5,276	5,657	4,685
Private sector	20,109	23,387	22,942	19,201	18,991
Change in stocks	890	763	526	485	1,051
Domestic demand	115,368	123,112	122,030	118,845	122,332
Foreign balance	-5,685	-6,029	-5,435	-635	169
Exports of goods and services	14,544	16,497	17,244	18,169	19,904
Imports of goods and services	20,229	22,526	22,679	18,804	19,735
Gross domestic product at constant prices	109,683	117,083	116,595	118,210	122,502

Source: Central Reserve Bank of Peru.

1/ Central government and nonfinancial public enterprises.

Table 5. Peru: Sectoral Origin of Gross Domestic Product at Constant (1994) Prices

	1996	1997	1998	1999	2000
	(In millions of new soles)				
Gross domestic product	**109,683**	**117,083**	**116,595**	**118,210**	**122,502**
Agriculture and livestock	8,593	9,060	9,175	10,274	10,895
Fishing	590	579	499	643	699
Mining and petroleum	5,052	5,507	5,815	6,501	6,724
Manufacturing	16,848	17,745	17,112	17,170	18,352
Construction	6,303	7,243	7,295	6,509	6,261
Commerce	16,262	17,531	16,982	16,702	17,535
Government	6,865	7,023	7,128	7,385	7,713
Other	49,170	52,395	52,589	53,026	54,323
	(Percentage change)				
Gross domestic product	**2.5**	**6.7**	**-0.4**	**1.4**	**3.6**
Agriculture and livestock	5.2	5.4	1.3	12.0	6.0
Fishing	-4.8	-1.8	-13.7	28.9	8.7
Mining and petroleum	5.1	9.0	5.6	11.8	3.4
Manufacturing	1.5	5.3	-3.6	0.3	6.9
Construction	-2.3	14.9	0.7	-10.8	-3.8
Commerce	0.9	7.8	-3.1	-1.6	5.0
Government	3.2	2.3	1.5	3.6	4.4
Other	3.3	6.6	0.4	0.8	2.4
	(As percent of total)				
Gross domestic product	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Agriculture and livestock	7.8	7.7	7.9	8.7	8.9
Fishing	0.5	0.5	0.4	0.5	0.6
Mining and petroleum	4.6	4.7	5.0	5.5	5.5
Manufacturing	15.4	15.2	14.7	14.5	15.0
Construction	5.7	6.2	6.3	5.5	5.1
Commerce	14.8	15.0	14.6	14.1	14.3
Government	6.3	6.0	6.1	6.2	6.3
Other	44.8	44.8	45.1	44.9	44.3

Source: Central Reserve Bank of Peru.

Table 6. Peru: Growth in Agricultural and Livestock Production

(Annual percentage change)

	1996	1997	1998	1999	2000
Total agricultural and livestock production	**5.2**	**5.4**	**1.3**	**12.0**	**6.0**
Agricultural production	8.2	4.1	-1.9	14.2	6.0
Domestic crops	7.6	7.0	0.1	13.4	5.1
Potatoes	-2.5	3.9	8.0	18.4	2.8
Rice	5.4	21.3	6.1	26.2	-5.7
Corn	12.8	-0.5	11.3	12.9	13.9
Wheat	16.9	-15.3	18.2	16.2	5.3
Other	9.9	7.4	-3.8	10.3	6.3
Export crops	9.2	-10.2	-13.3	19.7	11.3
Cotton	23.9	-45.7	-34.7	41.7	29.0
Sugarcane	-3.3	13.3	-17.7	10.0	10.7
Coffee	10.2	6.0	6.2	20.8	5.5
Livestock production	0.9	8.6	7.0	9.3	6.1
Poultry	-0.1	8.1	10.5	12.9	8.3
Beef	2.8	7.4	4.8	7.8	3.6
Pork	3.6	4.3	4.7	2.5	1.7
Lamb	7.4	5.9	5.1	31.9	n.a.
Milk	5.5	4.8	5.3	1.5	5.8
Eggs	-9.8	14.9	3.4	4.4	1.9
Other	-10.8	20.0	2.8	-1.0	4.7

Sources: Ministry of Agriculture; and Central Reserve Bank of Peru.

Table 7. Peru: Agricultural Production

(Production in thousands of metric tons; area in thousands of hectares; and yield in metric tons per hectare)

	1996	1997	1998	1999	2000
Coffee	106.5	112.9	119.9	144.9	152.8
Area	176.3	184.6	188.6	212.3	222.9
Yield	0.6	0.6	0.6	0.7	0.7
Corn					
Corn (amiláceo)	250.8	221.6	230.5	252.6	273.0
Area	215.6	206.6	214.6	220.9	241.0
Yield	1.2	1.1	1.1	1.1	1.1
Corn (duro)	559.7	605.8	702.5	806.1	927.9
Area	185.4	210.5	229.1	237.6	270.3
Yield	3.0	2.9	3.1	3.4	3.4
Cotton	268.6	145.8	95.3	134.9	174.0
Area	137.1	91.3	74.0	78.8	98.4
Yield	2.0	1.6	1.3	1.7	1.8
Potato	2,308.9	2,398.1	2,589.3	3,066.2	3,153.6
Area	229.4	248.6	268.9	271.0	277.5
Yield	10.1	9.6	9.6	11.3	11.4
Rice	1,203.2	1,459.8	1,548.7	1,955.0	1,843.0
Area	210.4	238.7	269.1	310.5	280.2
Yield	5.7	6.1	5.8	6.3	6.6
Sugarcane	6,119.0	6,930.3	5,705.3	6,278.6	6,947.3
Area	54.4	63.5	52.6	60.0	60.9
Yield	112.5	109.1	108.4	105.0	114.1

Sources: Ministry of Agriculture; and Central Reserve Bank of Peru.

Table 8. Peru: Production, Consumption, and Exports of the Fishing Industry

	1996	1997	1998	1999	2000
	(In thousands of metric tons)				
For industrial use					
Industrial fish catch	8,771.7	6,998.8	3,696.3	7,783.5	9,962.1
Anchovy	7,460.4	5,923.0	1,205.1	6,724.9	9,241.3
Other	1,311.3	1,075.8	2,491.2	1,058.6	720.7
Fishmeal					
Production	1,925.0	1,597.1	832.0	1,739.4	2,190.8
Exports	1,609.8	1,926.3	666.2	1,474.4	2,374.0
Domestic consumption	165.3	181.7	77.3	115.8	135.0
Fish oil					
Production	422.5	330.0	123.0	503.2	638.0
Exports	221.0	242.5	34.6	258.7	495.0
For human consumption					
Total catch	745.3	872.0	651.6	643.8	799.3
Fresh	250.0	254.3	249.2	255.7	324.4
Canned	213.9	352.1	218.2	204.3	256.8
Frozen	222.5	209.0	128.6	115.0	139.5
Salted	28.8	23.5	18.1	30.5	36.8
Freshwater	30.1	33.1	37.5	38.3	41.9
Domestic consumption	354.6	362.5	347.0	351.0	362.0
	(Annual percentage change)				
Total industrial catch	6.9	-20.2	-47.2	110.6	26.0
Fishmeal production	7.6	-17.0	-47.9	109.1	25.9
Fish oil production	13.0	-21.9	-62.7	309.1	26.8
Total catch for human consumption	1.4	17.0	-25.3	-1.2	24.2

Sources: Ministry of Fishing; and Central Reserve Bank of Peru.

Table 9. Peru: Mineral Production by Major Products

	1996	1997	1998	1999	2000
	(Volumes in thousands of recoverable units)				
Metals					
Copper (MT)	373.1	383.2	356.2	393.5	404.7
Lead (MT)	224.1	247.2	242.7	254.8	256.2
Silver (Kg)	1,972.8	2,134.1	2,067.0	2,263.5	2,460.0
Zinc (MT)	634.1	693.1	693.9	718.5	730.1
Iron (MT)	2,988.9	3,185.3	3,296.6	2,636.2	2,611.4
Petroleum (barrels)	43,909.2	43,157.1	42,191.4	38,663.4	36,828.9
	(Percentage change) 1/				
Metals					
Copper	5.1	2.7	-7.0	10.5	2.8
Lead	2.9	10.3	-1.8	5.0	0.6
Silver	9.2	8.2	-3.1	9.5	8.7
Zinc	9.6	9.3	0.1	3.5	1.6
Iron	-25.0	6.6	3.5	-20.0	-0.9
Petroleum	-1.2	-1.7	-2.2	-8.4	-4.7
Total mineral sector 2/	5.1	9.0	5.6	11.8	3.4

Sources: Ministry of Energy and Mines; and Central Reserve Bank of Peru.

1/ Percentage change in output volume.
2/ Percentage change in output valued at 1994 prices.

Table 10. Peru: Sources and Uses of Petroleum and Petroleum Derivatives

	1996	1997	1998	1999	2000
	(Millions of barrels)				
Sources	74.8	79.9	83.8	72.2	72.0
Crude petroleum production	43.9	43.2	42.2	38.7	36.8
Petroperu	10.4	0.0	0.0	0.0	0.0
Petrotech	6.7	6.3	5.8	5.1	4.9
Occidental	19.1	18.1	17.6	14.8	13.5
Oxy-Bridas	0.8	0.0	0.0	0.0	0.0
Others	6.8	18.8	18.8	18.8	18.4
Petroleum imports	30.9	36.7	41.6	33.6	35.2
Imports of crude	19.6	25.9	32.0	22.6	21.4
Imports of derivatives	11.3	10.8	9.6	11.0	13.8
Uses	74.8	79.9	83.8	72.2	72.0
Petroleum exports	22.0	26.2	26.9	18.3	16.5
Exports of crude	13.6	16.6	15.6	10.2	5.7
Exports of derivatives	7.1	8.3	9.6	7.3	10.7
Refinery losses of crude	0.0	0.0	-2.6	0.0	2.2
Domestic consumption of derivatives	56.1	55.2	56.0	58.1	56.7
Gasoline	10.5	10.2	10.3	10.1	n.a.
Jet fuel	3.6	3.4	4.0	3.0	n.a.
Kerosene	5.1	5.0	5.0	4.9	n.a.
Diesel	19.6	20.8	20.3	21.3	n.a.
Residual	11.3	9.4	10.9	11.1	n.a.
Other	4.5	4.9	4.0	6.2	n.a.
	1.5	1.46	1.5	1.6	1.6
Change in stocks					
Crude	-3.3	-1.5	3.5	-4.2	-3.4
Derivatives 1/	-5.7	-5.9	-0.5	-5.0	-4.2

Sources: Ministry of Energy and Mines; and Central Reserve Bank of Peru.

1/ Includes own consumption by refineries and sales of bunker fuel.

Table 11. Peru: Manufacturing Production

	1996	1997	1998	1999	2000
	(Index 1994 = 100)				
Total	107.0	112.7	108.7	109.0	116.5
Fishmeal	87.6	84.3	42.9	79.3	101.5
Food, beverages, and tobacco	107.1	114.0	119.1	128.8	133.3
Food	108.6	115.0	120.9	131.7	135.6
Beverages	97.8	108.5	108.8	111.0	120.0
Tobacco	119.3	107.1	110.4	131.1	128.5
Textiles, clothing, and leather	111.9	123.5	113.9	110.7	119.2
Textiles	111.0	121.8	113.2	115.0	129.5
Leather and furs	105.2	96.0	80.0	71.0	56.7
Leather shoes	120.0	147.3	136.1	113.1	107.2
Paper	130.3	129.4	132.5	138.2	164.3
Petroleum derivatives and other chemical products	105.3	114.4	113.0	108.9	116.3
Industrial chemical products	120.7	122.6	132.8	126.9	135.5
Other chemical products	101.8	123.0	105.9	104.5	113.0
Petroleum refining	100.0	104.4	108.7	100.5	99.2
Rubber products	103.5	110.4	119.5	114.8	129.5
Plastic products	120.8	119.4	125.0	133.9	172.6
Nonmetallic mineral products	131.7	144.8	149.6	130.8	132.3
Glass and glass products	169.6	194.8	204.8	184.6	169.2
Other	119.3	128.5	131.6	113.2	120.3
Basic metallic industry	113.6	121.5	128.7	132.0	137.3
Iron and steel	120.6	142.6	149.5	138.9	148.5
Nonferrous metals	112.0	116.8	124.2	130.5	134.9
Metallic products and machinery	107.4	117.4	116.9	94.6	102.5
Metallic products	117.1	133.5	139.3	131.9	145.9
Nonelectrical machinery	111.6	127.5	111.2	79.0	79.9
Electrical machinery and equipment	125.7	130.8	121.0	93.5	100.7
Vehicles	76.3	79.2	89.6	60.3	65.7
Other	93.6	116.4	125.3	114.2	104.9
	(Percentage change)				
Total	1.5	5.3	-3.6	0.3	6.9
Fishmeal	5.5	-3.8	-49.1	84.9	27.9
Food, beverages, and tobacco	1.8	6.4	4.5	8.1	3.6
Textiles, clothing, and leather	3.4	10.4	-7.8	-2.8	7.7
Paper	0.3	-0.7	2.4	4.3	18.9
Petroleum derivatives and other chemical products	3.1	8.6	-1.2	-3.6	6.8
Nonmetallic mineral products	11.1	10.0	3.3	-12.6	1.2
Basic metallic industry	8.4	6.9	6.0	2.6	4.0
Metallic product and machinery	-9.0	9.3	-0.4	-19.0	8.3
Other	-8.3	24.4	7.6	-8.9	-8.1

Sources: Ministry of Industry, Tourism, Integration and International Commercial Negotiations; and Central Reserve Bank of Peru.

Table 12. Peru: Population and Labor Force Statistics

	1996	1997	1998	1999	2000
	(In thousands of persons)				
Population 1/	23,947	24,371	24,801	25,232	25,662
Labor force (age 14 and older)	6,592	7,310	7,512	7,836	...
Metropolitan Lima					
Labor force (age 14 and older) 2/	2,999	3,323	3,392	3,534	...
	(In percentage of labor force)				
Urban unemployed	7.0	7.7	7.8	8.0	...
Urban underemployed	42.7	41.8	44.3	43.5	...

Sources: Ministry of Labor and Public Welfare; and National Institute of Statistics and Information.

1/ Estimates based on 1993 census data.
2/ Data based on annual household surveys conducted the third quarter of each year in Lima Metropolitan Area.

Table 13. Peru: Strike Activity by Sector 1/

(Workers and man-hours in thousands)

	1996	1997	1998	1999	2000
Total					
Number of strikes	77	66	58	71	37
Number of workers affected	36	19	17	52	5
Man-hours lost	1 400	319	323	724	182
Mining					
Number of strikes	26	7	13	12	9
Number of workers affected	12	1	2.6	3	1
Man-hours lost	665	42	77	63	19
Manufacturing					
Number of strikes	9	14	14	17	7
Number of workers affected	3	2	1.7	2	1
Man-hours lost	174	20	107	19	19
Construction					
Number of strikes	21	25	14	13	6
Number of workers affected	15	13	10	6	1
Man-hours lost	219	224	108	63	17
Other					
Number of strikes	21	20	17	29	15
Number of workers affected	7	4	3	41	2
Man-hours lost	342	35	31	579	127

Source: Ministry of Labor and Public Welfare.

1/ Includes man-hours lost in work stoppages as well as strikes.

Table 14. Peru: Private Sector Wages and Salaries in the Lima Metropolitan Area 1/ 2/

	In Nominal Terms			In Real Terms 3/		
	Minimum	Average		Minimum	Average	
	Wage 4/	Salaries	Wages	Wage 4/	Salaries	Wages
	(In new soles per month)			(Index 1988=100)		
1996						
March	132.0	1,778.0	714.3	26.2	63.8	51.0
June	132.0	1,833.0	690.0	25.6	64.4	48.2
September	132.0	1,885.1	705.6	25.0	64.5	48.0
December	215.0	1,945.0	732.0	39.7	65.0	48.6
1997						
March	215.0	1,987.0	757.0	39.0	65.2	49.4
June	300.0	2,027.3	758.8	53.2	65.1	48.4
September	345.0	2,048.5	767.0	60.4	64.9	48.3
December	345.0	2,110.4	773.4	59.8	66.3	48.3
1998						
March	345.0	2,200.4	796.8	57.8	66.8	48.1
June	345.0	2,252.7	802.5	56.8	67.2	47.6
September	345.0	2,318.5	802.8	56.6	68.9	47.4
December	345.0	2,383.8	805.8	56.4	70.5	47.4
1999						
March	345.0	2,455.7	796.5	55.9	72.0	46.4
June	345.0	2,485.5	811.5	55.2	72.0	46.7
September	345.0	2,533.3	819.3	54.7	72.7	46.8
December	345.0	2,558.0	822.6	54.4	73.0	46.7
2000						
March 5/	391.0	2,650.4	842.1	61.0	74.8	47.3
June	410.0	2,704.3	842.4	63.6	75.9	47.0

Sources: Ministry of Labor and Public Welfare; and Central Reserve Bank of Peru.

1/ The annual data are period averages.

2/ Wages and salaries correspond to labor earnings of blue collar and white collar workers, respectively.

3/ Deflated by the consumer price index in the Lima metropolitan area.

4/ Corresponds to the minimum legal income, i.e., the minimum vital salary plus supplementary bonuses.

5/ Minimum Wage: average of S/. 345 and S/. 410 by the days, weighted by the number of days each such wage was in effect.

Table 15. Peru: Prices of Public Goods and Services

	1996	1997	1998	1999	2000
(Period averages in new soles per unit as specified)					
Fuels					
Gasoline, 84 octane (gallon)	4.7	5.1	5.1	5.7	7.3
Gasoline, 95 octane (gallon)	6.2	6.7	6.8	7.8	9.5
Diesel 2 (gallon)	3.7	4.4	4.1	4.6	6.3
Kerosene (gallon)	3.0	3.4	3.2	3.8	5.2
Gas (24 lb. cylinder)	23.5	25	23.4	25.3	30.3
Tariffs					
Water					
Potable water (30 cubic meters)	19.6	24.9	31	35.3	36.3
Electricity					
Residential (up to 100 kwh/month)	32.0	33.4	32.3	36.0	39.0
Telephone					
Residential A (150 calls)	53.6	66.5	79.6	87.6	91.3
(Real Index 1991 = 100)					
Fuels					
Gasoline, 84 octane (gallon)	80.2	80.2	74.7	80.7	99.6
Gasoline, 95 octane (gallon)	77.7	77.4	73.2	81.2	95.3
Diesel 2 (gallon)	102.8	113.2	98.3	107.3	140.8
Kerosene (gallon)	96.7	101.0	88.6	102.2	134.1
Gas (24 lb. cylinder)	129.9	124.3	99.3	116.1	134.2
Tariffs					
Water					
Potable water (30 cubic meters)	141.7	165.7	192.4	211.7	209.8
Electricity					
Residential (up to 100 kwh/month)	420.8	404.2	364.4	392.6	409.9
Telephone					
Residential A (150 calls)	271.9	311.0	347.1	369.2	370.8

Source: Central Reserve Bank of Peru.

Table 16. Peru: Consumer Prices in the Lima Metropolitan Area

(Percentage change) 1/

	Total	Food	Clothing	Housing, Fuel, and Electricity	Furniture	Medical Expenses	Transport & Communi-tions	Leisure Activities	Other	Tradables 2/	Non-tradables 3/
1996											
March	**11.6**	12.6	10.4	14.3	9.5	13.2	2.6	15.8	8.1	10.2	12.6
June	**11.0**	10.7	9.1	12.9	9.5	13.7	15.0	12.1	6.5	10.2	11.6
September	**11.7**	12.6	7.8	10.6	8.0	13.7	15.8	10.3	6.7	8.8	13.8
December	**11.8**	11.3	7.3	13.5	7.7	13.8	24.8	10.2	6.6	8.9	13.9
Average	**11.5**	12.2	9.0	12.7	8.9	13.5	11.2	12.5	7.0	9.6	12.9
1997											
March	**9.3**	6.5	7.6	12.6	8.9	14.5	27.1	12.2	5.9	7.1	10.8
June	**9.5**	9.3	7.3	7.7	8.8	12.5	13.9	12.2	6.7	6.0	11.9
September	**8.1**	7.2	7.3	6.4	9.3	11.9	13.6	11.7	7.1	6.2	9.4
December	**6.5**	6.0	7.2	2.1	9.4	11.5	7.5	11.0	8.1	5.7	7.0
Average	**8.5**	7.1	7.4	8.3	9.0	12.8	17.8	11.9	6.9	6.4	10.0
1998											
March	**8.2**	10.2	6.2	0.9	8.8	9.4	4.8	7.5	8.1	7.7	8.5
June	**7.7**	9.2	5.1	3.1	8.8	8.5	4.2	7.5	7.6	6.9	8.2
September	**6.6**	7.2	5.1	4.9	8.6	7.8	3.1	8.2	7.3	7.5	6.0
December	**6.0**	5.8	5.6	5.8	8.5	7.5	3.1	8.8	7.8	7.3	5.1
Average	**7.3**	8.3	5.6	3.1	8.7	8.7	4.3	8.2	7.8	7.3	7.2
1999											
March	**3.4**	0.3	7.1	9.0	8.3	8.3	4.5	8.0	8.9	4.9	2.4
June	**2.9**	-1.1	8.2	10.3	6.4	10.3	5.9	8.3	9.3	5.3	1.3
September	**3.4**	-0.9	7.8	14.0	4.2	10.9	8.6	7.0	9.7	4.5	2.7
December	**3.7**	-0.9	6.5	13.8	3.4	10.9	13.5	6.3	9.1	3.9	3.6
Average	**3.5**	-0.3	7.4	11.3	6.0	9.6	7.2	7.6	9.2	4.9	2.5
2000											
March	**3.9**	0.2	4.4	12.1	2.7	9.9	13.3	4.7	8.0	3.3	4.3
June	**3.2**	-0.1	2.9	10.0	3.3	7.7	12.5	4.4	6.6	3.8	2.8
September	**3.9**	1.6	2.7	7.4	4.7	6.9	11.5	4.6	5.9	3.9	3.9
December	**3.7**	1.6	2.6	12.1	4.6	6.2	5.8	4.6	4.3	4.7	3.1
Average	**3.8**	0.7	3.5	10.6	3.7	8.1	11.5	4.7	6.5	3.8	3.7

Source: National Institute of Statistics and Information.

1/ With respect to the same period of the preceding year.
2/ Foodstuffs, textiles, electric and home appliances, and other tradables.
3/ Fuels, public services, and other foodstuffs and services.

Table 17. Peru: Social and Economic Welfare Indicators

	1990	1994	1996	1997	1998	1999	2000
Income and demographic indicators							
Population (thousands)	21,569	23,130	23,947	24,371	24,801	25,232	25,662
GDP per capita							
Real, percent change	-6.9	10.9	0.7	4.9	-2.1	-0.3	1.8
Nominal, US$ thousands	1,388	1,940	2,326	2,419	2,302	2,059	2,107
Income inequality (Gini coefficient)	...	0.47	...	0.48	...	...	...
Poverty rate 1/ 2/	55.0	54.0	...	50.7	...	...	...
Extreme poverty rate 1/ 3/	26.8	19.0	...	14.7	...	...	...
Health and health care							
Doctors							
(per 10,000 of population)	10.2	7.1	10.3	...	...	...	...
Hospital beds							
(per 10,000 of population)	15.1	...	17.9	...	...	...	...
Malnutrition rate 4/	...	30.0	...	23.8	...	...	...
Education							
Illiteracy rate (percent) 5/	...	...	...	...	7.7	...	...
School attendance							
Gross enrollment ratio 6/	73.5	74.0	...	...	...	...	...
Housing 7/							
Access to utilities (percent)							
Electricity	...	68.8	...	73.7	...	...	77.6
Potable water	...	65.0	...	73.2	...	...	74.1
Sewage	...	48.2	...	58.9	...	...	...

Sources: National Institute of Statistics and Information; Ministry of Education; and the World Bank.

1/ Figures in first column pertain to 1991.

2/ Poverty rate is the percentage of the population whose spending is not able to finance a basic bundle of goods. The value of such a bundle is the poverty line.

3/ Extreme poverty is the percentage of the population whose spending is unable to cover a subsistence bundle of goods.

4/ Percent of children below five years of age.

5/ Census data for 1972, 1981, and 1993; 1998 INEI. Illiteracy rates are calculated for population ages 15 and older.

6/ In percent of population age 5 to 24.

7/ National Household Survey 1997 and 2000 (ENNIV 1997 y 2000), Instituto Cuánto.

Table 18. Peru: Fiscal Operations of the Combined Public Sector 1/
(In millions of new soles)

	1996	1997	1998	1999	2000
Central government primary balance	**1,490**	**1,564**	**1,406**	**-1,740**	**-778**
Revenue	22,218	25,293	26,785	25,957	27,978
Current	21,522	25,001	26,174	25,334	27,299
Capital	697	292	612	624	679
Noninterest expenditure	20,729	23,729	25,379	27,697	28,756
Current	15,680	17,934	19,756	21,797	23,671
Capital	5,048	5,795	5,623	5,900	5,085
Rest of the general government primary balance	**394**	**676**	**776**	**99**	**354**
Revenue	6,306	7,890	8,661	9,408	10,417
Current	6,270	7,859	8,623	9,369	10,157
Capital	36	32	38	38	260
Noninterest expenditure	5,912	7,215	7,884	9,308	10,063
Current	4,637	5,738	6,392	7,648	8,251
Capital	1,275	1,477	1,492	1,660	1,812
Public enterprises primary balance	**349**	**1,069**	**-158**	**57**	**-861**
Current balance	1,371	1,938	1,216	1,658	501
Capital balance	-1,022	-869	-1,375	-1,601	-1,363
Nonfinancial public sector primary balance	**2,232**	**3,309**	**2,024**	**-1,583**	**-1,285**
Central bank operating balance	41	122	175	197	35
Combined public sector primary balance	**2,273**	**3,431**	**2,199**	**-1,386**	**-1,250**
Interest payments	3,507	2,957	3,275	3,807	4,300
Combined public sector overall balance	**-1,234**	**475**	**-1,075**	**-5,192**	**-5,550**
Statistical discrepancy					
Financing	**1,234**	**-475**	**1,075**	**5,192**	**5,550**
External financing	1,092	-591	642	-111	2,096
Domestic financing	-5,017	-1,277	-252	4,070	1,994
Privatization	5,159	1,393	685	1,233	1,460

Sources: Central Reserve Bank of Peru; and Ministry of Economy and Finance.

1/ Comprises the operations of the nonfinancial public sector and the operating balance of the central bank.

Table 19. Peru: Fiscal Operations of the Combined Public Sector 1/

(In percent of GDP)

	1996	1997	1998	1999	2000
Central government primary balance	**1.1**	**0.9**	**0.9**	**-1.0**	**-0.4**
Revenue	16.2	15.7	15.8	14.8	14.8
Current	15.7	15.6	15.4	14.4	14.5
Capital	0.5	0.2	0.3	0.4	0.4
Noninterest expenditure	15.2	14.8	14.9	15.7	15.2
Current	11.5	11.3	11.6	12.4	12.5
Capital	3.7	3.5	3.2	3.4	2.7
Rest of the general government primary balance	**0.3**	**0.3**	**0.5**	**0.1**	**0.3**
Revenue	4.6	5.6	5.9	5.4	5.5
Current	4.6	5.4	5.8	5.3	5.4
Capital	0.0	0.2	0.1	0.0	0.1
Noninterest expenditure	4.3	5.3	5.4	5.3	5.2
Current	3.4	4.2	4.4	4.3	4.3
Capital	0.9	1.1	1.0	0.9	1.0
Public enterprise primary balance	**0.3**	**0.6**	**-0.1**	**0.0**	-0.5
Current balance	1.0	1.2	0.7	1.0	0.3
Capital balance	-0.7	-0.5	-0.8	-0.9	-0.7
Nonfinancial public sector primary balance	**1.6**	**1.8**	**1.2**	**-0.9**	**-0.7**
Central bank operating balance	0.0	0.1	0.1	0.1	0.0
Combined public sector primary balance	**1.7**	**1.9**	**1.3**	**-0.8**	**-0.7**
Interest payments	**2.6**	**1.9**	**1.9**	**2.2**	**2.3**
Combined public sector overall balance	**-0.9**	**0.0**	**-0.6**	**-3.0**	**-3.0**
Statistical discrepancy	**0.0**	**-0.1**	**-0.1**	**0.0**	**0.0**
Financing	**0.9**	**-0.1**	**0.5**	**3.0**	**3.0**
External financing	0.8	-0.6	0.4	0.0	1.2
Domestic financing	-3.7	-0.4	-0.3	2.3	1.1
Privatization	3.8	0.9	0.4	0.7	0.8
Memorandum items:					
General government revenue	19.0	19.1	19.1	17.8	17.8
General government non-interest expenditure	17.6	17.1	17.5	18.7	17.9
Public sector final demand 2/	13.8	13.9	14.5	15.1	14.2
General government expenditure plus public enterprise investment	20.6	20.1	20.3	21.5	20.7

Sources: Central Reserve Bank of Peru; and Ministry of Economy and Finance.

1/ Comprises the operations of the nonfinancial public sector and the operating balance of the central bank.

2/ General government expenditure less transfers to households and interest payments, plus investment by public enterprises.

Table 20. Peru: Fiscal Operations of the Central Government

(In millions of new soles)

	1996	1997	1998	1999	2000
Current primary balance	**5,842**	**7,067**	**6,417**	**3,536**	**3,627**
Current revenue	21,522	25,001	26,174	25,334	27,299
Tax revenue	19,036	22,122	22,995	21,873	22,514
Direct taxes	5,982	6,804	6,845	6,072	6,162
Indirect taxes	13,054	15,317	16,150	15,801	16,352
Other current revenue	2,485	2,879	3,179	3,460	4,785
Current noninterest expenditure	15,680	17,934	19,756	21,797	23,671
Labor services and pensions 1/	8,038	9,535	10,416	11,778	12,403
Goods and nonlabor services	4,619	4,710	5,418	5,598	6,378
Transfers and other	3,024	3,689	3,922	4,421	4,890
Capital balance	**-4,352**	**-5,503**	**-5,011**	**-5,276**	**-4,406**
Capital revenue	697	292	612	624	679
Capital expenditure	5,048	5,795	5,623	5,900	5,085
Gross capital formation	3,921	4,448	4,964	5,652	4,590
Other	1,128	1,347	659	248	495
Primary balance	**1,490**	**1,564**	**1,406**	**-1,740**	**-778**
Interest payments	**3,289**	**2,789**	**3,119**	**3,674**	**4,144**
External	3,213	2,673	2,944	3,436	3,599
Domestic	76	116	176	238	545
Overall balance	**-1,799**	**-1,225**	**-1,713**	**-5,414**	**-4,922**
Statistical discrepancy					
Financing	**1,799**	**1,225**	**1,713**	**5,414**	**4,922**

Sources: Central Reserve Bank of Peru; and Ministry of Economy and Finance.

1/ Includes wages, salaries, pensions and employer contributions to social security.

Table 21. Peru: Fiscal Operations of the Central Government

(In percent of GDP)

	1996	1997	1998	1999	2000
Current primary balance	**4.3**	**4.2**	**3.8**	**2.0**	**1.9**
Current revenue	15.7	15.6	15.4	14.4	14.5
Tax revenue 1/	13.9	14.6	14.2	12.7	12.2
Direct taxes	4.4	4.5	4.3	3.4	3.3
Indirect taxes	9.5	10.1	9.9	9.2	9.0
Other current revenue	1.8	0.9	1.2	1.7	2.2
Current noninterest expenditure	11.5	11.3	11.6	12.4	12.5
Labor services 2/	5.9	5.9	6.1	6.7	6.6
Goods and nonlabor services	3.4	2.4	2.7	3.0	3.2
Transfers and other	2.2	3.1	2.9	2.7	2.8
Capital balance	**-3.2**	**-3.3**	**-2.9**	**-3.0**	**-2.3**
Capital revenue	0.5	0.2	0.3	0.4	0.4
Capital expenditure	3.7	3.5	3.2	3.4	2.7
Gross capital formation	2.9	2.2	2.3	2.7	2.1
Other	0.8	1.3	0.9	0.7	0.6
Primary balance	**1.1**	**0.9**	**0.9**	**-1.0**	**-0.4**
Interest payments	**2.4**	**1.8**	**1.8**	**2.1**	**2.3**
External	2.3	1.7	1.7	2.0	2.0
Domestic	0.1	0.1	0.1	0.1	0.3
Overall balance	**-1.3**	**-0.9**	**-1.0**	**-3.1**	**-2.7**
Statistical discrepancy	**0.0**	**-0.1**	**-0.1**	**0.0**	**0.0**
Financing	**1.3**	**0.8**	**0.9**	**3.1**	**2.7**

Sources: Central Reserve Bank of Peru; and Ministry of Economy and Finance.

1/ Net of tax on assets of public enterprises and of central government payroll tax (IES) payments.
2/ Includes wages, salaries, pensions and employer contributions to social security.

Table 22. Peru: Central Government Revenue

(In millions of new soles)

	1996	1997	1998	1999	2000
Current revenue	**21,522**	**25,001**	**26,174**	**25,334**	**27,299**
Tax revenue 1/	19,036	22,122	22,995	21,873	22,514
Income tax	4,981	5,710	5,861	5,072	5,126
Advance payments	4,180	5,154	5,332	4,677	4,623
Annual filing	801	556	530	394	504
Payroll tax (FONAVI)	1,001	1,094	984	1,000	1,036
Import duties	2,308	2,471	2,891	2,848	2,871
Domestic consumption taxes	11,340	13,710	14,467	14,475	15,351
Value-added tax 2/	8,578	10,344	11,040	11,029	11,976
Domestic	4,723	5,929	6,384	6,470	7,043
Imports	3,856	4,415	4,655	4,559	4,933
Excises	2,761	3,365	3,427	3,446	3,375
Petroleum derivatives	1,599	1,931	2,000	2,092	2,057
Other	1,162	1,434	1,426	1,354	1,319
Other tax revenue	269	646	586	579	825
Tax refunds	-863	-1,509	-1,794	-2,101	-2,695
Other current revenue	2,485	2,879	3,179	3,460	4,785
Resources of ministries and other nontax revenues	2,167	2,493	2,810	3,193	4,620
Interest on privatization funds	319	386	369	268	165
Capital revenue	**697**	**292**	**612**	**624**	**679**
Grants	253	141	197	203	225
Transfers from public enterprises	444	151	415	421	454
Total revenue and grants	**22,218**	**25,293**	**26,785**	**25,957**	**27,978**
Memorandum items:					
Tax revenue earmarked for municipalities	978	1,177	1,231	1,220	1,320

Sources: Central Reserve Bank of Peru; Ministry of Economy and Finance; and SUNAT.

1/ Includes revenues from FONAVI/IES. In 1998, the contribution to FONAVI was replaced by the Impuesto Extraordinario de Solidaridad (IES).

2/ Includes the part earmarked for municipal governments (IPM), equal to 2 percentage points of the VAT rate.

Table 23. Peru: Central Government Revenue

(In percent of GDP)

	1996	1997	1998	1999	2000
Current revenue	**15.7**	**15.9**	**15.7**	**14.4**	**14.5**
Tax revenue 1/	13.9	14.1	13.8	12.4	11.9
Income tax	3.6	3.6	3.5	2.9	2.7
Advance payments	3.1	3.3	3.2	2.7	2.4
Annual filing	0.6	0.4	0.3	0.2	0.3
Payroll tax (FONAVI)	0.7	0.7	0.6	0.6	0.5
Import duties	1.7	1.6	1.7	1.6	1.5
Domestic consumption taxes	8.3	8.7	8.7	8.2	8.1
Value-added tax 2/	6.3	6.6	6.6	6.3	6.3
Domestic	3.5	3.8	3.8	3.7	3.7
Imports	2.8	2.8	2.8	2.6	2.6
Excises	2.0	2.1	2.1	2.0	1.8
Petroleum derivatives	1.2	1.2	1.2	1.2	1.1
Other	0.8	0.9	0.9	0.8	0.7
Other tax revenue	0.2	0.4	0.4	0.3	0.4
Tax refunds	-0.6	-1.0	-1.1	-1.2	-1.4
Other current revenue	**1.8**	**1.8**	**1.9**	**2.0**	**2.5**
Resources of ministries and other nontax revenues	1.6	1.6	1.7	1.8	2.4
Interest on privatization funds	0.2	0.2	0.2	0.2	0.1
Capital revenue	**0.5**	**0.2**	**0.4**	**0.4**	**0.4**
Grants	0.2	0.1	0.1	0.1	0.1
Transfers from public enterprises	0.3	0.1	0.2	0.2	0.2
Total revenue and grants	**16.2**	**16.1**	**16.0**	**14.8**	**14.8**
Memorandum items:					
Tax revenue earmarked for municipalities	0.7	0.7	0.7	0.7	0.7

Sources: Central Reserve Bank of Peru; Ministry of Economy and Finance; and SUNAT.

1/ Includes revenues from FONAVI/IES. In 1998, the contribution to FONAVI was replaced by the Impuesto Extraordinario de Solidaridad (IES).

2/ Includes the part earmarked for municipal governments (IPM), equal to two percentage points of the VAT rate.

Table 24. Peru: Central Government Expenditure

(In millions of soles)

	1996	1997	1998	1999	2000
Current noninterest expenditure	**15,680**	**17,934**	**19,756**	**21,797**	**23,671**
Labor services	8,038	9,535	10,416	11,778	12,403
Wages and salaries	5,433	6,397	6,979	7,774	8,187
Regular payroll	4,594	5,639	6,147	6,937	7,340
Additional payments	839	758	832	837	848
Pensions	2,239	2,634	2,894	3,281	3,420
Social security contributions	365	504	543	724	796
Goods and nonlabor services	4,619	4,710	5,418	5,598	6,378
Transfers	3,024	3,689	3,922	4,421	4,890
To the private sector	884	1,045	930	1,095	1,130
To the rest of the nonfinancial public sector	2,139	2,645	2,992	3,326	3,760
Public pension system (ONP)	313	388	601	1,015	1,296
Local governments	1,316	1,647	1,788	1,698	1,875
Other public institutions	510	610	603	612	589
Capital expenditure	**5,048**	**5,795**	**5,623**	**5,900**	**5,085**
Gross capital formation	3,921	4,448	4,964	5,652	4,590
Other capital expenditure	1,128	1,347	659	248	495
FONAVI 1/	739	476	-17	-18	-98
Transfers to the rest of the nonfinancial public sector	341	703	565	108	300
Public pension system (ONP)	0	0	0	0	0
Local governments	0	0	0	0	235
Other public institutions	341	703	565	108	65
Other	48	169	111	157	294
Interest payments	**3,289**	**2,789**	**3,119**	**3,674**	**4,144**
External	3,213	2,673	2,944	3,436	3,599
Domestic	76	116	176	238	545
Total central government expenditure	**24,017**	**26,518**	**28,498**	**31,371**	**32,900**
Memorandum item:					
Total noninterest expenditure	20,729	23,729	25,379	27,697	28,756

Sources: Central Reserve Bank of Peru; Ministry of Economy and Finance; and SUNAT.

1/ FONAVI was a fund that provided housing loans and was funded by the payroll tax. Excludes loans to Banco de Materiales, already included in transfers to nonfinancial public sector.

Table 25. Peru: Central Government Expenditure

(In percent of GDP)

	1996	1997	1998	1999	2000
Current noninterest expenditure	**11.5**	**11.4**	**11.8**	**12.4**	**12.5**
Labor services and pensions	5.9	6.1	6.2	6.7	6.6
Wages and salaries	4.0	4.1	4.2	4.4	4.3
Regular payroll	3.4	3.6	3.7	3.9	3.9
Additional pays	0.6	0.5	0.5	0.5	0.4
Pensions	1.6	1.7	1.7	1.9	1.8
Social security contributions	0.3	0.3	0.3	0.4	0.4
Goods and nonlabor services	3.4	3.0	3.2	3.2	3.4
Transfers	2.2	2.3	2.3	2.5	2.6
To the private sector	0.6	0.7	0.6	0.6	0.6
To the rest of the nonfinancial public sector	1.6	1.7	1.8	1.9	2.0
Public pension system (ONP)	0.2	0.2	0.4	0.6	0.7
Local governments	1.0	1.0	1.1	1.0	1.0
Other public institutions	0.4	0.4	0.4	0.3	0.3
Capital expenditure	**3.7**	**3.7**	**3.4**	**3.4**	**2.7**
Gross capital formation	2.9	2.8	3.0	3.2	2.4
Other capital expenditure	0.8	0.9	0.4	0.1	0.3
FONAVI 1/	0.5	0.3	0.0	0.0	-0.1
Transfers to the rest of the nonfinancial public sector	0.2	0.4	0.3	0.1	0.2
Public pension system (ONP)	0.0	0.0	0.0	0.0	0.0
Local governments	0.0	0.0	0.0	0.0	0.1
Other public institutions	0.2	0.4	0.3	0.1	0.0
Other	0.0	0.1	0.1	0.1	0.2
Interest payments	**2.4**	**1.8**	**1.9**	**2.1**	**2.2**
External	2.3	1.7	1.8	2.0	1.9
Domestic	0.1	0.1	0.1	0.1	0.3
Total central government expenditure	**17.6**	**16.9**	**17.1**	**17.8**	**17.4**
Memorandum item:					
Total noninterest expenditure	15.2	15.1	15.2	15.7	15.2

Sources: Central Reserve Bank of Peru; Ministry of Economy and Finance; and SUNAT.

1/ FONAVI was a fund that provided housing loans and was funded by the payroll tax. Excludes loans to Banco de Materiales, already included in transfers to nonfinancial public sector.

Table 26. Peru: Operations of the Rest of the General Government 1/

(In millions of new soles)

	1996	1997	1998	1999	2000
Current revenue	**6,270**	**7,859**	**8,623**	**9,369**	**10,157**
Tax revenue	388	431	470	437	470
Contributions	2,378	2,804	2,795	2,945	3,106
Nontax revenue	1,809	2,458	2,831	3,115	3,243
Transfers	1,695	2,167	2,526	2,872	3,337
Current noninterest expenditure	**4,637**	**5,738**	**6,392**	**7,648**	**8,251**
Labor services	1,239	1,580	1,698	1,898	2,046
Goods and services	1,779	2,206	2,582	2,757	2,959
Transfers	1,619	1,951	2,112	2,994	3,246
Current balance	**1,633**	**2,121**	**2,231**	**1,721**	**1,906**
Capital revenue	**36**	**32**	**38**	**38**	**260**
Capital expenditure	**1,275**	**1,477**	**1,492**	**1,660**	**1,812**
Gross capital formation	1,260	1,459	1,467	1,607	1,787
Other	15	18	26	53	25
Primary balance	**394**	**676**	**776**	**99**	**354**
Interest payments	**43**	**55**	**55**	**55**	**46**
External	0	0	0	0	0
Domestic	43	55	55	55	46
Overall balance	**351**	**621**	**722**	**44**	**308**
Statistical discrepancy					
Financing	**-351**	**-621**	**-722**	**-44**	**-308**
Foreign	3	0	0	0	0
Domestic	-354	-621	-722	-44	-308

Sources: Central Reserve Bank of Peru; and Ministry of Economy and Finance.

1/ Comprises local governments, social security, universities, and regulatory agencies.

Table 27. Peru: Operations of the Rest of the General Government 1/

(In percent of GDP)

	1996	1997	1998	1999	2000
Current revenue	**4.6**	**5.0**	**5.2**	**5.3**	**5.4**
Tax revenue	0.3	0.3	0.3	0.2	0.2
Contributions	1.7	1.8	1.7	1.7	1.6
Nontax	1.3	1.6	1.7	1.8	1.7
Transfers	1.2	1.4	1.5	1.6	1.8
Current noninterest expenditure	**3.4**	**3.7**	**3.8**	**4.3**	**4.4**
Labor services	0.9	1.0	1.0	1.1	1.1
Goods and services	1.3	1.4	1.5	1.6	1.6
Transfers	1.2	1.2	1.3	1.7	1.7
Current balance	**1.2**	**1.4**	**1.3**	**1.0**	**1.0**
Capital revenue	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**
Capital expenditure	**0.9**	**0.9**	**0.9**	**0.9**	**1.0**
Gross capital formation	0.9	0.9	0.9	0.9	0.9
Other	0.0	0.0	0.0	0.0	0.0
Primary balance	**0.3**	**0.4**	**0.5**	**0.1**	**0.2**
Interest payments	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
External	0.0	0.0	0.0	0.0	0.0
Domestic	0.0	0.0	0.0	0.0	0.0
Overall balance	**0.3**	**0.4**	**0.4**	**0.0**	**0.2**
Statistical discrepancy					
Financing	**-0.3**	**-0.4**	**-0.4**	**0.0**	**-0.2**
Foreign	0.0	0.0	0.0	0.0	0.0
Domestic	-0.3	-0.4	-0.4	0.0	-0.2

Sources: Central Reserve Bank of Peru; and Ministry of Economy and Finance.

1/ Comprises local governments, social security, universities, and regulatory agencies.

Table 28. Peru: Operations of the Public Enterprises

(In millions of new soles)

	1996	1997	1998	1999	2000
Current receipts	**12,304**	**11,388**	**9,524**	**10,728**	**12,989**
Gross sales	11,381	10,586	8,669	9,804	12,134
Other	923	802	855	924	855
Current noninterest expenditure	**10,932**	**9,450**	**8,308**	**9,070**	**12,488**
Labor services	1,450	1,159	1,126	1,066	996
Goods and services	5,603	5,124	4,021	4,616	6,699
Taxes	3,160	2,608	2,539	2,745	3,242
Other	719	558	622	643	1,551
Capital revenue	**344**	**703**	**650**	**108**	**90**
Capital expenditure	**1,367**	**1,571**	**2,025**	**1,709**	**1,452**
Gross capital formation	668	998	1,033	1,181	866
Transfers 1/	444	151	415	421	454
Other	254	422	577	107	132
Primary balance	**349**	**1,069**	**-158**	**57**	**-861**
Interest payments	**175**	**112**	**101**	**78**	**110**
External	7	24	29	33	52
Domestic	168	88	72	45	58
Overall balance	**173**	**957**	**-259**	**-20**	**-972**
Statistical discrepancy					
Financing	**-173**	**-957**	**259**	**20**	**972**
Foreign	11	-602	81	202	55
Domestic	-184	-354	178	-181	917

Sources: Central Reserve Bank of Peru; and Ministry of Economy and Finance.

1/ To the rest of the nonfinancial public sector.

Table 29. Peru: Operations of the Public Enterprises

(In percent of GDP)

	1996	1997	1998	1999	2000
Current receipts	**9.0**	**7.2**	**5.7**	**6.1**	**6.9**
Gross sales	8.3	6.7	5.2	5.6	6.4
Other	0.7	0.5	0.5	0.5	0.5
Current noninterest expenditure	**8.0**	**6.0**	**5.0**	**5.2**	**6.6**
Labor services	1.1	0.7	0.7	0.6	0.5
Goods and services	4.1	3.3	2.4	2.6	3.5
Taxes	2.3	1.7	1.5	1.6	1.7
Other	0.5	0.4	0.4	0.4	0.8
Capital revenue	**0.3**	**0.4**	**0.4**	**0.1**	**0.0**
Capital expenditure	**1.0**	**1.0**	**1.2**	**1.0**	**0.8**
Gross capital formation	0.5	0.6	0.6	0.7	0.5
Transfers 1/	0.3	0.1	0.2	0.2	0.2
Other	0.2	0.3	0.3	0.1	0.1
Primary balance	**0.3**	**0.7**	**-0.1**	**0.0**	**-0.5**
Interest payments	**0.1**	**0.1**	**0.1**	**0.0**	**0.1**
External	0.0	0.0	0.0	0.0	0.0
Domestic	0.1	0.1	0.0	0.0	0.0
Overall balance	**0.1**	**0.6**	**-0.2**	**0.0**	**-0.5**
Statistical discrepancy					
Financing	**-0.1**	**-0.6**	**0.2**	**0.0**	**0.5**
Foreign	0.0	-0.4	0.0	0.1	0.0
Domestic	-0.1	-0.2	0.1	-0.1	0.5

Sources: Central Reserve Bank of Peru; and Ministry of Economy and Finance.

1/ To the rest of the nonfinancial public sector.

Table 30. Peru: Functional Classification of Central Government Expenditure

	1997	1998	1999	2000
	(In percent of GDP)			
Total	**18.8**	**17.3**	**19.0**	**18.3**
Planning and Administration	5.6	4.0	4.7	4.5
Debt service	4.8	3.0	3.4	3.8
Administration	0.8	0.9	1.2	0.7
Pensions and social assistance	3.6	3.5	4.1	4.1
Pensions	2.6	2.7	3.0	3.2
Other social assistance	1.0	0.8	1.0	0.9
Education	2.7	2.7	3.0	2.9
Preprimary	0.2	0.2	0.3	0.2
Primary	1.0	1.0	1.1	1.0
Secondary	0.7	0.7	0.7	0.7
Tertiary	0.5	0.5	0.6	0.5
Other	0.3	0.3	0.3	0.4
Defense and national security	2.9	2.9	2.8	2.9
Health and water	1.4	1.5	1.5	1.6
Water and sewage	0.2	0.2	0.2	0.1
Healthcare services	1.3	1.3	1.4	1.4
Transportation	1.1	0.9	1.0	0.6
Agriculture	0.6	0.7	0.7	0.7
Justice	0.4	0.4	0.4	0.4
Energy and natural resources	0.2	0.2	0.2	0.1
Foreign relations	0.1	0.2	0.2	0.2
Legislative	0.1	0.1	0.1	0.1
Housing and urban development	0.0	0.1	0.1	0.1
Industry, commerce, and services	0.1	0.1	0.1	0.1
Fishing	0.1	0.0	0.1	0.1
Communications	0.0	0.0	0.0	0.0
Employment	0.0	0.0	0.0	0.0
Memorandum items:				
Total social expenditure	6.9	6.5	7.0	6.8
Budgetary social expenditure 1/	5.1	5.0	5.5	5.3
ESSALUD 2/	1.1	1.2	1.4	1.5
Fonavi 3/	0.8	0.3	0.1	0.0
GDP (in millions of soles)	157,089	167,026	175,855	188,719

Source: Ministry of Economy and Finance.

1/ Includes education, health and sanitation and other social assistance.
2/ Total expenditure by Essalud, the public health insurance administration.
3/ Net operations of the national housing fund (Fonavi), loan disbursements and amortizations received.

Table 31. Peru: Monetary Survey

	1996	1997	1998	1999	2000
S/. per US$	2.45	2.70	2.87	3.45	3.60
(End-of-period stock, in millions of new soles)					
I. Central Reserve Bank					
Net international reserves	20,298	27,000	25,642	28,149	28,693
Net domestic assets	-17,053	-23,173	-21,692	-23,518	-24,142
Net credit to the public sector 1/	-8,810	-11,666	-11,585	-10,491	-10,556
Banking system (net)	-8,279	-11,077	-9,360	-10,954	-11,546
Other	36	-430	-747	-2,073	-2,040
Currency in circulation	3,245	3,827	3,950	4,631	4,551
II. Banking system					
Net international reserves	21,085	21,094	19,760	25,630	26,928
Net medium-and long-term foreign liabilities	122	227	684	333	n.a.
Net domestic assets	8,954	15,576	17,987	19,668	21,148
Net credit to the nonfinancial public sector	-13,937	-16,242	-16,593	-16,381	-14,725
Credit to the private sector	28,029	38,419	43,419	49,166	49,975
Other	-5,138	-6,602	-8,839	-13,118	-14,101
Liabilities to the private sector	30,161	36,896	38,432	45,631	48,076
(Change in percent of currency in circulation at the beginning of the period) 2/					
I. Central Reserve Bank					
Net domestic assets	-151.8	-126.2	78.4	85.9	13.0
Net credit to the public sector 1/	-114.8	-60.1	20.7	87.9	8.2
Banking system (net)	-42.2	-62.0	60.9	2.9	-3.6
Other	5.3	-4.2	-3.2	-4.9	8.4
Currency in circulation	6.6	17.9	3.2	17.2	-1.7
(Change in percent of liabilities to the private sector at the beginning of the period) 2/					
II. Banking System					
Net domestic assets	4.7	16.7	7.1	0.1	2.2
Net credit to the nonfinancial public sector	-24.5	-3.2	1.6	6.6	4.6
Credit to the private sector	31.2	25.9	8.2	-2.6	-2.0
Other	-1.9	-6.0	-2.7	-3.9	-0.4
Liabilities to the private sector	28.0	15.0	0.2	4.3	2.2

Sources: Central Reserve Bank of Peru.

1/ Includes net credit to Banco de la Nación.
2/ Flows in foreign currency are valued at the program exchange rate.

Table 32. Peru: Monetary and Quasi-Money

	1996	1997	1998	1999	2000
(In millions of nuevos soles, end-of period stocks) 1/					
Money and quasi-money	**31,376**	**37,073**	**40,947**	**46,179**	**47,421**
Money	**5,523**	**6,590**	**6,623**	**7,467**	**n.a.**
Currency	3,245	3,827	3,950	4,631	4,551
Demand deposits	2,278	2,763	2,673	2,837	n.a.
Quasi-money	**25,853**	**30,483**	**34,324**	**38,712**	**n.a.**
In domestic currency	4,794	6,365	6,021	6,642	n.a.
In foreign currency 1/	21,060	24,118	28,303	32,071	33,036
(In millions of U.S. dollars)	8,100	8,867	8,985	9,137	9,359
(In percent of GDP) 2/					
Money and quasi-money	**19.7**	**21.4**	**23.1**	**25.1**	**24.6**
Money	**3.3**	**3.5**	**3.7**	**3.6**	**n.a.**
Currency	1.9	2.0	2.1	2.1	n.a.
Demand deposits	1.4	1.5	1.6	1.5	n.a.
Quasi-money	**16.4**	**18.0**	**19.5**	**21.5**	**n.a.**
In domestic currency	3.3	3.5	3.8	3.7	n.a.
In foreign currency	13.0	14.5	15.6	17.8	n.a.

Sources: Central Reserve Bank of Peru.

1/ Foreign currency stocks converted to domestic currency using end-of-period exchange rates.
2/ Average stocks as percent of GDP.

Table 33. Peru: Selected Interest Rates on Domestic Currency Operations

	Effective Interest Rates 1/				
	Lending 2/		Deposit 3/		Central Bank
	Nominal	Real 4/	Nominal	Real 4/	Rediscounts
	(In percent per annum)				
1996					
March	25.6	12.5	15.0	3.0	15.7
June	25.6	13.1	14.7	3.3	16.8
September	26.0	12.8	14.7	2.7	16.0
December	27.4	13.9	15.0	2.8	18.2
1997					
March	28.0	17.1	15.3	5.5	18.0
June	30.2	18.9	15.6	5.6	15.3
September	31.1	21.3	14.8	6.2	--
December	31.1	23.1	14.2	7.3	16.0
1998					
March	29.9	20.1	13.8	5.2	--
June	29.3	20.1	13.9	5.8	30.8
September	31.5	23.4	16.2	9.0	40.3
December	33.2	25.6	18.4	11.7	18.7
1999					
March	33.5	29.1	18.8	14.9	--
June	31.9	28.2	17.9	14.6	25.6
September	28.7	24.4	13.1	9.3	--
December	27.6	23.0	14.1	10.0	17.8
2000					
January	28.2	23.5	14.4	10.2	--
February	28.3	23.4	14.6	10.2	--
March	27.8	23.0	13.8	9.5	--
April	27.7	23.0	13.7	9.5	--
May	28.2	24.1	13.7	10.0	--
June	27.9	23.9	13.6	10.1	--
July	28.5	24.2	13.2	9.4	--
August	29.2	24.5	12.8	8.7	--
September	27.9	23.1	12.3	8.1	--
October	27.7	22.5	12.4	7.8	--
November	27.1	22.2	12.5	8.1	14.0
December	26.5	21.9	12.5	8.5	--

Source: Central Reserve Bank of Peru

1/ Weighted average (by share of bank paticipation in the banking system).
2/ Average rate on loans of up to 360 days.
3/ Average rate on deposits of 31-179 days.
4/ Deflated by consumer price index.

Table 34. Peru: Selected Interest Rates on Foreign Currency Operations

(In percent per year)

	Efective Interest Rates 1/		Central Bank Remuneration on Reserves in Foreign Currency 4/
	Lending 2/	Deposit 3/	
1996			
March	16.1	9.2	5.3
June	15.9	8.5	5.4
September	15.8	8.2	4.5
December	15.8	7.6	4.5
1997			
March	15.5	7.3	4.5
June	15.5	7.3	4.4
September	15.1	7.0	4.3
December	15.1	6.8	4.5
1998			
March	15.3	6.5	4.3
June	15.4	6.5	4.3
September	15.6	6.3	4.5
December	16.5	7.1	4.2
1999			
March	16.4	6.9	4.0
June	16.0	6.4	4.2
September	15.8	6.0	4.6
2000			
January	13.6	5.7	5.9
February	13.6	5.7	6.0
March	13.6	5.6	6.1
April	13.4	5.6	6.2
May	13.3	5.7	6.7
June	13.0	5.7	6.7
July	12.8	5.7	6.6
August	12.7	5.6	6.6
September	12.1	5.7	6.6
October	12.0	5.7	6.7
November	12.1	5.7	6.7
December	11.9	5.6	6.4

Source: Central Reserve Bank of Peru.

1/ Weighted average (by share of bank participation in the banking system).
2/ Average rate on loans of up to 360 days.
3/ Average rate on deposits of 31-179 days.
4/ Remuneration is paid on the difference between required reserves and minimum legal reserves.

Table 35. Peru: Summary Accounts of the Banking System

(In millions of nuevos soles; foreign currency accounts are valued at end-of-period exchange rate)

	1996			1997			1998			1999			2000		
	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total
						I. Central Reserve Bank									
End-of-period exchange rate (S/. per US$)		2.60			2.72			3.13			3.48			3.52	
Net international reserves		21,541	21,541		27,200	27,200		28,144	28,144		28,638	28,638		28,318	28,318
Foreign assets		24,202	24,202		29,671	29,671		30,310	30,310		30,526	30,526		29,769	29,769
Foreign liabilities		2,661	2,661		2,471	2,471		2,166	2,166		1,887	1,887		1,451	1,451
Medium and long-term foreign assets	0	509	509	0	579	579	-7	781	773	-28	956	928	-8	1,046	1,038
Net domestic assets	3,267	-21,931	-18,664	3,874	-27,701	-23,827	3,968	-28,841	-24,873	4,785	-29,519	-24,734	4,970	-29,286	-24,316
Nonfinancial public sector	336	-8,300	-7,964	437	-11,200	-10,764	613	-12,590	-11,977	181	-10,338	-10,158	21	-9,462	-9,441
- Central Goverment	341	-8,224	-7,884	458	-7,989	-7,532	614	-6,757	-6,144	405	-3,924	-3,519	124	-2,153	-2,029
- Rest of the nonfinancial public sector	-4	-76	-80	-21	-3,211	-3,232	-1	-5,832	-5,833	-225	-6,414	-6,639	-103	-7,308	-7,412
Private sector	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Banking system	-968	-9,166	-10,133	-2,113	-10,022	-12,135	-1,517	-9,407	-10,924	-1,571	-10,064	-11,636	-2,027	-10,244	-12,271
- National Bank	-407	-975	-1,381	-798	-188	-986	-429	-328	-757	-432	-79	-511	-324	-592	-916
- Commercial banks	-561	-8,191	-8,752	-1,315	-9,834	-11,149	-1,088	-9,079	-10,167	-1,139	-9,985	-11,124	-1,703	-9,652	-11,355
- Development banks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net unclassified assets	3,898	-4,465	-566	5,551	-6,479	-928	4,872	-6,845	-1,973	6,175	-9,116	-2,941	6,976	-9,580	-2,604
Liabilities to private sector	3,267	119	3,386	3,874	78	3,952	3,961	84	4,044	4,757	76	4,832	4,962	79	5,041
Money	3,259	0	3,259	3,837	0	3,837	3,959	0	3,959	4,638	0	4,638	4,564	0	4,564
- Currency	3,245	0	3,245	3,827	0	3,827	3,950	0	3,950	4,631	0	4,631	4,551	0	4,551
- Demand deposits	14	0	14	10	0	10	9	0	9	7	0	7	13	0	13
Quasi-money	8	119	127	37	78	115	2	84	86	119	76	194	398	79	476

Table 35. Peru: Summary Accounts of the Banking System

(In millions of nuevos soles; foreign currency accounts are valued at end-of-period exchange rate)

	1996			1997			1998			1999			2000		
	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total
II. Banco de la Nacion															
End-of-period exchange rate (S/. per US$)		2.60			2.72			3.13			3.48			3.52	
Net international reserves		3,663	3,663		669	669		681	681		436	436		92	92
Foreign assets		3,750	3,750		748	748		774	774		534	534		n.a.	n.a.
Foreign liabilities		88	88		79	79		93	93		99	99		n.a.	n.a.
Medium and long-term foreign assets	0	107	107	0	591	591	0	633	633	0	98	98	n.a.	n.a.	n.a.
Net domestic assets	294	-3,670	-3,376	434	-1,163	-729	514	-838	-324	546	-365	181	619	42	662
Nonfinancial public sector	-765	-2,441	-3,206	-872	1,212	340	-183	1,603	1,419	-216	2,833	2,617	-459	3,107	2,648
- Central Goverment	-743	-2,463	-3,205	-886	1,219	334	-544	1,529	985	-368	3,740	3,372	n.a.	n.a.	n.a.
- Rest of the nonfinancial public sector	-23	22	-1	14	-8	6	361	73	434	152	-907	-755	n.a.	n.a.	n.a.
Private sector	24	129	153	35	110	145	32	125	158	42	130	172	64	131	195
Banking system	559	975	1,534	992	189	1,181	612	325	937	417	180	597	460	661	1,121
- Central Reserve Bank	407	975	1,381	798	188	986	429	328	757	432	79	511	324	592	916
- Commercial banks	153	-3	150	194	1	196	183	-3	180	-15	101	86	136	70	205
- Development banks	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0
Capital and reserve	-1,844	-436	-2,281	-2,383	-364	-2,747	-1,243	-2,105	-3,348	-1,106	-2,473	-3,578	n.a.	n.a.	n.a.
Net unclassified assets	2,321	-1,896	424	2,661	-2,309	352	1,296	-785	510	1,408	-1,035	373	554	-3,856	-3,302
Liabilities to private sector	294	99	393	434	97	531	514	476	990	546	169	715	619	135	754
Money	186	0	186	239	0	239	263	0	263	256	0	256	n.a.	n.a.	n.a.
Quasi-money	108	99	207	195	97	292	251	476	727	291	169	459	n.a.	n.a.	n.a.

Table 35. Peru: Summary Accounts of the Banking System

(In millions of nuevos soles; foreign currency accounts are valued at end-of-period exchange rate)

	1996			1997			1998			1999			2000		
	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total
III. Commercial Banks															
End-of-period exchange rate (S/. per US$)		2.60			2.72			3.13			3.48			3.52	
Net international reserves		-2,756	-2,756		-6,544	-6,544		-7,137	-7,137		-2,998	-2,998		-2,006	-2,006
Foreign assets		1,179	1,179		1,572	1,572		1,930	1,930		3,443	3,443		n.a.	n.a.
Foreign liabilities		3,935	3,935		8,117	8,117		9,068	9,068		6,441	6,441		n.a.	n.a.
Medium and long-term foreign assets	-55	-348	-403	-44	-813	-857	-64	-555	-619	-53	-633	-686	n.a.	n.a.	n.a.
Net domestic assets	6,776	23,921	30,697	8,657	31,275	39,932	8,204	35,408	43,612	8,839	35,448	44,286	8,783	34,819	43,602
Nonfinancial public sector	-1,406	-2,183	-3,589	-2,538	-3,462	-6,000	-3,764	-3,565	-7,329	-4,195	-4,856	-9,051	-4,039	-3,694	-7,733
- Central Goverment	-500	-179	-678	-1,116	-295	-1,411	-1,733	-137	-1,870	-2,142	-69	-2,211	n.a.	n.a.	n.a.
- Rest of the nonfinancial public sector	-906	-2,005	-2,910	-1,423	-3,167	-4,589	-2,031	-3,428	-5,459	-2,053	-4,788	-6,841	n.a.	n.a.	n.a.
Private sector	7,245	21,083	28,328	8,446	29,221	37,667	9,025	36,653	45,677	8,696	40,191	48,887	8,809	39,361	48,170
Banking system	408	8,194	8,602	1,121	9,833	10,954	905	9,081	9,986	1,151	9,885	11,036	1,565	9,583	11,148
- Central Reserve Bank	561	8,191	8,752	1,315	9,834	11,149	1,088	9,078	10,166	1,137	9,985	11,122	1,701	9,653	11,354
- National banks	-153	3	-150	-194	-1	-196	-183	3	-180	14	-101	-87	-136	-70	-205
- Development banks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital and reserve	-4,971	-1,263	-6,233	-6,575	-1,724	-8,299	-8,009	-2,952	-10,961	-10,161	-5,118	-15,279	n.a.	n.a.	n.a.
Net unclassified assets	5,499	-1,911	3,588	8,203	-2,593	5,610	10,048	-3,809	6,239	13,347	-4,654	8,694	2,449	-10,431	-7,983
Liabilities to private sector	6,721	20,817	27,538	8,613	23,918	32,530	8,140	27,716	35,856	8,785	31,816	40,601	8,783	32,813	41,596
Money	2,071	0	2,071	2,507	0	2,507	2,381	0	2,381	2,553	0	2,553	n.a.	n.a.	n.a.
Quasi-money	4,650	20,817	25,467	6,105	23,918	30,023	5,760	27,716	33,475	6,233	31,816	38,049	n.a.	n.a.	n.a.

Table 35. Peru: Summary Accounts of the Banking System

(In millions of nuevos soles; foreign currency accounts are valued at end-of-period exchange rate)

	1996			1997			1998			1999			2000		
	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total
IV. Development Banks															
End-of-period exchange rate (S/. per US$)		2.60			2.72			3.13			3.48			3.52	
Net international reserves		-71	-71		-75	-75		0	0		0	0		0	0
Foreign assets		30	30		31	31		0	0		0	0		0	0
Foreign liabilities		101	101		106	106		0	0		0	0		0	0
Medium and long-term foreign assets	0	-80	-80	0	-84	-84	0	-29	-29	0	0	0	0	0	0
Net domestic assets	35	176	211	35	184	219	29	58	87	21	10	31	21	10	31
Nonfinancial public sector	0	80	81	0	84	84	0	0	0	0	0	0	0	0	0
- Central Goverment	-1	60	59	-1	63	62	0	0	0	0	0	0	0	0	0
- Rest of the nonfinancial public sector	1	20	21	1	21	22	0	0	0	0	0	0	0	0	0
Private sector	276	526	803	276	551	827	276	634	910	103	706	809	103	710	813
Banking system	1	-4	-3	1	-4	-3	0	0	0	0	0	0	0	0	0
- Central Reserve Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- National banks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Commercial banks	0	-4	-3	0	-4	-4	0	0	0	0	0	0	0	0	0
Capital and reserve	-226	-531	-757	-226	-555	-781	-226	-639	-865	-226	-713	-939	-226	-717	-943
Net unclassified assets	-17	104	87	-17	109	92	-21	63	42	144	17	161	144	17	161
Liabilities to private sector	35	24	59	35	25	60	29	28	57	21	10	31	21	10	31
Money	7	0	7	7	0	7	21	0	21	21	0	21	21	0	21
Quasi-money	28	24	52	28	25	53	8	28	37	0	10	10	0	10	10

Table 35. Peru: Summary Accounts of the Banking System

(In millions of nuevos soles; foreign currency accounts are valued at end-of-period exchange rate)

	1996			1997			1998			1999			2000		
	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total	Domestic Currency	Foreign Currency	Total
V. Consolidated Banking System															
End-of-period exchange rate (S/. per US$)		2.60			2.72			3.13			3.48			3.52	
Net international reserves		22,376	22,376		21,250	21,250		21,688	21,688		26,076	26,076		26,404	26,404
Medium and long-term foreign assets	-55	188	132	-44	273	229	-71	829	758	-81	422	340	n.a.	n.a.	n.a.
Net domestic assets	10,372	-1,504	8,867	13,000	2,595	15,595	12,715	5,787	18,502	14,190	5,573	19,763	14,385	6,632	21,017
Nonfinancial public sector	-1,834	-12,845	-14,678	-2,973	-13,367	-16,340	-3,334	-14,552	-17,886	-4,230	-12,362	-16,592	-4,477	-10,049	-14,526
- Central Goverment	-903	-10,805	-11,708	-1,545	-7,002	-8,547	-1,663	-5,365	-7,028	-2,104	-253	-2,357	n.a.	n.a.	n.a.
- Rest of the nonfinancial public sector	-931	-2,039	-2,970	-1,428	-6,365	-7,793	-1,671	-9,187	-10,858	-2,126	-12,109	-14,235	n.a.	n.a.	n.a.
Private sector	7,545	21,739	29,283	8,758	29,882	38,639	9,333	37,411	46,745	8,841	41,027	49,868	8,976	40,201	49,178
Interfinancial claims	0	-1	0	0	-4	-3	0	-1	-1	-3	0	-3	-2	0	-1
Capital and reserves	-7,292	-2,230	-9,521	-9,582	-2,643	-12,225	-9,938	-5,696	-15,634	-11,923	-8,304	-20,227	n.a.	n.a.	n.a.
Net unclassified assets	11,952	-8,168	3,784	16,797	-11,273	5,524	16,654	-11,376	5,279	21,505	-14,788	6,717	9,888	-23,521	-13,633
Liabilities to private sector	10,316	21,060	31,376	12,955	24,118	37,073	12,644	28,303	40,947	14,109	32,071	46,179	14,385	33,036	47,421
Money	5,523	0	5,523	6,590	0	6,590	6,623	0	6,623	7,467	0	7,467	n.a.	n.a.	n.a.
- Currency	3,245	0	3,245	3,827	0	3,827	3,950	0	3,950	4,631	0	4,631	4,551	0	4,551
- Demand deposits	2,278	0	2,278	2,763	0	2,763	2,673	0	2,673	2,837	0	2,837	n.a.	n.a.	n.a.
Quasi-money	4,794	21,060	25,853	6,365	24,118	30,483	6,021	28,303	34,324	6,642	32,071	38,712	n.a.	33,036	n.a.
- Time deposits	1,860	0	1,860	2,652	0	2,652	2,265	0	2,265	2,759	0	2,759	n.a.	n.a.	n.a.
- Savings deposits	2,382	0	2,382	2,864	0	2,864	2,822	0	2,822	2,795	0	2,795	n.a.	n.a.	n.a.
- Other	552	21,060	21,612	849	24,118	24,967	935	28,303	29,238	1,088	32,071	33,158	n.a.	33,036	n.a.

Source: Central Reserve Bank of Peru.

Table 36. Peru: Banking System Credit by Type of Bank and Currency of Denomination

(End-of-period stocks in millions of nuevos soles, and percent of total)

	1996		1997		1998		1999		2000	
	S/.	In percent	S/.	In percent	S/.	In percent	S/.	In percent	S/.	In percent
Total credit outstanding	**14,605**	**100.0**	**22,299**	**100.0**	**28,858**	**100.0**	**33,276**	**100.0**	**34,651**	**100.0**
Public sector (net)	**-14,678**	**-100.5**	**-16,340**	**-73.3**	**-17,886**	**-62.0**	**-16,592**	**-49.9**	**-14,526**	**-41.9**
In national currency	-1,834	-12.6	-2,973	-13.3	-3,334	-11.6	-4,230	-12.7	-4,477	-12.9
In foreign currency 1/	-12,845	-87.9	-13,367	-59.9	-14,552	-50.4	-12,362	-37.1	-10,049	-29.0
Private sector	**29,283**	**2.0**	**38,639**	**173.3**	**46,745**	**162.0**	**49,868**	**149.9**	**49,178**	**141.9**
In national currency	7,545	51.7	8,758	39.3	9,333	32.3	8,841	26.6	8,976	25.9
In foreign currency 1/	21,739	148.8	29,882	134.0	37,411	129.6	41,027	123.3	40,201	116.0
By type of bank	**29,283**	**100.0**	**38,639**	**100.0**	**46,745**	**100.0**	**49,868**	**100.0**	**49,178**	**100.0**
Central Reserve Bank	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
National Bank	153	0.5	145	0.4	158	0.3	172	0.3	195	0.4
Commercial banks	28,328	96.7	37,667	97.5	45,677	97.7	48,887	98.0	48,170	98.0
Development banks	803	2.7	827	2.1	910	1.9	809	1.6	813	1.7
Memorandum items										
Liabilities to private sector	31,376	100.0	37,073	100.0	40,947	100.0	46,179	100.0	47,421	100.0
Money	5,523	17.6	6,590	17.8	6,623	16.2	7,467	16.2	n.a.	...
Quasi-money	25,853	82.4	30,483	82.2	34,324	83.8	38,712	83.8	n.a.	...

Source: Central Reserve Bank of Peru.

1/ Flows in foreign currency are valued at end-of-period exchange rates.

Table 37. Peru: Net International Reserves of the Central Reserve Bank

(End-of-period stock in millions of U.S. dollars)

	1996	1997	1998	1999	2000
Net international reserves	**8,285**	**10,000**	**8,935**	**8,159**	**8,022**
Foreign assets	**9,308**	**10,908**	**9,622**	**8,697**	**8,433**
Gold 1/	368	368	368	368	368
Foreign banks	7,529	7,940	5,557	5,324	5,163
Invesments in Eurobonds	1,341	2,543	3,647	2,928	2,858
Reciprocal credit agreements	70	57	38	60	25
Other assets	1	0	12	17	20
Foreign liabilities	**1,023**	**908**	**688**	**538**	**411**
Reciprocal credit agreements	68	61	37	5	24
International organizations	955	847	650	533	387
Liabilities to IMF	955	847	650	528	377
Use of Fund credit	955	847	650	528	377
Charges arrears	0	0	0	0	0
BID's deposits	0	0	0	5	10
Foreign banks	0	0	0	0	0
Other foreign financial institutions	0	0	0	0	0
Interest due to foreign institutions	0	0	0	0	0
BID'S Deposits	0	0	0	0	0
Others	0	0	0	0	0
Memorandum items:					
Reserve deposits in foreign currency	3,595	3,713	3,065	2,964	3,013

Source: Central Reserve Bank of Peru.

1/ Valued at US$329.8 per ounce.

Table 38. Peru: Balance of Payments

(In millions of U.S. dollars)

	1996	1997	1998	1999	2000
Current account	**-3,429**	**-3,057**	**-3,638**	**-1,817**	**-1,631**
Merchandise trade	-1,988	-1,721	-2,466	-616	-355
Exports	5,898	6,832	5,757	6,113	7,016
Imports	-7,886	-8,553	-8,222	-6,729	-7,372
Consumer goods	-1,847	-1,910	-1,884	-1,438	-1,452
Intermediate goods	-3,237	-3,437	-3,386	-3,015	-3,703
Capital goods	-2,417	-2,816	-2,602	-2,140	-2,091
Other	-385	-390	-350	-136	-126
Services, income, and current transfers (net)	-1,442	-1,338	-1,169	-1,201	-1,270
Services	-685	-767	-593	-600	-611
Investment income	-1,639	-1,472	-1,488	-1,545	-1,637
Current transfers	883	901	912	944	978
Capital and financial account	**4,439**	**4,962**	**2,267**	**1,025**	**1,450**
Public sector	-434	-55	-57	393	279
Disbursements	464	985	790	1,237	1,528
Amortization	-878	-837	-859	-961	-1,116
Bonds (net)	-20	-203	13	117	-133
Privatization receipts	1,688	145	60	219	229
Foreign direct investment (FDI)	1,554	1,553	1,820	1,751	448
Other private capital	1,631	3,319	444	-1,338	494
Medium- and long-term loans	657	449	423	388	741
Portfolio investment	197	317	-343	-316	-281
Short-term flows to the financial sector	-237	2,684	-99	-1,424	-211
Other short-term flows (incl. errors and omissions)	1,014	-130	464	14	245
Financing	**-1,010**	**-1,905**	**1,371**	**792**	**181**
Change in central bank reserves (increase-)	-1,932	-1,733	1,006	775	189
Exceptional financing	922	-172	365	18	-8
Total external debt (end of period)	**33,805**	**28,642**	**29,477**	**27,966**	**27,314**
Medium- and long-term	28,286	22,171	23,256	23,414	23,594
Public sector (excluding central bank)	25,196	18,787	19,562	19,500	19,180
Central bank	1,004	869	756	589	348
Private sector	2,086	2,515	2,937	3,325	4,066
Short term	5,519	6,472	6,222	4,552	3,720
Total outstanding arrears 1/	**11,574**	**187**	**166**	**155**	**104**

Sources: Central Reserve Bank of Peru; Ministry of Economy and Finance; and Fund staff estimates and projections.

1/ Includes accumulation of arrears to private and bilateral creditors pending the conclusion of debt negotiations, and payments and rescheduling of arrears. In 1997, stock of arrears includes principal only.

Table 39. Peru: Trade Volume and Terms of Trade

	1996	1997	1998	1999	2000
	(Year 1994 =100)				
Exports					
Value	128.3	148.6	125.2	132.9	152.6
Volume	109.1	123.5	127.3	144.9	159.4
Unit value	117.6	120.3	98.4	91.7	95.7
Imports					
Value	140.9	152.8	146.9	120.3	131.7
Volume	122.9	137.5	139.3	114.2	119.1
Unit value	114.6	111.1	105.5	105.3	110.6
Terms of trade	102.6	108.3	93.3	87.1	86.5
	(Percentage change)				
Export volume	5.1	13.2	3.1	13.9	10.1
Import volume	-2.4	11.9	1.3	-18.1	4.3
Terms of trade	-3.7	5.6	-13.8	-6.6	-0.6

Sources: Central Reserve Bank of Peru; and Fund staff estimates.

Table 40. Peru: Exports f.o.b. by Group of Products

	1996	1997	1998	1999	2000
	(In millions of U.S. dollars)				
Traditional products	**4,213.3**	**4,704.5**	**3,711.9**	**4,142.8**	**4,815.3**
Minerals	2,654.4	2,730.5	2,746.7	3,008.0	3,192.8
Petroleum and derivatives	353.0	376.4	232.5	251.3	405.8
Agricultural products	297.1	471.7	322.7	281.9	240.3
Fishing	908.8	1,125.9	409.9	601.5	976.4
Nontraditional products	**1,589.7**	**2,046.5**	**1,968.0**	**1,874.2**	**2,042.1**
Agriculture and livestock	323.3	339.9	302.2	405.4	425.3
Textiles	454.5	572.6	533.6	574.9	670.0
Fishing products	212.0	277.5	224.9	190.2	196.6
Metal products	48.7	56.8	105.0	75.1	87.7
Chemicals	167.1	206.2	196.3	194.4	206.3
Steel and metallurgical products	141.2	233.9	222.4	197.9	212.9
Nonmetal minerals	37.3	51.4	51.6	51.3	46.2
Other	205.6	308.2	332.2	184.9	197.1
Other	**95.0**	**80.7**	**78.0**	**96.7**	**158.8**
Fishing concessions	20.6	7.2	0.0	31.3	97.8
Other	74.4	73.5	78.0	65.4	61.0
Total exports, f.o.b.	**5,898.0**	**6,831.7**	**5,756.8**	**6,112.7**	**7,016.2**
	(In percent of total)				
Traditional products	**71.4**	**68.9**	**64.5**	**67.8**	**68.6**
Minerals	45.0	40.0	47.7	49.2	45.5
Petroleum and derivatives	6.0	5.5	4.0	4.1	5.8
Agricultural products	5.0	6.9	5.6	4.6	3.4
Fishing	15.4	16.5	7.1	9.8	13.9
Nontraditional products	**27.0**	**30.0**	**34.2**	**30.7**	**29.1**
Agriculture and livestock	5.5	5.0	5.2	6.6	6.1
Textiles	7.7	8.4	9.3	9.4	9.5
Fishing products	3.6	4.1	3.9	3.1	2.8
Metal products	0.8	0.8	1.8	1.2	1.3
Chemicals	2.8	3.0	3.4	3.2	2.9
Steel and metallurgical products	2.4	3.4	3.9	3.2	3.0
Nonmetal minerals	0.6	0.8	0.9	0.8	0.7
Other	3.5	4.5	5.8	3.0	2.8
Other	**1.6**	**1.2**	**1.4**	**1.6**	**2.3**
Fishing concessions	0.3	0.1	0.0	0.5	1.4
Other	1.3	1.1	1.4	1.1	0.9
Total exports, f.o.b.	**100**	**100**	**100**	**100**	**100**

Source: Central Reserve Bank of Peru.

Table 41. Peru: Traditional Exports f.o.b. by Commodity

(In millions of U.S. dollars)

	1996	1997	1998	1999	2000
Traditional products	**4,213.3**	**4,704.5**	**3,711.9**	**4,142.8**	**4,815.3**
Fishing	**908.8**	**1,125.9**	**409.9**	**600.5**	**976.4**
Fishmeal	834.9	1,030.9	392.0	532.5	889.6
Volume (thousands mt.)	1,609.8	1,926.3	666.2	1,474.4	2,374.0
Unit value (US$/mt)	518.6	535.2	588.4	361.2	374.7
Fish oil	73.9	95.0	18.0	68.1	86.9
Volume (thousands mt)	221.0	242.5	34.6	258.7	495.0
Unit value (US$/mt)	334.3	391.9	518.8	263.1	175.5
Agricultural products	**297.1**	**471.7**	**322.7**	**281.9**	**240.3**
Cotton	30.2	32.1	4.0	1.6	5.0
Volume (thousands mt)	11.6	13.6	1.6	0.9	2.7
Unit value (US$/mt)	2,613.8	2,357.5	2,459.9	1,823.3	1,865.8
Sugar	37.2	34.4	26.8	9.4	7.1
Volume (thousands mt)	82.5	79.4	60.1	21.3	20.9
Unit value (US$/mt)	450.7	433.3	446.1	442.5	340.4
Coffee	223.1	396.9	286.9	267.7	224.3
Volume (thousands mt)	100.3	98.0	115.9	145.7	138.1
Unit value (US$/mt)	2,224.4	4,048.8	2,474.9	1,837.5	1,624.4
Others	6.6	8.3	5.0	3.2	3.9
Minerals	**2,654.4**	**2,730.5**	**2,746.7**	**3,008.0**	**3,192.8**
Copper 1/	1,052.2	1,096.3	778.8	776.3	900.8
Volume (thousands mt)	475.4	501.2	486.4	521.1	512.3
Unit value (US$/mt)	2,213.5	2,187.3	1,601.3	1,489.9	1,758.3
Tin	108.6	133.2	118.6	132.8	174.5
Volume (thousands mt)	20.4	28.3	24.9	28.0	36.3
Unit value (US$/mt)	5,316.7	4,714.5	4,761.0	4,749.0	4,810.5
Iron	83.9	76.5	96.4	66.7	72.1
Volume (millions mt)	4.1	3.8	4.6	3.8	3.9
Unit value (US$/mt)	20.5	20.1	21.0	17.4	18.4
Gold	579.3	500.1	928.5	1,192.5	1,174.7
Volume (thousands troy oz.)	1,478.2	1,487.6	3,150.1	4,228.1	4,151.1
Unit value (US$/oz.)	391.9	336.2	294.7	282.0	283.0
Silver (refined)	119.5	104.8	130.6	169.3	181.5
Volume (millions troy oz.)	22.9	22.1	25.5	32.4	35.8
Unit value (US$/oz.)	5.2	4.7	5.1	5.2	5.1
Lead 1/	274.3	237.0	208.7	177.1	176.6
Volume (thousands mt)	200.7	211.6	217.5	222.1	243.5
Unit value (US$/mt)	1,366.7	1,120.0	959.6	797.2	725.5
Zinc	400.8	539.3	445.2	462.4	476.1
Volume (thousands mt)	599.1	652.0	656.7	669.2	745.5
Unit value (US$/mt)	669.0	827.0	677.9	691.0	638.6
Others	35.7	43.4	39.9	30.8	36.4
Petroleum and derivatives	**353.0**	**376.4**	**232.5**	**251.3**	**405.8**
Volume (millions bbl.)	20.6	24.9	25.9	17.5	16.4
Unit value (US$/bbl.)	17.1	15.1	9.0	14.4	24.8

Source: Central Reserve Bank of Peru.

1/ Includes base metal content of unrefined silver.

Table 42. Peru: Imports f.o.b. by Economic Category

	1996	1997	1998	1999	2000
	(In millions of U.S. dollars)				
Consumer goods	**1,847.0**	**1,909.9**	**1,883.8**	**1,438.3**	**1,451.6**
Nondurable	1,072.3	1,107.3	1,146.3	932.3	876.2
Durable	774.6	802.6	737.6	506.1	575.4
Raw materials and intermediate goods	**3,236.6**	**3,436.6**	**3,386.2**	**3,015.4**	**3,702.9**
Fuels	733.7	780.2	579.9	640.6	1,078.2
Raw materials for agriculture	187.5	201.9	204.2	185.1	213.4
Raw materials for industry	2,315.5	2,454.4	2,602.1	2,189.7	2,411.4
Capital goods	**2,416.8**	**2,816.4**	**2,602.4**	**2,139.5**	**2,091.3**
Construction materials	189.2	244.4	215.0	198.8	212.8
Capital goods for agriculture	21.3	28.3	44.8	65.6	29.9
Capital goods for industry	1,726.6	2,037.1	1,768.2	1,396.6	1,407.6
Transportation equipment	479.7	506.5	574.4	478.5	441.1
Other goods	**385.1**	**389.8**	**349.9**	**135.6**	**125.8**
Total imports, f.o.b.	**7,885.5**	**8,552.6**	**8,222.4**	**6,728.9**	**7,371.6**
Memorandum item:					
Foodstuffs	820.9	699.6	779.7	574.6	510.6
	(In percent of total imports)				
Consumer goods	**23.4**	**22.3**	**22.9**	**21.4**	**19.7**
Nondurable	13.6	12.9	13.9	13.9	11.9
Durable	9.8	9.4	9.0	7.5	7.8
Raw materials and intermediate goods	**41.0**	**40.2**	**41.2**	**44.8**	**50.2**
Fuels	9.3	9.1	7.1	9.5	14.6
Raw materials for agriculture	2.4	2.4	2.5	2.8	2.9
Raw materials for industry	29.4	28.7	31.6	32.5	32.7
Capital goods	**30.6**	**32.9**	**31.7**	**31.8**	**28.4**
Construction materials	2.4	2.9	2.6	3.0	2.9
Capital goods for agriculture	0.3	0.3	0.5	1.0	0.4
Capital goods for industry	21.9	23.8	21.5	20.8	19.1
Transportation equipment	6.1	5.9	7.0	7.1	6.0
Other goods	**4.9**	**4.6**	**4.3**	**2.0**	**1.7**
Total imports, f.o.b.	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Memorandum item:					
Foodstuffs	10.4	8.2	9.5	8.5	6.9

Source: Central Reserve Bank of Peru.

Table 43. Peru: Direction of Trade

(In percent)

	1996	1997	1998	1999	2000 1/
Exports	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
United States	19.9	23.8	32.9	29.3	26.8
Colombia	2.1	2.3	2.5	1.7	2.1
Japan	6.7	7.1	3.8	4.4	5.7
Germany	5.2	5.7	4.1	4.1	3.3
Spain	2.4	2.3	2.7	3.0	2.6
Venezuela	2.2	2.1	1.9	1.5	1.7
Brazil	4.1	3.8	3.1	2.9	3.1
Chile	2.1	2.0	2.4	2.9	4.0
United Kingdom	7.3	4.5	4.9	9.3	8.5
People's Republic of China	7.2	7.3	4.1	3.6	6.8
Italy	3.4	3.4	3.3	2.3	1.8
South Korea	2.8	1.4	0.7	1.5	2.4
Switzerland	5.0	6.1	8.5	9.3	8.0
Canada	2.7	1.8	2.2	2.0	1.8
Mexico	1.6	1.7	2.4	2.8	2.2
Rest of world	25.3	24.8	20.3	19.4	19.3
Imports	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
United States	30.7	31.9	32.5	31.6	29.8
Colombia	7.3	4.2	3.2	4.7	4.7
Japan	3.7	3.8	4.3	4.6	4.3
Germany	3.9	3.6	4.3	3.8	3.1
Spain	5.7	8.5	7.4	7.5	9.4
Venezuela	5.8	4.4	3.3	4.4	4.7
Brazil	4.2	4.1	4.2	4.0	4.3
Chile	5.7	5.6	5.6	6.7	6.9
United Kingdom	1.3	1.2	1.6	1.2	1.1
People's Republic of China	1.1	1.4	1.3	1.7	1.8
Italy	2.2	2.4	2.1	1.7	1.5
South Korea	2.5	2.6	3.0	2.7	2.6
Switzerland	0.8	1.1	1.4	1.6	1.5
Canada	2.4	2.8	2.3	2.0	2.6
Mexico	2.8	3.2	2.9	2.7	2.9
Rest of world	19.9	19.1	20.5	18.9	18.8

Source: Central Reserve Bank of Peru

Table 44. Peru: Services and Transfers

(In millions of U.S. dollars)

	1996	1997	1998	1999	2000
Transport 1/	-520	-608	-651	-583	-602
Credits	324	294	306	223	257
Debits	844	902	958	806	859
Communications	104	101	69	52	48
Credits	174	168	126	105	100
Debits	70	67	58	53	52
Insurance	-43	-46	149	-24	-25
Credits	114	114	305	131	127
Debits	158	160	155	155	152
Travel	320	383	393	446	447
Credits	670	816	845	890	963
Debits	350	434	452	443	516
Other services 2/	-546	-597	-552	-491	-480
Credits	132	145	166	173	178
Debits	677	742	719	664	658
Total services	-685	-767	-593	-600	-611
Credits	1,414	1,538	1,748	1,522	1,625
Debits	2,099	2,305	2,341	2,122	2,237
Current transfers 3/	883	901	912	944	978
Capital transfers (net) 4/	13	-76	-86	-95	-90

Source: Central Reserve Bank of Peru.

1/ Includes freight, passengers, expenditures in ports by ships and planes, and transportation fees.
2/ Includes government, information, and financial services, royalties, and leasing of equipment.
3/ Excludes cash grants and debt forgiveness.
4/ Includes capital grants and transfers of emigrants.

Table 45. Peru: Investment Income

(In millions of U.S. dollars)

	1996	1997	1998	1999	2000
Credits	613	722	778	656	741
Public sector	489	585	632	517	583
Private sector	125	137	146	138	158
Debits	2,253	2,194	2,266	2,200	2,378
Public sector interest	1,385	1,087	1,081	1,088	1,133
Multilateral debt	1,325	958	873	887	942
Bonds	0	79	159	167	159
Central Reserve Bank 1/	51	45	44	32	30
Short term 2/	9	5	5	2	2
Private sector	868	1,107	1,185	1,112	1,245
Profits and dividends	338	504	380	292	368
Retained earnings	80	69	101	180	194
Interest obligations	450	534	703	639	682
Long term	144	160	208	239	315
Short term 3/	297	356	473	366	331
Bonds	9	18	23	34	36
Net investment income	-1,639	-1,473	-1,489	-1,547	-1,640

Source: Central Reserve Bank of Peru.

1/ Includes interest on short- and long-term debt.

2/ Includes interest owed by Banco de la Nación, development banks, and debt taken over by the government.

3/ Includes interest owed by nonfinancial public enterprises.

Table 46. Peru: Scheduled Public Sector Debt Service Payments on Medium- and Long-Term Debt

(In millions of U.S. dollars)

	1996	1997	1998	1999	2000
Scheduled interest payments	**1,325**	**1,037**	**1,032**	**1,054**	**1,101**
Multilateral creditors	259	287	301	351	413
Bilateral creditors	694	559	513	472	454
Paris Club	638	536	494	460	447
Latin American	26	19	14	9	5
Eastern European	30	4	5	3	2
Private creditors	372	191	218	231	234
Commercial banks/Brady bonds	320	142	169	182	178
Suppliers (nonguaranteed credit)	52	49	49	49	56
Scheduled principal payments	**878**	**837**	**859**	**961**	**1,116**
Multilateral creditors	200	308	254	272	544
Bilateral creditors	652	501	562	355	449
Paris Club	467	410	478	277	400
Latin American	77	72	65	63	36
Eastern European	108	19	19	15	13
Private creditors	26	28	43	334	123
Commercial banks/Brady bonds	4	2	16	319	109
Suppliers (nonguaranteed credit)	22	26	27	15	14
Total debt service due	**2,203**	**1,874**	**1,891**	**2,015**	**2,217**
Multilateral creditors	459	595	555	623	957
Bilateral creditors	1,346	1,060	1,075	827	903
Paris Club	1,105	946	972	737	847
Latin American	103	91	79	72	41
Eastern European	138	23	24	18	15
Private creditors	398	219	261	565	357
Commercial	324	144	185	501	287
Suppliers (nonguaranteed credit)	74	75	76	64	70

Source: Central Reserve Bank of Peru.

Table 47. Peru: Nonfinancial Public Sector External Borrowing

(In millions of U.S. dollars)

	1996	1997	1998	1999	2000
Total disbursements	**381**	**1,566**	**657**	**812**	**1,310**
Multilateral creditors	271	1,323	557	576	758
Bilateral creditors	110	243	100	232	552
Paris Club creditors	90	225	99	224	521
Latin American creditors	0	0	0	7	18
Other bilateral creditors	20	18	1	1	13
Private creditors	0	0	0	4	0
Commercial banks	0	0	0	1	0
Suppliers (nonguaranteed credit)	0	0	0	3	0
Project loans 1/	**380**	**656**	**557**	**634**	**540**
Multilateral creditors	270	513	457	398	286
Bilateral creditors	110	143	100	232	254
Paris Club creditors	90	125	99	224	223
Latin American creditors	0	0	0	7	18
Other bilateral creditors	20	18	1	1	13
Private creditors	0	0	0	4	0
Commercial banks	0	0	0	1	0
Suppliers (nonguaranteed credit)	0	0	0	3	0
Balance of payments/DDSR support loans 2/	**1**	**910**	**100**	**178**	**770**
Multilateral creditors	1	810	100	178	472
Bilateral creditors	0	100	0	0	298
Paris Club creditors	0	100	0	0	298
Latin American creditors	0	0	0	0	0
Other bilateral creditors	0	0	0	0	0
Private creditors	0	0	0	0	0
(In percent of total)					
By type of lender	**100**	**100**	**100**	**100**	**100**
Multilateral creditors	71	84	85	71	58
Bilateral creditors	29	16	15	29	42
Private creditors	0	0	0	0	0

Source: Central Reserve Bank of Peru.

1 / Includes food imports and defense.
2/ DDSR refers to debt and debt-service reduction operation.

Table 48. Peru: Medium- and Long-Term External Debt of the Nonfinancial Public Sector

(In millions of U.S. dollars, end-of-period)

	1996	1997	1998	1999	2000
Total external debt outstanding	**24,818**	**18,316**	**19,019**	**18,690**	**18,673**
Multilateral creditors	3,429	4,300	4,743	5,107	5,555
Bilateral creditors	11,171	8,946	9,091	8,692	8,331
Paris Club	9,087	8,581	8,830	8,524	8,179
Latin America	374	226	159	104	89
Other bilateral	1,710	139	102	64	63
Private creditors	10,218	5,070	5,185	4,891	4,787
Commercial banks/Bonds	8,448	4,141	4,170	3,772	3,737
Unguaranteed suppliers	1,770	929	1,015	1,119	1,050
	(In percent of total)				
By lender	**100**	**100**	**100**	**100**	**100**
Multilateral creditors	13.8	23.5	24.9	27.3	29.7
Bilateral creditors	45.0	48.8	47.8	46.5	44.6
Private creditors	41.2	27.7	27.3	26.2	25.6

Source: Central Reserve Bank of Peru.

Table 49. Peru: Private Sector Long-Term Capital Flows

(In millions of U.S. dollars)

	1996	1997	1998	1999	2000
Total	**4,096**	**2,463**	**1,959**	**2,041**	**1,137**
Net foreign investment	3,439	2,014	1,537	1,653	396
Privatization	1,688	145	60	219	229
Direct investment	1,554	1,552	1,820	1,750	448
Petroleum	145	267	429	113	-99
Mining and other	1,409	1,285	1,392	1,637	547
Portfolio investment	197	317	-343	-316	-281
Stock market and ADRs (net) 1/	205	67	-492	-291	-263
Bonds (net)	-8	250	148	-25	-18
Medium- and long-term loans	657	449	423	388	741
Disbursements	1,499	1,718	1,766	1,872	2,132
Amortization	842	1,269	1,344	1,484	1,391

Source: Central Reserve Bank of Peru.

1/ ADRs: American depositary receipts.

Table 50. Peru: Private Sector External Debt Stock

(In millions of U.S. dollars)

	1996	1997	1998	1999	2000
Medium- and long-term debt	**2,086**	**2,515**	**2,937**	**3,325**	**4,066**
Financial sector	497	725	704	704	870
Nonfinancial sector	1,588	1,790	2,234	2,621	3,196
Short-term debt	**5,519**	**6,472**	**6,222**	**4,552**	**3,720**
Financial sector (including central bank)	1,766	3,401	3,267	2,071	1,460
Nonfinancial sector	3,753	3,071	2,955	2,481	2260

Source: Central Reserve Bank of Peru.

Table 51. Peru: Import Restrictions and Tariffs

	1996	1997	1998	1999	2000
	(In numbers of eight-digit customs categories) 1/				
Quantitative import restrictions					
Total imports	6,483	6,526	6,526	6,887	6,887
Without quantitative restriction	6,483	6,526	6,526	6,887	6,887
With quantitative restriction	0	0	0	0	0
Subject to prior licensing	0	0	0	0	0
Prohibited	0	0	0	0	0
	(In percent)				
Customs tariffs					
Average tariff (unweighted)	16	13	13	13	13
Standard deviation (unweighted)	3	3	3	3	3
Maximum tariff	25	20	20	20	20
	(In numbers of eight-digit customs categories) 1/				
Structure of customs tariff					
Number of categories with tariff rates of: 2/					
Zero percent					
More than zero and up to 10 percent					
10-20 percent	5,629	6,526	6,526	6,887	6,887
20-30 percent	854	0	0	0	0
30-40 percent	0	0	0	0	0
40-50 percent	0	0	0	0	0
50-60 percent	0	0	0	0	0
60-70 percent	0	0	0	0	0
70-80 percent	0	0	0	0	0
Greater than 80 percent	0	0	0	0	0
Total	6,483	6,526	6,526	6,887	6,887
Memorandum item:					
Actual average import duty (in percent) 3/	14	10	10	11	11

Source: Central Reserve Bank of Peru.

1/ According to the New Andean Nomenclature (NANDINA) in number of 10-digit customs categories.

2/ Calculated on the basis of tariff rates excluding surcharge.

3/ Calculated on the basis of total import duty collections (including surcharges) divided by the c.i.f. import value.