December 2004
IMF Country Report No. 04/415

Pakistan: Selected Issues and Statistical Appendix

This Selected Issues paper and Statistical Appendix for **Pakistan** 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 **November 16, 2004.** The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of **Pakistan** 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

PAKISTAN

Selected Issues and Statistical Appendix

Prepared by Milan Zavadjil, Ron van Rooden, Axel Schimmelpfennig, Zafar Iqbal, Abhisek Banerjee, and Madhavi Bokil (all MCD), Taimur Baig (FAD), Manmohan Singh (ICM), and Harald Finger (PDR)

Approved by the Middle East and Central Asia Department

November 16, 2004

Contents Page

Figures

Tables

Statistical Appendix Tables

I. OVERVIEW

1. **Pakistan needs to continue its recent record of strong policy implementation to realize its development objectives outlined in the Poverty Reduction Strategy Paper** (IMF Country Report No. 04/24). Sustaining high growth while maintaining macroeconomic stability and reducing fiscal as well as external vulnerabilities can be achieved if macroeconomic policies and structural reforms are fully coordinated. The following six chapters analyze some important policy areas that are crucial in this regard. Growth will require increased physical as well as human capital investment in addition to macroeconomic stability including through price stability. Fiscal policy needs to be geared toward generating the resources to finance the government's share of social expenditure and investment. Containing the drain from public sector enterprises and interest costs on the budget will contribute to this. Further trade liberalization and integration would also support growth in the medium to long term.

2. **Raising investment and improving institutions are key to raising Pakistan's potential growth.** Chapter II presents cross-country regression results that identify investment in physical capital and improvements in institutional quality as having the largest pay-off in terms of increased growth. In addition, better education and health care also boost growth. Therefore, Pakistan needs to raise its investment rate, institutional quality, as well as health and education indicators to levels achieved by South-East Asian countries such as Malaysia, Singapore, and Thailand, if it wants to emulate the stellar growth performance achieved by these countries.

3. **Quantitative inflation forecasts can assist monetary policy in achieving its inflation target.** Chapter III employs three approaches to forecast inflation in Pakistan. A leading indicator model outperforms an univariate autoregressive moving average model as well as a vector autoregressive model in terms of forecast quality. The leading indicators model would have anticipated the rapid acceleration of inflation over the last fiscal year and thus provided early cues that monetary tightening was required. For the remainder of this fiscal year, the model forecasts a further acceleration, supporting staff's advice that a more forceful tightening is needed. The chapter also finds that Pakistan could adopt inflation targeting if it were to make a medium-term inflation target the primary objective of monetary policy.

4. **Ongoing reforms and continued economic growth are expected to raise Pakistan's tax revenue yield by at least 1 percent of GDP over the next five years.** Fiscal revenues need to be strengthened to provide the space needed for social and development spending while reducing the still high debt to GDP ratio. Chapter IV finds that Pakistan has a low revenue-to-GDP ratio compared to countries in the same per capita GDP range. Recent tax policy measures have made the tax system more efficient, though some of them may have been revenue-reducing. Looking ahead, Pakistan's revenue take should be lifted through administrative reforms of the Central Board of Revenue and base broadening including through further extending the sales tax into the service sector and better taxation of

agriculture income. In fact, these reform efforts, if implemented steadfastly, could yield more than the 1 percent of GDP increase in revenues currently targeted by the government.

5. **Financial performance of public sector enterprises (PSEs) can be substantially strengthened through management reforms.** Chapter V presents three case studies of Pakistani PSEs that have recently witnessed strong improvements in their financial performance. All three PSEs were plagued by poor governance and imposed a significant burden on the budget. In two cases, new management teams were successful in fundamentally turning their businesses around by focusing on service delivery, downsizing overstaffed workforces, and controlling costs in general. Prepayment of expensive debt as well as debt write-offs by the government also contributed in this regard.

6. **Comprehensive public debt management is still at an early stage, though much progress has recently been made.** Chapter VI takes stock of current debt management policies and identifies vulnerabilities and policy challenges. Domestic financing is presently cheaper than financing through international capital markets. Nevertheless, developing a presence in international capital markets and—to a lesser extent—establishing a sovereign curve, are arguments for modest and cautious tapping of international capital markets. The government has started to hedge currency and interest rate risk. However, the government has also exposed itself somewhat to the risk of rising interest rates by relying heavily on short-term domestic financing and engaging in an interest rate swap on its recent Eurobond issue.

7. **The potential benefits of expanding trade between Pakistan and India from the current low levels are large.** Chapter VII takes stock of existing trade barriers and finds that the reduction of tariff and nontariff barriers, including through the prospective South Asian Free Trade Area, holds the potential for large benefits for Pakistan. Existing trade barriers span the full spectrum of tariff and non-tariff barriers. In addition, foreign direct investment which is typically associated with trade is also low between the two countries. Benefits of well-implemented trade liberalization can include lower prices and more choice for consumers, increased efficiency and larger markets for exporters, an increase in economic growth, and support to the broader process of regional integration.

II. How to Accelerate Economic Growth: Does Investing in Human Capital Help?[1]

A. Introduction

8. Since its independence, Pakistan has experienced economic growth rates of about 5 percent per year on average. While growth has been considerably stronger in Pakistan than in many other low- and middle-income countries and has been comparable to that of other South Asian countries, it has been significantly below the growth rates experienced by countries in South-East Asia, such as Malaysia, Singapore, and Thailand. This chapter tries to explain these differences by investigating which factors determine growth. More specifically, this chapter explores whether investing in human capital can help to achieve higher rates of economic growth. Besides more traditional factors, such as investment levels, differences in the quality of human capital may be a factor that can help to explain the differences in growth rates between Pakistan and the countries in South-East Asia.

9. Finding a link between investing in human capital and economic growth matters for an additional reason. A large part of the world's population continues to live in poverty, and the focus of economic researchers and policy makers, including in institutions such as the Fund, has increasingly shifted toward finding policies that benefit the poor. It is generally agreed that economic growth is necessary to help reduce poverty, but that growth by itself is not sufficient. Pakistan may be a good example of this, as despite the relatively high growth rates, its social development is weak and poverty remains widespread, with about an estimated 30 percent of the population regarded as poor. Investing in human capital may lead to higher future growth and incomes, by creating a more productive work force. But higher social spending can also benefit the poor directly, by improving their current living conditions through better health care and education.

10. Section B of this chapter reviews selectively the recent literature on economic growth, including findings regarding the importance of the quality of human capital. Section C presents the results of an econometric analysis of growth in a group of low- and middle-income countries during 1980–2002, adding a number of health and education indicators to more conventional factors explaining growth, such as macroeconomic policies, initial income levels, and institutional quality. Section D describes how Pakistan performed relative to the overall sample, and to countries in South and South-East Asia, in particular. Based on the results, it also offers suggestions as to how Pakistan could achieve higher rates of economic growth. Finally, Section E concludes.

---

[1] Prepared by Ron van Rooden.

B. A Review of Recent Growth Literature

11. A vast and growing body of literature attempts to answer the question of how to promote growth. But for almost any study that finds a particular factor important for growth, another study can be found that reaches an opposite conclusion. Still, there appears to be a broad consensus regarding a number of "stylized facts." Sala-i-Martin, 2004, offers a broad summary of the literature on cross-country growth analysis. He notes that (a) there is no simple determinant of growth; (b) the initial level of income is the most important and robust variable (and thus conditional convergence is the most robust empirical fact); (c) the size of the government does not appear to matter much, but what is important is the quality of government and its policies; (d) the relationship between human capital and growth is weak, although some measures of health (such as life expectancy) are robustly correlated with growth; (e) more open economies tend to grow faster; and (f) institutions are important for growth.

12. Similarly, studies that use a growth accounting approach in analyzing cross-country differences in economic growth, for example Bosworth and Collins, 2003, and Abed and Davoodi, 2004, find that the increase in production factors alone cannot explain economic growth. Or, as Easterly, 2001a, and Easterly and Levine, 2001, put it, it's the "A" in the standard production function $Y_t = A_t f(K_t, L_t)$ that is key to growth, where Y is output, K the capital stock, and L the quantity of labor. A is generally defined as total factor productivity. A substantial part of the differences in growth is accounted for by differences in total factor productivity. An increase in total factor productivity can be thought of as an outward shift in the production function, that is, growth results from dynamically increasing returns to scale.

13. The question that follows is what drives changes in total factor productivity? Total factor productivity in effect provides a measure of gains in economic efficiency: the quantity of output that can be produced with a given quantity of inputs. Changes in total factor productivity reflect a myriad of determinants that influence growth, but which the measured increases in factor inputs do not account for. Total factor productivity should not be taken as a mere indicator of technical progress. Policies and institutions, for example, also affect the efficiency of an economy in much of the same way as technology does. An economy with stable economic conditions or good institutions is more efficient in the sense that it takes less input to produce the same amount of output. Macroeconomic instability or weak institutions on the other hand lower incentives to invest (in physical and human capital, as well as technology), to work, and to produce. Empirically, it is becoming increasingly clear that good policies and institutions are important determinants of growth.

14. Beaugrand, 2004, follows Schumpeter in emphasizing the entrepreneur as the mainspring of economic evolution. Entrepreneurship is the prime force behind outward shifts of the production function. While no poor country has a large class of successful entrepreneurs, most countries are likely to have a large pool of potential entrepreneurs, who may be precluded from fulfilling their function because of unfavorable conditions. The issue

then becomes how governments in poor countries can unleash entrepreneurial spirits and thus promote economic development.

15. Beaugrand lists seven key steps to promote entrepreneurship and growth. These include (a) peace and stability: establish a credible political system that ensures legitimacy and continuity; (b) governance and the rule of law: maintain law and order, enforce property rights, promote accountability, weed out corruption, and set up a credible judiciary system; (c) mentality: muster support for economic and social reforms; (d) economic incentives: adopt sound economic policies, including hard budget constraints, allowing competition, while creating a level playing field; (e) basic infrastructure: ensure the provision of basic public services; (f) access to capital: develop an efficient financial intermediation system, mobilize external savings; and (g) education: build up human capital, raise literacy, and gain access to up-to-date knowledge. Beaugrand notes that no single step is likely to prove sufficient and not all may be necessary, but minimum standards and a critical mass are required to spur a genuine economic takeoff. The international financial institutions typically focus on only three out of these seven elements (the fourth, fifth, and sixth). Yet, as noted above, it has become empirically clear that sound economic policies and increased investment are far from sufficient to achieve economic growth and that one of the most important steps toward economic growth is to ensure good governance and to establish the rule of law.

16. Empirical studies aiming to find a link between increases in the level of education—or more broadly, increases in the quality of human capital—and economic growth are relatively recent. Higher educational attainment could have an impact on economic growth by improving the productivity of workers. An educated workforce is better able to implement new technologies and generate ideas for improving efficiency. But while at the microeconomic level studies have typically found a strong relationship between income and educational attainment, macroeconomic studies so far have found conflicting results. Early studies, including those of Mankiw, Romer, and Weil, 1992, and Barro and Sala-i-Martin, 1995, found a significant positive association between cross-country differences in the initial level of education and subsequent rates of growth. However, later studies,[2] including those of Bils and Klenow, 2000, Pritchett, 2001, Easterly and Levine, 2001, and Temple, 2001, that examined the relationship between years of schooling and changes in economic growth failed to find a significant association. Bosworth and Collins, 2003, also fail to find a robust link between educational quality and growth and particularly cannot distinguish educational quality from more general concepts of the quality of government institutions. Some researchers suggest that the link between education and growth may be weak because the benefits of education are not fully realized due to a failure to integrate improvements in

[2] This later work was greatly stimulated by Barro and Lee, 2000, who developed a comprehensive data set on schooling, covering a large number of countries over an extended time period.

education with other important elements of the growth process. That is, the creation of skills offers no benefits if the infrastructure and institutions do not make use of them.

C. Empirical Analysis

17. The use of an empirical model can help to determine the factors that are important for growth. But it should be stressed that growth regressions clearly have their limitations, particularly as often the parameter estimates have proven unstable. Examining the characteristics and determinants of economic growth therefore requires an empirical framework that can be applied to large groups of countries over a sufficiently long period. Still, as a great many researchers have regressed various indicators of output on a vast array of potential determinants, a core set of explanatory variables has emerged that has been shown to be consistently associated with economic growth. The importance of other variables should be examined conditional on inclusion of this core set in the specification.

18. The basis for the analysis in this paper is a production function of the form:

(1) $$Y = AK^{\alpha}(LH)^{1-\alpha}$$

where Y is the level of output, K is capital input, L is labor input, H is a measure of educational attainment or, more generally, the quality of human capital used to adjust the work force for quality change. This can be rewritten in a form that decomposes output per worker into the contributions of increases in capital per worker, increases in education per worker, and improvements in total factor productivity:

(2) $$\Delta ln(Y/L) = \alpha\Delta ln(K/L) + (1-\alpha)\Delta lnH + \Delta lnA$$

By assuming a steady-state constant value γ for the inverse of the capital-output ratio and with δ representing the rate of depreciation, the investment rate $i = I/Y$ can be used instead of the change in the capital stock:

(3) $$\Delta ln(Y/L) = \alpha(i-\delta\gamma)/L + (1-\alpha)\Delta lnH + \Delta lnA$$

The use of the investment ratio has the obvious advantage in that it avoids measurement problems associated with constructing a series for (changes in) the capital stock. With this, economic growth is a function of investment, the quality of human capital, and a set of determinants driving total factor productivity.

19. A number of different measures are used here to represent the quality of human capital. These include literacy rates, average years of schooling, gross secondary school enrollment, the share of the population that has completed secondary schooling, life expectancy, and per capita health expenditure. Variables that determine total factor productivity include the rate of inflation as a proxy for sound economic policies, and the overall quality of institutions. In addition, given the importance of convergence (that is, whether incomes of developing countries are converging toward those of higher-income

countries) the initial level of income has been included. Thus, the basic regression takes the form:

(4) $Growth = \alpha_1 (Investment) + \alpha_2 (Initial\ Income) + \alpha_3 (Macroeconomic\ Policy) +$

$$\alpha_4 (Institutional\ Quality) + \alpha_5 (Labor\ Quality) + \varepsilon$$

20. Data for real per capita GDP growth, gross fixed capital formation, CPI inflation, and per capita income in 1980 were obtained from the Fund's World Economic Outlook database. Data for gross secondary school enrollment, adult literacy rate, life expectancy, and per capita health expenditure were obtained from the World Bank's World Development Indicators database. Data for average years of schooling were taken from Barro and Lee, 2000. Representing institutional quality, the average of four indicators compiled by the International Country Risk Guide was used. These indicators were rescaled to range from 1–12, and covered bureaucratic quality, corruption, rule of law, and government stability.

21. Table II.1 presents the results of the estimation of a cross-section regression of equation (4) for a sample of 72 low- and middle-income countries, using ordinary least squares (OLS).[3] The dependent variable is average real per capita GDP growth over the 1980–2002 period. The explanatory variables are also averages over the 1980–2002 period, except for the initial income variable, which reflects income levels in 1980.

22. Table II.1 shows that the variables used to describe economic growth account for almost two-thirds of the cross-country variation in growth over the period 1980–2002. Inclusion of the investment rate results in a statistically significant coefficient, supporting the idea that it is a good proxy for the capital contribution. All of the conditioning variables—initial income, the rate of inflation, and the quality of institutions—have the expected signs and are highly significant. Multicollinearity does not seem to pose a problem, given the significance of each of the explanatory variables. The finding of a strong negative association between initial income and subsequent growth provides a robust support for a process of conditional convergence. There is also a strong correlation between growth and sound economic policies and between growth and the quality of governing institutions, such as law and order, protection of property rights, and the absence of corruption. Moreover, the results in Table II.1 confirm that a higher quality of human capital—that is, higher levels of educational attainment or better health indicators—is indeed associated with higher real per capita growth rates. The coefficients for each of the education and health indicators used have the expected sign and are highly significant. Interestingly, the relevance of the human capital indicators is independent of the overall institutional quality. Equations 5 and 7 in Table II.1 furthermore indicate that both education and health indicators influence growth independently of each other.

---

[3] Due to limited data availability, the actual number of observations is generally slightly smaller than the total sample size.

Table II.1. Regression Results

	(1)		(2)		(3)		(4)		(5)		(6)		(7)	
Dependent variable: average growth of real per capita GDP, 1980–2002														
Investment ratio (percent of GDP)	0.16		0.17		0.19		0.14		0.14		0.19		0.16	
	(4.71)	**	(4.52)	**	(4.53)	**	(3.60)	**	(4.10)	**	(5.17)	**	(4.70)	**
Initial income (1980 U.S. dollars, logs)	-1.16		-1.07		-1.03		-1.51		-1.47		-1.31		-1.3	
	(-7.54)	**	(-7.33)	**	(-6.22)	**	(-8.39)	**	(-7.84)	**	(-7.13)	**	(-7.14)	**
Inflation (percent)	-0.002		-0.002		-0.002		-0.002		-0.002		-0.002		-0.002	
	(-3.94)	**	(-3.77)	**	(-3.56)	**	(-3.20)	**	(-3.93)	**	(-3.68)	**	(-4.54)	**
Institutional quality 1/	0.64		0.55		0.49		0.55		0.63		0.49		0.58	
	(4.27)	**	(3.53)	**	(2.79)	**	(3.72)	**	(4.22)	**	(3.29)	**	(3.85)	**
Average years of schooling	0.37								0.26				0.24	
	(3.83)	**							(2.39)	**			(2.03)	**
School enrollment, secondary (percent gross)			0.03											
			(3.48)	**										
Literacy rate (adult total, percent of people ages 15 and above)					0.02									
					(2.12)	**								
Life expectancy at birth (years)							0.09		0.05					
							(4.02)	**	(2.34)	**				
Health expenditure per capita (current U.S. dolalrs, logs)											0.72		0.45	
											(4.13)	**	(1.95)	*
R-squared	0.65		0.63		0.63		0.65		0.68		0.65		0.68	
Adjusted R-squared	0.62		0.61		0.60		0.63		0.65		0.63		0.65	
No. observations	64		67		59		67		64		66		63	

Notes: Estimation is by OLS. T-statistics in parentheses. A * denotes significance at the 10 percent level and ** denotes significance at the 5 percent level.

1/ Average of four indicators, rescaled to range from 1-12, including bureaucratic quality, corruption, rule of law, and government stability.

23. To gauge the relative importance of the various determinants of growth, Table II.2 shows the standardized coefficients of the equations shown in Table II.1.[4] These standardized coefficients suggest that raising investment has the biggest impact on growth, but that improving a population's health also has a considerable effect. Improving institutions and levels of educational attainment have a somewhat smaller, but still significant impact on growth.

Table II.2. Standardized Coefficients

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variable: average growth of real per capita GDP, 1980-2002							
Investment ratio (percent of GDP)	0.49	0.46	0.54	0.44	0.43	0.49	0.44
Initial income (1980 U.S. dollars, logs)	-0.59	-0.61	-0.54	-0.64	-0.66	-0.90	-0.88
Inflation (percent)	-0.21	-0.23	-0.21	-0.23	-0.23	-0.24	-0.24
Institutional quality 1/	0.42	0.35	0.32	0.37	0.41	0.31	0.36
Average years of schooling	0.37				0.17		0.26
School enrollment, secondary (percent gross)		0.42					
Literacy rate (adult total, percent of people ages 15 and above)			0.22				
Life expectancy at birth (years)				0.49	0.34		
Health expenditures per capita (current U.S. dollars, logs)						0.70	0.48

Notes: Standardized coefficients calculated by standardizing timeseries as follows: (Y-MEAN(Y))/STDEV(Y).

1/ Average of four indicators, rescaled to range from 1-12, including bureaucratic quality, corruption, rule of law, and government stability.

D. Implications for Pakistan

24. What do the above regression results imply for Pakistan? Currently, government spending in Pakistan on health and education—both as a ratio to GDP and per capita[5]—is among the lowest levels in the world, although there has been a significant increase over the past few years. Not surprisingly, social indicators are also relatively weak. Pakistan ranked 142nd out of 177 countries covered by the United Nations Development Program's 2004 Human Development Index. Pakistan ranked particularly poorly in terms of educational attainment, but ranked somewhat better in terms of life expectancy.

25. Pakistan's poor social indicators, however, do not appear to have had a major negative impact on its growth performance. During the sample period, Pakistan's rate of economic growth was almost 5 percent, or slightly over 2 percent per capita. This is

[4] The standardized coefficients are what the regression coefficients would be if all the variables were measured on the same scale.

[5] Measured in percent of GDP, the 2004 UNDP Human Development Report shows only 5 countries out of 177 countries that have lower public spending on health care than Pakistan, and also only 5 countries that have lower public spending on education (although for some countries no data were available).

significantly better than the average performance of the countries included in the sample, which was an annual per capita growth rate of 0.8 percent, despite health and education indicators in Pakistan being lower than the sample averages (see Table II.3 and Figure II.1). But could Pakistan have achieved even higher growth rates if it had invested more in its human capital? Recent studies by Husain, 1999, and Easterly, 2001b, argue that Pakistan systematically underperforms on most social indicators for its levels of income and that it could indeed have achieved higher growth rates, if it had focused more on human capital accumulation. Easterly attributes this growth without development to domination by an elite and ethnic division, which both contributed to low levels of spending on health and education.

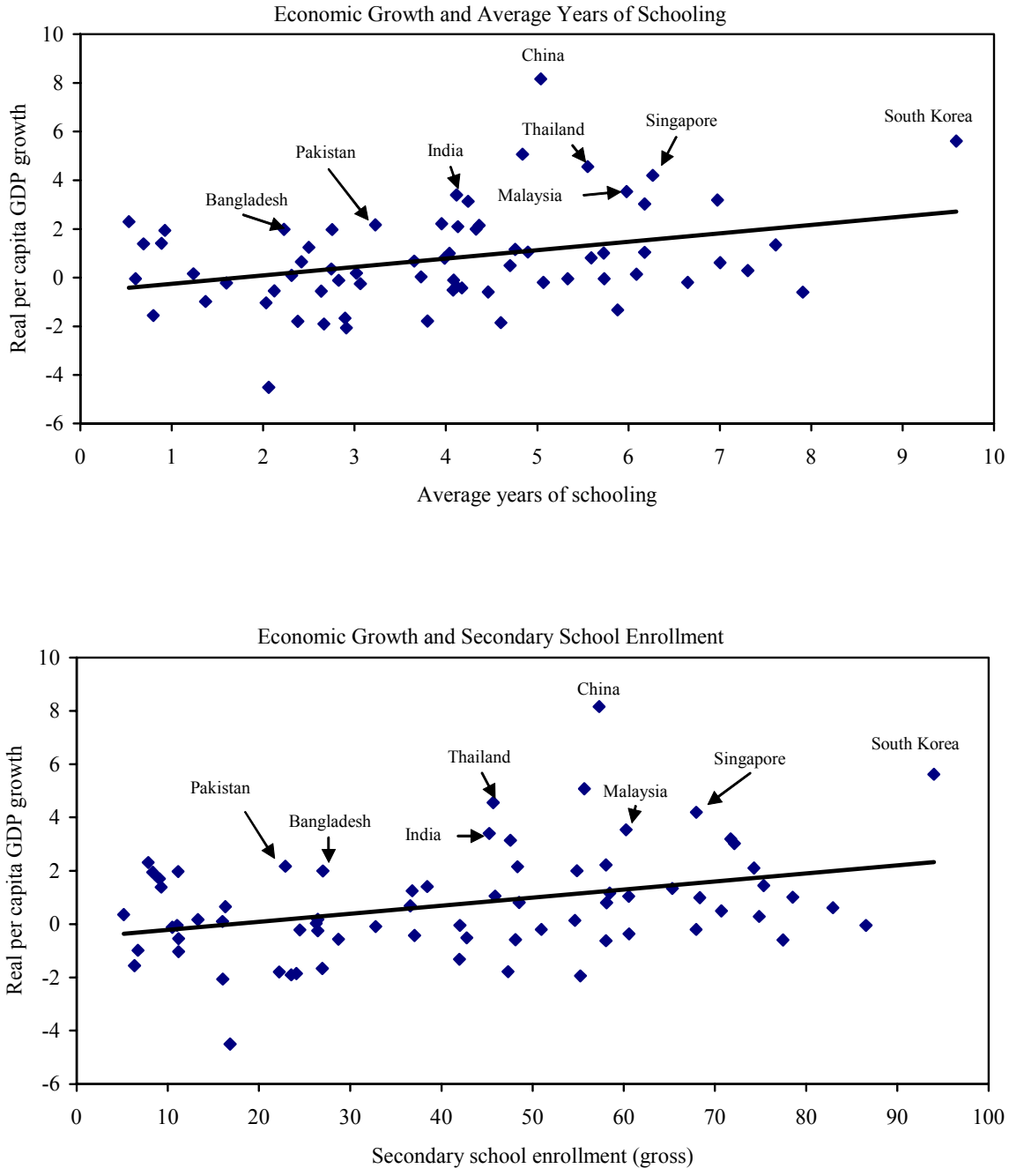
Table II.3. Country Values of Factors Contributing to Growth

	Real GDP Growth	Per Capita Real GDP Growth	Investment Ratio	Inflation	Institutional Quality	Life Expectancy	Average Years of Schooling	Health Expenditure Per Capita
Pakistan	4.9	2.2	18.6	7.8	5.6	59.5	3.2	18
Bangladesh	4.2	2.0	18.9	8.0	3.4	55.5	2.2	11
India	5.5	3.4	22.9	8.6	6.6	59.3	4.1	23
Sri Lanka	4.5	3.0	25.3	11.8	5.4	70.5	6.2	30
Malaysia	6.3	3.5	32.6	3.4	7.9	70.9	6.3	122
Singapore	6.9	4.2	36.8	2.1	10.0	75.5	6.0	866
Thailand	6.0	4.6	30.9	4.9	7.5	67.5	5.6	77
South Korea	6.8	5.6	32.7	6.5	7.7	70.5	9.6	493
China	9.5	8.2	37.1	6.6	7.1	69.0	5.0	41
Sample average	3.1	0.8	21.3	62.8	5.9	58.5	4.0	122

Sources: IMF World Economic Outlook; World Bank World Development Indicators; ICRG; and Barro and Lee (2000).

26. Table II.3 shows that Pakistan's economic growth rates were broadly similar to those elsewhere in South Asia, although India has been growing at a slightly faster pace, as has Sri Lanka on a per capita basis. But Pakistan's performance was significantly weaker than Malaysia, Singapore, Thailand, South Korea, or China. These countries recorded real per capita growth rates of 3½–8 percent on average per year over the period 1980–2002. Could Pakistan have achieved similar growth rates if it would have invested more in its human capital? Table II.3 also shows the values of the variables included in the regression equations for a number of Asian countries, as well as the sample averages. Table II.4 shows the contributions to growth, calculated using one of the equations presented in Table II.1 (equation (5)).

Figure II.1. Economic Growth and Education



Sources: IMF World Economic Outlook; World Bank World Development Indicators; and Barro and Lee (2000).

Table II.4. Contributions to Growth

	Per Capita Real GDP Growth	Investment Ratio	Initial Income	Inflation	Institutional Quality	Life Expectancy	Average Years of Schooling	Residual
Based on equation (5) of Table 1								
Pakistan	2.2	2.5	-8.6	-0.02	3.5	3.2	0.8	0.6
Bangladesh	2.0	2.6	-7.6	-0.02	2.1	3.0	0.6	1.3
India	3.4	3.1	-8.2	-0.02	4.1	3.2	1.1	0.0
Sri Lanka	3.0	3.5	-8.2	-0.03	3.4	3.8	1.6	-1.0
Malaysia	3.5	4.5	-11.0	-0.01	5.0	3.9	1.6	-0.4
Singapore	4.2	5.0	-12.5	-0.01	6.2	4.1	1.5	-0.2
Thailand	4.6	4.2	-9.6	-0.01	4.7	3.7	1.4	0.2
South Korea	5.6	4.5	-11.0	-0.02	4.8	3.8	2.5	1.0
China	8.2	5.1	-8.4	-0.02	4.5	3.8	1.3	2.0
Sample average 1/	0.9	3.0	-9.9	-0.17	3.7	3.2	1.1	0.0

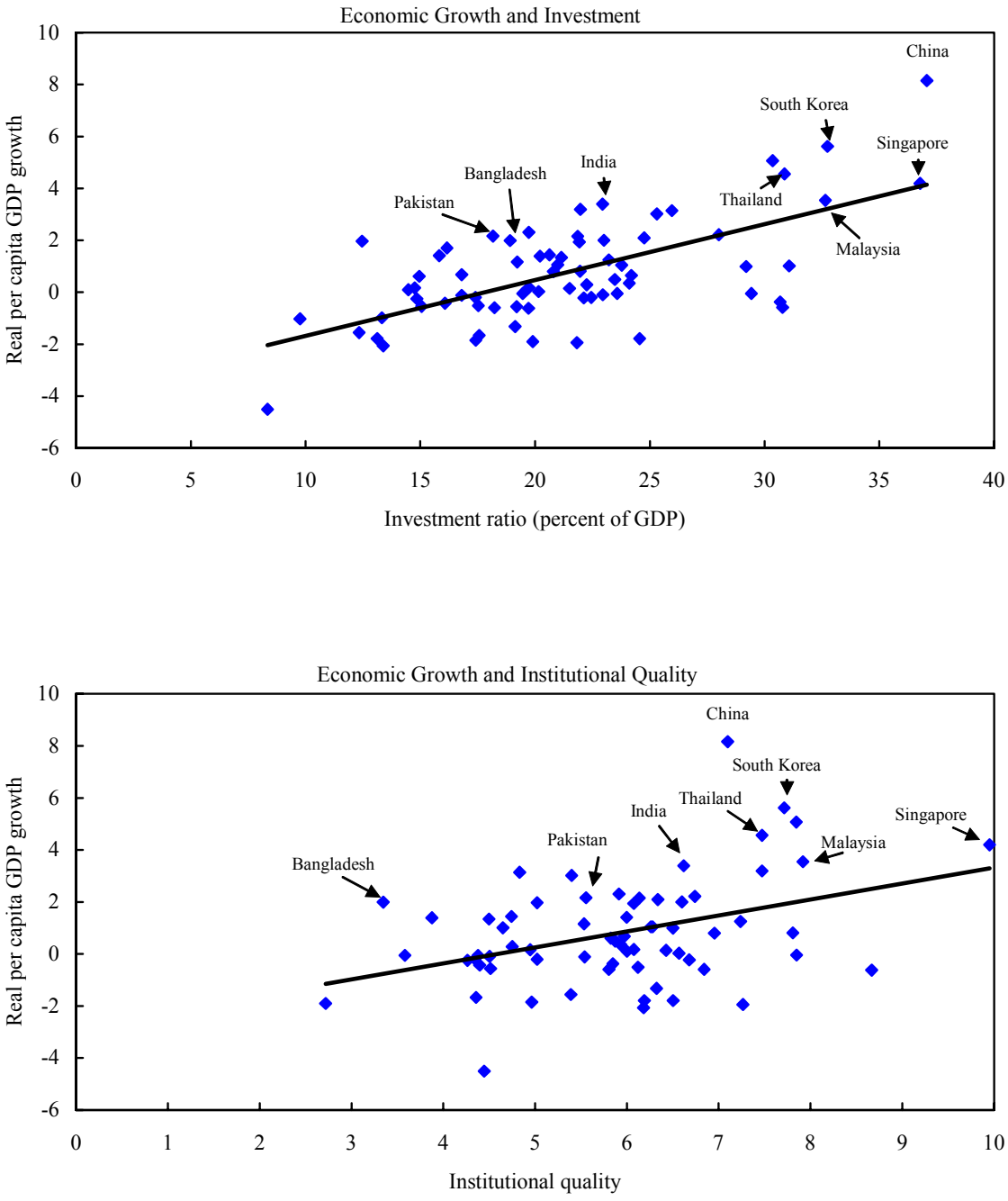
Sources: IMF World Economic Outlook; World Bank World Development Indicators; ICRG; and Barro and Lee (2000).

1/ Comprising 64 countries out of the total sample of 72 countries.

27. The regression results and the data in Tables II.3 and II.4 indicate that the best way to achieve higher rates of economic growth is to raise investment and to improve the quality of institutions (see also Figure II.2). In the sample period, investment ratios were significantly higher in South-East Asian countries and China, than they were in South Asian countries, including Pakistan. This supports the Pakistani authorities' emphasis on increasing private and public investment to achieve their growth targets. An increase in Pakistan's investment ratio by 5–6 percentage points, as the authorities aim to achieve over the next 4–5 years—to a level comparable to that of Sri Lanka—could result in an increase in the country's annual real per capita GDP growth rate of about 1 percentage point. Similarly, the countries in South-East Asia scored considerably better in terms of institutional quality. The results here suggest that the pace of economic growth in Pakistan can be raised further by improving the quality of its institutions. On a scale from 1–12, with a higher value representing better institutions, Pakistan rated 5.6 on average during 1980–2002. By increasing this score by 1 point—to a level similar to that of a country such as Egypt—Pakistan could raise its real per capita growth rate by about another ½ percentage point per year.

28. The regression results and the data in Tables II.3 and II.4 also suggest that lower investment in health and education in Pakistan at least partly accounted for the growth differences vis-à-vis South-East Asian countries. Pakistan could increase its pace of economic growth by investing more in human capital, as planned. While the impact this would have on growth would be somewhat smaller than that of raising investment or improving the overall quality of institutions, the effects would still be significant. For example, the average years of schooling received by Pakistan's population 15 years and older was 3¼ years. Raising this by 1½–2 years—to the levels of countries such as Thailand or Venezuela—would be a major achievement, but could raise the real per capita growth rate

Figure II.2. Economic Growth, Investment, and Institutions



Sources: IMF World Economic Outlook; World Bank World Development Indicators; and International Country Risk Guide.

also by about ½ percentage point per year. Improving health care to achieve an increase in the life expectancy of Pakistan's population by five years—to levels comparable to that of countries such as Morocco or the Philippines—would add another ½ percentage point to its annual real per capita growth rate. Within the region, Sri Lanka is also a good example of a country that has better social indicators and has achieved somewhat stronger per capita growth rates than Pakistan, despite its prolonged ethnic strife.

29. Just as importantly, for a low-income country such as Pakistan, investing in human capital through better education and health care benefits the poor directly by improving the current living conditions, besides fostering economic growth. The majority of people in low- and middle-income countries do not posses many assets, other than their own human capital. The possibility to improve their living conditions, therefore, depends to a considerable extent on how productive they can be. This in turn depends, among other things, on the educational possibilities and health care that are available to them.

30. A few caveats. First, higher spending on health care and education should be well-targeted to specifically include the poor. This implies an emphasis on primary and secondary levels of education and basic health care, as opposed to more spending on higher education and more specialized health care. The richer segments of the population can be expected to benefit more from the latter, which would perpetuate the divide between the poor and the rich. Second, given the poor quality and/or limited availability of government financed education and health care, a growing number of people relies on private service providers. The data used in this study may not fully capture this, due to a lack of reporting. Private health care and education, however, is generally not accessible to the poor, thus also continuing the divide between the haves and have-nots. Third, care should be taken that higher (government) spending on health and education is used effectively. The quality of public services in Pakistan, as well as in other low- and middle-income countries, has often been poor, due to weak institutional capacity, corruption, or other factors. There have been frequent examples of teachers failing to show up for work, or not necessarily being more knowledgeable than the students they are supposed to teach. Higher social spending will, therefore, need to be accompanied by improvements in institutional capacity—to ensure that the funds are used efficiently and effectively—if it is to have the desired positive effect on future economic growth and poverty reduction.

E. Conclusion

31. The empirical results presented in this paper support the traditional view that raising investment and improving institutions are key to achieving higher rates of economic growth. But the results also confirm that countries that invest more in their human capital do better in terms of economic growth. Higher levels of education and better health care result in a more productive work force, increasing total factor productivity and pushing a country's production function outward.

32. Compared to a large group of low- and middle-income countries, Pakistan's performance in terms of per capita economic growth has been better than average during 1980–2002, and broadly similar to that of other countries in South Asia. But several countries in South-East Asia, such as Malaysia, Singapore, and Thailand achieved considerably higher rates of economic growth. Besides having higher rates of investment and a better quality of institutions, the quality of human capital in these countries was significantly better than in Pakistan, widening the growth differentials vis-à-vis Pakistan. This implies that Pakistan could have achieved even higher growth rates, had it invested more in its human capital. The Pakistani authorities are, therefore, correct in emphasizing the need for higher social spending in their development strategy, in addition to the need to attract more investment and further improve the overall quality of the country's institutional framework.

References

Abed, George T, and Hamid R. Davoodi, 2004, "Determinants of Growth in the MENA Region," paper presented at the conference "The Middle East and North Africa (MENA) Region: The Challenges of Growth and Globalization," Washington, April.

Barro, Robert J., 1991, "Economic Growth in a Cross Section of Countries," *Quarterly Journal of Economics*, Vol. 106, No. 2 (May), pp. 407–33.

———, and Jong-Wha Lee, 2000, "International Data on Educational Attainment, Updates and Implications," NBER Working Paper No. 7911 (Cambridge, Massachusetts: National Bureau of Economic Research).

Barro, Robert J., and Xavier Sala-i-Martin, 1995, *Economic Growth*, (New York: McGraw-Hill).

Beaugrand, Phillippe, 2004, "And Schumpeter Said, "This is How Thou Shalt Grow": The Further Quest for Economic Growth in Poor Countries," IMF Working Paper 04/40 (Washington: International Monetary Fund).

Bils, Mark, and Peter J. Klenow, 2000, "Does Schooling Cause Growth?," *American Economic Review*, Vol. 90, No. 5 (December), pp. 1160–83.

Bosworth, Barry P., and Susan M. Collins, 2003, "The Empirics of Growth: An Update," *Brookings Papers on Economic Activity: 2*, Vol. 2 (September), pp. 113–206.

Cohen, Daniel, and Marcelo Soto, 2001, "Growth and Human Capital: Good Data, Good Results," CEPR Discussion Paper No. 3025, (London: Center for Economic Policy Research).

Easterly, William, 2001a, *The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics*, (Massachusetts: MIT Press).

———, 2001b, "The Political Economy of Growth Without Development: A Case Study of Pakistan," Paper for Analytical Narratives of Growth Project, (Harvard: Kennedy School of Government).

———, and Ross Levine, 1997, "It's Not Factor Accumulation: Stylized Facts and Growth Models," *World Bank Economic Review*, Vol. 15. No. 2, pp. 177-219.

Hakura, Dalia S. 2004, "Growth in the Middle East and North Africa," IMF Working Paper 04/56 (Washington: International Monetary Fund).

Husain, Ishrat, 1999, *Pakistan: The Economy of an Elitist State*, (Karachi; New York: Oxford University Press).

Mankiw, N. Gregory, David Romer, and David N. Weil, 1992, "A Contribution to the Empirics of Economic Growth," *Quarterly Journal of Economics*, Vol. 107 No. 2 (May), pp. 407–37.

Pritchett, Lant, 2001, "Where Has All the Education Gone?," *World Bank Economic Review*, Vol. 15, No. 3, pp. 367–91.

Sala-i-Martin, Xavier, 2004, "Some Lessons From the Recent Empirical Growth Literature," (preliminary draft).

Temple, Jonathan R.W., 2001, "Generalizations That Aren't? Evidence on Education and Growth," *European Economic Review*, Vol. 45 No. 4-5 (May), pp. 905–18.

III. FORECASTING INFLATION[6]

33. **This section presents three empirical approaches to forecasting inflation in Pakistan**. The preferred approach is a leading indicators model in which private sector credit growth leads inflation by 10 months. This model forecasts inflation to increase through the remainder of 2004/05, stabilizing by June 2005. A vector autoregressive model illustrates how monetary developments can be described by a Phillips-curve type relationship and also suggests that inflation will continue to accelerate in the near future. A univariate approach seems less suited to capturing turning points. This section also discusses some implications for monetary policy in Pakistan, including whether inflation targeting could be a feasible strategy.

A. Pakistan's Monetary Policy Framework

34. **Monetary policy in Pakistan is charged with three objectives**. According to the State Bank of Pakistan's (SBP) July 2004 monetary policy statement: Monetary policy "... will have to ensure that the current growth and investment momentum in the country is not impaired in any significant manner, export competitiveness is maintained while inflation is kept under control." At times, these objectives can be conflicting and thus difficult to achieve simultaneously using only monetary policy instruments.

35. **The SBP has operationalized its objectives as quantitative targets**. The inflation target is 5 percent at the moment. However, it seems likely that the target will be exceeded in 2004/05 by up to 2 percentage points, after undershooting the 4 percent target in 2002/03. The SBP tries to smooth excess exchange rate volatility, at times giving the impression of supporting certain psychological thresholds for the Pakistani rupee-U.S. dollar rate. More generally, the SBP looks at competitiveness when assessing the exchange rate. The SBP has also adopted the government's growth targets of 6.5 percent in 2004/05, and increasing to 8 percent over the medium term.

36. **The State Bank of Pakistan uses treasury bill (TB) auctions as the main monetary policy instrument**. TB auctions are held every fortnight, with auctions for 6-month maturity alternating with a combined auction for 3- and 12-month maturity. The cut-off rate for 6-month TBs is the SBP's main policy rate used to manage liquidity. The SBP operates a discount window, but the discount rate has remained unchanged since October 2002 while the 6-month TB rate had fallen by over 400 basispoints to its trough in July 2003. The discount rate has thus been somewhat defunct as a policy rate and has not been raised so far while TB rates have gone up again. Open market operations are scheduled as needed for liquidity management purposes and to support the general monetary policy direction.

[6] Prepared by Madhavi Bokil and Axel Schimmelpfennig.

37. **The SBP does not publish a quantitative inflation forecast**. The semiannual monetary policy statement includes an inflation target and discusses prospects for achieving the target. However, no inflation forecast itself is communicated to the public.

B. Toward a More Forward Looking Framework

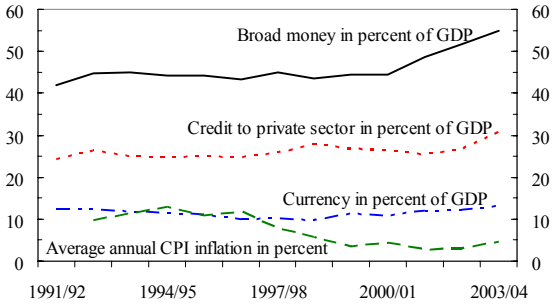
38. **Ongoing financial deepening changes the environment for monetary policy**. The SBP has moved away from targeting monetary aggregates such as reserve money and net domestic assets (NDA). In the past few years, NDA targets agreed under the Fund program were not effective in controlling reserve money growth because of the strong net foreign asset accumulation that continued to outperform projections. Instead, the SBP has relied increasingly on short-term interest rates to achieve its objectives. With steady improvements in financial intermediation and continued financial deepening, the credit channel should become more effective, strengthening short-term interest rates as the main policy instruments. Our finding below that private sector credit growth is a good leading indicator for inflation is evidence that the credit channel is part of the monetary transmission mechanism in Pakistan.

39. **Ideally, a quantitative forecasting framework is needed to support policy setting**. Forecasts of major economic aggregates, in particular inflation and growth, can provide a sense of whether the SBP is set to achieve its objectives. This information could then feed into the policy setting process to ensure that objectives are indeed met. Given the typical time-lags of monetary policy, forecasts are valuable sources of information to adjust policies early on. In light of the SBP's possibly conflicting objectives, forecasts can also illustrate possible trade-offs. Of course, the SBP could also decide to adopt formal inflation targeting, and use an inflation forecast as an intermediate target.

40. **There are three main challenges that a forecasting model has to address:**

- Ongoing changes in Pakistan's financial system such as financial deepening imply that simple standard relationships such as money demand functions may not be stable at the end of the sample period. Thus, small models may suffer from nonconstant parameters, which affects the model's forecast quality, or they may even result in estimated coefficients that are contrary to economic reasoning.[7]

Figure III.1: Monetary Developments



Source: National authorities; and Fund staff calculations.

[7] We explore this in Bokil/Schimmelpfennig (2004).

- Only a few, mostly monetary, variables are available on a monthly or quarterly basis. GDP, for example, is available only annually, though quarterly national accounts are under construction.

- Pakistan's data is not only subject to Gregorian calendar, but also to Islamic calendar effects.[8] Several standard techniques are available to address Gregorian calendar seasonality. However, only little work has been done to address Islamic calendar effects that cannot be controlled for by standard techniques which are calendar year-based because the Islamic year is shorter than the calendar year.[9]

C. Related Literature

41. **A large number of empirical studies is available that look at inflation and monetary policy relationships in Pakistan**. Some studies are based on samples going back as far as the 1950s, but most start in 1972, using either annual or constructed quarterly data. Most studies use either cointegration techniques or estimate vector autoregressive models (often in first differences). All studies are in the business of model building and none attempts to use their results for forecasting. Table III.1 provides a selective survey of the literature.

42. **Most empirical studies find standard economic relationships to hold**. Estimates of money demand functions mostly find money demand to be determined by measures of opportunity costs and activity (e.g., Tariq and others, 1997). Likewise, inflation is influenced by changes in money supply, interest rates, measures of aggregate demand or output, and import prices (e.g., Ahmad and Ali, 1999a). While most studies find such relationships to hold in a cointegration framework, a few fail to find cointegration which could suggest structural breaks in particular samples (e.g., Shamsuddin and Holmes, 1997). There seems to be no or only little exchange rate pass-through to domestic prices (e.g., Choudhri and Khan, 2002).

D. Three Quantitative Approaches

43. **We use three empirical approaches to forecasting inflation**. As a benchmark, we estimate a univariate autoregressive moving-average model (ARMA). Next, we use a vector-autoregressive (VAR) model that includes several variables based on an economic model. And finally, we use a leading indicators model (LIM), also based on several explanatory variables, but less concerned with mirroring an economic model. We find the LIM to be best suited for forecasting in terms of statistical properties and measures of forecast accuracy.

---

[8] Prices tend to increase during Ramadan and the Eids (religious holidays).

[9] A notable exceptions is Riazuddin and Khan, 2002.

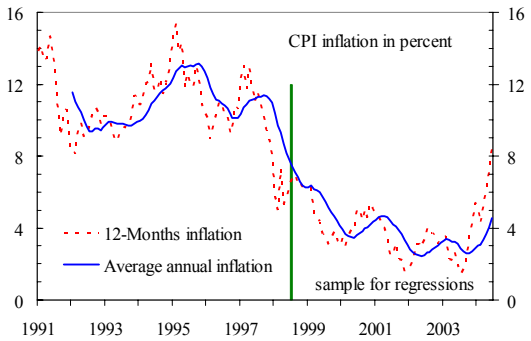
However, once longer time-series become available, we believe that an economic model-based VAR could allow more in-depth policy analysis.

The data

44. **The database includes mostly monetary and financial data available at monthly frequency**. We restrict the analysis to monthly data because this is available with much shorter lags and thus more suitable for a continuous forecasting exercise. However, this implies that we cannot use variables such as GDP because national accounts are compiled only on a fiscal year basis. As such, data is restricted to monetary aggregates, interest rates, the exchange rate, and inflation. In addition, we use the monthly large-scale manufacturing index to proxy activity. Table III.2 presents descriptive statistics for the core variables in our database.

45. **The sample is restricted to July 1998 onwards**. This starting point was chosen to exclude observations before the 1998/99 crisis after which the exchange rate was liberalized substantially. A casual look at the data supports this cut-off date as inflation appears to be much more stable since the crisis. Truncating the sample in 1998 has the added advantage that the recent fundamental changes in the financial system would be better reflected in the estimated coefficients which should contribute to better forecasts. However, nonconstant coefficients remain a problem for at least one of our approaches, though we did not try techniques that allowed for time-varying coefficients because this would further strain the already small sample size.[10] At the time of estimation, the latest available observation was June 2004 for most variables which leaves a fairly short sample.

Figure III.2: CPI Inflation



Source: National authorities; and Fund staff calculations.

46. **We address seasonality by using 12-month moving averages except in the ARMA approach**. Using average annual inflation as well as 12-month averages for possible regressors in the VAR and the LIM smoothes out calendar year effects. In addition, averaging

[10] In principle, it would be possible to account for the structural break in 1989/99 by including intercept and slope dummies for observations after 1989/99. When allowing different slopes for all variables in the period after 1998/99, this is approach is almost equivalent to simply restricting the sample as we do. Moreover, attempts at estimating a vector error correction model for a longer sample failed to find cointegration, suggesting that there is no stable long run relationship over the 1990–2004 period. As such, we believe that the more recent observations contain more relevant information for the purpose of forecasting and restrict ourselves to the 1998/99 and beyond sample.

should also smooth out Islamic calendar effects, except for the rare case where, for example, two Eids would fall into one calendar year. For the ARMA, we find that taking 12-month moving averages filters out too much of the variation in the data, resulting in a poorly specified model that does not fit the data well. However, using unfiltered monthly data yields a satisfactory ARMA specification.

47. **Most core variables in the database are nonstationary in levels** (Table III.3).[11] In our sample range, the consumer price index (CPI), broad money, credit to the private sector, the six-month TB rate and the output gap[12] are integrated of order one based on augmented Dickey-Fuller tests. However, reserve money and the large scale manufacturing index are stationary. Inflation is found to be integrated of order two. While this is not unusual, it seems somewhat at odds with the finding that the CPI is integrated of order one. Moreover, a graphical inspection of the inflation series casts some doubt on this result which may be driven by the fact that nonstationarity tests are biased toward nonrejection in small samples.

A Univariate Model

48. **In the simplest form, inflation can be modeled as an ARMA process**. We determine the optimal lag length according to the Box-Jenkins methodology, significance tests, and statistics measuring the forecast quality such as the root square mean error. Since inflation is integrated of order one according to unit root tests, we should difference inflation as part of the ARMA approach. However, the estimated model does poorly. Therefore, we estimate the model without differencing inflation—based on the finding that the CPI is integrated of order one and a visual inspection of the data which suggests that inflation may be stationary—and achieve better results.[13]

49. **The preferred specification is an ARMA (5,3) model that replicate the sine-type trajectory inflation has followed in the past** (Table III.4). We reestimate the model for a reduced sample through June 2003 and use this reestimated model to predict inflation for the period July 2003 through June 2004 for which we also have actual data, allowing an assessment of the model's predictive power. The in-sample forecast fails to fully anticipate the acceleration of inflation in 2003/04. However, none of the other ARMA specifications yielded a better in-sample forecast accuracy.

---

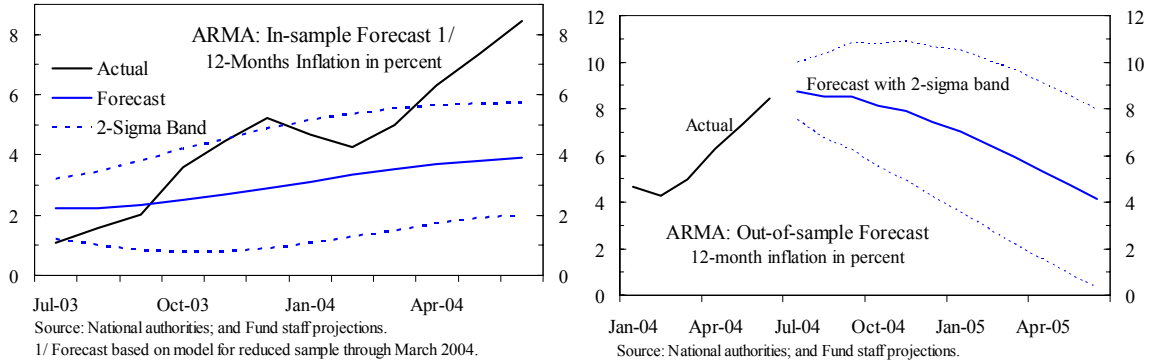
[11] The detailed test results can be found in Bokil and Schimmelpfennig, 2004.

[12] We calculate the output gap as the difference of the large scale manufacturing index from its long-run HP-filtered trend in percent of the trend.

[13] The results for an ARIMA based on first-differenced data can be found in Bokil and Schimmelpfennig, 2004. While they are not fundamentally different, the forecast quality of the model for inflation is somewhat worse.

50. **The ARMA (5,3) predicts a sharp slowdown in 12-month inflation starting in July 2004**. However, ARMA forecasts have difficulties capturing turning points because they use only information on past values of inflation and do not use any information on shocks that would trigger turning points. Instead, the ARMA model extrapolates the sine-type trajectory which inflation has followed in the past. The out-of-sample forecast then suggests that typically, inflation would be expected to come down soon if the average cycle length realized in the past continues to hold. However, more information on what is driving this sine-type behavior is needed to firm up such a forecast.

Figure III.3: In-Sample and Out-of-Sample Forecasts with the ARMA



An Unrestricted Vector Autoregressive Model

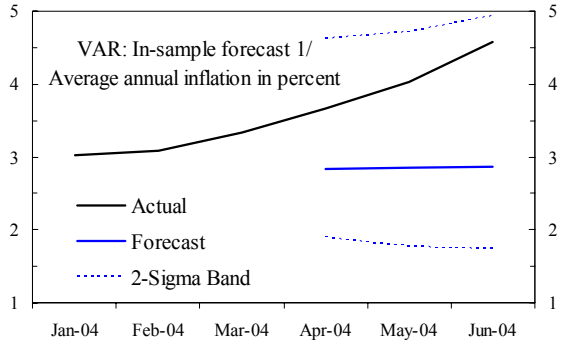
51. **A VAR allows a more model-based approach that should be better able to identify shocks that may trigger turning points in inflation**. With nonstationary variables, the VAR can be specified as a vector error correction model in levels that separates long-run and short-run relationships. However, we failed to find cointegration in various specifications which is likely to reflect the fairly short sample span that does not provide sufficient information on long-run relations as well as the structural changes taking place in the financial system. Alternatively, we specify a VAR in first differences that describes short-run relationships.[14] The widely used Phillips curve provides the theoretical starting point. Parameter restrictions would be required to make the VAR truly model-based. However, for now, we have only estimated an unrestricted VAR. The VAR's lag length is selected based on standard information criteria and tests for normality of the error terms; the information criteria suggest a lag length of one, but we set the lag length at three to ensure that the residuals are white noise.

[14] Thus, we either deviate from our assumption that inflation is stationary and assume that it is indeed integrated of order one, or—in terms of long-run relationship—we assume that the other variables in the VAR (which are integrated of order one) are cointegrated and that cointegrating vector is related to inflation. By differencing inflation, we, of course, run the risk of over-differencing the model.

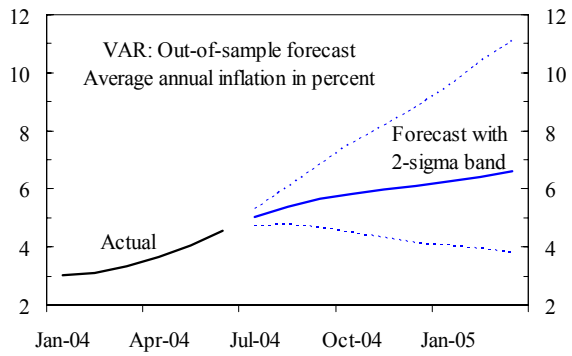
52. **The estimation results are shaky, but provide some insights**. Our preferred specification is a VAR including inflation, a real interest rate (defined as the 3-month TB rate less expected inflation from an ARMA model), and the output gap. In this specification, inflation is low when the output gap is large (i.e., the economy is below potential) or when the real interest rate is high (see Table III.5). However, there is no feedback between output gap or real interest rate in either direction. The estimated output gap equation does not fit the data well. Reestimating the model for a reduced sample through March 2004 and comparing the forecast with actual data, shows that the VAR forecast does not capture the accelerating trend of inflation, though actual inflation is within the wide 2-sigma band.

53. **The VAR predicts an acceleration of average annual inflation to 6½ percent by March 2005**. At the same time, the VAR predicts the output gap to remain almost constant while the real interest rate increases notably. One interpretation of this forecast could be that a tightening of monetary policy successfully reins in inflation without affecting the output gap. More technically, the unchanged output gap is the result of the poor fit in that equation.

Figure III.4: In-Sample and Out-of-Sample Forecasts with the VAR



Source: National authorities; and Fund staff calculations.
1/ Forecast based on model for reduced sample through March 2004.



Source: National authorities; and Fund staff projections.

54. **As typical economic relationships are firming up in the data, the VAR approach should become a useful tool to forecast and analyze inflation trends**. At present, not enough data is available to estimate a structural VAR with sufficient precision. Moreover, structural changes in the financial system result in nonconstant coefficients which make forecasting problematic. However, after 2001, Phillips curve-type relations are found in the data. If these relations were to firm up going forward, a structural VAR that reflects an economic model should provide a powerful tool for forecasting inflation and analyzing monetary policy.

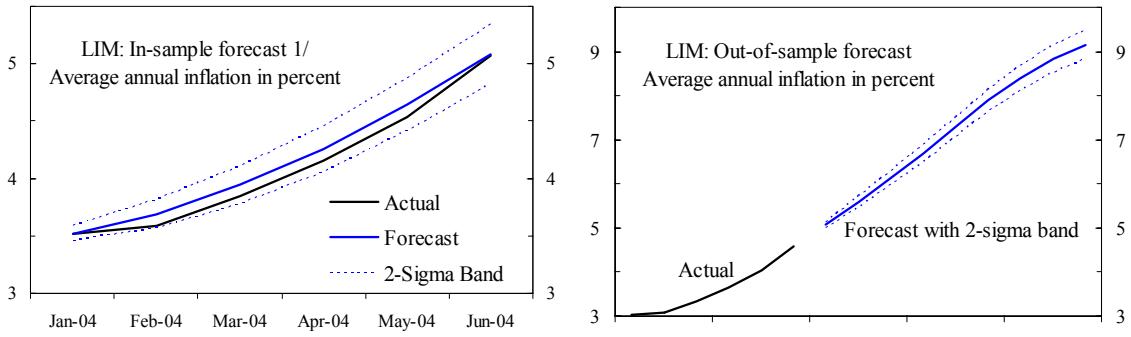
A Leading Indicators Model

55. **The leading indicators approach searches for variables that co-move with the variable to be forecasted without imposing a model structure**. Leading indicators do not necessarily need to be causal factors of the target variable as part of an economic model, though this would presumably strengthen one's confidence in a forecasting model (e.g.,

Marcellino, 2004, and Stock and Watson, 1989 and 1999). We use the general-to-specific algorithm in PcGets to narrow down the set of possible leading indicators from our full dataset and then use the same criteria of forecast accuracy as for the ARMA to arrive at a final specification (see Hendry and Krolzig, 2004). We require indicators to lead inflation by at least 6 months and allow for leads up to 12 months.

56. **Private sector credit growth is a good leading indicator of inflation.** Higher private sector credit leads an acceleration of inflation by 10 months (see Table III.6) which is consistent with a monetary transmission mechanism that works through the credit channel. All other variables drop out of the specification process, including broad money growth, reserve money growth or the output gap which did not add to the model's forecast quality. The ex-post in-sample forecast based on a model reestimated for a reduced sample through June 2003 and forecasted through June 2004 tracks the actual inflation development quite well, with inflation staying within a fairly narrow two-sigma band. Using the model estimated through June 2004 to forecast out-of-sample shows average annual inflation to increase steadily though with a slightly declining trend up to 9 percent in March 2005.

Figure III.5: In-Sample and Out-of-Sample Forecasts with the LIM

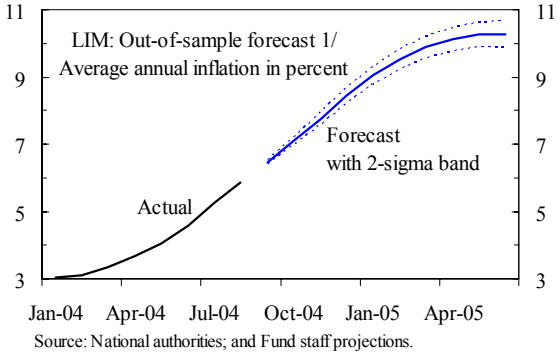


Source: National authorities; and Fund staff projections.
1/ Forecast based on model for reduced sample through December 2003.

Source: National authorities; and Fund staff projections.

57. **The leading indicators model yields a fairly accurate forecast, but is not grounded in an economic model**. By construction, the approach picks a leading indicator that yields a high forecast accuracy at the current juncture. Moreover, higher private sector credit growth being associated with higher inflation seems plausible from an economic point of view (credit channel). However, the choice of leading indicators may change over time, so that the forecasting model may not be

Figure III.6: Updated Out-of-Sample Forecast with the LIM



Source: National authorities; and Fund staff projections.
1/ LIM re-estimated through August 2004; projections through June 2005.

stable. As such, periodic respecification and reestimating would be required. For example, since we specified the model, two additional months of data have become available. Reestimating the model for the extended sample leaves the coefficient estimates fairly unchanged. The projection from this reestimated model has inflation stabilize about 10 percent by June 2005.

E. Inflation Targeting

58. **Inflation targeting is a monetary policy strategy based on five elements** (e.g., Carare and others, 2002, Croce/Khan, 2000, and Mishkin, 2000): (a) the public announcement of a quantitative inflation target for the medium- to long-term; (b) an institutional commitment to price stability as the primary objective of monetary policy to which all other objectives are subordinated; (c) use of a wide set of variables and information to set monetary policy instruments; (d) transparent communication with the public and markets, explaining monetary policy objectives and decisions; and (e) accountability of the central bank for achieving the inflation target.

59. **Pakistan's monetary policy contains some of these elements**. An annual inflation target is publicly announced, and the SBP explains its past and future actions in the semiannual monetary policy statement, as well as quarterly and annual reports. However, price stability is not the SBP's only objective, and growth and exchange rate stability are not always subordinated to the inflation target.

60. **If Pakistan wanted to adopt inflation targeting, the medium-term inflation target would need to be made the primary objective of monetary policy**. While the SBP has an inflation target even now, it cannot pursue inflation targeting as long as there are two other possibly conflicting objectives, growth and the exchange rate. This is a political decision that needs to weigh the advantages of inflation targeting against the question of what role monetary policy can play to support growth and the rationale behind a 'fear of floating' (e.g., Calvo and Reinhart, 2000, and Hausman and others, 2000).[15]

61. **Using an inflation forecast as an intermediate target is, however, not yet possible**. As illustrated above, empirical relationships do not appear to be firm enough, yet, to establish a forecast as the intermediate target and fine-tune monetary policy in response to an inflation forecast that deviates from the inflation target. However, inflation forecasts can inform monetary policy and give an indication whether a particular target is likely to be achieved. The forecasting models presented above can serve such a purpose and provide at least qualitative input for setting monetary policy instruments.

[15] Fatás and others, 2004, find strong empirical support that having a quantitative target for monetary policy significantly lowers inflation.

F. Conclusions

62. **Pakistan's economic data permits quantitative forecasts of inflation**. Using monthly data since mid-1998, we have presented three approaches to forecasting inflation. At present, we consider the LIM most appropriate to arrive at a quantitative inflation forecast. However, over time as economic relationships firm up, a structural VAR approach should yield a richer forecast that will also allow an analysis of the impact of monetary policy instruments.

63. **Inflation forecasts with the LIM as of August 2004 suggest that monetary policy needs to be tightened**. The LIM estimated through August 2004 predicts annual average inflation to stabilize about 10 percent by June 2005, significantly higher than the SBP's 5 percent target for 2004/05. In fact, on current trends, this target is not likely to be achieved in 2004/05. Thus, monetary policy should be geared toward reversing the acceleration of inflation, and possibly returning 12-month inflation to 5 percent by the end of 2004/05.

64. **The LIM can also give some guidance on an intermediate target**. The LIM is not a structural model. Therefore, strictly speaking, the LIM does not allow inference on what needs to be done to achieve the SBP's inflation target. Nonetheless, stretching the limits of the model, the LIM can be inverted to show that slowing down credit growth to about 18–20 percent (from 31 percent in August 2004) over the next six months, would possibly lead to a decline of average annual inflation to 5 percent by December 2005. Such an exercise should be treated with caution, but may give some guidance for monetary policy.

65. **Inflation targeting is a policy option for the SBP**. However, if the SBP were to adopt inflation targeting, inflation would need to be made the primary objective of monetary policy. This could facilitate the conduct of monetary policy compared to the current regime in which the SBP has three potentially conflicting objectives—inflation, growth, and the exchange rate. Empirical relationships do not appear firm enough to allow using an inflation forecast as an intermediate target of monetary policy. Still, quantitative inflation forecasts would provide important information in an inflation targeting policy framework.

66. **The models presented here can be developed further**. In part, this will require longer time series, but also some stabilization in the rapidly developing financial system to ensure parameter stability. Given the data limitations, our econometric techniques were also constrained, and we look forward to future refinements. In the meantime, we put our LIM forecasts to the test of time.

Table III.1. Pakistan: Empirical Studies of Inflation and Monetary Policy

Authors	Empirical Approach	Dependent Variable	Regressors	Sample Period	Findings
Hyder, Zulfiqar and Sardar Shah (2004)	VAR		CPI inflation, WPI inflation, PR/USD, M2, LSM index, oil prices	1988:1 to 2003:9	Little exchange rate pass through to domestic CPI inflation.
Choudhri, Ehsan U. and Mohsin S. Khan (2002)	Single equation and VAR in first differences	CPI and WPI	U.S. dollar exchange rate, foreign price index	1982–2001	There is no exchange rate pass-through to domestic prices.
Ahmad, Eatzaz and Muhammad Munirs (2000)	OLS, cointegration analysis	M1, M2	Index of industrial production, interbank call money rate, CPI inflation	1972:I to 1996:I	Find that inflation is a better measure of opportunity cost than interest rate, money demand adjusts sluggish, and there was a structural break in the early 1990s.
Ahmad, Eatzaz and Saima Ahmed Ali (1999a)	Single equation, including Engle/Granger cointegration test, 2-equation model with 2SLS	CPI and exchange rate	Exchange rate, import prices, world prices, money supply, GDP, forex reserves	1982:II to 1996:IV	CPI reacts to changes in import prices (due to change in world prices or exchange rate) and money supply. Exchange rate responds to domestic and world prices.
Ahmad, Eatzaz and Saima Ahmed Ali (1999b)	2-equation model with 2SLS	CPI and exchange rate	Exchange rate, import prices, world prices, money supply, GDP, forex reserves	1982:II to 1996:IV	CPI reacts to changes in import prices (due to change in world prices or exchange rate) and money supply. Exchange rate responds to domestic and world prices.
Price, Simon and Anjum Nasim (1999)	Johansen (VECM), and SUR	CPI and exchange rate	Broad money, world prices, GDP, deposit rate	1974 to 1994	PPP and money demand relation are identified that are connected through cointegrating relationships.
Hsing, Yu (1998)	Single equation	Real M2	Real GDP, deposit rate	n.a.	Real GDP elasticity is close to unity whereas interest elasticity is low.
Shamsuddin, Abul F.M. and Richard A. Holmes (1997)	Johansen procedure, VARMA, ARMA	CPI	Broad money, real output	1972:II to 1993:IV	Rejects a cointegrating relationship between inflation, broad money and GDP and concludes that a univariate ARMA yields the best forecasts.

Table III.1. Pakistan: Empirical Studies of Inflation and Monetary Policy (continued)

Authors	Empirical Approach	Dependent Variable	Regressors	Sample Period	Findings
Tariq, Syed Muhammed and Kent Matthews (1997)	Johansen, single equation ECM	M2, M1, divisia	Real GDP, opportunity costs	1974:IV to 1992:IV	Identifies a cointegration vector that is interpreted as a money demand function. Short-run parameters of money demand equation are stable.
Chaudhary, M. Aslam and Naved Ahmad (1996)	OLS	CPI inflation	Broad money, GDP growth, share of service sector, public debt, import prices	1972 to 1992	Inflation results from money growth and structural factors such as growth, share of service sector, public debt, and import prices.
Arize, A.C. (1994)	OLS of ECM	M1, M2	GDP, inflation rate, call money rate, government bond yield, expected rate of depreciation (foreign interest differential)	1973:I to 1990:I	Finds that money demand is a function of GDP, inflation, interest rate and exchange rate expectations. Also, dummies for the oil shocks, and structural breaks in 1981 on account of introduction of partial interest-free banking and floating the rupee matter.
Hossain, Akhtar (1994)	Engle/Granger 2-stage, Johansen	M1, M2	GDP, yield on government bonds, market call rate, CPI inflation	1951–91	Meaningful cointegration relationship (money demand function) for the post-1972 period.
Khan, Ashfaque H. (1994)	Engle/Granger 2-stage	M1, M2	Real income, real interest rate (short-term and medium-term), nominal interest rate (short-term and medium-term), inflation	1971:III to 1993:III	Finds cointegrating relationship between M2 (or M1) and real income, real interest rate and inflation.
Dhakal, Dharmendra and Magda Kandil (1993)	OLS of distributed lag specification (AIC)	CPI inflation	M1, industrial production, interest rate, foreign interest rate, import prices	1970:I to 1987:IV	Import prices, industrial production, and U.K. interest rate explain inflation. M1 is insignificant.

Table III.1. Pakistan: Empirical Studies of Inflation and Monetary Policy (continued)

Authors	Empirical Approach	Dependent Variable	Regressors	Sample Period	Findings
Khan, Imran Naveed (1992)	OLS	M1, M2	GNP, call rate, CPI	n.a.	Money demand in Pakistan is a function of income and inflation, but not of interest rate.
Ahmad, Eatzaz and Harim Ram (1991)	OLS	WPI, CPI, GNP deflator, and absorption deflator inflation	Real GNP growth, growth rate of unit value of imports, growth rate of M1/M2, lagged inflation	1960 to 1988	Inflation is determined by real GNP growth, unit value of import growth, nominal money growth, and lagged inflation.
Ahmad, Mushtaq and Ashfaque H. Khan (1990)	ML (Cooley/Prescott 1976 varying parameter technique)	M1, M2	Income, inter-bank call rate, time deposit rate	1959 to 1987	Demand for real money was unstable at the time of delinking the Pakistani rupee from the U.S. dollar and introduction of interest-free deposit accounts.
Burney, Nadeem A. and Mohammad Akmal (1990)	NLLS	Real money stock	Income, CPI inflation, CPI inflation volatility	n.a.	Real money adjusts instantaneously to the desired level of money demand which is driven by income, and expected inflation.
Khan, Ashfaque H. and Bilquees Raza (1989)	OLS	M1, M2	Real GNP, interest rate, expected inflation	1972:II to 1987:II	Larger than unity income elasticities of money demand and the expected influence of expected inflation and interest rates.
Hug, M.D. Shamsul and Majumdar, Badiul A. (1986)	OLS	M1, M2	GNP, call money rate, government bond rate, CPI inflation	1955 to 1977	Structural breaks in the demand for money in 1965 and 1971.
Nisar, Shaheena and Naheed Aslam (1983)	OLS	M1, M2	GNP, term structure, GNP deflator	1959 to 1978	Term structure matters for money demand besides income.
Khan, Ashfaque (1982a)	OLS	M1, M2	GNP, interest rate on time deposits	1959/60 to 1979/80	Income elasticity of 1.7 and interest elasticity of 0.5

Table III.1. Pakistan: Empirical Studies of Inflation and Monetary Policy (concluded)

Authors	Empirical Approach	Dependent Variable	Regressors	Sample Period	Findings
Khan, Ashfaque H. (1982b)	OLS	M1, M2	GNP, expected inflation, inflation variability	n.a.	Including the variability of inflation improves the estimate of the money demand function.
Naqvi, Syed Nawab, A.R. Kemal, and Rashid Aziz (1982)	53-equation macro model			1959/60 to 1978/79	Inflation is not imported. Money demand is interest-sensitive. The GNP elasticity of money demand is fairly large.

Table III.2. Pakistan: Descriptive Statistics of Core Variables Used

(Average annual change in percent, unless otherwise indicated)

	Mean	Median	Minimum	Maximum	Standard Deviation	Last observation
Inflation	4.0	3.7	2.4	7.4	1.3	Jun-04
Broad money	11.8	10.9	4.3	18.5	4.5	Jun-04
Reserve money	12.0	12.4	8.5	16.4	2.2	Jun-04
Credit to the private sector	10.8	9.7	1.7	28.0	6.3	Jun-04
6-month TB rate	7.6	7.6	1.2	15.6	4.1	Jun-04
Spread (in basis points) 1/	103.4	86.8	-55.0	406.0	84.2	Jun-04
Large-scale manufacturing index	5.6	5.5	-2.5	14.3	3.7	Mar-04
Output gap	0.0	0.0	-0.5	0.6	0.6	Mar-04

Sources: Pakistani authorities; and Fund staff calculations.

1/ Defined as 12-month TB rate less 3-month TB rate.

Table III.3. Pakistan: Test for Nonstationarity of Core Variables 1/

	Level 2/	First Difference 2/	Process is
CPI	-0.6	-6.9	I(1)
Broad money	1.8	-3.5	I(1)
Reserve money	-3.8	-10.3	I(0)
Credit to the private sector	-2.8	-10.6	I(1)
6-month TB rate	-2.0	-6.7	I(1)
Large scale manufacturing index	-6.0	-8.0	I(0)
Output gap	-2.7	-5.7	I(1)

Sources: Pakistani authorities; and Fund staff calculations.

1/ Augmented Dickey Fuller test. Model includes intercept and trend. Sample range is 1998:7 through 2004:6 where available.

2/ The critical value at the 5 percent significance level is -3.5.

Table III.4. Pakistan: Econometric Results of the ARMA Model

	Adj. R^2	F-stat	AIC	SIC	Root Mean Squared Error	Mean Absolute Error	Mean Absolute Percentage Error	Theil Inequality Coefficient
ARMA (1,0)	0.84	367.64	1.76	1.82	2.47	2.06	42.98	0.36
ARMA (2,0)	0.84	185.24	1.77	1.86	2.50	2.09	43.60	0.36
ARMA (3,0)	0.84	123.38	1.78	1.91	2.43	2.03	42.69	0.35
ARMA (4,0)	0.84	92.32	1.80	1.96	2.29	1.93	41.13	0.32
ARMA (5,0)	0.84	72.73	1.83	2.02	2.28	1.92	40.88	0.32
ARMA (6,0)	0.85	67.16	1.76	1.98	2.27	1.92	40.37	0.32
ARMA (1,1)	0.84	183.80	1.77	1.87	2.51	2.10	44.01	0.37
ARMA (5,1)	0.84	64.41	1.79	2.02	1.94	1.66	37.03	0.26
ARMA (5,2)	0.86	60.92	1.72	1.98	1.92	1.65	37.57	0.26
ARMA (5,3)	0.88	68.28	1.52	1.80	1.79	1.54	35.02	0.24
ARMA (5,4)	0.85	46.75	1.76	2.08	1.88	1.62	36.49	0.25
ARMA (5,5)	0.87	47.34	1.67	2.02	1.84	1.57	35.16	0.42
ARMA (5,6)	0.87	43.85	1.67	2.05	2.22	1.89	40.87	0.31
ARMA (6,1)	0.85	59.61	1.74	2.00	2.07	1.76	38.49	0.28
ARMA (6,2)	0.85	51.41	1.77	2.06	2.14	1.84	40.29	0.30
ARMA (6,3)	0.87	51.90	1.67	1.99	2.07	1.76	38.48	0.28
ARMA (6,4)	0.89	56.59	1.51	1.86	2.08	1.77	38.46	0.29
ARMA (6,5)	0.86	41.36	1.72	2.10	2.77	2.38	51.09	0.42

Sources: Pakistani authorities; and Fund staff estimates.

Table III.5. Pakistan: Econometric Results of the VAR Model

	Inflation 1/		Real interest rate 2/		Output gap	
	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.
Constant	-0.0003	-0.8169	-0.0041	-1.4852	-0.0061	-0.9759
Inflation 1/						
Lag 1	0.5214	1.9480	-0.0113	-0.0949	-0.0004	-0.0304
Lag 2	0.1801	0.5766	-0.1692	-1.2216	-0.0136	-0.8003
Lag 3	-0.1076	-0.4780	0.1871	1.8754	0.0020	0.1605
Real interest rate 2/						
Lag 1	-0.6722	-1.6405	0.6308	3.4724	0.0086	0.3888
Lag 2	0.1086	0.2453	-0.0169	-0.0863	-0.0326	-1.3566
Lag 3	0.1000	0.2456	0.2431	1.3460	-0.0030	-0.1360
Output gap						
Lag 1	1.4412	0.3830	0.5388	0.3229	0.2053	1.0059
Lag 2	8.9753	2.5371	-1.2028	-0.7669	-0.3285	-1.7127
Lag 3	5.9956	1.3974	2.1870	1.1497	0.1175	0.5049
Adjusted R-square	0.75		0.80		-0.05	
F Statistic	11.62		15.12		0.82	

Sources: Pakistani authorities; and Fund staff estimates.

1/ Annual average inflation.
2/ The real interest rate is defined as the nominal 3-month TB rate less expected inflation, where inflation expectations are based on an ARMA model.

Table III.6. Pakistan: Econometric Results of the Leading Indicators Model

	Coef.	t-stat.
Constant	0.32	6.46
Average annual inflation		
lagged 1 month	1.45	12.36
lagged 2 months	-0.53	-3.63
lagged 5 months	0.34	2.46
lagged 6 months	-0.39	-3.64
Average annual growth in credit to private sector		
lagged 10 months	0.08	5.81
lagged 11 months	-0.06	-4.50
Effective sample	1999:6 to 2004:6	
Adjusted R-squared	0.99	

Sources: Pakistani authorities; and Fund staff estimates.

References

Ahmad, Eatzaz and Harim Ram, 1991, "Foreign Price Shocks and Inflation in Pakistan: A Monetarist Approach," *Pakistan Economic and Social Review*, Vol. 29, No. 1, pp. 1–20.

Ahmad, Eatzaz and Muhammad Munirs, 2000, "An Analysis of Money Demand in Pakistan," *Pakistan Economic and Social Review*, Vol. 38, No. 1, pp. 47–67.

Ahmad, Eatzaz and Saima Ahmed Ali, 1999a, "Relationship Between Exchange Rate and Inflation," *Pakistan Economic and Social Review*, Vol. 37, No. 2, pp. 139–54.

———, 1999b, "Exchange Rate and Inflation Dynamics," *The Pakistan Development Review*, Vol. 28, No. 3, pp. 235–51.

Ahmad, Mushtaq and Ashfaque H. Khan, 1990, "A Reexamination of the Stability of the Demand for Money in Pakistan," *Journal of Macroeconomics*, Vol. 12, No. 2, pp. 307–21.

Arize, A.C., 1994, "A Re-Examination of the Demand for Money in Small Developing Economies," *Applied Economics*, Vol. 26, pp. 217–28.

Burney, Nadeem A. and Mohammad Akmal, 1990, "Expected Inflation Rate, Its Variability, and Desired Real Money Demand in Pakistan: Some Alternative Estimates Using Non-Linear Squares Method," *Pakistan Economic and Social Review*, Vol. 28, No. 1, pp. 69–88.

Bokil, Madhavi and Axel Schimmelpfennig, 2004, "Pakistan – Three Attempts at Inflation Forecasting," (Forthcoming as an IMF Working Paper).

Calvo, Guillermo and Carmen Reinhart, 2000, "Fear of Floating," NBER Working Paper 7993, (Cambridge, Massachusetts: National Bureau of Economic Research).

Carare, Alina and others., 2002, "Establishing Initial Conditions in Support of Inflation Targeting," IMF Working Paper 02/102 (Washington: International Monetary Fund).

Chaudhary, Aslam M. and Aurangzaib Khan, 1997, "Volatility of Money and Monetary Policy in Pakistan," *Pakistan Economic and Social Review*, Vol. 15, No. 2, pp. 131–51.

Chaudhary, M. Aslam and Naved Ahmad, 1996, "Sources and Impacts of Inflation in Pakistan," *Pakistan Economic and Social Review*, Vol. 34, No. 1, pp. 21–39.

Choudhri, Ehsan U. and Mohsin S. Khan, 2002, "The Exchange Rate and Consumer Prices in Pakistan: Is Rupee Devaluation Inflationary?," *The Pakistan Development Review*, Vol. 41, No. 2, pp. 107–20.

Croce, Enzo and Mohsin S. Khan, 2000, "Monetary Regimes and Inflation Targeting." *Finance & Development*, Vol. 37, No. 3, pp. 48–51.

Dhakal, Dharmendra and Magda Kandil, 1993, "The Inflationary Experience of Six Developing Countries in Asia: An Investigation of Underlying Determinants," *Applied Economics*, Vol. 25, pp. 413–25.

Fatás, Antonio, Ilian Mihov, and Andrew K. Rose, 2004, "Quantitative Goals for Monetary Policy," NBER Working Paper 10846, (Cambridge, Massachusetts: National Bureau of Economic Research).

Hasan, M. Aynul, S. Ghulam Kadir, and Fakhre Mahmud, 1988, "Substitutability of Pakistan's Monetary Assets under Alternative Monetary Aggregates," *The Pakistan Development Review*, Vol. 27, No. 3, pp. 317–26.

Hausman, Ricardo, U. Panizza, and E. Stein, 2000, "Why Do Countries Float the Way They Float?," *Journal of Economic Development*. Vol. 66, pp. 387–414.

Hendry, David F. and Hans-Martin Krolzig, 2004, *We Ran One Regression*, (London: Oxford University). [http://www.nuff.ox.ac.uk/economics/papers/2004/w17/OneReg.pdf.]

Hossain, Akhtar, 1994, "The Search for a Stable Money Demand Function for Pakistan: An Application of the Method of Cointegration," *The Pakistan Development Review*, Vol. 33, No. 4, pp. 969–83.

Hsing, Yu, 1998, "Tests of Changes in the Elasticity of the Demand for M2 and Policy Implications: The Case of Four Asian Countries." *Journal of Economic Development*, Vol. 23, No. 2, pp. 181–89.

Huq, M.D. Shamsul and Majumdar, Badiul A., 1986, "Stability of the Demand for Money Function: Evidence from a Developing Country," *Pakistan Economic and Social Review*, Vol. 24, No. 1, pp. 45–55.

Hyder, Zulfiqar and Sardar Shah, 2004, "Exchange Rate Pass-Through to Domestic Prices in Pakistan," State Bank of Pakistan Working Paper No. 5.

Khan, Ashfaque, 1982a, "An Analysis of the Demand for Money in Pakistan," *Journal of the Institute of Bankers in Pakistan*, Vol. 48, pp. 25–34.

———, 1982b, "Adjustment Mechanism and the Money Demand Function in Pakistan," *Pakistan Economic and Social Review*. Vol. 20, pp. 36–51.

Khan, Ashfaque and Lubna Hasan, 1998, "Financial Liberalization, and Economic Development in Pakistan," *Economic Development and Cultural Change*, Vol. 46, pp. 581–97.

Khan, Ashfaque H., 1982a, "The Demand for Money and the Variability of the Rate of Inflation - An Empirical Note," *Economics Letters*, Vol. 10, pp. 257–61.

———, 1994, "Financial Liberalisation and the Demand for Money in Pakistan, " *The Pakistan Development Review*, Vol. 33, No. 4, pp. 997–1,010.

Khan, Ashfaque H. and Bilquees Raza, 1989, "The Demand for Money in Pakistan: Quarterly Results 1972–1987," *Pakistan Economic and Social Review*, Vol. 27, No. 1, pp. 33–48.

Khan, Imran Naveed, 1992, "The Demand for Money in Pakistan & India," *Pakistan Economic and Social Review*, Vol. 30, No. 2, pp. 181-90.

Marcellino, Massimiliano, 2004, "Leading Indicators: What Have We learned," (Forthcoming in: G. Elliot, C.W.J. Granger, and A. Timmermann (eds.), *Handbook of Economic Forecasting*, Elsevier - North Holland).

Mishkin, Frederic S., 2000, "Inflation Targeting in Emerging Market Countries," NBER Working Paper 7618, (Cambridge, Massachusetts: National Bureau of Economic Research).

Naqvi, Syed Nawab, A.R. Kemal, and Rashid Aziz, 1982, *The P.I.D.E. Econometric Model of Pakistan's Economy (1959-60 to 1978-79)*, (Islamabad: Pakistan Institute of Development Economics).

Nisar, Shaheena and Naheed Aslam, 1983, "The Demand for Money and the Term Structure of the Interest Rates in Pakistan," *The Pakistan Development Review*, Vol. 22, No. 2, pp. 97-116.

Price, Simon and Anjum Nasim, 1999, "Modelling Inflation and the Demand for Money in Pakistan: Cointegration and the Causal Structure," *Economic Modelling*, Vol. 16, pp. 87-103.

Riazuddin, Riaz and Mahmood-ul-Hasan Khan, 2002, "Detection and Forecasting of Islamic Calendar Effects in Time Series Data," State Bank of Pakistan Working Paper No. 2, (January).

Shamsuddin, Abul F.M. and Richard A. Holmes, 1997, "Cointegration Test of the Monetary Theory of Inflation and Forecasting Accuracy of the Univariate and Vector ARMA Models of Inflation," *Journal of Economic Studies*, Vol. 24, No. 5, pp. 294-306.

Siddiqui, Anjum, 1990, "Money and Inflation in Pakistan: Some Tests," *Indian Economic Journal*, Vol. 38, No. 1, pp. 41-57.

State Bank of Pakistan, 2004, *Monetary Policy Statement July-December 2004* (Islamabad). [http://www.sbp.org.pk/m_policy/m_policy.pdf.]

Stock, James H. and Mark W. Watson, 1989, "New Indexes of Coincident and Leading Economic Indicators," Olivier Jean Blanchard and Stanley Fischer (eds), *NBER Macroeconomics Annual 1989*, pp. 351-394 (Cambridge, MA: MIT Press).

———, 1999, "Forecasting Inflation," *Journal of Monetary Economics*, Vol. 44, pp. 293-335.

Tariq, Syed Muhammed and Kent Matthews, 1997, "The Demand for Simple-Sum and Divisia Monetary Aggregates for Pakistan: A Cointegration Approach," *The Pakistan Development Review*, Vol. 36, No. 3, pp. 275-91.

IV. Revenue Generation in Pakistan: Performance, Policies, and Prospects[16]

A. Introduction

67. **Faced with a high incidence of poverty and large public debt, domestic resource mobilization is at the heart of Pakistan's reform agenda**. Pakistan's social indicators lag behind most countries in the region, reflecting in part relatively low social expenditure, and a range of compounding socio-political factors. A low revenue ratio restricts the fiscal room for maneuver, and revenue collection is constrained by a small taxpayer base and administrative shortcomings.

68. **In order to successfully meet the authorities' social and poverty alleviation objectives, revenues, in real terms, need to increase sizably in the short and medium term**. In this context, Pakistan's Poverty Reduction and Strategy Paper (PRSP), published in late 2003, envisions the tax-to-GDP ratio to increase by 1 percentage point of GDP in five years. The revenues gained from the enhanced effort, as well as lower interest expenditures in the coming years, are expected to create the fiscal space necessary to reach the government's poverty, social, and development spending objectives.

69. **The PRSP also lays out a strategic reform framework that builds on recent initiatives and takes additional steps to raise revenue**. A number of initiatives, through tax policy and administration reforms, have already been undertaken in recent years to improve revenue collection. This paper examines the past trends and performances to obtain a set of useful lessons for the road ahead, examining in particular:

- The recent history of revenue measures in Pakistan;
- Pakistan's revenue ratio against a group of comparable countries;
- The gap, if any, between past revenue generating measures, targets, and outcomes, and lessons learnt; and
- A realistic revenue target for the medium term and a roadmap of policy and administrative reforms to get there.

70. Since taxes account for more than three-fourth of budgetary revenues, and the Central Board of Revenue (CBR) is directly or indirectly responsible for collecting virtually all federal revenues, the paper's analysis focuses on CBR-related reforms and performances.

---

[16] Prepared by Taimur Baig and M.S. Lal, Member, Policy and Tax Reforms, Central Board of Revenue, Government of Pakistan.

71. **In general, the paper finds that Pakistan's tax system, while still yielding low levels of revenue, appears to be moving in the right direction**. Following the implementation of several key policy and administrative reforms in recent years, the structure of taxes has improved, the taxpayer environment has become friendlier, and there are some indications of increased efficiency of the tax system. Also, tax collection by the CBR in the four core tax categories have shown a modest upward trend of late. The authorities, however, still need to ensure that the reform momentum is maintained, including by addressing still-persisting administrative inefficiencies and shortcomings, and by implementing some further improvement in tax policy by broadening the tax base, which remains rather narrow.

B. Recent Steps

72. **The tax policy and administrative reforms in recent years have aimed at creating a fairer and friendlier tax environment, as well as widening the tax net. These include**:

- Rationalization of both the personal income tax rate and the corporate tax rate;
- Revision of tax laws to enforce uniformity of tax treatment (e.g., between residents and nonresidents, banks, and public limited companies);
- Introduction of self-assessment for filing personal income and corporate tax;
- Levy of withholding tax on stock market transactions;
- Refinement on the presumptive taxation scheme; and
- Expansion of general sales tax (GST) on agriculture inputs.

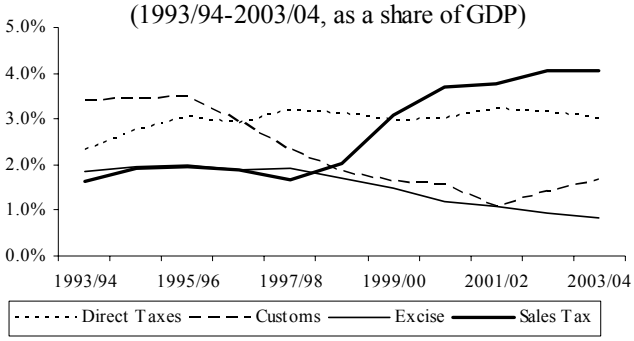
Also, customs and excise duties on a large number of items have been rationalized, and various income tax, duty, and GST exemptions have been removed. On the administrative front, the CBR has opened large- and medium-taxpayer units and a customs house toward taxpayer facilitation. Efforts are underway to revamp the human resource management of CBR and to implement functional integration of various CBR units to improve the tax information base.

73. **Many of these measures were corrective steps to remove distortions from the tax system, but not necessarily revenue enhancing in nature**. Moreover, tax administration measures aimed at taxpayer facilitation may not immediately provide for substantial revenue gains, although they make the tax environment more conducive to compliance. Steps that aim at base broadening, increased tax administration efficiency and better implementation skills, would ultimately pave the way for a buoyant revenue environment.

C. Tax Composition, Trends, and Comparisons

74. **Pakistan's key tax revenue sources are direct tax (on personal and business income), consumption taxes (sales tax and federal excise duty), and customs duties**. The CBR is directly responsible for collection and administration of these taxes.[17] Following a number of trade liberalization measures in the mid- and late-1990s, Pakistan's structure of taxation has changed considerably, with a gradual reduction in the dependence on foreign trade taxes (collected through customs) and a concurrent increase in GST and direct tax collection. These changes indicate a move toward a modern tax structure.

Figure IV.1. Pakistan: Major Tax Components
(1993/94-2003/04, as a share of GDP)



Source: Central Board of Revenue.

75. **Direct taxes as a share of total CBR collection have increased over the past decade**, from about 25 percent in the early 1990s to 32 percent in 2003/04. A number of measures, including the introduction of self-assessment, removal of a large number of income tax exemptions, levying withholding tax on some targeted goods and transactions, several tax amnesty schemes, and widening the scope of dividend taxation, were implemented during this period. Some revenue reducing measures, principally cuts in corporate income tax rates have also been put in place in recent years. The increase in overall CBR share notwithstanding, direct tax receipts as a share of GDP have been basically stagnant since the mid-1990s, hovering at around 3 percent. [18]

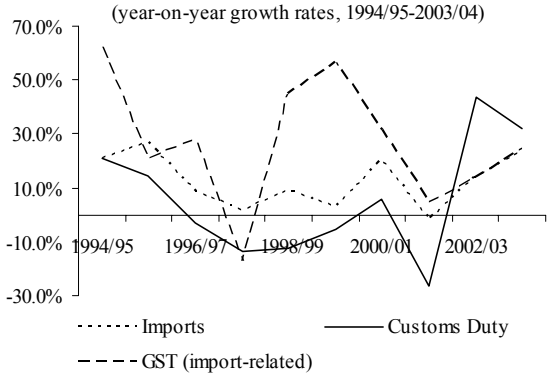
76. **Induced largely by trade liberalization measures, customs collection declined sharply over the past decade**, with the exception of an import rebound-led bounce in the past two years. As a share of GDP, customs collections declined from 3.4 percent in 1993/94 to 1.1 percent in 2001/02. In the early 1990s, customs accounted for 35–40 percent of CBR's total collection, when high and differentiated levels of imports tariffs characterized the regime. Since then, customs duties have been reduced and rationalized on a large number of products, and some exemptions have been removed. The policy measures, along with improved administration, appears to have yielded results of late, as collections have shown a

[17] The CBR branches across the country also receive gas and petroleum surcharges, amounting to about 1½ percentage points of GDP.

[18] This paper uses the newly rebased GDP of Pakistan for calculating various ratios. The revised GDP data is currently available for only five years going back. For data prior to that, necessary adjustments were made to maintain continuity in the time series. The new data, owing to substantial upward revision, reduces Pakistan's tax-to-GDP ratio by about 2¼ percentage points of GDP.

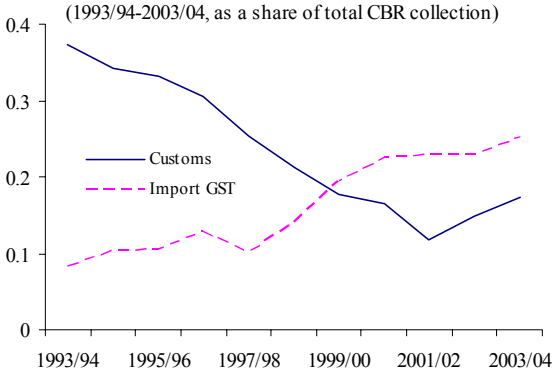
pickup in buoyancy in the last two years. During this period, on the heels of double-digit imports growth, customs duty collection improved by 0.6 percentage points of GDP, growing by 44 and 32 percent in 2002/03 and 2003/04.[19]

Figure IV.2. Pakistan: Imports, Customs, and GST
(year-on-year growth rates, 1994/95-2003/04)



Sources: IMF, Central Board of Revenue

Figure IV.3. Pakistan: Customs and Import GST
(1993/94-2003/04, as a share of total CBR collection)



Source: Central Board of Revenue.

77. **Some of the policy-induced decline in customs receipts has been offset by increases in import-related GST**. This reflects a major tax policy change implemented in the 1994/95 budget, which brought 125 imported goods under the GST net. Subsequently, some targeted rises in GST and turnover tax also boosted import-related GST collection, which accounted for a quarter of CBR's collection in 2003/04, compared to about 8 percent in 1993/94.

78. **Excise duties accounted for about a fifth of CBR's collection until 1998/99,** targeting levies on utility services, bank advances, and other goods and services at the point of production.[20] Since then, some administrative difficulties, gradual cuts in excise duties, as well as removal of selected items from the excise net, have led to a sharp decline in collection, with excises currently comprising of only 9 percent of total CBR revenues or 0.8 percentage points of GDP.

79. **The general sales tax, introduced in the value-added mode under the Sales Tax Act of 1990, is the major source of revenue in Pakistan**, currently accounting for more than 42 percent of total CBR revenues. Over the past decade and a half, hundreds of

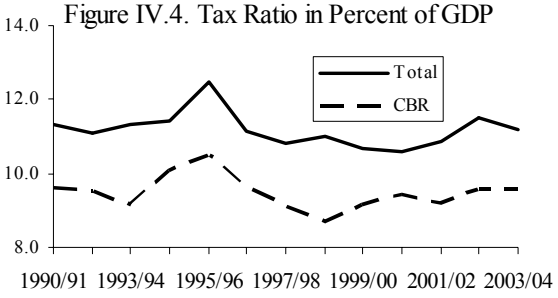
[19] An additional contributing factor toward the large jump in customs revenues in 2002/03 was the large reduction in duty drawback rates to account for the tariff reductions implemented in the previous years.

[20] Typically, excises are imposed on efficiency grounds, on goods that have low elasticity of demand (e.g., cigarettes), are easy to administer since they are levied at the point of production or importation, and may internalize negative externalities that consumption of goods such as tobacco and petroleum impose on the rest of the society. However, excises can also be regressive. For example, tobacco products tend to represent a higher proportion of spending on poorer households.

previously exempt items have been brought under the GST net, while the coverage has been extended to agriculture inputs, wholesale and retail sales, and selected services. In addition, the standard rate was raised from 12.5 to 15 percent in 1993/94, turnover and further tax were levied on certain products, retailers were registered, and various efficiency enhancement measures were put in place (e.g., presumptive assessment). The result, however, has been modest, with the domestic component of GST accounting for slightly over 1.5 percentage points of GDP during the last five years. The import-component of GST thus accounts for most of the increase in GST intake in recent years.[21]

80. **Considering the tax categories together, it is seen that Pakistan's tax revenue relative to GDP has been stagnant at around 11 percent for a number of years**. Indeed, five-year average tax ratios have been on a slightly declining path—from 11.4 percent of GDP during 1987–91, to about 11 percent by 2000–04. Reform initiatives in recent years have at least stabilized the ratio somewhat, and data from 2002 onward appear to indicate the beginning of a slight upward trend. In particular, after bottoming in the late 1990s, CBR revenue ratios have increased steadily.

Figure IV.4. Tax Ratio in Percent of GDP



Source: Central Board of Revenue

81. **How does Pakistan measure up against countries with similar characteristics?** Comparisons can be made with countries in the same region, or with comparable levels of development (proxied by per capita GDP). First, Pakistan's tax collection since 1987 is examined against regional counterparts: Bangladesh, India, Nepal, and Sri Lanka—countries with broadly similar tax policies and administration structures. The unweighted average of these four economies' tax ratio over the sample period is about 1 percentage point of GDP higher than that of Pakistan's. If Sri Lanka, which enjoys a substantially higher per capita GDP than the other South Asian economies, is taken out of the sample, the average ratio is broadly comparable to Pakistan's.

82. **Comparisons with nonregional comparators are unambiguously unfavorable**. Using latest available data, a worldwide ranking of per capita GDP on a purchasing power parity basis was prepared, and tax ratios of countries that were no more than one-half standard deviation away from Pakistan in the distribution were selected as the comparator

[21] A further caveat is that refunds for GST at the import stage are netted from domestic GST, thus the import component of GST can be characterized as "gross" receipts, whereas the domestic component is "net" in nature.

group.[22] Unweighted average of the these economies' tax ratios are about 7–8 percentage points of GDP higher than Pakistan's.

Table IV.1. Tax Revenue Against Comparators
(1987–2004)

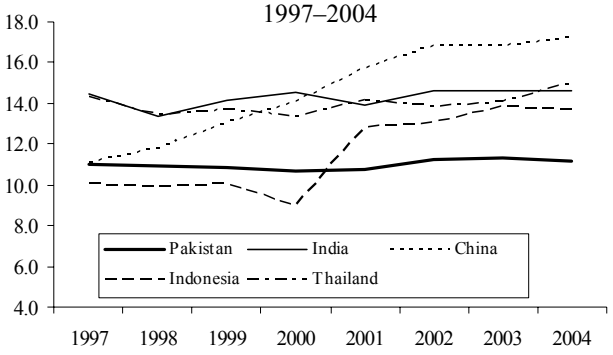
	Pakistan	South Asia 1/	Non-South Asia 2/
1987	11.8	12.2	20.1
1991	11.0	13.7	18.7
1996	11.8	12.9	20.5
2001	10.7	11.5	18.0
2004	11.1	12.0	18.7

Source: IMF, based on general government data (where available) from the Government Financial Statistics, converted to calendar year basis. 2004 values are based on projections
1/ Bangladesh, India, Nepal, and Sri Lanka (simple average).
2/ Bolivia, Cameroon, Côte d'Ivoire, Egypt, Indonesia, Lesotho, Moldova, Mongolia, Nicaragua, Senegal, and Zimbabwe (simple average). Selection criterion is having per capita GDP (ppp) within 0.5 standard deviation of Pakistan in a worldwide ranking.

83. **Looking at broader comparators, the average tax ratio of non-OECD countries, at 15.2 percent, is substantially higher than Pakistan's**. In this cohort, direct taxes and VAT revenues amount to about 4.5 and 5 percent of GDP, respectively, compared to Pakistan's 3 percent and 4 percent, respectively. Excises average about 2 percent of GDP, more than twice that of Pakistan's excise collection.

84. **Among developing economies with Pakistan's level of wealth, relative stagnation in revenue ratios is common** (particularly in South Asia), reflecting a variety of factors associated with low-income countries, including capacity constraints and poorly designed tax systems. Pakistan's revenue trend however looks unsatisfactory compared to a selected number of dynamic economies. For example, China, Indonesia, and Thailand show clear revenue buoyancy in recent years, as their economic growth rates have accelerated.

Figure IV.5. Selected Countries: Tax Revenue Evolution, 1997–2004



Sources: IMF; general government data.

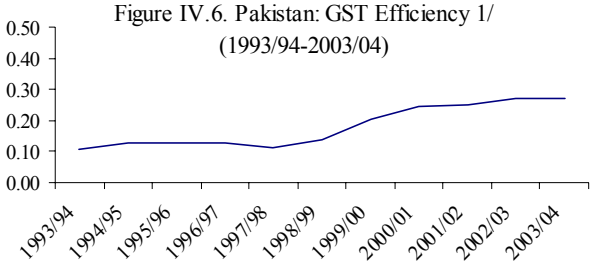
[22] Despite having comparable per capita income, Bangladesh, Nepal, and India were excluded as they had already been compared in the previous column. Including them reduces the averages by about 1 percentage point.

D. Behind the Low Ratio

85. **Factors underlying Pakistan's low revenue yield are commonly associated with low-income countries**. They include problems in tax administration, including a taxpayer-unfriendly environment, discretionary powers of tax officials, complex tax rules, and weak supervision of staff which undermines willingness of taxpayers to comply. A pervasive lack of ownership regarding the link between taxation and public service delivery has also contributed to tax evasion and noncompliance. A narrow and inflexible tax base hampers revenue generation, while a large informal economy continues to escape the tax net. Pervasive smuggling remains a major problem, with associated revenue losses. On the tax policy end, some tax exemptions aimed at special interest groups persist. This section focuses on some of these issues, including sales tax efficiency and the tax base, and on tax expenditures incurred through various exemptions.

86. **Pakistan's major source of tax revenue, the GST, has been subject to a variety of reforms in recent years**, but continues to yield rather low levels of revenues. Since its introduction, GST efficiency has admittedly increased, but from a very low base, and at a very slow pace. In fact, since 1999/2000, GST efficiency, in particular the domestic component, has been virtually flat.

Figure IV.6. Pakistan: GST Efficiency 1/
(1993/94-2003/04)



Source: Central Board of Revenue.
1/ GST collection in percent of GDP divided by 15, which is the GST standard rate.

87. **Pakistan's GST efficiency is low by international standards**. Indeed, of the 86 countries that currently have a VAT type sales tax system, Pakistan's GST (or VAT) efficiency ratio is at the bottom 10 percent. Also, the ratio is the lowest in South Asia. Despite the implementation of various measures, including removal of exemptions, enhancing taxpayer facilitation, and widening the tax net, there appear to be shortcomings in Pakistan's GST collection. Reinforcing existing policies and enhancing compliance are usual first steps to resolving this problem.

Table IV.2. VAT Rates and Revenues
(Selected Countries)

	Standard Rate (In percent)	Yield (In percent of GDP)	Efficiency Ratio 1/ (In percent of GDP)	Applicable Year
Jordan	13.0	8.0	0.62	2001
Mongolia	15.0	7.3	0.49	2001
Korea	10.0	4.7	0.47	2001
Thailand	7.0	3.1	0.44	2001
Vietnam	10.0	4.2	0.42	2002
Sri Lanka	15.0	5.8	0.39	2003
Indonesia	10.0	3.7	0.37	2001
Bangladesh	11.0	4.1	0.37	2003
Singapore	4.0	1.4	0.35	2001
Philippines	10.0	3.1	0.31	2001
Nepal	10.0	3.0	0.30	2003
Pakistan	15.0	4.0	**0.27**	2003

Source: IMF
1/ Revenue efficiency = Total VAT revenue as percentage of GDP divided by the VAT standard rates.

88. **With regard to direct taxes, a narrow base, noncompliance, and tax evasion are the major underlying factors behind the relatively disappointing performance**.[23] The economy has a large informal, virtually nontaxed component, estimated by most studies to be at least over a quarter of GDP. Also, the service and agriculture sectors, accounting for 52 and 23 percent of GDP respectively, are taxed nominally, with tax administration efforts focusing mostly on the industrial sector.

Table IV.3. Pakistan: Taxpayer Information 1/
(In millions, unless otherwise stated)

Number of tax payers 2/	1.6
Number of returns filed	1.1
Compliance ratio (in percent)	67.6
Potential revenue net	
Cell phone subscribers	3.0
Electricity consumers	> 10.0
Gas consumers	3.5
Automobile owners	2.5
Commercial bank account holders	2.8

Sources: Central Board of Revenue; World Bank (2004).
1/ Based on 2003/04 data.
2/ After adjusting for double-counting and invalid entries in the taxpayer database.

89. **A gradual reduction in personal and corporate income taxes in recent years partly explains the lack of pickup in direct tax collection, but major gaps remain in the proper assessment and collection of income taxes**, and many more taxpayers should be under the revenue net. About a third of the registered taxpayers do not file for taxes in Pakistan. Moreover, given the consumption level and pattern of goods and services that are relatively costly, conservative estimates suggest that the number of taxpayers should be at least 3 million.[24]

90. **Despite some administrative efforts, including occasional amnesties, the number of returns filed since 1999/2000 has been stagnant, in fact declining as a share of the population**.[25] National taxpayer identification numbers, introduced to enhance the collection and profiling of taxpayer information, are somewhat out of date and the database contains many errors. Automation of the taxpaying process, which would increase efficiency and allow more resources to be devoted to compliance and enforcement, is yet to be accomplished. Since 2003, the CBR has been attempting to identify additional taxpayers by exploiting the various consumer information available in its electronic database (e.g., automobile ownership, utility charges, etc.) from GST administration. To improve the quality of audits, it has also been using a software to link the unique national taxpayer identification number with the information indicating consumption patterns. Universal self-assessment for tax filing has been introduced, and the CBR is refining its system of assessment and auditing

[23] Pakistan's direct tax collection, at 3 percent of GDP, is substantially lower than the non-OECD average of 4.5 percent.

[24] After adjusting for income tax threshold and excluding labor force in the agriculture sector.

[25] Slightly over 0.97 million income tax returns were filed in 1999/2000; the number was 1.05 million in 2003/04.

under this new environment. It remains to be seen if these efforts will bear fruit in the coming years.

91. **An additional factor accounting for Pakistan's low revenue ratio is the practice of exempting special interest groups from various taxes**. In this regard, Pakistan has been moving in the right direction, with a large number of tax exemptions removed in recent years. Tax expenditures, estimated to account for nearly 0.8 percent of GDP in 2000/01, were reduced by a half through 2003/04. The authorities justify some of the exemptions as means to promote investment, exports, and growth. Nevertheless, closer examination of remaining tax exemptions should be considered with a view to reducing tax expenditures.

Table IV.4. Pakistan: Tax Expenditures, 2000/01–2003/04

(In percent of GDP)

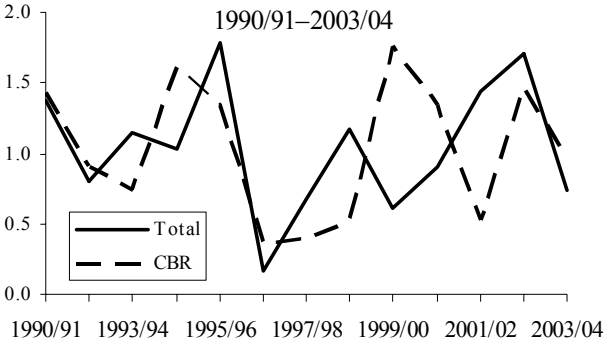
	2000/01	2001/02	2002/03	2003/04
Direct Tax	0.27	0.23	0.14	0.11
GST	0.32	0.20	0.22	0.17
Customs	0.15	0.12	0.12	0.08
Excise	0.01	0.01	0.01	0.00
Total	0.75	0.56	0.48	0.36

Sources: Economic Survey, Government of Pakistan, various issues.

E. Revenue Generating Measures, Targets, and Outcomes

92. **Given the mostly flat tax ratio trend, it may appear that taxes have at least grown in line with the economy in recent years**. A close look at Pakistan's tax buoyancy, measured as a ratio of nominal tax collection growth rate relative to the growth rate of nominal growth, indicates a more complex picture. Tax buoyancy has been rather volatile in the past decade and a half, although there are some signs of an upward trend in recent years. Some of the fluctuations can be explained by economic shocks, and various policy and administrative changes undertaken. It also appears, however, that until very recently, there haven't been many gains from revenue measures. The volatile tax buoyancy also reflects to some extent uneven administration of taxes and policy-induced cuts in levies.[26]

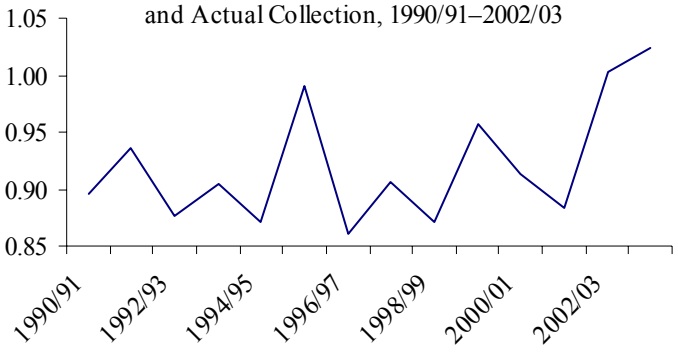
Figure IV.7. Pakistan: Tax Buoyancy, 1990/91–2003/04



[26] Note that in 2003/04, the decline in revenue buoyancy was driven by declines in gas and petroleum surcharges. CBR revenues, representing the core tax categories, grew in line with GDP, and exceeded the initial budget projection by 2.4 percent.

93. **Another way to look at the gap between tax measures and budgetary outcome is the difference between initial estimate and actual collection**. Encouragingly, year-end collections exceeded budgeted amounts both in 2002/03 and 2003/04, a notable reversal of earlier trends. During these two years, no downward revisions of revenue estimates were made either.

Figure IV.8. Central Board of Revenue: Ratio of Budgeted and Actual Collection, 1990/91–2002/03



Source: Central Board of Revenue

94. **The years prior to the latest two years were, however, not encouraging**. Looking at aggregate figures from 1990 onward, it is seen that over the past decade and a half, Pakistan's actual revenue outturn was almost always lower than the initial budget estimates, as the measures outlined in the budget usually fell short of achieving their expected goals. There was also a consistent pattern of making downward revisions to the initial projections, as administrative shortcomings and, occasionally, economic factors, combined to force the adjustment. Among administrative shortcomings that have been responsible for this pattern, weak planning and insufficient resources in the implementation of the budget measures, inadequate information analysis of the impact of the measures, and occasional rescinding of initial steps owing to political considerations are notable.

95. **An ex post examination of tax by tax outcomes over the last five years sheds further light on this issue (see Table IV.5)**.[27] The figures show that year-end outcomes fell short of what should have been expected under the realized growth factors and budgeted revenue measures in about half the cases in the sample. Excise collection was consistently lower than what could have been expected, accounting for the bulk of the aggregate shortfall, possibly indicating underestimates of the impact of the relief measures contained in the initial budget assumptions.

[27] The analysis incorporates relevant nominal growth factors and expected impact of various budget measures (made by the CBR).

Table IV.5. Pakistan: Ex Post Analysis of Revenue Performance, 1999/2000–2003/04

(In Pakistani rupees billion, other than growth rates)

	Baseline	Ex-post Nominal Growth Factor	Revenue Without Budgetary Measures	Revenue With Net Budgetary Measures	Ex-post Expected Revenue	Actual Revenue	Shortfall (Expected - Actual)
Direct Taxes							
1999/2000	110.2	7.5	118.5	4.8	123.2	113.0	10.3
2000/01	113.0	6.2	120.0	-1.2	118.8	124.6	-5.8
2001/02	124.6	6.6	132.8	-3.7	129.1	142.5	-13.4
2002/03	142.5	8.2	154.2	-4.1	150.1	151.7	-1.6
2003/04	151.7	10.3	167.3	-4.1	163.2	163.8	-0.6
Sales Tax (Import Related)							
1999/2000	43.0	-0.1	43.0	0.6	43.5	67.3	-23.7
2000/01	67.3	6.2	71.4	0.3	71.7	88.6	-16.9
2001/02	88.6	7.5	95.2	7.3	102.5	92.8	9.7
2002/03	92.8	20.1	111.4	4.0	115.4	105.6	9.8
2003/04	105.6	21.4	128.2	-2.2	126.0	127.0	-1.0
Sales Tax (Domestic)							
1999/2000	29.1	5.1	30.6	1.0	31.6	49.5	-17.9
2000/01	49.5	15.4	57.1	0.0	57.1	65.0	-7.9
2001/02	65.0	7.0	69.6	4.0	73.6	73.7	-0.2
2002/03	73.7	10.3	81.3	0.0	81.3	89.5	-8.2
2003/04	89.5	21.0	108.3	-2.0	106.3	91.9	14.4
Customs							
1999/2000	65.3	6.1	66.9	3.5	70.4	61.6	8.8
2000/01	61.7	24.5	74.1	-1.6	72.5	65.1	7.4
2001/02	65.1	1.4	63.7	-2.6	61.1	47.8	13.3
2002/03	47.8	17.6	54.7	2.6	57.3	68.8	-11.5
2003/04	69.1	27.0	85.1	-2.8	82.3	87.1	-4.8
Excise							
1999/2000	60.9	5.4	64.2	1.5	65.7	55.8	9.9
2000/01	55.8	7.0	59.7	1.6	61.3	49.1	12.2
2001/02	49.1	6.4	52.2	0.8	53.0	47.2	5.8
2002/03	47.2	6.1	50.1	-2.1	48.0	45.0	3.0
2003/04	45.0	8.4	48.8	-4.9	43.9	43.8	0.1

Note: Baseline defined as previous year's collection, Net measures reflect CBR estimates during the budget preparation stage. Expected revenues equal the sum of revenue based on relevant nominal growth factor and net measures. Nominal growth factors are: direct tax: nominal GDP growth; sales tax (import): nominal import growth; sales tax (domestic): large manufacturing growth and inflation; customs: dutiable imports growth and inflation; excise: large manufacturing growth of selected items and inflation.

Sources : Central Board of Revenue, Pakistan Economic Survey, IMF.

96. **There are no clear patterns on the other tax categories**. Indeed, although GST (domestic component) and direct tax collections relative to GDP have been stagnant, the outcomes have been mostly in line with the growth factors and budgeted measures. The attached table also shows that the net estimated impact of the various direct tax measures was mostly negative, partly accounting for the lack of buoyancy. Collections of customs duties were substantially short of the expected figures through 2002/03, but the situation has reversed over the last two years, indicating some pickup in buoyancy. In 2001/02 and 2002/03, import-related GST saw substantial shortfalls.

97. **The ex post analysis can be a useful guide to evaluating the performance of taxes in relation to macroeconomic developments**. Indeed, tax by tax performances should be seen in light of evolving economic conditions, and not only in relation to the initial estimates, as the impact of macro factors (which are seldom the same as the initial forecast), and tax measures are better understood through the course of the year.

F. The Road Ahead

98. **Pakistan's PRSP envisages raising CBR revenues by 1 percentage point of GDP between 2003/04 and 2007/08**. The PRSP's fiscal policy priorities include debt reduction and increasing the volume and effectiveness of social and development expenditures over the medium term. Raising the tax ratio by at least 1 percentage point—largely through continued tax administration reform—would contribute significantly toward achieving these objectives. Implementation of the existing reform agenda and continued economic growth should allow for that target to be reached readily. Nonetheless, reaching the five year target of a tax revenue ratio of around 11.5 percent of GDP would still leave Pakistan with a lower revenue base than many comparator countries, underscoring the need for further efforts in the medium term to mobilize resources necessary to achieve its social goals. Indeed, given the favorable growth outlook and the ambitious reform agenda in place, it should be reasonable to expect greater tax buoyancy in the coming years, with tax ratios rising higher than envisaged in the PRSP.

99. **Pakistan's relatively flat revenue ratio should also be looked at in the context of a rather unstable political and economic past**. The economy underwent several episodes of exogenous shocks and balance of payments difficulties through the past decade and a half, and has only very recently begun to experience accelerated growth. The last couple of years have demonstrated that the gains from a combination of favorable economic environment and reforms can be formidable. Indeed, three or five-year averages of tax buoyancy are well over one through 2003/04, and at around their highest levels in the past decade and a half.

100. **Gains from reforms should become more visible provided the reform momentum is maintained**. Major tariff rationalization and other tax cut measures have already been implemented, so the coming years should not necessitate many more revenue reducing adjustments. As per capita income increases, Pakistan is likely to experience a combination of buoyant consumer demand leading to rising imports and retail sales, as well as increases in

taxable income. The experiences of Korea and Thailand should be instructive in this context. Both countries saw their tax-to-GDP ratio improve by over 1 percentage point during the five years when their per capita GDP (on a purchasing power basis) rose from $2,000 to $3,000. Pakistan's PRSP envisages a comparable rise in per capita income and tax ratio over the next half decade.

101. **Along the road ahead, key reform steps should include**:

- Move toward a functional organization of tax administration that relies on voluntary compliance, self-assessment, risk-based audits, and minimal face-to-face contacts between taxpayers and officials. Encouraging progress has been made in this regard in recent years, and the momentum of the reforms must be maintained.
- Administrative and governance reforms to ensure better documentation of economic transactions, ownership of assets, and sources of income, to enable the government to implement existing tax laws more effectively as well as to widen the tax net in the future. In particular, the databank of existing economic transactions should be refined, updated, and utilized;
- Introduce a national taxpayer database that combines the information existing in the income tax and sales tax databases. Also, functional integration of income tax and GST administration and automation of the taxpaying process in the CBR need to be advanced;
- Streamline the tax system through steady reduction of exemptions and increasing the number of taxpayers by bringing nonfilers into the tax net;
- Extend the GST further into the service sector, for example, in the areas of consulting, accounting, broadcasting, and medical, and law practices;
- Assess the scope for raising the revenue yield of agriculture taxation in the context of fiscal devolution.[28] This could strengthen own source revenue of lower levels of government, complementing expenditure devolution. Given the lack of success on taxation on the basis of land and income, an alternative approach could be to introduce presumptive tax on selected agriculture output. The appeal of this measure is that it would be rather be relatively easy to operationalize, given the small number of withholding agents that would carry out these transactions. Well-known social and political constraints are associated with taxing the agriculture sector, thus the focus should be on implementing simple, transparent, and gradual measures.

[28] Agriculture tax is a provincial tax.

G. Conclusion

102. **Pakistan's tax ratio remains low by international standards, but encouragingly its tax policy and administration are moving in the right direction**. Despite various shortcomings, a review of recent measures clearly point toward a tax environment that is becoming less distortionary and more conducive to taxpayers' compliance. Pakistan's tax authorities need to mobilize sufficient resources for meeting the country's social objectives. Reinforcing the reforms already in place and taking additional steps consistent with the reform agenda in the near and medium term would assist significantly along the way.

References

Ebrill, Liam, Michael Keen, Jean-Paul Bodin, and Victoria Summers, 2001, *The Modern VAT*, (Washington, D.C.: International Monetary Fund).

Government of Pakistan, 2003, *Accelerating Economic Growth and Reducing Poverty: The Road Ahead*, Poverty Reduction Strategy Paper.

World Bank, 2004, *Pakistan: Public Expenditure Management, Strategic Issues and Reform Agenda*, Volume 1, Country Report No. 25665-PK

United Nations Development Program, 2004, *Cultural Liberty in Today's Diverse World*, Human Development Report.

V. The Contribution of Managerial Improvement in the Financial Rehabilitation of Selected Public Enterprises in Pakistan[29]

A. Introduction

103. **This section examines the improvement in the financial performance of three major nonfinancial public enterprises in Pakistan since 2000**. During the 1990s, Pakistan Steel Mills (PSM), Pakistan International Airlines (PIA), and Pakistan Railways (PR) incurred substantial losses that were covered by the federal budget and thereby contributed to macroeconomic instability. Poor governance was singled out frequently as a key cause of the public enterprises' financial weaknesses and low quality of service. As part of its economic reform strategy, the government that took office in 1999 had the objective of redirecting budgetary expenditures from subsidies towards high priority human and physical capital development, as well as enhancing the contribution of all three enterprises to economic growth by providing better services at a lower cost.[30]

104. **The improvement in the financial performance of the three public enterprises is analyzed by comparing the period 2000/01 to 2003/04 with the period 1994/95 to 1999–2000 (prior to reforms)**.[31] Some improvements were made possible because the federal government, as owner of the enterprises, took over the burden of their debt service or recapitalized their balance sheets, leaving the consolidated public sector accounts unchanged. However, management efforts were key to improved financial performance.

B. Measuring Public Enterprise Performance: An Accounting Framework

105. **Financial performance is measured as the retained income of the enterprise corrected for the net contribution made by the government (adjusted earnings)**. By definition, any improvement in adjusted earnings reduces an enterprise's burden on the budget in the absence of other financing sources. The accounting framework is presented in Table V.1.[32] Accrual-based accounting is used as it measures the loss or profit more accurately than cash-based accounting. After adjusting for the contribution of the government, the financial improvement is then split into two components: (a) improvements

---

[29] Prepared by Zafar Iqbal, Senior Economist, IMF Resident Mission, Islamabad, Pakistan.

[30] The Ministry of Finance and the responsible line departments prepared and monitored quarterly financial improvement plans (FIPs) of PSM, PIA, and PR in August 2002. Quarterly reports on the performance of each enterprise have subsequently been posted on the Ministry of Finance website (www.finance.gov.pk).

[31] The fiscal year in Pakistan starts on July 1.

[32] For a detailed description and further disaggregating of the financial accounts of a public enterprise, see *A Manual on Government Finance Statistics,* 1986, International Monetary Fund.

Table V.1. Operations of a Nonfinancial Public Enterprise: An Accounting Framework (accrual basis)

1. Operating and nonoperating revenues

   O*f which*: 1.1 Subsidies received from the government

   1.2 Capital transfers received from the government

2. Operating and nonoperating expenses

   O*f which*: 2.1 Taxes and compulsory fees incurred in the course of production
   2.2 Current and capital transfers to the government
   2.3 Interest accrued to the government and the central bank

3. Income before direct taxes (=1–2)

4. Direct taxes accrued

5. Income after taxes (=3–4)

6. Dividends and other distributions of entrepreneurial income to the government

7. Dividends and other distributions of entrepreneurial income paid to others than the government

8. Retained income from operations (=5–6–7) or (=11–12)

9. Net transfers to the government (=4+2.1 + 2.2+2.3 - 1.1 - 1.2 +6)

10. Corrected retained income (= 8+9)

11. Net acquisition of capital assets

12. Financing requirement (=11–8)

   12.1 Net domestic financing
   O*f which*: equity and net borrowing from the government

   12.2 Net financing from abroad

that are exogenous to the enterprise and can be attributed to a more favorable environment; and (b) improvements that reflect better management and corporate governance and are therefore directly attributable to economic reform efforts at the level of the individual enterprises.

C. Financial Performance of Public Enterprises

106. **The financial operations of PSM, PIA, and PR over the period 1994/95 to 2003/04 are presented in Tables V.2, V.3, and V.4**. The entire period under analysis is divided into two subperiods: 1994/95 to 1999/2000 (before reforms) and 2000/01 to 2003/04 (during reforms). The financial results of the selected enterprises over both periods are compared.

Operations of Pakistan Steel Mills

107. **PSM was incorporated in 1968 with the objective of enhancing the domestic availability of basic raw material (iron and steel products) for the engineering and construction industries**. PSM's creation facilitated the establishment of 22 downstream public steel companies that produce engineering goods with higher value added. The production capacity of PSM is 1.1 million tons of raw steel per annum which is planned to be expanded to 3 million tons over the next 10 years. The establishment of PSM lessened Pakistan's dependence on steel imports.

108. **A comprehensive restructuring plan addressed ingrained problems**. PSM had been plagued by operational inefficiency, overstaffing, poor maintenance, low capacity utilization, unsatisfactory work discipline, and mismanagement. In order to make PSM economically viable and to facilitate repayment of outstanding loans, the new management, appointed in 2000, undertook a restructuring strategy to stem the losses. Manpower was significantly reduced as a large part of noncore activities were outsourced. Management also focused on enhancing capacity utilization. Financial restructuring, repairs and maintenance, and improving governance were part of the reform agenda. A number of incentives including cash rewards, and merit certificates were introduced for good workers, and employees were given access to the chairman of the PSM to redress their grievances. A Welfare Trust was established to look after medical, education, and transport needs of the workers. The new management was given a full mandate to lay off surplus employees. To improve governance, PSM signed a memorandum of understanding with Transparency International (Pakistan) to strengthen procurement procedures.

Table V.2. Operations of Pakistan Steels

(Accrual basis; in millions of Pakistani rupees)

	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04 Prov.
1. Operating and nonoperating revenues (total sales and other income)	15,423	14,571	13,032	15,734	14,200	14,463	17,731	16,166	22,919	25,696
Of which: 1.1 Total net sales	14,867	13,843	12,678	15,309	13,970	14,045	16,603	14,286	22,084	24,778
1.2 Subsidies received from the government	...	...	...	...	...	...	...	...	...	...
1.3 Capital transfers received from the government	...	...	...	...	...	...	...	...	...	...
1.4 Other revenue	556	728	354	425	230	418	1,128	1,880	835	918
2. Operating and nonoperating expenses (total cost)	15,061	13,771	15,446	17,092	15,612	15,534	17,274	15,987	21,680	18,716
Of which: 2.1 Salaries and pensions	3,555	3,933	3,781	3,608	3,928	5,091	3,855	3,738	3,811	4,942
2.1.1 Salaries	3,555	3,931	3,779	3,607	3,928	5,090	3,854	3,738	3,811	4,941
2.1.2 Pensions 1/	0.26	1.58	1.63	0.52	0.26	1.02	1.47	0.49	0.48	1.41
2.2 Utilities (fuel & electricity cost)	1,282	1,718	1,972	2,072	2,205	2,302	2,752	2,684	2,938	3,342
2.3 Raw materials	5,036	5,988	6,841	6,111	5,648	5,677	6,806	7,100	8,685	9,260
2.4 Taxes and compulsory fees incurred in the course of production	1,115	1,567	1,115	570	555	639	893	403	433	435
2.5 Current and capital transfers to government	...	...	...	...	...	...	...	...	...	...
2.6 Interest to SBP	...	...	...	...	...	...	...	...	...	...
2.7 Other paid	4,073	565	1,737	4,731	3,276	1,825	2,968	2,062	5,813	737
3. Income before direct taxes (= 1 - 2)	362	800	-2,414	-1,358	-1,412	-1,071	457	179	1,239	6,980
4. Direct taxes accrued	266	69	63	77	70	70	-95	77	215	492
5. Income after taxes (= 3 - 4) or (= 8 - 9)	96	731	-2,477	-1,435	-1,482	-1,141	552	102	1,024	6,488
6. Net transfers to government (= 4 + 2.4 + 2.5 + 2.6 - 1.2 - 1.3)	1,381	1,636	1,178	647	625	709	798	480	648	927
7. Corrected retained income (= 5 + 6)	1,477	2,367	-1,299	-788	-857	-432	1,350	582	1,672	7,415
8. Net acquisition of capital assets	202	2,826	1,059	-2,285	-547	-1,374	-1,007	237	-5,094	-318
9. Financing requirement (= 8 - 5)	106	2,095	3,536	-850	935	-233	-1,559	135	-6,118	-6,806
9.1 Net domestic financing	106	2,095	3,536	-850	935	-233	-1,559	135	-6,118	-6,806
Of which: equity and net borrowing from the government	...	...	...	...	...	...	...	...	...	...
9.2 Net financing from abroad	...	...	...	...	...	...	...	...	...	...
Memorandum item:										
Numbers of employees	21,971	21,498	21,518	21,070	20,625	16,102	14,407	13,625	13,371	13,192
Numbers of pensioners 1/	9	9	12	14	14	16	18	17	17	18
Average salary (in thousands of Pakistani rupees)	162	183	176	171	190	316	267	274	285	375
Total net sales in quantity (in thousand tons)	1,119	833	804	862	749	861	962	903	1,272	1,122
Average price per ton (in Pakistani rupees)	13,286	16,618	15,769	17,760	18,652	16,312	17,259	15,821	17,362	22,084
Capacity utilization (percentage)	84	82	88	76	76	91	86	81	91	93

Source: Pakistan Steel Mills, Karachi.

1/ Pakistan Steel Mills has no pension scheme for its employees. However, some amount of pension is being paid to ex-employees of Chitagong Port transferred to Pakistan Steel Mills treating government of Pakistan employees.

109. **The restructuring contributed to a turn-around in financial performance**. PSM made losses after taxes during the late 1990s. However, during the past four years, the financial position of PSM improved significantly, despite the fact that the workforce reduction by about 40 percent during the last 10 years (mostly since 2000/01) did not result in a decline in salary outlays because of severance payments offered as incentives for voluntary retirement.[33] PSM did not receive any direct subsidies or capital transfers from the government throughout the period under analysis. In fact, PSM made a positive contribution to the net worth of the public sector: adjusted retained income rose from PRs 1.4 billion in 2000/01 to PRs 7.4 billion in 2003/04.

110. **The external environment became mostly favorable only after 2002/03**. Following the events of September 11, industrial production and construction activities slowed, causing a fall in demand for steel products and depressing prices for PSM output. This was aggravated by increased import competition following a reduction in import tariffs in July 2001. Only in 2002/03 and 2003/04 did the economic environment become more favorable to PSM. The levy of 30 percent import duty on steel products by the United States raised the prices of steel products in the international market, as did a growing demand from China. In addition, expansion of domestic construction activity gave a boost to the steel industry in Pakistan. Accordingly, PSM's net sales rose sharply, reflecting both price and volume effects. Capacity utilization rose from about 80 percent in the 1990s to 93 percent in 2003/04. However, the cost of fuel and electricity rose significantly over time, as did payments for raw materials.

111. **Summing up, over the past four years PSM improved its adjusted retained earnings and retired its domestic debt**. Its workforce declined significantly and capacity utilization and sales volume increased. The improvement in financial and operational performance was primarily due to better management. Only in the last two years did a favorable external environment contribute to the improvement.

Operations of Pakistani International Airlines

112. **PIA is a well established international carrier**. PIA's network reaches 33 international and 21 domestic destinations. Unlike PR and PSM, PIA is listed on the stock exchange.[34] The government's share in PIA was 57.7 percent till 2001 but rose to 75.9 percent in 2002 and 87 percent in 2003.[35] PIA recently lost its monopoly in the domestic market as five private airlines were granted licenses.

---

[33] PSM has no pension scheme for its employees, except for small amounts paid to ex-employees of its former Chitagong Port entity.

[34] PIA was listed on the Karachi Stock Exchange in 1957.

[35] The increase to 75.9 percent in 2002 and 87 percent in 2003 occurred when PIA settled interest payment obligations to the government by issuing equity shares.

113. **PIA incurred sustained operating losses, accompanied by liquidity problems, in the 1990s**. Frequent pilot strikes, problems with suppliers/vendors, overstaffing, political interference, mismanagement, staff indiscipline, and low employee morale were the main factors behind PIA's weak performance. The events after September 11 further undermined the financial position of the national carrier because of the closure of the Afghan airspace, higher fuel costs, large war risk premiums, and restrictions on flying over India as well as visa restrictions by many countries that reduced travel to and from Pakistan. But PIA also benefited as other international carriers stopped flying to Pakistan.

114. **The present management prepared and implemented a business plan aimed at reestablishing the profitability of PIA**. PIA suffered heavy losses until 2001 as income after taxes remained negative during most years, hitting bottom in 2000. The new management, which took over in April 2001, took various cost cutting and revenue enhancing measures, including eliminating nonprofitable flights, increasing flight/duty time, downsizing of personnel (in particular at foreign stations), moving from manual to automatic ticketing, outsourcing noncore functions, increasing domestic and international fares, and replacing old aircraft with new ones. Cash awards for employees were introduced to reward performance. As a result, PIA became profitable and its income after taxes was positive, PIA did not receive any subsidies or capital transfers from the government, but instead made a positive net transfer to the government.[36]

115. **Containing costs contributed significantly to improved financial performance**. A workforce reduction by 10 percent over 10 years resulted in lower overall cost of salaries and pensions, particularly during the past three years. Cost per employee fell by 24 percent between 2000 and 2003.[37] Engineering and maintenance costs also declined during the last two years. In some years, fuel costs fell in line with international oil prices and a strengthening rupee. However, recently, rising oil prices pushed fuel costs higher. Depreciation adversely impacted total costs.

---

[36] However, under the financial package, an amount of PRs 1.2 billion on account of interest payable to the government during August 2001 to December 2002 was converted into equity. Further, the government of Pakistan also provided PRs 1.8 billion ($30 million) to PIA during 2002 toward equity contribution under the aircraft replacement plan. Consequently, the government's equity in the PIA increased from 57.7 percent in 2001 to 75.9 percent in 2002. The government's equity further increased to 87 percent in 2003 on account of interest payable to the government (PRs 1.4 billion) and an amount of PRs 3.5 billion ($60 million) under aircraft fleet replacement plan, used for purchasing eight Boeing 777 aircrafts.

[37] In recognition of the contribution of its employees in the turnaround, PIA management increased salaries of its employees by 20 percent in January 2003, which reflected a higher salary bill in 2003. In addition, PIA also hired some more employees (1,881 in number) mainly on contract basis in 2003.

Table V.3. Operations of Pakistan International Airlines

(Accrual basis; in millions of Pakistani rupees)

	1994/95	1995/96	1996/97	1998 2/	1999 3/	2000	2001	2002	2003
1. Operating and nonoperating revenues (total sales and other income)	25,417	27,747	32,732	34,872	36,994	39,941	44,167	43,963	48,616
Of which : 1.1 Revenue from passengers	20,853	22,625	27,691	29,403	30,272	33,479	37,356	37,580	42,260
1.2 Revenue from cargo	3,220	3,258	3,564	3,511	3,141	3,696	4,276	4,111	4,163
1.3 Subsidies received from the government	...	...	...	...	...	...	...	...	...
1.4 Capital transfers received from the government	...	...	...	...	...	...	...	...	...
1.5 Other revenue	1,344	1,864	1,477	1,958	3,581	2,766	2,535	2,272	2,193
2. Operating and nonoperating expenses (total cost)	24,982	27,539	37,335	33,258	38,447	45,087	46,049	41,852	44,915
Of which : 2.1 Salaries and pensions	7,090	8,466	9,769	10,415	10,491	10,460	7,783	6,956	8,352
2.1.1 Salaries	6,813	8,096	9,327	10,031	10,107	10,018	7,407	6,583	8,008
2.1.2 Pensions 1/	277	370	442	383	384	442	376	373	344
2.2 Engineering and maintenance cost	2,655	2,418	2,894	3,840	4,059	4,447	4,648	3,129	2,751
2.3 Depreciation cost	1,820	2,076	2,155	2,597	2,442	1,936	2,650	4,503	3,432
2.4 Landing/over flying	2,192	2,337	3,029	2,923	3,129	3,377	3,580	2,983	3,579
2.5 Fuel cost	4,943	5,901	8,042	6,373	6,901	12,321	12,211	9,335	12,211
2.6 Taxes and compulsory fees incurred in the course of production	...	...	...	...	...	...	...	...	...
2.7 Current and capital transfers to the government	...	...	...	...	...	...	...	...	...
2.8 Interest to SBP	...	...	...	...	...	...	...	...	...
2.9 Other paid	6,282	6,341	11,446	7,111	11,425	12,546	15,177	14,946	14,590
3. Income before direct taxes (= 1 - 2)	435	208	-4,603	1,614	-1,453	-5,146	-1,882	2,111	3,701
4. Direct taxes accrued	141	143	192	175	599	9	324	237	2,401
5. Income after taxes (= 3 - 4)	294	65	-4,795	1,439	-2,052	-5,155	-2,206	1,874	1,300
6. Dividends and other distributions to the government 4/	...	...	...	...	...	...	...	...	...
7. Dividends and other distributions paid to other than the government 4/	...	...	...	...	...	...	...	...	...
8. Retained income from operations (= 5 - 6 - 7) or (= 11 - 12)	294	65	-4,795	1,439	-2,052	-5,155	-2,206	1,874	1,300
9. Net transfers to the government (= 4 + 2.6 + 2.7 + 2.8 - 1.3 - 1.4 +6)	141	143	192	175	599	9	324	237	2,401
10. Corrected retained income (= 8 + 9)	435	208	-4,603	1,614	-1,453	-5,146	-1,882	2,111	3,701
10a. Adjusted corrected retained income (= 8 + 9) 6/	435	208	-4,603	1,614	-1,453	-5,146	-1,882	-825	-1,143
11. Net acquition of capital assets	1,706	1,166	1,595	498	1,791	-1,009	234	7,064	8,964
12. Financing requirement (= 11 - 8)	1,412	1,101	6,390	-941	3,843	4,146	2,440	8,126	7,664
12.1 Net domestic financing	3,314	2,745	8,057	-83	6,836	8,419	4,755	5,065	3,309 7/
of which : equity and net borrowing from the government	...	...	...	...	...	...	...	2,936	4,844
12.2 Net financing from abroad	-1,902	-1,644	-1,667	-858	-2,993	-4,273	-2,315	3,061	4,355
Memorandum item:									
Numbers of employees	20,685	21,181	21,671	18,946	17,854	17,663	17,170	16,689	18,570
Numbers of pensioners	4,914	5,358	5,793	8,840	8,969	9,074	9,360	9,814	10,233
Average salary (in thousands of Pakistani rupees)	329	382	430	529	566	567	431	394	431
Average pension (in thousands of Pakistani rupees)	56	69	76	43	43	49	40	38	34
Number of passengers travelled on all flights (in thousand)	5,517	5,399	5,883	5,401	4,914	5,297	4,877	4,166	4,556
Revenue per passengers (in thousands of Pakistani rupees)	4	4	5	5	6	6	8	9	9
Increase in revenue per passenger (percent)		10.9	12.3	0.0	13.2	2.6	21.2	17.8	2.8
Number of tons kilometers transported through cargo (in millions)	453	430	426	383	327	340	371	347	351
Cargo charges per ton kilometer (in thousands of Pakistani rupees)	7	8	8	9	10	11	12	12	12
Increase in cargo charges per ton kilometer (percent)		6.6	10.4	0.0	4.7	13.2	6.0	2.8	0.1
Government shareholding (percent) 5/	57.7	57.7	57.7	57.7	57.7	57.7	57.7	75.9	87.0

Source: Pakistan International Airlines, Karachi.

1/ PIA's annual contribution to recognised Pension Fund.
2/ The 18-month period data (July 1997–December 1998) was converted into 12 month period (multiplying the number by 0.667) to make the table consistent.
3/ Effective January 1999, the accounting year was changed from fiscal year (July–June) to calendar year (January–December).
4/ No dividends were distributed as the PIA recorded losses during the period under analysis.
5/ In 2002, government's equity increased to 76 percent against non-payment of interest by the PIA.
6/ Corrected retained income is adjusted for GoP's equity contribution of PRs. 2,936 million to the PIA in 2002.
7/ Since the accounts are on accrual basis, the net increase/decrease in cash and bank balances are not taken here.

116. **PIA revenue from both passenger and cargo traffic increased markedly between 2000 and 2003**. Incentives for travel agents resulted in higher sales and increased seat occupancy. Reducing the number of free tickets to employees left more seats available for paying passengers. As a result, receipts per passenger grew substantially during 2001–2003 compared to 1995–2000.

116. **PIA's financial improvement is primarily due to better management**. PIA improved its adjusted retained earnings by containing costs and strengthening revenues. In particular, salaries and pension payments declined sharply, though cost factors outside PIA's control eroded some of these gains. Revenues were strengthened by raising capacity utilization and revenue per passenger.

Operations of Pakistani Railways

117. **PR operates in most parts of Pakistan and caters for the bulk of freight movement as well as passengers who cannot afford other more expensive means of transportation**. The existing network of tracks is in disrepair, and trains and coaches need modernization. As a result, demand for rail traffic has declined.

118. **PR's poor performance was the result of years of mismanagement**. The merger of PR's financial operations with the budget of the federal government in 1970 marked the beginning of PR's financial difficulties. In particular, no funding was made for contingent liabilities such as pensions, the provident fund and depreciation. The shift in preferences toward road transport as well as a lack of investment, management, inefficiencies, and corruption also undermined PR's financial performance. As a result, PR's financial performance steadily deteriorated during the 1990s, as its losses (i.e. income after taxes) rose from PRs 0.6 billion in 1994/95 to PRs 5.3 billion in 1998/99. In order to cover PR's losses, the government transferred substantial amounts to PR.[38]

119. **In order to reverse the decline, a new PR management began structural and managerial reforms in 1999/2000, including through recruitment of finance, marketing, and information technology professionals**. Measures included rationalization of staff, removal of ghost pensioners and employees, minimizing ticketless travel, disciplinary action against corrupt employees, scaling back free railway passes to employees, and leasing un-utilized PR land on a competitive basis. The new management also established a Vigilance Directorate to monitor the performance of employees at all levels.

[38] A special retirement program caused a sharp one-time loss in 1995/96.

Table V.4. Operations of Pakistan Railways

(Accrual basis; in millions of Pakistani rupees)

	1994/95	1995/96		1996/97	1997/98	1998/99	1999/00	2000/01		2001/02	2002/03		2003/04 Prov.
1. Operating and nonoperating revenues (total sales and other income)	13,072	12,395		13,327	14,326	12,440	14,792	18,120		23,309	25,739		25,643
Of which : 1.1 Revenue from passenger trains	3,104	3,602		4,440	4,499	4,448	4,779	5,602		6,395	7,163		7,932
1.2 Revenue from freight	3,444	3,568		4,097	4,234	3,698	3,760	4,576		4,751	4,802		4,349
1.3 Subsidies received from the government	1,592	1,909		1,982	2,013	1,530	3,100	3,710		4,666	6,529		6,591
1.4 Capital transfers received from the government	1,775	2,355		1,529	2,615	1,618	2,120	2,457		5,303	4,603		4,603
1.5 Other revenue	3,157	961		1,279	964	1,147	1,033	1,775		2,195	2,642		2,167
2. Operating and nonoperating expenses (total costs)	13,697	16,699		15,866	16,978	17,733	16,916	18,218		18,896	22,245		21,443
Of which : 2.1 Salaries and pensions	5,663	7,193	1/	5,919	6,187	6,327	6,657	7,205		7,587	7,870		6,818
2.1.1 Salaries	3,973	4,105		3,988	4,118	4,119	4,379	4,481		4,665	4,989		3,889
2.1.2 Pensions	1,690	3,087	1/	1,931	2,069	2,208	2,278	2,724		2,922	2,882		2,929
2.2 Fuel cost	1,266	1,384		1,590	1,572	1,624	1,720	2,431		2,570	3,090		3,665
2.3 Taxes and compulsory fees incurred in the course of production	1,210	1,565		599	1,450	1,400	234	704		875	1,588		1,393
2.4 Current and capital transfers to the government	...	...		...	...	...	...	...		...	...		...
2.5 Interest to SBP	547	796		1,506	2,069	2,731	2,579	1,995		1,195	367		250
2.6 Other paid	5,011	5,762		6,252	5,700	5,651	5,726	5,883		6,669	9,330		9,317
3. Income before direct taxes (= 1 - 2)	-625	-4,305		-2,539	-2,651	-5,293	-2,124	-98		4,414	3,494		4,201
4. Direct taxes accrued	...	...		...	...	...	...	...		...	...		...
5. Income after taxes (= 3 - 4) or (= 8 - 9)	-625	-4,305		-2,539	-2,651	-5,293	-2,124	-98		4,414	3,494		4,201
6. Net transfers to government (4 + 2.3 + 2.4 + 2.5 - 1.3 - 1.4)	-1,610	-1,903		-1,406	-1,109	984	-2,407	-3,468		-7,899	-9,178		-9,551
7. Corrected retained income (= 5 + 6)	-2,235	-6,208		-3,945	-3,760	-4,309	-4,530	-3,565		-3,485	-5,684		-5,351
8. Net acquisition of capital assets	1,928	2,507		2,486	1,030	2,186	419	2,089		4,766	4,449		5,505
9. Financing requirement (= 8 - 5)	2,553	6,812		5,025	3,681	7,479	2,543	2,187		352	955		1,305
9.1 net domestic financing	1,129	5,084		2,879	2,955	5,571	2,392	1,003		-1,912	-2,211		-2,095
Of which : equity and net borrowing from the government	...	...		...	...	...	...	...		...	...		...
9.2 net financing abroad	1,424	1,728		2,146	726	1,908	151	1,184		2,264	3,166		3,399
Memorandum item:													
Numbers of employees	113,186	104,281	1/	102,364	98,570	96,643	94,243	92,500		90,500	86,710		88,027
Numbers of pensioners	103,404	112,271	1/	116,168	120,071	123,996	126,864	105,708	2/	111,177	120,264	2/	123,797
Average salary (in thousands of Pakistani rupees)	35	39		39	42	43	46	48		52	58		44
Increase in salary cost per employees (in percent)		12.1		-1.1	7.2	2.0	9.0	4.3		6.4	11.6		-23.2
Average pension cost (in thousands of Pakistani rupees)	16	27		17	17	18	18	26		26	24		24
Increase in average pension cost (in percent)		68.3		-39.5	3.7	3.3	0.8	43.5		2.0	-8.8		-1.3
Numbers of passengers carried (passenger traffic) (in thousand)	66,465	73,652		68,801	64,870	64,988	67,508	68,859		69,003	73,400		71,490
Average fare per passenger (in thousands of Pakistani rupees)	47	49		65	69	68	71	81		93	98		111
Kilometers travelled (passenger traffic) (in million)	17,555	18,905		19,114	18,774	18,980	18,495	19,590		20,783	20,346		21,726
Average fare of passenger traffic per kilimeter (in Pakistani rupees)	0.18	0.19		0.23	0.24	0.23	0.26	0.29		0.31	0.35		0.37
Increase in average fare of passenger traffic (in percent)		7.8		21.9	3.2	-2.2	10.3	10.7		7.6	14.4		3.7
Tons of freight (in thousand)	7,356	6,854		6,380	5,977	5,448	4,770	5,894		5,866	5,860		5,930
Implicit fare of goods train per ton (in Rs.)	468	521		642	708	679	788	776		810	819		733
Kilometers covered of freight (in thousand)	5,661	5,077		4,607	4,447	3,970	3,753	4,520		4,573	4,569		4,614
Average fare of freight per ton kilometer (in Pakistani rupees.)	608	703		889	952	931	1002	1012		1039	1051		943
Increase in average fare of freight (in percent)		15.5		26.6	7.1	-2.2	7.6	1.0		2.6	1.2		-10.3

Source: Pakistan Railways

1/ Due to extraordinary retirement in 1995/96.

2/ Number of pensioners revised as per issuance of departmental identity cards.

120. **Workforce rationalization and removal of ghost employees did not result in lower costs**. The number of employees fell from 113,000 in 1994/95 to 88,000 in 2003/04, but there was a corresponding increase in retirees.[39] Despite the reduction in staff, salaries and pensions kept rising. The average annual cost per employee increased by 7.4 percent and per pensioner by 12.2 percent during the 2001–03 period, which was higher than during the 1995–2000 period. However, salaries and consequently annual cost per employee decreased in 2003/04.

121. **Annual revenue from passenger trains increased much faster than revenue from freight trains**. Annual revenue from passenger trains increased sharply in 2003/04, because of a significant increase in fares. A shift from less profitable short-haul routes to long-haul routes also contributed to higher receipts per passenger.[40] By contrast, revenue from freight trains increased only marginally from 1994/ 95 to 2003/04. The average annual increase in the fare of freight transportation fell from 10.9 percent during 1995–2000 to 1.6 percent during 2001–03. More recently, the average fare of freight declined further by 10.3 percent in 2003/04.

122. **The reforms failed to bring about a fundamental improvement of PR's financial performance**. Labor costs were not contained. In addition, fuel costs increased significantly on account of international oil prices.[41] There was some improvement in revenue from passenger trains reflecting better managerial efforts as PR improved its facilities to attract more passengers and raised tariffs significantly. By contrast, for transportation of freight, ground lost to transportation by truck could not be recovered. Taken together, there was some improvement in PR's income after taxes, reflecting sharply higher net transfers from the passenger trains reflecting better managerial efforts as PR improved its facilities to attract more passengers and raised tariffs significantly. During the past four years, PR's corrected retained income averaged negative PRs 4.5 billion compared with PRs 4.2 billion during the preceding six years, implying little financial improvement so far.

123. **Summing up, over the past four years, PR failed to improve its adjusted retained earnings, but stepped up its acquisition of fixed assets and retired domestic debt**. Sharply higher government transfers to PR allowed repayment of debt and accumulation and replacement of capital equipment. The improvement in operations of PR, in particular the

[39] In 2000/01, Pakistan Railways management issued departmental identity cards to its pensioners and identified over 21,000 ghost pensioners, thereby reducing the number of pensioners from 127,000 in 1999/00 to 106,000 in 2000/01.

[40] The average annual increase of fares was 9.1 percent during the 2001–04 period, compared with 8.2 percent during 1995–2000.

[41] The average annual fuel cost increased significantly from PRs 1.5 billion during 1995-2000 to about PRs 3 billion during 2001–04.

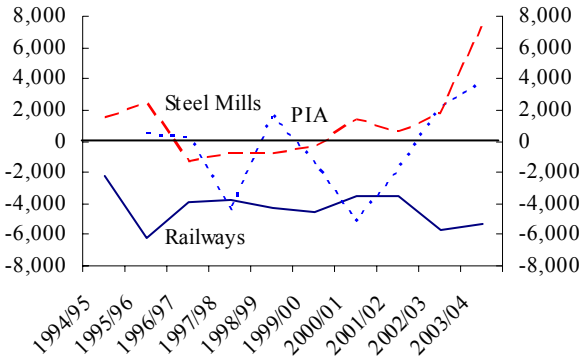
reduction in the workforce, reflected better management. Overall, the financial performance of PR remained roughly the same during the past four years.

D. Conclusion

124. **PSM and PIA succeeded in improving their financial performance while PR is still lagging behind (Figure V.1)**. PSM, PR, and PIA all suffered heavy losses and were in financial difficulties during the 1990s. However, during the last four years, the management of all three companies have undertaken measures to improve their financial position and operational performance. The financial position of PSM and PIA improved markedly as the enterprises turned from loss makers in the 1990s to profitable entities. In contrast, the financial performance of PR deteriorated during the same period. With regard to managerial efforts, all three enterprises reduced significantly their workforces and repaid relatively expensive debts. Unfavorable external factors like oil price hikes, however, harmed the financial performance during the reform period.

125. **Four more general lessons emerge from these case studies**. First, the induction of a competent and effective management is crucial to good financial performance. Second, PSEs need to be financially independent and have a clear accountability yardstick. Continued government involvement typically leads to weak budget constraints and can imply conflicting objectives besides profitability. Third, cleaning up balance sheets can provide a clean slate and allow a distressed PSE to return to profitability. However, this needs to be combined with management reforms and increased (financial) accountability to ensure that the 'second chance' is not wasted. Fourth, improving financial performance is more difficult in business areas that have characteristics of natural monopolies such as railways. Here, lesssons from the industrial organization literature as well as the experience with deregulating and regulating state monopolies such as power utilities may be useful for formulating a comprehensive reform strategy.

Figure V.1. Corrected Retained Income
(of Railways, Steel Mills, and PIA)
(in millions of Pakistani rupees)



VI. PUBLIC DEBT MANAGEMENT[42]

126. **This section summarizes Pakistan's public debt strategy and discusses some future challenges**. Since the 1998/99 crisis, Pakistan has achieved a reduction in total debt and external debt relative to GDP as well as debt servicing costs. At present, domestic funding is cheaper than tapping international markets. However, additional Eurobond issues could contribute to establishing Pakistan in international capital markets. Looking ahead, increased use of hedging instruments could lower currency and interest rate risk.

A. Debt Strategy Objectives

127. **Pakistan's debt strategy was developed against the backdrop of the 1998/99 crisis**. Throughout the 1990s, Pakistan accumulated external debt at a high rate while reserves were low. After the ban on bilateral aid in 1998, Pakistan faced acute debt servicing difficulties. The immediate response was a freeze of private dollar accounts of residents and nonresidents. This was followed by a restructuring of outstanding bonds and three Paris Club agreements to lower the external debt burden. Since 2003, a Debt Policy Coordination Office (DPCO) under the Ministry of Finance has started to coordinate and determine the government's overall debt policy strategy.

128. **The debt strategy has concentrated on four points**. Reducing the overall debt-to-GDP ratio and the share of external debt in total debt to lower external vulnerabilities were two key objectives. In addition, the share of interest payments in total expenditures was to be reduced to create space for social and development expenditures. Finally, the government strove to reestablish creditworthiness by accessing international capital markets with a sovereign issue.

129. **The debt management functions are divided between four main actors**. The DPCO is charged with drawing up borrowing strategies including risk management and containing borrowing costs. The Economic Affairs Division (EAD) of the Ministry of Economic Affairs and Statistics negotiates foreign borrowing from multilaterals and donors. The Central Directorate for National Savings (CDNS) borrows from the domestic retail sector. The State Bank of Pakistan (SBP) is the government's fiscal agent.

130. **A draft fiscal responsibility law pins down the main elements of the debt strategy**. The draft law requires the government to reduce the debt-to-GDP ratio to at least 60 percent over the next 10 years. As intermediate steps, the draft law mandates that the debt-to-GDP ratio is reduced by at least 2½ percentage points per annum. Moreover, the

[42] Prepared by Manmohan Singh and Axel Schimmelpfennig. This paper has benefited from extended discussions with the authorities, especially Dr. Naseer (SBP), Dr. Khan, and Mr. Gilani (Ministry of Finance). The views of the major foreign and local banks (J.P. Morgan, Deutsche, NBP) and nonbanks (SLI, EOBI) were also solicited.

current deficit, defined as current revenues excluding grants less current expenditures, is to be eliminated by 2006/07. The draft law is in the final stages of the legislative process.

B. Debt Instruments

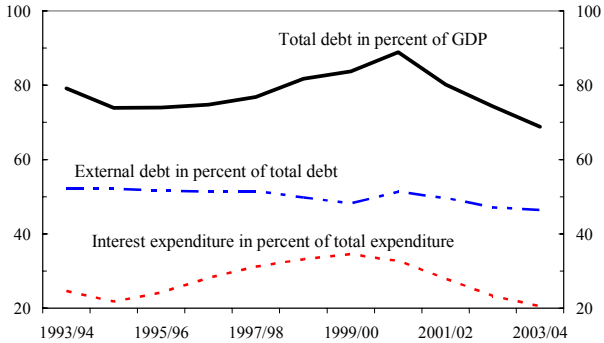
131. **Domestic debt is comprised of three instruments**. Short term debt is issued as treasury bills (T-bills) through competitive bid auctions in 3, 6, and 12-month tenors as zero coupons. Medium-long term debt is issued as Pakistan Investment Bonds (PIBs) that have semiannual coupons and 3, 5, and 10 years maturity.[43] In January 2004, the government also introduced 15 and 20 year PIBs to avail of low interest rates and provide a yield curve for long-term financing; so far there has been one auction of small volume. Another source for domestic funding are National Savings Scheme (NSS) certificates, usually with tenors of 3, 5, and 10 years. Returns on NSS certificates are tied to PIBs with a significant premium. The State Bank of Pakistan (SBP) manages domestic debt issuance for the government including the cut-off rates for T-Bills and PIBs. The CDNS administers the NSS. NSS certificates are sold on "tap" so that the volume of NSS cannot be controlled by CDNS, Ministry of Finance or the SBP.

132. **Pakistan takes advantage of a wide range of external debt instruments**. The existing external debt includes commercial credits, nonconcessional and concessional debt and some floating-rate bonds and a fixed Eurobond. EAD negotiates and contracts external debt in coordination with the DPCO.

C. Past Policies and Developments

133. **Good progress has been made on achieving the debt strategy objectives**. The debt to GDP ratio has been reduced significantly from its peak in 2000/01, largely through limiting the government's borrowing needs, supported by some external debt write-off as well as a strengthening the Pakistani rupee. The government has reduced the share of external debt in total debt by limiting its external borrowing and pre-paying around $1 billion in relatively expensive external debt. Interest expenditure has been brought down in percent of GDP and in percent of total expenditure. External interest expenditure has been brought down through debt relief from the Paris Club and the pre-payment. Domestic interest expenditure has been

Figure VI.1. Debt and Interest Expenditure



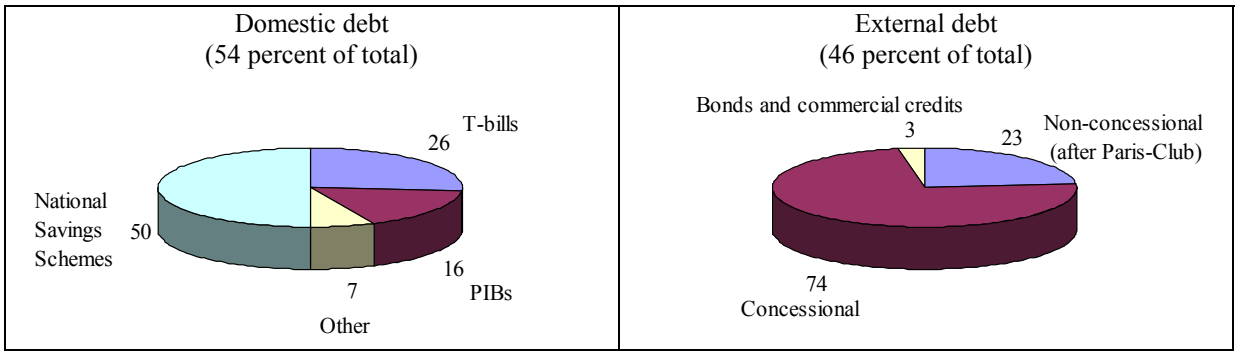
Source: National authorities.

[43] Prior to 2000, the government issued so-called Federal Investment Bonds.

brought down through NSS reform and macroeconomic stabilization that lead to a substantial fall in interest rates.

Figure VI.2 Compositition of Debt

(in percent of total, as of end-June 2004)



Source: Pakistani authorities.

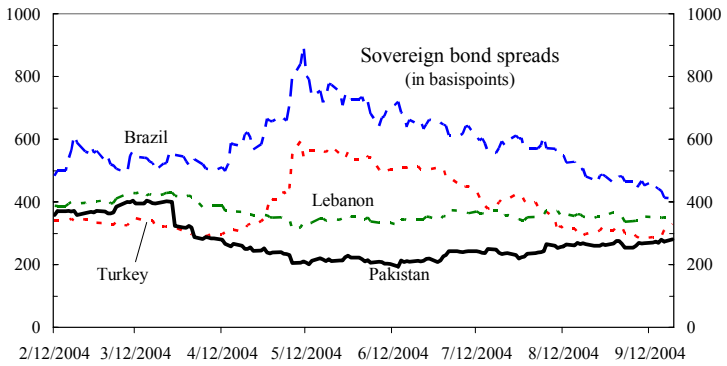
134. **Reform of the NSS has been a major step in reducing domestic interest costs**. Until 2001, NSS certificates were issued at yields far in excess of market rates. Private individuals as well as institutional investors could buy NSS certificates from CDNS branches, post offices, and banks. Thus, NSS certificates were very attractive, crowding out other debt instruments and leading to very high interest costs. In 2001, the government banned institutional investors from buying NSS certificates and linked the return on NSS certificates to market-determined PIB yields, albeit with a mark-up. This has resulted in a substantial reduction in NSS rates. Moreover, domestic commercial banks were prohibited from selling NSS certificates in 2003 to better control the volume of issuance. The government also introduced two new certificates targeted at pensioners, widows and orphans that are linked to PIBs but with higher mark-up; in 2003/04, these two certificates accounted for the largest net inflow among NSS certificates.

135. **The comprehensive Paris Club restructuring agreement of December 2001 has eased the external debt service burden**. Although Pakistan approached the Paris Club twice in January 1999 and January 2001, the need for a third comprehensive rescheduling was fundamental to the overall debt strategy. About $12.5 billion out of a total $13.5 billion debt owed to the Paris Club was restructured at very favorable rates, including long grace periods. Comparable treatment was also sought from commercial banks and holders of Eurobonds. Commercial credits are to be repaid over 23 years with 5 years of grace period; ODA credits are to be repaid over 38 years with 15 years of grace period at interest rates at least as favorable as the concessional rates applying to these loans.

136. **New external borrowing has been mostly on concessional terms**. Pakistan has borrowed from the World Bank, the Asian Development Bank, the Fund, and other multilaterals such as the Islamic Development Bank. Loans include grant elements and long grace periods so that the debt service burden is low.

137. **Pakistan has also reestablished its presence in international capital markets with a successful issuance of a Eurobond in February 2004**. The $500 million five year Eurobond was four times oversubscribed and priced to yield 6.75 percent, implying a spread of only 370 bps over U.S. treasuries. The bond was rated B by Standard & Poor's and B2 by Moody's. Reflecting an upbeat market sentiment, but also a 'scarcity' value, the bond was priced in the vicinity of or slightly better than similarly rated countries. The spread over U.S. treasuries has remained consistently below its level on the date of issuance, and the bond trades in the secondary market with very little volatility when compared to other B rated sovereigns bonds that also mature in 2009 (Brazil, Turkey, Lebanon).

Figure VI.3. Sovereign bond spreads
(in basis points)



Source: Bloomberg.

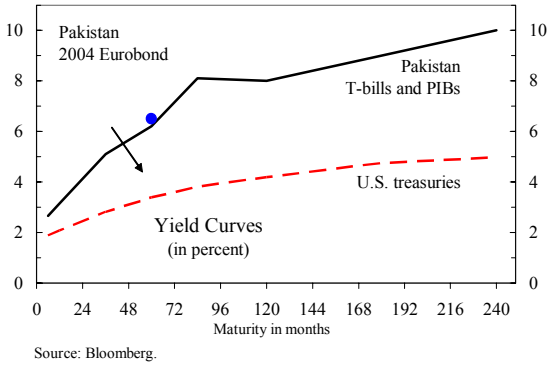
138. **The government engaged in an interest rate swap in April 2004, effectively transforming its Eurobond obligation from fixed to floating**. With the swap, Pakistan will pay 6-month U.S. dollar LIBOR plus 323 bps over the life of the bond, reducing the interest rate from the previous fixed rate as long as short-term rates remain favorable. The contract limits the interest rate risk for Pakistan during the final two years of the contract by adding a clause that caps the floating rate at 6.75 percent during this period as long as the LIBOR stays below 5.52 percent.

D. Issues for the Future

Domestic vs. external financing

139. **T he budget financing requirement for 2004/05 of PRs 145 billion will be covered mostly from domestic markets.** The government expects to raise PRs 123 billion from domestic bank and nonbank sources through issuing government securities and NSS certificates. The remaining PRs 22 billion is projected to come in the form of concessional loans on a net basis. The government has also announced that it might issue an Islamic bond or another Eurobond in international markets during 2004/05. Such inflows could either be used to lower domestic financing needs or substitute concessional financing in case of delays.

Figure VI.4. Pakistan and U.S. Yield Curves
(basis points)



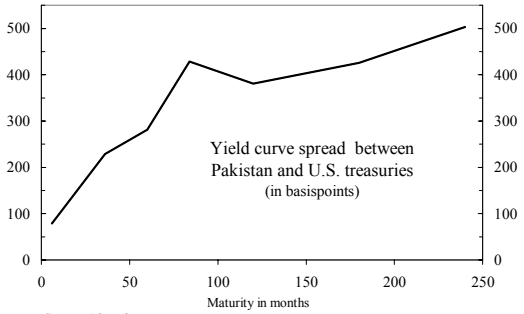
Source: Bloomberg.

140. **Presently, local debt markets provide a cheaper funding source when compared to the yields of the (only) external Eurobond**. Abstracting from exchange rate risk, a 5-year PIB presently yields about 6.2 percent vis-à-vis the Pakistan's 5-year Eurobond due 2009 that trades at a yield of 6.4 percent. However, there appear to be some upward pressures in the PIB market that could reduce the current interest rate advantage.

141. **Accounting for exchange rate risk, funding via the PIBs looks even more attractive**. Assuming a constant real effective exchange rate, and given current inflation projections, the Pakistani rupee would depreciate by around 12 percent in nominal terms over the next five years. Thus, the principal amount due on a Eurobond issue could be 12 percent higher in Pakistani rupees terms. Likewise, the rupee cost of the coupons will also be higher than the notional amount. The expected depreciation would therefore substantially increase the debt servicing cost differential between domestic PIBs and a Eurobond. However, a fundamental change in the interest rate environment could reverse this assessment.

142. **Assuming no pressure on the balance of payments, issuing a 7-year Eurobond would contribute towards building a sovereign curve**. The domestic yield curve has a kink as seven year PIBs (10-year PIB issued in 2001 at 14 percent coupons) presently trade at 8.1 percent, slightly higher in the secondary market than 10-year PIBs. Although the investor base for a 5-year bond differs from that of a 7-year bond, the average ratio of prices of 7-year and 5-year bond of B rated sovereigns suggest that Pakistan may be able to issue the 7-year at an additional 35–45 bps over the present Pakistan 5-year Eurobond spreads.[44] Thus, a 7-year Eurobond could possibly issued at a spread of about 325–335 bps over U.S. treasuries while the spread of 7-year PIBs over U.S. treasuries is 440 bps.

Figure VI.5. Yield Curve Spread Between Pakistan and U.S. Treasuries
(basis points)



Source: Bloomberg.

[44] Banks usually hold fixed-income instruments of up to five years maturity. Pension and insurance companies are more interested in 7-year (and longer) instruments. Aside from the longer tenor, the change in investor base contributes to the higher spreads at the 7-year and is often reflected in the steepness in sovereign curves between 5 and 7 years. The ratio of prices at seven and five year maturity is a better measure than comparing only spreads at 7 years.

Table VI.1. Comparable Bonds of B-rated Sovereigns Maturing in 2011 1/

	Maturity	Coupon (in percent)	Stripped spreads over swap curve (in basis points)
Brazil	2011	11.00	422
Turkey	2011	9.00	272
Uruguay	2011	7.25	434
Venezuela	2010 / 2013	...	371
Lebanon	2011	7.87	355
Ukraine	2011	6.80	291

Source: Bloomberg.
1/ When comparable seven year U.S. dollar bonds are not available, spreads are interpolated

143. **The government also envisages issuing an asset backed, collateralized Islamic *sukuk* bond that will lower borrowing costs**. There is a sizeable demand from Middle Eastern accounts for Islamic instruments. As such, an Islamic bond will likely result in issuance at a lower spread vis-à-vis a Eurobond issue (see Selected Issues paper on Malaysia, 2004). However, market liquidity for Islamic bonds is likely to be low because they are typically not issued as a 144A/Reg S.[45] Thus, an Islamic bond would not contribute towards building a sovereign curve (see below).

Short-term vs. medium- to long-term domestic borrowing

144. **The government has moved to borrowing at the short end of the curve**. In 2003/04, the government borrowed mostly in PIBs taking advantage of low medium- to long-term rates. The ratio of PIBs to T-bills was four to one. With interest rates rising, the borrowing profile has changed. The SBP has started to raise interest rates in order to rein in inflation, but wants to avoid a sharp and sudden rise in rates which could choke off growth. At the same time, the government want to keep borrowing costs down. Therefore, new borrowing has been largely in T-bills, with some auctions even being scrapped to moderate the interest rate increase. Driven by inflationary expectations, PIB yields in the secondary market have increased more than T-bill rates so that the yield curve has steepened. Also, there is an irregularity at the seven year maturity where yields (on past issuance with up to 14 percent coupons) exceed yields on 10-year maturities, reflecting low liquidity in the secondary market for PIBs. A decrease in the issuance of PIBs will further add to the illiquidity in the secondary market.

[45] The United States Securities and Exchange Commission (SEC) allows sale of privately placed securities to qualified institutional buyers (QIBs) under rule 144A. Regulation S clarifies the conditions under which offers and sales of securities outside the United States are exempt from SEC registration requirements.

145. **The small volume of PIB auctions relative to market demand has contributed to maturity mismatch for banks and nonbank financial institutions**. In search for return, banks have accumulated large PIB holdings—about 70 percent of outstanding PIBs—and are reluctant to sell as they would have to realize losses on their holdings due to increased interest rates.[46] Thus, a large share of banks' assets is long-term while their liabilities are mostly short-term. Nonbank financial institutions such as insurances and pension funds are reluctant to hold 7- and 10-year PIBs yielding about 8 percent when 12-month inflation is around 9 percent. Instead, nonbanks prefer a strategy of rolling over the 3 percent return at the short end and either expect yields to increase in the near future and/or inflation to decrease (and thus postpone buying PIBs until real rates turn positive). Market sources indicate that a major nonbank has sold about 80 percent of its PIBs holdings in the past year and is now holding only PRs 2 billion of PIBs, citing negative real rates as the main reason to unwind his position. Thus, a large share of nonbanks' assets are short-term while their liabilities are long-term.

Building a Sovereign Yield Curve

146. **A sovereign curve is usually constructed over a few years.** Sovereigns typically issue a 3- to 5-year bond initially and then augment the debut sovereign "point" by issuing longer dated bonds between 7- and 10-years. Pakistan's debut 5-year Eurobond could thus be followed up with a longer maturity issue to establish a second point.

147. **A sovereign curve can provide a benchmark for corporates to borrow internationally.** Despite high levels of reserves and in the absence of external financing needs, several emerging market countries including China, Singapore, etc. have developed sovereign curves to enable their corporates or quasi-sovereigns to issue abroad. Presently staff is unaware of any Pakistani corporates that wants to tap international debt markets.[47] However, in the medium term, borrowing costs may tilt in favor of international markets, and a sovereign curve might help corporates to access cheaper external financing. Nonetheless, a sovereign curve does not appear to be a necessary pre-condition for corporates to borrow abroad as the example of India shows. The Indian government has not issued external bonds, but some corporates have still successfully tapped international markets.

---

[46] A recent circular from the central bank requires banks that hold PIBs in "trading accounts" to mark them to market, while PIBs that are in "hold-to-maturity accounts" need not be marked-to-market. It remains to be seen if the expectations of an increase in local interest rates will force banks to offload PIBs held in their trading accounts. Experience from other emerging markets suggests that enforcement of this regulation may be accompanied with a sell-off in the bond market and a spike in yields. If banks hold the new issues in their "hold-to-maturity" accounts, such issues are unlikely to reach the secondary market (and will have no impact on the yield curve). It is interesting to note that the Reserve Bank India has allowed banks the discretion to increase the cap on their "hold-to-maturity" portfolio of government securities.

[47] Furthermore, relative low cost of alternative sources of funds has meant that some large Pakistani corporates have prepaid dollar debt by borrowing in rupees. Bank credit is readily available and private sector credit grew almost 30 percent year-on-year, as of end-June 2004.

E. Vulnerabilities and Policy Challenges

148. **Pakistan is vulnerable to currency mismatch and interest rate risk.** In the past, the government has done little to hedge the debt service profile that includes payments in U.S. dollars, Yen, SDR, and other foreign currencies. The DPCO together with EAD has now strengthened its external debt database and has started to implement forward and option contracts that provide hedging against exchange rate movements. Interest rate swaps are also being contracted to hedge against the floating debt portfolio. Still, Pakistan is at a very preliminary stage of executing hedges. Moreover, a better link needs to be established between reserve management and the debt servicing profile. Developing a derivatives market, initially led by the banking sector, should also provide the impetus for correcting the 'kinks' in the local bond market.

149. **The Eurobond swap from a fixed to a floating rate has exposed Pakistan to changes in the global interest rate cycle.** Initially, the swap entails reduced interest costs as long as the floating rate of LIBOR plus 323 bps is lower than the 6.75 percent coupon rate. And even in the last two years, the interest rate is capped at 6.75 percent, that is the coupon rate, as long as the LIBOR stays below 5.52 percent. However, in case the LIBOR crosses 5.52 percent, Pakistan would have to pay LIBOR plus 323 bps, i.e. over 8.75 percent, with no cap.

150. **Relying too much on T-bills for budget financing also exposes the government to rollover risk.** As interest rates have slowly started to edge up, the government has almost predominantly relied on T-bills to cover its borrowing needs. While this helps to contain borrowing costs in the short-term, it may be more advantageous in the medium-term to strike a better balance between T-bills and PIBs and thus at least partly lock in the benign interest rate environment.

151. **The functioning of the secondary market for PIBs needs to be improved.** Non-banks, which are an important source of budget financing, are 'crowded-out' by banks in the PIB market. In particular, some nonbanks are critical of the primary dealer arrangement which they perceive as working to their disadvantage. The secondary market quotes are significantly higher following a primary auction—that is, large bid/ask spreads adds to the illiquidity. One way of strengthening the position of nonbanks could be to allow pass-through bids at the primary auctions. Moreover, nonbanks would like to be allowed to hold Pakistani Eurobonds; presently, only Pakistani banks can hold Eurobonds through their offshore affiliates' nonresident deposits.[48] Finally, liquidity in the secondary market could be

[48] Offshore affiliates of Pakistani banks (e.g., Habib Bank) are allowed to hold Eurobonds as long as they are funded by offshore deposits. Market sources confirm that such affiliates have bought the recent Eurobond in the secondary market—another indication that the Eurobond is an attractive instrument to hold versus the local five year PIB (and thus more expensive from the budget's debt service perspective).

enhanced by allowing the stripping of PIBs coupons which would also lengthen the effective maturity of PIBs.

152. **Budget borrowing could be separated more clearly from liquidity management.** The SBP uses T-bill auctions as its main intervention to manage liquidity and thus conduct monetary policy. This can lead to conflicting interests regarding the cut-off rates between the SBP and the government when the SBP wants to tighten monetary policy while the government wants to contain borrowing costs. The tension could be eased by moving more towards open market operations for conducting monetary policy and using T-bill and PIB auctions only to raise resources for the government.

References

Khan, H. Ashfaque., 2003 "Debt Growth and Poverty: *A Case of Pakistan,"* Asian Development Bank Conference, (November).

_____, 2004, "Trends in Public Debt," *Economic Survey*, (Pakistan, Ministry of Finance).

Luis Valdivieso, and others, 2004 "The Malaysian Capital Market: Overview of Developments, Issues, and Prospects," IMF Selected Issues Paper, (Washington: International Monetary Fund)

VII. Trade Integration Between Pakistan and India[49]

A. Introduction

153. **It is natural and beneficial for neighboring countries to trade.** Often, transportation costs between neighbors are low, and language similarities reduce communication and transaction barriers. Where cultural affinity leads to similarity in tastes, profitable complementarities can emerge. Trade in turn improves economic efficiency, as it helps countries to exploit their comparative advantages. In addition, it fosters growth through economies of scale, innovation and knowledge spillover, and can aid the broader process of political and social integration.

154. **India and Pakistan are two neighbors that hardly trade with each other.** Partly, this is due to their history of being overall relatively closed economies, but more importantly past political frictions have influenced their mutual trade regimes. It is also, in part, a regional South Asian phenomenon.

155. This chapter reviews the degree of trade openness of India and Pakistan, and the degree of trade integration between them. It assesses the existing trade policies and tariff and non-tariff trade barriers of the two countries. It provides an outlook of how trade barriers may be dismantled, partly in the advent of the South Asian Free Trade Area (SAFTA), and what the likely economic effects of such trade liberalization would be.

B. Trade Between India and Pakistan

156. **Trade between India and Pakistan has been very low.** While in 1948, just after India and Pakistan had become independent countries, 60 percent of Pakistan's exports were destined for India and 17 percent of India's exports were sent to Pakistan, trade soon dried up as tensions between the neighbors increased. Since 1990, on average 0.9 percent of annual Pakistani exports went to India, while 0.3 percent of Indian exports were shipped to Pakistan (see Figure VII.1).

157. **India and Pakistan are relatively closed economies** (see Figure VII.2). India's trade share of GDP has increased steadily since the early 1990s, but has remained low at 31 percent in 2003, while Pakistan's trade openness was 38 percent (2003).

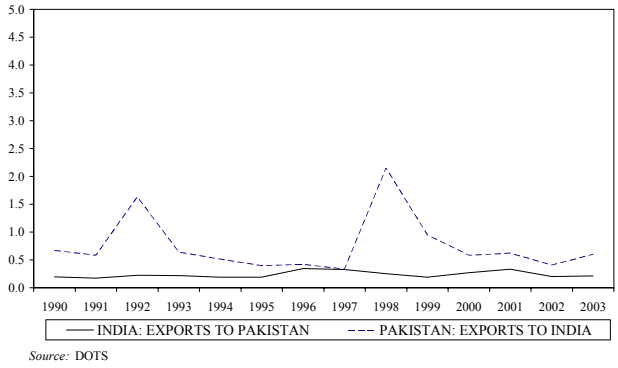
158. **Low trade and trade integration are in part a regional phenomenon.** The South Asian average trade openness was 65 percent in 2003 (simple average of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka), much below the openness of other regions, as, for example, trade openness of ASEAN countries averaged 144 percent in 2003. In addition, South Asia is among the least integrated regions in the world (see Figure VII.3).

---

[49] Prepared by Harald Finger (PDR)

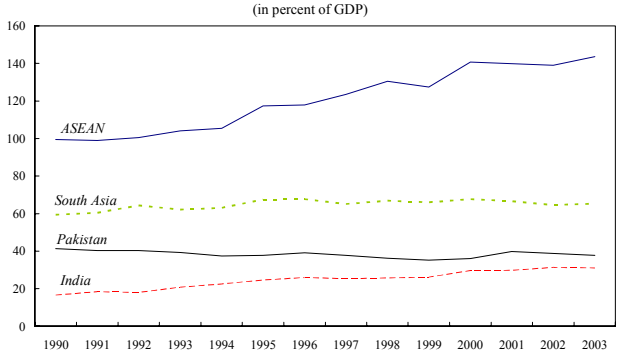
Intraregional trade in South Asia was below one percent of GDP in 2002, less than the Middle East and North Africa (3.5 percent), and much less than East Asia (26.5 percent).

Figure 1. Pakistan and India: Inter-Country Exports, 1990-2003
(in percent of total exports)



Source: DOTS

Figure 2. Trade Opennes, 1990-2003
(in percent of GDP)



Source: WEO

C. Tariff and Nontariff Trade Barriers

159. **Low levels of trade can in part be explained by the large size of the two countries, but low volumes of trade and low trade integration in India and Pakistan have their roots also in their respective trade systems, as both India's and Pakistan's trade regulations are relatively restrictive.** According to an index prepared by Fund staff, India's trade restrictiveness measures 8 (on a scale from 1 to 10), while Pakistan's index stands at 6. Comparatively high trade restrictiveness is partly a regional feature, with the average of South Asian countries at 5.9, compared to an average of all Asian countries of 4.4.

160. **In both countries, tariffs have already been reduced from very high levels** (see Figure VII.4). India started its trade liberalization in 1991/92, and between that year and 1997/98 the unweighted average tariff was brought down from 128 percent to 34 percent. Since 2002/03, the general maximum customs duty was reduced from 35 percent to 20 percent (30 percent for agricultural products), and a previously imposed Special Additional Duty (SAdd) of 4 percent was abolished. An exception to India's trade liberalization efforts are agricultural tariffs, which at an average of 40.1 percent (see Table VII.1) remain substantially higher than non-agricultural tariffs (19.7 percent). In

Table 1. Tariff Structures in India and Pakistan
(in percent)

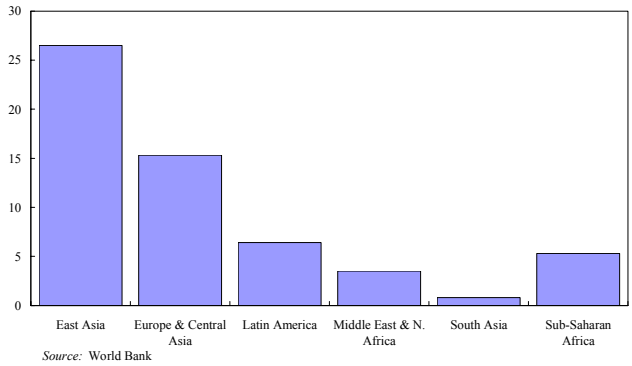
	India	Pakistan
All tariff lines		
Average of customs duties	22.2	14.9
General maximum customs duty 1/	30.0	25.0
Average of customs duties		
Non-agricultural tariffs	19.7	13.8
Agricultural tariffs	40.1	20.5
Percentage of tariff lines subject to higher duties	6.9	1.1
Range of higher ad valorem rates	35-182	40-250

Source: World Bank (2004), Pakistan Central Board of Revenue

1/ In India: 20 percent when excluding agricultural products

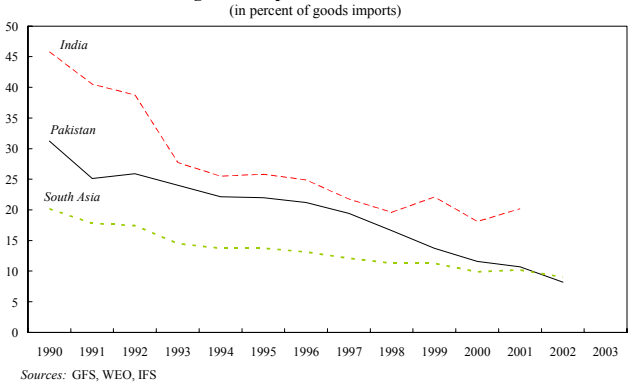
Pakistan, trade liberalization started in the 1980s and continued cautiously through the 1990s. It was reinforced in 1996/97 with a new comprehensive tariff reduction and simplification program. By 2002/03, the basic maximum tariff was reduced to 25 percent, and currently Pakistan operates with a relatively simple, four-rate structure. The average unweighted customs duty is 14.9 percent. Pakistan's trade liberalization has included the agricultural sector, where the unweighted average tariff (20.5 percent) is only moderately above the non-agricultural tariff average (13.8 percent).

Figure 3. Intraregional Trade, 2002
(in percent of GDP)



Source: World Bank

Figure 4. Import Duties, 1990-2002
(in percent of goods imports)



Sources: GFS, WEO, IFS

161. **Both India and Pakistan maintain tariff peaks, lines with basic customs duties exceeding the general maximum rate.** In India, 6.9 percent of tariff lines exceed the general maximum customs duty of 30 percent, with rates ranging between 35 percent and 182 percent. In addition, 5.3 percent of Indian tariff lines are subject to specific customs duties, in some cases equivalent to 50-100 percent. India's tariff peaks are concentrated in the agricultural, automobile, and textiles and garments sectors. Pakistan, which maintains few tariff peaks (1.1 percent of tariff lines), mainly protects the edible oils and automobile industries, and also imposes high tariffs on alcoholic drinks.

162. **Overall, despite the efforts to open up for trade, both India's and Pakistan's average tariffs remain relatively high.** India's average tariff stands at 22.2 percent, while Pakistan's is 14.9 percent. This compares with a developing country median of 11.2 percent.[50]

163. **India has moved to protective measures by means of anti-dumping duties.** Since 1995, India has initiated 383 anti-dumping cases.[51] Currently, India applies anti-dumping duties on a wide range of intermediate materials and inputs, including chemicals and petrochemicals, pharmaceuticals, synthetic fibers and steels products, as well as more recently also on some consumer goods. 47 exporting countries are affected by Indian anti-

[50] See World Bank (2004)

[51] Status as of June 2004; see WTO website.

dumping duties, including China, Taiwan Province of China, the European Union, Korea, Japan and the United States. No cases have been initiated against exporters from Pakistan.

164. **Pakistan has only started using anti-dumping measures recently, with the first case having been decided in November 2002.** However, Pakistan has recently institutionalized anti-dumping procedures by means of a new anti-dumping law and the strengthening of the Pakistan Tariff Commission. Therefore, increased use of anti-dumping tariffs by Pakistan is possible in the future.

165. **Apart from anti-dumping duties, both India and Pakistan employ other types of tariff-like measures.** For India, this includes small-scale industry and other exemptions on domestic excise taxes. Moreover, for some products, India applies values other than actual cif prices as the base for ad valorem import duties, which is done mainly as a preventive measure against under-invoicing, but may at times effectively result in higher tariffs. By contrast, Pakistan has in the past employed "regulatory duties" imposed on top of normal customs duties to provide extra protection to particular local industries. However, this policy is being phased out, with no new duties being imposed and only a few still remaining in place.

166. **In the area of non-tariff barriers, the most significant hurdle to trade is Pakistan's restriction of imports from India.** While India granted MFN status to Pakistan in the mid-1990s, Pakistan's imports from India remain restricted to items covered on a positive list. In 1986, Pakistan issued a list of 42 items that were allowed to be imported from India. This list has progressively been extended to 686 items[52] (May 2003). In addition, a 2002 Statutory Regulatory Order (SRO) permits the import from India of not locally produced raw materials, required for the production of exports, covering approximately an additional 1000 items. The increase in items allowed for importing notwithstanding, the positive list approach remains an important hurdle to imports from India.

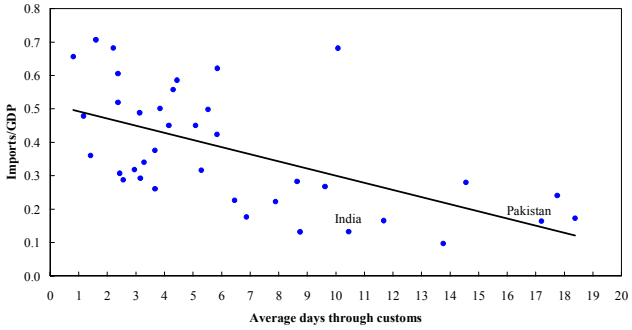
167. **Starting in the 1980s, and reinforced in 1996/97, Pakistan progressively dismantled its use of import licensing and other non-tariff trade barriers, few of which are remaining today.** Apart from the positive list of imports from India, the main remaining restrictions are largely confined to local content programs in the automobile industry. Under these programs, which have to be phased out under the WTO's Trade Related Investment Measures (TRIMs) agreement, import duty reductions are given to individual firms in return for their commitment to incorporate specified amounts of locally produced inputs in their production. In addition, Pakistan employs health- and safety-related barriers, including a ban on imports of some second-hand household machinery, some used motor vehicles, and some categories of industrial machinery.

[52] Some items at the 4-digit, some at the 6-digit and some at the 8-digit level

168. **In India, significant non-tariff barriers remain**. While import licensing was largely abandoned in 2001, remaining forms of non-tariff barriers include government-mandated import monopolies, which are in place in the areas of agricultural products and petroleum products. In addition, India maintains tariff rate quotas in the agricultural sector, permitting the import of small quotas at moderate tariffs while applying much higher tariffs on imports in excess of the quota amounts. Besides, India uses technical barriers to trade in the form of technical standards and regulations, administered by the Bureau of Indian Standards, which operates a certification scheme for foreign exporters of products on a list of more than 100 items.[53] Moreover, India employs sanitary and phytosanitary rules in the agricultural sector and other health and safety regulations (e.g. in pharmaceuticals), which may in part serve the purpose of discouraging trade.[54] For instance, under health and safety concerns, India bans the import of used clothing and second hand household machinery and cars.

169. **Efficiency of customs operations can act as a de facto barrier to trade**. As delays in clearing goods at customs effectively constitutes an extra cost for traded products relative to domestically produced goods, long delays at customs diminish the competitiveness of imports. Pakistan and India both have above average times of customs clearance. According to the World Bank Investment Climate Surveys, the average number of days to clear imports through Pakistani customs was 17 days (2003), while it took an average of 10 days in India (2000).[55] These compare with a average of 4 days for developed countries, and 6 days for East Asia[56]. Figure VII.5 plots the relationship between imports and customs delays for 38 low- and middle-income countries, confirming the expected negative correlation.

Figure 5. Customs Delays and Imports in Low and Middle Income Countries



Sources: World Bank Investment Climate Surveys, WEO

170. **Limited foreign investment can also be part of the explanation for low trade flows.** By means of FDI, companies can set up infrastructure to allocate each stage of production to the country with lower cost, leading to trade flows in the production stages. However, substantial FDI flows are more likely between countries that trade extensively, so that the cause and effect relationship is not unidirectional.

---

[53] See Bureau of Indian Standards Website (www.bis.org.in/cert/man.htm).

[54] See World Bank (2004)

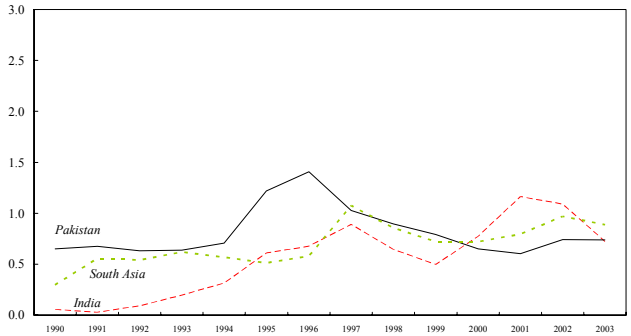
[55] Data is taken from the most recent country surveys available.

[56] See Newfarmer (2004)

171. **FDI flows both to India and Pakistan have been rather low** (see Figure VII.6). In India, FDI inflows have started to materialize slowly with the economic opening of the 1990s, but levels have remained below 1 percent of GDP. In Pakistan, inflows have fluctuated between 0.6 percent and 1.4 percent of GDP. Low FDI inflows are in part a regional phenomenon, with unweighted country averages in South Asia having gyrated around 1 percent. For comparison, between 1999 and 2003, FDI inflows to Indonesia averaged 2.2 percent of GDP, and were substantially higher for China (3.7 percent). Moreover, the share of FDI flows to Pakistan originating from India is negligible, as is Pakistan's share in flows to India.

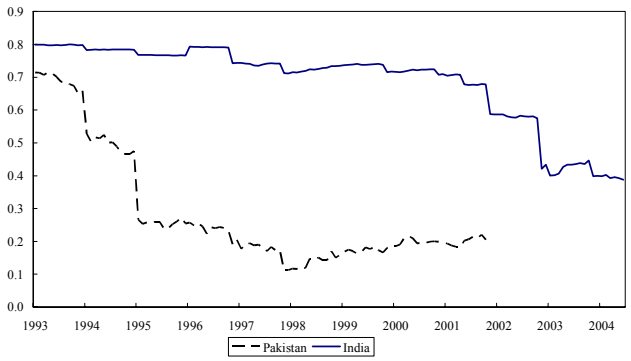
172. **Limits in foreign investment can in part be explained by restrictions to equity investment**, as measured by the Foreign Ownership Restrictions Index (see Figure VII.7).[57] The index measures the share of equity markets that is barred from foreign investment, and shows that, despite substantial opening since the early 1990s, significant restrictions remain.

Figure 6. Foreign Direct Investment Inflows, 1990-2003
(in percent of GDP)



Source: WEO

Figure 7. Foreign Ownership Restrictions Index, 1993-2004



Sources: S&P/IFC, Staff calculations

173. **Other restrictions hamper trade between India and Pakistan, in part reflecting the past political tensions.** A highly restrictive visa regime continues to curb travel between the countries, thus limiting possibilities to engage in business contacts. Direct air travel between India and Pakistan used to be banned and started to be restored only in late 2003. Similarly, sea and land transportation between the countries is made difficult. Ships plying between Indian and Pakistani ports are obliged to first touch a third-country port before being allowed to land. In addition, India limits the ports and inland customs posts at which imports can be cleared for a number of products it labels as sensitive items. Moreover, the lack of coordination between the railway authorities of both countries and border closure continue to

[57] Foreign ownership restrictions are defined as the portion of equity markets that is not available to foreign investors, calculated as one minus the ratio of the market capitalization of the Standard and Poor's/International Finance Corporation's (IFC) investable index to the market capitalization of the total market index (see Edison and Warnock (2001)).

hamper land transportation. In the area of the payments system, current restrictions and underdeveloped financial links act as an impediment to the efficient settlement of payments.

D. Dismantling the Trade Barriers

174. **Efforts at boosting regional trade integration have in the past focused on the South Asian Preferential Trade Agreement (SAPTA).** Signed in 1993 by Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, the members of the South Asian Association for Regional Cooperation (SAARC), the SAPTA agreement provided a framework and institutional base for trade liberalization by means of exchange of concessions on tariff and non-tariff barriers. However, SAPTA had only marginal impact on regional trade, as the political will to follow through on trade liberalization was low, and, in the event, restrictions excluded 90 percent of tariff lines, and quotas often rendered even the liberalized lines meaningless.

175. **On January 6, 2004, the seven SAARC member countries signed the SAFTA Framework Treaty, which establishes SAFTA effective as of January 2006**. The Treaty covers tariff reductions vis-à-vis members, rules of origin, safeguards, institutional structures, and dispute settlement. It also calls for trade facilitation by means of harmonization of standards and customs procedures, and cooperation in transport infrastructure.

176. **Under the treaty, members agreed to gradually reduce their import tariffs vis-à-vis other SAFTA members to a range of 0-5 percent.** In 2006 and 2007, members must reduce their maximum tariff rates to 20 percent (the 'non-Least Developed Countries (non-LDCs)' India, Pakistan and Sri Lanka) or 30 percent (the 'Least-Developed Countries (LDCs)' Bangladesh, Bhutan, the Maldives and Nepal). In a second stage, tariffs must then be reduced to 0-5 percent. India and Pakistan must implement this second stage by January 1, 2013, Sri Lanka by January 1, 2014, and the LDCs by January 1, 2016.

177. **In addition, member countries will be allowed to maintain 'sensitive lists' of products that would be exempted from tariff reductions.** These lists are currently under negotiation and will be periodically reviewed with a view to reducing the number of items covered.

178. **Member countries are also obliged to eliminate all quantitative trade restrictions, except those permitted under WTO rules.** This would include the obligation for Pakistan to abolish its positive list for imports from India. No mechanism to deal with non-tariff barriers has so far been specified for SAFTA, other than notification and consideration by the SAARC Committee.

179. **The treaty's prospective impact remains uncertain.** Under the agreement, back-loaded tariff cuts are possible, opening the possibility that tariff reduction takes place slowly and over a prolonged period. On the other hand, unless the high external protection levels for some sectors are dismantled in parallel, steep regional tariff cuts could lead to either

substantial trade diversion (see below) and thereby to large welfare losses, or to strong resistance to concessions, which could result in extensive use of the sensitive lists. In addition, the agreement provides for temporary suspension of concessions in the face of balance of payments difficulties, and does not exclude the use of anti-dumping measures between members, creating uncertainty and the potential for disruptions of the trade integration process. Moreover, important elements of the agreement, including the rules of origin, remain to be negotiated. Regardless of the SAFTA process, the broader process of tariff reduction should be continued and the existing distorting protection for certain industries should be phased out.

E. Advantages of Trade Liberalization for Pakistan

180. **The potential advantages of trade liberalization for Pakistan are large.** Going well beyond the immediate creation of trade flows, the advantages of dismantling tariff- and non-tariff barriers include the potential for boosting productivity and economic growth, and can also extend to promoting regional cooperation in all areas.

181. **SAFTA may result in trade creation.** The lowering of trade barriers can create trade flows that are increasing economic efficiency, in product groups that are currently being produced in Pakistan mainly due to trade barriers, while the cost for production and transportation from other SAFTA members are at a competitive level. Similarly, the lowering of trade barriers will create new export opportunities for Pakistani products in other SAFTA member countries.

182. **As with all regional trade areas (RTAs), SAFTA could also lead to welfare-reducing trade diversion.** An RTA may create new and additional trade that is internationally competitive, but may also divert trade from low-cost international sources to a higher-cost source within the RTA. The latter may occur in situations in which trade barriers are initially high to all trading partners, and then lowered for RTA members only. With this, trade may be diverted from outside to within the RTA, which, if production costs in the RTA are higher than elsewhere, would be welfare-reducing.

183. **Evidence from existing RTAs is encouraging.** [58] In six existing RTAs (Mercado Común del Sur (MERCOSUR), Andean Pact II, Caribbean Community (CARICOM), ASEAN Free Trade Area (AFTA) and Gulf Co-operation Council (GCC)), five years after signature of the RTA, intra-RTA imports as share of GDP had grown, but simultaneously, extra-RTA imports as share of GDP had similarly increased. While this is no evidence that trade diversion has not occurred, it does not appear to have been a dominating factor at the aggregate level. Nonetheless, the most effective means to avoid trade diversion is to continue the process of dismantling the protection of heavily shielded industries from outside the RTA at the same time as trade within the RTA is liberalized.

[58] See Newfarmer (2004)

184. **There is an enormous potential for increasing trade flows between India and Pakistan**. Compared to the officially reported trade flows of US$260 million (2003), estimates for the potential under a free trade setting vary. At the upper end, Pakistan's Ministry of Commerce estimates the potential at US$2.7 billion (informal estimate), and at the lower end Nabi et al. (2001) estimate it at US$750–1000 million. More formally, the potential has been estimated at US$1.85 billion, using a fixed-effects gravity model of bilateral trade based on 2001 data.[59] However, part of such flows would certainly be the conversion of existing trade now routed through third countries into direct India-Pakistan trade, as well as the formalization of trade flows currently smuggled across the border.

185. **Trade liberalization will unambiguously benefit Pakistani consumers, since product prices fall and consumer choice increases with reduced trade barriers**. Importing from India rather than from more distant locations would often imply lower transportation costs. These, as well as lower tariffs, would be largely passed on to consumer prices if there is sufficient competition among suppliers. In addition, in agriculture, price volatility could decline, as at times of unforeseen shortages in local production, access to Indian production could help smooth out price spikes. Pakistani consumers could also gain from liberalized trade in power, as the reliability of power supply could increase. In textiles, lower prices would be expected to have a beneficial income distribution effect, as lower-income households spend a higher share of their income on textiles. For upper income groups, access to high-quality Indian silk products would imply an increase in consumption choices. In engineering goods, consumers may benefit from lower prices for cars, motorcycles and bicycles, as well as access to Indian products.

186. **Pakistani producers would lose due to falling consumer prices, but gain due to access to larger markets and possible efficiency boosts**. As a main disadvantage for producers, trade liberalization is expected to lower prices of imported products, so that Pakistani firms competing with those imports would face decreasing profit margins. By contrast, trade integration will allow producers to access a much wider market, allowing for greater efficiency in production by exploiting economies of scale in production, thereby boosting productivity. In addition, since freer trade provides entrepreneurs with an incentive to explore new export opportunities and to compete more fiercely with imports, trade liberalization can lead to efficiency gains through learning and innovation. Finally, like consumers, producers would also benefit from increased reliability of power supply that may materialize if trade in power is liberalized.

187. **The Pakistani government would gain customs revenue**. Increased trade flows that stem from the lifting of import prohibitions from India would lead to additional customs revenue for Pakistan. By contrast, to the extent that existing tariffs are lowered, there would be corresponding losses in customs revenue.[60] However, as the existing trade flows are much

[59] See Newfarmer (2004)

[60] Under normal circumstances, that is, unless demand elasticities are abnormally high.

lower than the potential for such flows (see above), the former effect would almost certainly dominate the latter. In addition, to the extent that trade integration increases the likelihood of the construction of a gas pipeline from Iran or Afghanistan through Pakistan to India, the government could then profit from transit fees, estimated in the order of US$500–700 million.[61]

188. **Trade liberalization can lead to higher economic growth.** Gains in total factor productivity achieved by economies of scale and enhanced efficiency (see above) are likely to translate into higher growth of potential output. In addition, a liberalized trade regime is likely to attract FDI, as an economy with larger access to regional markets becomes more attractive to foreign investors. Higher FDI, in turn, may lead to increased technology transfer and thereby to increases in total factor productivity. Moreover, trade liberalization can be seen as part of the broader process of regional integration, which may foster closer relations between India and Pakistan.

F. Conclusions

189. This chapter finds that the potential for expanding trade in the South Asian region and especially between India and Pakistan from its current, abnormally low level is substantial. In order to foster trade, multilateral and bilateral trade restrictions should continue to be dismantled. SAFTA could provide an institutional vehicle for such trade liberalization, but, as shown by the limited progress reached under SAPTA, SAFTA alone cannot guarantee continued advancements, and political determination will be needed to reduce the trade barriers. The potential advantages for Pakistan are large, reaching from lower prices and higher choice for consumers and increased efficiency and market access for producers to higher revenue for the government. Moreover, trade integration can foster economic growth and the broader process of regional integration.

[61] See Lama and Kemal (2003)

References

Edison, Hali, and Francis E. Warnock, 2001, "A Simple Measure of the Intensity of Capital Controls", International Monetary Fund Working Paper 01/180

Government of Pakistan, 2001, "Pakistan Trade Review", Ministry of Commerce, July 2001

Khan, Mohammad Zubair, 1996, "A Review of Pakistan's Trade Relations with India", in: "Pakistan-India Trade: Transition to the GATT Regime", Government of Pakistan, Ministry of Commerce, September 1996

Lama, Mahendra P., and A.R. Kemal, 2003, "Power Sector Reforms in India and Pakistan: Scope for Cross Border Trade in Power", Pakistan Institute of Development Economics, Islamabad

Nabi, Ijaz, and Anjum Nasim, 2001, "Trading with the Enemy—A Case for Liberalizing Pakistan-India Trade", in: Regionalism and Globalization: Theory and Practice, edited by Sajal Lahiri; Routledge, London

Newfarmer, Richard, 2004, "SAFTA: Promise and Pitfalls of Preferential Trade Arrangements", World Bank

Schuler, Philip, 2004, "Pakistan: Tariff Rationalization Study", draft, World Bank

Topalova, Petia, 2004, "Trade Liberalization and Firm Productivity: The Case of India, International Monetary Fund Working Paper WP/04/28

World Bank, 2002, "Development, Trade and the WTO—A Handbook"

———, 2003a, "Trade Policies in South Asia: An Overview—Volume 1: An Overview"

——— , 2003b, "Improving the Investment Climate in Pakistan", World Bank, May 2003

——— , 2004, "Trade Policies in South Asia: An Overview" (forthcoming)

World Trade Organization, 2001, "Trade Policy Review—Pakistan", WTO WT/TPR/S/95, December 2001

Table 1. Pakistan: Sectoral Origin of Gross Domestic Product at Constant Prices, 1999/2000–2003/04

	1999/2000	2000/01	2001/02	2002/03	2003/04
	(In millions of Pakistani rupees at constant 1999/2000 prices)				
Agriculture	923,609	903,499	904,433	941,275	965,372
Crops	467,879	430,147	418,128	439,271	450,136
Major crops	342,200	308,474	300,911	321,548	330,402
Minor crops	125,679	121,673	117,217	117,723	119,734
Livestock	417,120	433,066	448,968	461,509	473,699
Fishing	15,163	14,715	12,901	13,346	13,611
Forestry	23,447	25,571	24,436	27,149	27,926
Industry	798,190	827,229	849,139	898,369	1,015,630
Mining and quarrying	48,377	47,561	51,031	59,266	59,272
Manufacturing	522,801	571,357	596,841	637,964	723,335
Large scale	338,602	375,687	388,859	416,843	488,287
Small scale	132,369	142,310	152,997	164,487	176,841
Slaughtering	51,830	53,360	54,985	56,634	58,207
Construction	87,386	87,846	89,241	91,976	99,283
Utilities	139,626	120,465	112,026	109,163	133,740
Services	1,807,546	1,863,396	1,952,146	2,055,608	2,163,317
Transport, storage, and communication	400,983	422,195	427,296	444,256	461,394
Commerce	621,842	649,564	667,615	706,813	763,585
Finance and insurance	132,454	112,455	131,761	127,604	122,924
Ownership of dwellings	110,425	114,593	118,604	122,755	127,051
Public administration and defense	220,291	225,152	240,585	264,997	280,527
Other services	321,551	339,437	366,285	389,183	407,836
GDP at factor costs	3,529,345	3,594,124	3,705,718	3,895,252	4,144,319
Indirect taxes	295,815	301,920	312,886	352,528	361,570
Subsidies	31,724	32,050	30,227	54,023	60,084
GDP at market prices	3,793,436	3,863,994	3,988,377	4,193,757	4,445,805
Per capita income at factor cost	25,662	25,606	25,883	26,689	27,867
Per capita income at market prices	27,583	27,529	27,858	28,734	29,894
		(Annual changes in percent)			
Memorandum items:					
Agriculture	...	-2.2	0.1	4.1	2.6
Crops	...	-8.1	-2.8	5.1	2.5
Livestock	...	3.8	3.7	2.8	2.6
Industry	...	3.6	2.6	5.8	13.1
Mining and quarrying	...	-1.7	7.3	16.1	0.0
Manufacturing	...	9.3	4.5	6.9	13.4
Large scale	...	11.0	3.5	7.2	17.1
Construction	...	0.5	1.6	3.1	7.9
Utilities	...	-13.7	-7.0	-2.6	22.5
Services	...	3.1	4.8	5.3	5.2
Transport, storage, and communication	...	5.3	1.2	4.0	3.9
Commerce	...	4.5	2.8	5.9	8.0
Finance and insurance	...	-15.1	17.2	-3.2	-3.7
Ownership of dwellings	...	3.8	3.5	3.5	3.5
Public administration and defense	...	2.2	6.9	10.1	5.9
Other services	...	5.6	7.9	6.3	4.8
GDP at factor costs	...	1.8	3.1	5.1	6.4
Indirect taxes	...	2.1	3.6	12.7	2.6
Subsidies	...	1.0	-5.7	78.7	11.2
GDP at market prices	...	1.9	3.2	5.1	6.0

Source: Pakistani authorities.

Table 2. Pakistan: Sectoral Origin of Gross Domestic Product at Current Prices, 1999/2000–2003/04

	1999/2000	2000/01	2001/02	2002/03	2003/04
	(In millions of Pakistani rupees at current prices)				
Agriculture	923,609	945,301	968,291	1,046,007	1,174,586
Crops	467,879	456,258	449,993	496,945	593,793
Major crops	342,200	325,579	316,857	369,217	461,996
Minor crops	125,679	130,679	133,136	127,728	131,797
Livestock	417,120	446,058	476,310	504,303	533,153
Fishing	15,163	16,546	16,377	15,651	16,201
Forestry	23,447	26,439	25,611	29,108	31,439
Industry	798,190	895,044	938,394	1,041,198	1,250,787
Mining and quarrying	48,377	59,151	65,997	84,238	84,539
Manufacturing	522,801	608,132	642,850	726,576	869,896
Large scale	338,602	410,879	424,089	481,224	585,809
Small scale	132,369	143,463	161,734	180,558	199,282
Slaughtering	51,830	53,790	57,027	64,794	84,805
Construction	87,386	94,670	95,197	97,097	129,996
Utilities	139,626	133,091	134,350	133,287	166,356
Services	1,807,546	2,035,680	2,188,527	2,392,668	2,662,948
Transport, storage, and communication	400,983	512,997	542,828	609,929	656,957
Commerce	621,842	691,854	720,812	782,079	897,097
Finance and Insurance	132,454	116,997	142,424	142,037	142,533
Ownership of dwellings	110,425	124,359	126,454	129,632	172,399
Public administration and defense	220,291	235,039	260,042	295,222	325,305
Other services	321,551	354,434	395,967	433,769	468,657
GDP at factor costs	3,529,345	3,876,025	4,095,212	4,479,873	5,088,321
Indirect taxes	295,815	320,669	339,262	403,221	443,429
Subsidies	31,724	34,040	32,775	61,791	73,687
GDP at market prices	3,793,436	4,162,654	4,401,699	4,821,303	5,458,063
	(In percent of GDP at factor cost)				
Memorandum items:					
Agriculture	26.2	24.4	23.6	23.3	23.1
Crops	13.3	11.8	11.0	11.1	11.7
Livestock	11.8	11.5	11.6	11.3	10.5
Industry	22.6	23.1	22.9	23.2	24.6
Mining and quarrying	1.4	1.5	1.6	1.9	1.7
Manufacturing	14.8	15.7	15.7	16.2	17.1
Large scale	9.6	10.6	10.4	10.7	11.5
Construction	2.5	2.4	2.3	2.2	2.6
Utilities	4.0	3.4	3.3	3.0	3.3
Services	51.2	52.5	53.4	53.4	52.3
Transport, storage, and communication	11.4	13.2	13.3	13.6	12.9
Commerce	17.6	17.8	17.6	17.5	17.6
Finance and insurance	3.8	3.0	3.5	3.2	2.8
Ownership of dwellings	3.1	3.2	3.1	2.9	3.4
Public administration and defense	6.2	6.1	6.3	6.6	6.4
Other services	9.1	9.1	9.7	9.7	9.2
Total	100.0	100.0	100.0	100.0	100.0

Source: Pakistani authorities.

Table 3. Pakistan: Gross Domestic Product—Expenditure Side, 1999/2000–2003/04

	1999/2000	2000/01	2001/02	2002/03	2003/04
	(In millions of Pakistani rupees at constant 1999/2000 prices)				
Private consumption	2,851,346	2,861,680	2,900,987	2,927,781	3,089,280
Government consumption	330,691	312,170	358,968	389,646	417,798
Gross fixed capital formation	607,410	634,423	632,134	638,580	732,190
Change in inventories	51,700	52,914	53,491	81,308	76,973
Domestic demand	3,841,147	3,861,187	3,945,580	4,037,315	4,316,241
Export of goods and nonfactor services	514,280	576,936	634,399	814,425	787,950
Imports of goods and nonfactor services	561,990	574,130	591,602	657,983	658,386
Gross domestic product at market prices	3,793,437	3,863,993	3,988,377	4,193,757	4,445,805
Percentage change		*1.9*	*3.2*	*5.1*	*6.0*
Less indirect taxes	295,815	301,920	312,886	352,528	361,570
Plus subsidies	31,724	32,050	30,227	54,023	60,084
Gross domestic product at factor cost	3,529,346	3,594,123	3,705,718	3,895,252	4,144,319
Percentage change		*1.8*	*3.1*	*5.1*	*6.4*
Net factor income from abroad	-47,957	-47,284	22,594	126,689	87,988
Gross national product (market prices)	3,745,480	3,816,709	4,010,971	4,320,446	4,533,793
Percentage change		*1.9*	*5.1*	*7.7*	*4.9*
	(In millions of Pakistani rupees at current prices)				
Private consumption	2,851,346	3,163,874	3,278,905	3,547,453	3,987,487
Government consumption	330,691	327,562	388,446	438,057	493,975
Gross fixed capital formation	607,410	659,325	680,373	713,859	892,513
Change in inventories	51,700	56,200	58,000	93,000	94,400
Domestic demand	3,841,147	4,206,961	4,405,724	4,792,369	5,468,375
Export of goods and nonfactor services	514,280	617,148	677,855	815,158	874,625
Imports of goods and nonfactor services	561,990	661,455	681,880	786,224	884,937
Gross domestic product at market prices	3,793,437	4,162,654	4,401,699	4,821,303	5,458,063
Less indirect taxes	295,815	320,669	339,262	403,221	443,429
Plus subsidies	31,724	34,040	32,775	61,791	73,687
Gross domestic product at factor cost	3,529,346	3,876,025	4,095,212	4,479,873	5,088,321
Net factor income from abroad	-47,957	-54,482	23,665	151,812	118,244
Gross national product (market prices)	3,745,480	4,108,172	4,425,364	4,973,115	5,576,307

Source: Pakistani authorities.

Table 4. Pakistan: Consumer and Wholesale Price Indices, 1997/98–2003/04

(2000/01 = 100)

	Index (12-Month Average)		Annual Average Percent Change		Twelve-Month Percent Change 1/	
	CPI	WPI	CPI	WPI	CPI	WPI
			(Fiscal year data)			
1997/98	88.3	87.7	7.8	6.6	6.5	5.3
1998/99	93.4	93.3	5.7	6.3	3.7	4.6
1999/2000	96.7	95.0	3.6	1.8	5.1	3.4
2000/01	101.0	100.9	4.4	6.2	2.5	4.6
2001/02	103.5	102.1	2.5	1.2	3.4	1.9
2002/03	106.7	107.8	3.1	5.6	1.9	4.1
2003/04	112.5	117.2	4.6	7.9	8.5	12.8
			(Monthly data)			
Jul-02	103.9	102.2	2.6	0.8	4.0	1.4
Aug-02	104.2	102.4	2.7	0.6	3.7	2.7
Sep-02	104.5	102.7	2.8	0.5	3.7	3.4
Oct-02	104.8	103.2	2.9	0.8	3.5	5.0
Nov-02	105.1	103.6	3.0	1.3	3.1	5.2
Dec-02	105.4	104.1	3.2	2.0	3.3	6.3
Jan-03	105.7	104.7	3.3	2.7	3.4	7.0
Feb-03	106.0	105.5	3.4	3.6	3.5	9.8
Mar-03	106.2	106.3	3.3	4.4	2.3	9.1
Apr-03	106.4	106.9	3.2	5.1	2.2	7.2
May-03	106.6	107.4	3.2	5.4	2.6	6.0
Jun-03	106.7	107.8	3.1	5.6	1.9	4.1
Jul-03	106.9	108.1	2.9	5.8	1.4	4.2
Aug-03	107.0	108.5	2.7	5.9	1.8	3.8
Sep-03	107.2	108.8	2.6	5.9	2.2	3.7
Oct-03	107.5	109.3	2.6	6.0	3.5	6.1
Nov-03	107.9	110.1	2.7	6.3	4.2	8.2
Dec-03	108.4	110.9	2.9	6.5	5.4	9.6
Jan-04	108.8	111.8	3.0	6.8	5.2	9.5
Feb-04	109.2	112.4	3.1	6.5	4.3	6.9
Mar-04	109.7	113.2	3.3	6.5	5.3	8.2
Apr-04	110.2	114.1	3.7	6.7	6.0	10.3
May-04	110.9	115.1	4.0	7.2	7.1	11.5
Jun-04	111.6	116.3	4.6	7.9	8.5	12.8
Jul-04	112.5	117.2	5.2	8.4	9.3	10.2
Aug-04	113.3	118.0	5.9	8.7	9.2	7.9

Sources: Federal Bureau of Statistics; and Fund staff calculations.

1/ For fiscal year data, refers to the change in in indices at the end of the year.

Table 5. Pakistan: Domestic Retail Prices of Selected Petroleum Products, 1997/98–2003/04

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04
	(In Pakistan rupees per litre unless otherwise indicated) 1/						
Regular petrol 2/	17.60	22.24	25.98	25.75	31.48	33.01	33.78
High-octane petrol	20.47	25.89	30.58	33.57	35.79	37.14	37.80
Kerosene	9.44	9.56	10.91	14.32	15.74	19.60	21.76
High speed diesel	9.66	9.78	11.49	15.58	16.51	21.05	22.61
Light diesel	7.79	7.87	9.28	13.57	14.30	17.27	18.66
Fuel oil (Pakistani rupees per metric ton.) 3/	6,251	5,567	7,170	11,176	10,594	12,714	11,515

Source: Ministry of Petroleum and Natural Resources; and Federal Bureau of Statistics.

1/ Annual averages.
2/ MS 87-RON.
3/ Fuel oil prices were deregulated with effect from July 1, 2000.

Table 6. Pakistan: Natural Gas Prices, 1997–2004 1/

	1/1/1997	16/8/1999	7/1/2000	17/3/2001	3/1/2002	23/7/2002	20/8/2002	25/10/2002	7/1/2003	1/7/2004
	(In Pakistan rupees per thousand cubic feet)									
Fertilizer industry	34.01	34.01	35.80	35.80	36.77	36.77	36.77	36.77	36.77	36.77
Other industries	102.46	120.00	145.26	166.18	166.18	166.18	166.18	166.88	172.26	182.09
Household										
Up to 3.55 mcf/month	49.09	55.23	66.85	66.85	66.86	66.86	66.86	67.95	69.31	73.95
From 3.55 to 7.1 mcf/month	50.75	65.58	79.51	93.39	100.73	100.73	100.73	102.37	104.42	111.42
From 7.1 to 10.64 mcf/month	69.30	89.66	108.54	138.93	161.16	161.16	161.16	163.78	167.06	178.25
From 10.64 to 14.20 mcf/month	83.16	107.58	130.23	168.09	201.45	201.45	201.45	213.06	217.32	231.88
Above 14.20 mcf/month				181.54	217.85	217.85	217.85	213.06	217.32	231.88
Commercial	115.28	135.02	155.27	163.44	186.98	186.98	186.98	190.02	193.82	204.88
Memorandum item:										
Weighted price index 2/	86.3	101.2	121.3	140.6	145.0	145.0	145.0	146.0	150.1	158.7

Sources: Ministry of Petroleum and Natural Resources; and Fund staff estimates.

1/ Columns indicate date of price adjustments.

2/ The weights used, based on the 1984/85 consumption pattern, are as follows: fertilizer industry, 0.148; other industries, 0.644; household use, 0.165 (with equal shares for all classes of users); and commercial, 0.043.

Table 7. Pakistan: Federal Government Fiscal Operations, 1997/98–2003/04

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04
	(In millions of Pakistan rupees)						
Total revenue (incl. grants)	310,978	368,432	396,133	420,799	525,115	622,988	600,021
Tax revenue (net)	220,975	257,721	243,604	259,414	287,786	336,285	382,736
Transfers to provincial tax pool	114,078	115,573	143,231	163,131	171,466	195,950	200,633
Tax revenue (gross)	335,053	373,294	386,835	422,545	459,252	532,235	583,369
Income and profit taxes	91,499	94,649	108,011	124,566	142,589	151,976	164,497
Wealth and capital taxes	7,723	8,812	4,597	0	0	0	0
Federal excise duty	58,795	60,572	55,630	49,018	46,920	44,002	45,823
Sales tax	49,046	68,680	116,697	153,474	166,316	195,138	220,607
Customs duties	81,644	78,654	61,638	65,013	48,072	68,835	90,940
Surcharges	46,346	61,927	38,912	30,290	54,258	68,230	61,381
Gas (net)	9,800	9,855	13,509	12,348	17,694	21,358	16,770
Petroleum	36,546	52,072	25,403	17,942	36,564	46,872	44,611
Foreign travel tax	0	0	1,350	184	1,097	4,054	121
Nontax revenue	90,003	97,008	119,086	120,843	154,182	167,748	186,757
Interest receipts (provinces)	26,010	25,469	28,270	29,368	29,528	27,996	26,126
Interest receipts (other)	16,556	16,205	25,070	21,885	23,821	24,988	39,308
Dividend	7,766	9,553	14,145	16,334	26,607	26,567	36,144
SBP profit	18,000	8,000	30,000	20,000	26,000	6,000	0
Sales proceeds and royalty	...	...	...	...	...	12,644	14,104
Other civil administration	7,767	6,226	3,186	3,387	22,186	54,683	50,232
Other federal miscellaneous	13,706	31,221	18,415	29,870	26,040	14,870	20,843
Capital revenue	198	334	0	0	0	0	0
Grants 1/	0	13,703	33,443	40,542	83,147	118,955	30,528
Expenditure and net lending	501,321	520,006	569,182	554,201	694,889	696,745	705,091
Current expenditures	411,980	444,603	501,281	495,826	561,037	632,961	587,867
Interest payments 2/	196,251	213,259	245,078	234,470	245,263	207,069	196,261
Domestic	167,513	175,273	198,417	183,450	184,632	166,873	154,817
Foreign	28,738	37,986	46,661	51,020	60,631	40,196	41,444
Defense 3/	136,164	143,471	150,390	130,819	149,029	159,925	180,361
General administration	47,539	46,907	47,525	75,424	83,482	108,029	108,028
Grants	16,175	16,324	33,617	35,622	59,361	49,994	64,841
O*f which:* to provinces	10,881	12,084	21,002	17,520	16,518	26,521	30,569
Subsidies	6,267	9,533	14,748	19,850	23,742	51,463	40,462
Railway account	2,368	5,421	2,657	666	-2,295	-1,744	-2,476
Food account	-2,565	4,532	-208	-1,185	2,213	341	43
Fertilizer and other accounts	1,174	-1,171	-44	-163	-56	-12	-261
Other	8,607	6,327	7,518	323	298	57,896	608
Development expenditure and net lending	89,341	75,403	67,901	58,375	133,852	63,784	117,224
Public Sector Development Program 4/	81,000	85,419	59,336	66,908	98,377	90,835	102,316
Net lending	8,341	-10,016	8,565	-8,533	35,475	-27,051	14,908
O*f which:* to provinces	8,063	11,296	21,457	9,107	3,705	14,416	-5,513
Statistical discrepancy	13,819	18,941	4,606	30,476	13,947	7,254	8,521
Overall balance	-204,162	-170,515	-177,655	-163,878	-183,721	-81,011	-113,591
Financing	204,162	170,515	177,655	163,878	183,721	81,011	113,591
External	38,839	133,299	36,328	80,212	51,678	-23,874	-37,053
Of which: privatization reciepts	0	0	0	0	0	7,576	0
Domestic	165,323	37,216	141,327	83,666	123,691	101,129	139,432
Bank	47,194	-67,052	44,713	-8,349	38,724	-40,480	78,388
Nonbank	118,129	104,268	96,614	92,015	84,967	141,609	61,044
Privatization proceeds	0	0	0	0	8,352	3,756	11,212
	(In percent of GDP, unless otherwise indicated)						
Memorandum items:							
Revenue	9.6	10.4	10.4	10.1	11.9	12.9	11.0
Expenditure	15.5	14.7	15.0	13.3	15.8	14.5	12.9
Balance	-6.3	-4.8	-4.7	-3.9	-4.2	-1.7	-2.1
GDP (in millions of Pakistani rupees)	3,227,511	3,541,773	3,793,436	4,162,654	4,401,699	4,821,303	5,458,063

Source: Ministry of Finance and Economic Affairs.

1/ Fiscal year 2003/03 includes $1 billion (PRs 58 billion) U.S. special grants for debt retirement and also increase in project/other grants.
2/ Accrued payments. Excludes interest expenditure by the military which is included in the defense allocation.
3/ Includes interest and principal payments on military debt; excludes military imports financed by external grants and disbursements.
4/ Includes certain current outlays under the public sector development program.

Table 8. Pakistan: Provincial Government Fiscal Operations, 1997/98–2003/04

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04
	(In millions of Pakistan rupees)						
Total revenue	156,983	169,021	220,608	228,577	231,764	284,206	275,812
Provincial share in fed. revenue	114,078	115,573	143,231	163,131	171,466	195,950	200,633
Provincial taxes	13,908	15,494	18,774	18,981	18,793	21,940	28,087
Property taxes	4,194	4,161	3,876	5,912	3,446	5,973	6,691
Excise duties	911	1,264	1,334	1,295	1,366	1,414	1,715
Stamp duties	4,814	5,267	6,398	5,098	5,729	6,958	10,329
Motor vehicles tax	2,113	2,362	2,803	3,100	3,203	3,634	4,722
Other	1,876	2,440	4,363	3,576	5,049	3,961	4,630
Provincial nontax	10,053	14,574	16,144	19,838	21,282	25,379	22,037
Interest	1,534	243	813	1,480	1,251	1,352	1,218
Profits from hydro electricity	5,442	6,000	6,000	5,244	6,000	4,919	5,581
Other	3,077	8,331	9,331	13,114	14,031	19,108	15,238
Federal loans and transfers	18,944	23,380	42,459	26,627	20,223	40,937	25,055
Loans (net)	8,063	11,296	21,457	9,107	3,705	14,416	-5,514
Grants	10,881	12,084	21,002	17,520	16,518	26,521	30,569
Total expenditure	173,008	171,437	213,028	218,962	233,006	261,580	302,759
Current expenditure	148,798	147,862	176,775	196,066	205,133	222,420	244,529
Interest to federal government	26,010	25,469	28,270	29,369	29,528	27,996	26,126
Errors and omissions							
Other	122,788	122,393	148,505	166,697	175,605	194,424	218,403
Development expenditure	24,210	23,575	36,253	22,896	27,873	39,160	58,230
Statistical discrepancy	-15,191	-10,350	2,830	-15,133	-27,012	7,238	-41,636
Overall balance	-834	7,934	4,750	24,748	25,770	15,388	14,689
Financing	834	-7,934	-4,750	-24,748	-25,770	-15,388	-14,689
External	0	0	0	0	0	0	0
Domestic	834	-7,934	-4,750	-24,748	-25,770	-15,388	-14,689
Bank	834	-7,934	-4,750	-24,748	-25,770	-15,388	-14,689
Nonbank	0	0	0	0	0	0	0
	(In percent of GDP unless otherwise indicated)						
Memorandum items:							
Total revenue	4.9	4.8	5.8	5.5	5.3	5.9	5.1
Total expenditure	5.4	4.8	5.6	5.3	5.3	5.4	5.5
Overall balance	0.0	0.2	0.1	0.6	0.6	0.3	0.3
GDP (in millions of Pakistani rupees)	3,227,511	3,541,773	3,793,436	4,162,654	4,401,699	4,821,303	5,458,063

Sources: Ministry of Finance and Economic Affairs; and Fund staff calculations.

Table 9. Pakistan: Government Debt, 1997/98–2003/04

(In billions of Pakistani rupees, unless otherwise indicated)

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04
Total debt	2,479.2	2,894.6	3,175.4	3,695.4	3,508.4	3,583.6	3,751.4
Domestic debt	1,202.8	1,453.2	1,644.8	1,799.2	1,757.5	1,896.4	2,008.7
Short-term debt (treasury bills)	473.8	561.6	647.4	737.8	557.7	516.3	542.9
Medium- and long-term debt	290.0	317.5	325.6	349.1	407.7	470.6	570.1
Government securities	277.5	253.8	256.9	278.2	365.3	427.9	536.8
Market loans	17.5	12.9	12.2	4.0	2.9	4.7	3.0
Government bonds	10.3	10.3	13.6	9.9	9.6	9.6	9.6
State Life Insurance bonds	10.3	11.0	13.9	13.7	14.3	9.5	6.2
Bearer National Funds Pakistan	21.7	0.0	0.0	0.0	0.0	0.0	0.0
Federal investment bonds (FIB)	146.6	138.4	136.0	113.0	81.5	45.5	33.5
Pakistan investment bonds (PIB)	0.0	0.0	0.0	46.1	153.9	228.7	331.6
Prize bonds	71.1	81.2	81.2	91.5	103.1	130.0	152.8
Of which: Pakistan investment bonds	0.0	0.0	0.0	46.1	153.9	228.7	331.6
Foreign currency instruments	12.5	63.7	68.7	70.9	42.4	42.7	33.3
National saving schemes and others	439.0	574.1	671.8	712.3	792.1	909.5	895.6
Defense saving certificates	168.8	207.2	248.4	265.0	287.0	309.0	312.3
National deposit certificates	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Khas deposit certificates	0.8	0.8	0.7	0.7	0.6	0.6	0.6
Special saving certificates	148.1	178.1	202.4	215.7	256.2	346.2	335.0
Regular income schemes	85.0	144.1	170.2	178.9	189.9	175.0	126.1
Mahana Amdani account	1.9	1.9	1.9	2.0	2.1	2.2	2.3
Saving accounts	8.0	10.3	10.1	8.0	7.7	9.3	7.5
Pensioners' benefit account	...	...	...	...	...	10.2	23.4
Bahbood Savings Certificates	...	...	...	...	...	...	22.7
Postal life insurance	12.4	15.0	19.1	23.5	29.9	37.3	44.1
GP fund	13.9	16.6	18.9	18.5	18.7	19.7	21.6
External debt	1,276.4	1,441.4	1,530.6	1,896.2	1,750.9	1,687.3	1,742.7
Memorandum items:							
Domestic debt by creditor							
Total public debt (in percent of GDP)	76.8	81.7	83.7	88.8	79.7	74.3	68.7
Domestic debt	37.3	41.0	43.4	43.2	39.9	39.3	36.8
Bank	...	...	...	...	...	14.9	14.4
Nonbank	...	...	...	...	...	24.4	22.4
External debt	39.5	40.7	40.3	45.6	39.8	35.0	31.9
Nominal GDP	3,227.5	3,541.8	3,793.4	4,162.7	4,401.7	4,821.3	5,458.1

Sources: Pakistani authorities; and Fund staff calculations.

Table 10. Pakistan: External Debt 1997/98–2003/04

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04
			(In million of U.S. dollars)				
Total external debt	36,072	39,696	37,759	37,183	36,541	35,572	35,321
Total public and publicly guaranteed external debt excluding external SBP liabilities	27,904	31,794	31,040	31,379	32,361	32,237	32,364
Medium and long-term	25,987	29,750	29,868	30,259	31,096	31,570	31,963
Project and nonproject aid	22,844	25,423	25,301	25,606	27,276	28,069	28,627
Commercial Banks and IDB	1,100	730	1,100	1,103	314	231	198
Euro bonds	628	608	620	645	643	482	824
Special dollar bonds	0	1,164	1,297	1,376	924	696	552
Fund credits	1,415	1,825	1,550	1,529	1,939	2,092	1,762
Military debt	1,006	1,004	653	554	819	263	204
Foreign currency bonds (NHA/NC)	285	263	241	219	197	175	153
Public sector short-term	626	777	278	347	249	229	44
Commercial banks and IDB	298	582	130	257	183	187	22
FEBCs, DBCs, and FCBCs	328	195	148	90	66	42	22
Deposit liabilities of the banking system	3,425	3,578	3,350	2,958	1,861	1,301	1,286
State Bank of Pakistan (excluding IMF)	886	1,473	1,737	1,670	1,030	745	745
Of which: depoits of foreign banks	450	700	700	700	700	700	700
Deposit money banks	2,539	2,105	1,613	1,288	831	556	541
Liabilities to foreign banks	1,272	1,453	1,284	1,071	713	500	500
Other liabilities	1,267	652	329	217	118	56	41
Deposit liabilities of nonbank financial institutions	1,616	889	527	396	93	6	1
Private debt	3,127	3,435	2,842	2,450	2,226	2,028	1,670
.			(In percent of GDP)				
Total public debt	57.8	68.2	51.4	52.0	50.9	43.1	37.2
Medium and long-term public and publically guaranteed	41.6	51.1	40.7	42.3	43.3	38.2	33.7
Military debt	1.6	1.7	0.9	0.8	1.1	0.3	0.2
Foreign currency bonds (NHA/NC)	0.5	0.5	0.3	0.3	0.3	0.2	0.2
Public sector short-term	1.0	1.3	0.4	0.5	0.3	0.3	0.0
Deposit liabilities of the banking system	5.5	6.2	4.6	4.1	2.6	1.6	1.4
State Bank of Pakistan (excluding IMF)	1.4	2.5	2.4	2.3	1.4	0.9	0.8
Deposit money banks	4.1	3.6	2.2	1.8	1.2	0.7	0.6
Deposit liabilities of the nonbank financial institutions	2.6	1.5	0.7	0.6	0.1	0.0	0.0
Private debt	5.0	5.9	3.9	3.4	3.1	2.5	1.8
Memorandum items:							
GDP in millions of U.S. dollars	62,447	58,167	73,448	71,457	71,854	82,565	94,920

Sources: Pakistan authorities; and Fund staff calculations.

Table 11. Pakistan: Direction of Trade, 1997/98–2003/04

(In percent)

	1997/98	19998/99	1999/00	2000/01	2001/02	2002/03	2003/04 3/
Exports	100.0	100.0	100.0	100.0	100.0	100.0	100.0
European community	29.2	28.7	27.3	25.3	26.3	27.5	30.3
United Kingdom	7.0	6.6	6.8	6.3	7.2	7.1	7.6
Other	22.2	22.1	20.5	19.0	19.1	20.4	22.7
United States	20.5	21.8	24.8	24.4	24.7	23.5	23.9
Japan	4.2	3.5	3.1	2.1	1.8	1.2	1.1
Hong Kong	7.0	7.1	6.1	5.5	4.8	4.6	4.7
Singapore	0.5	0.5	0.6	0.5	0.5	0.8	0.9
China	2.0	2.0	2.1	3.3	2.5	2.2	2.3
Baltic and CIS countries 1/	1.4	0.1	0.0	0.5	0.4	0.5	0.4
Oil-producing trading partners 2/	4.8	4.6	3.7	5.2	5.4	6.1	4.5
Other	30.4	31.7	32.3	33.2	33.6	33.6	31.9
Imports	100.0	100.0	100.0	100.0	100.0	100.0	100.0
European community	19.0	17.4	15.1	14.2	16.3	16.2	15.3
United Kingdom	4.0	4.4	3.5	3.3	3.5	2.9	2.8
Other	15.0	13.0	11.6	10.9	12.8	13.3	12.5
United States	11.0	7.7	6.3	5.3	6.6	6.0	8.5
Japan	8.0	8.3	6.3	5.4	5.0	6.6	6.0
Hong Kong	0.4	0.6	0.5	0.6	0.7	1.3	0.9
Singapore	2.0	3.5	2.6	3.0	3.1	3.5	3.2
China	5.0	4.2	4.6	4.9	5.6	6.9	7.4
Baltic and CIS countries 1/	0.6	0.6	0.9	0.9	1.1	1.0	1.1
Oil-producing trading partners 2/	15.7	15.8	23.9	25.6	22.6	21.8	21.9
Other	38.3	41.9	39.8	40.1	39.0	36.7	35.7

Source: Federal Bureau of Statistics

1/ Excludes informal trade with Central Asian Republics.

2/ Indonesia, Iran, Kuwait, and Saudi Arabia.

3/ The share of Estonia, Latvia, and Lithuania during 2003/04 in export and import is 0.2 percent. Prior to 2003/04 they were including in Baltic and CIS states, currently they are included in the EU.

Note: The Baltic countries are namely the following countries: Estonia, Latvia, and Lithuania. The CIS countries are namely the following countries: Russia, Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

Table 12. Pakistan: Monetary Developments, 1999/2000–2003/04

(At current exchange rates)

	1999/2000	2000/01	2001/02	2002/03	2003/04
	(In billions of Pakistani rupees)				
Banking system					
Net foreign assets	-45.1	26.3	230.8	539.6	583.1
Net domestic assets	1,445.7	1,499.7	1,530.5	1,539.1	1,903.4
Net claims on government	616.0	569.7	644.9	566.4	624.5
Of which: budget support	532.2	499.9	567.2	511.2	574.9
Credit to nongovernment	842.8	902.4	921.6	1,069.0	1,364.2
Private sector	753.2	802.1	840.9	999.9	1,298.0
Public sector enterprises	89.6	100.2	80.7	69.1	66.2
Privatization account	-2.9	-2.9	-2.9	-2.9	-2.9
Other items, net	-10.1	30.6	-33.0	-93.4	-82.4
Broad money	1,400.6	1,526.0	1,761.4	2,078.7	2,486.6
Currency	355.7	375.5	433.8	494.6	578.1
Rupee deposits	932.5	996.4	1,170.1	1,458.0	1,762.7
Foreign currency deposits	112.5	154.2	157.5	126.1	145.7
State Bank of Pakistan					
Net foreign assets	-55.6	-19.1	133.5	461.6	512.2
Net domestic assets	553.4	552.3	451.1	207.9	260.7
Net claims on government	369.0	335.6	279.2	34.1	96.7
Of which: budget support	392.7	361.1	302.2	52.9	112.9
Claims on nongovernment	51.2	40.1	22.7	11.5	1.8
Clains on scheduled banks	193.4	198.0	195.8	180.6	195.6
Privatization account	-2.9	-2.9	-2.9	-2.9	-2.9
Other items, net	-57.3	-18.4	-43.7	-15.4	-30.4
Reserve money	398.0	533.2	584.6	669.5	772.9
Of which: banks' reserves	114.7	127.3	110.5	141.0	156.2
Of which: currency	375.1	394.6	460.2	525.0	614.5
	(12-month change in percent)				
Broad money	9.4	9.0	15.4	18.0	19.6
Private credit	2.5	6.5	4.8	18.9	29.8
Currency	23.6	5.6	15.5	14.0	16.9
Reserve money	0.0	34.0	9.6	14.5	15.4
	(In units as indicated)				
Memorandum items:					
Overall NDA to SBP NDA ratio	2.6	2.7	3.4	7.4	7.3
Money multiplier	3.5	2.9	3.0	3.1	3.2
Currency to broad money ratio (percent)	25.4	24.6	24.6	23.8	23.2
Currency to deposit ratio (percent)	34.0	32.6	32.7	31.2	30.3
Reserves to deposit ratio (percent)	11.0	11.1	8.3	8.9	8.2
Budget bank financing (billions of Pakistani rupees)	26.3	-32.3	67.3	-56.0	63.7
Excess reserves in percent of broad money	0.3	0.8	0.6	0.9	0.8

Source: Pakistani authorities; and Fund staff calculations.

Table 13. Pakistan: Major Interest Rates, 1996/97–2003/04

	Treasury Bill Rate 1/	SBP Discount Rate 2/	Call Money Rate 3/	Lending Rate 4/	Lending Rate 5/	Deposit Rate 6/
			(Annual averages in percent)			
1996/97	15.6	19.2	13.0	17.1	14.3	9.6
1997/98	15.1	18.1	12.2	16.5	15.2	9.8
1998/99	12.5	15.6	7.8	15.4	15.1	9.3
1999/2000	8.8	12.0	8.5	14.0	14.0	7.5
2000/01	10.4	12.7	9.0	13.8	13.6	6.6
2001/02	8.1	10.1	6.7	13.1	13.5	5.6
2002/03	4.1	8.0	4.2	9.8	12.8	4.6
2003/04	1.4	7.5	1.9	5.2	8.4	1.8
			(Monthly averages in percent)			
2001/02						
July	11.6	13.0	6.9	14.4	13.6	6.6
August	10.5	12.0	8.3	14.1	13.6	6.6
September	10.5	12.0	9.2	13.8	13.6	6.6
October	10.3	10.0	10.4	14.2	13.6	6.6
November	8.3	10.0	9.4	14.1	13.6	6.6
December	7.9	10.0	6.1	13.4	13.5	5.6
January	6.4	9.0	3.6	13.1	13.5	5.6
February	6.4	9.0	5.5	12.0	13.5	5.6
March	6.4	9.0	4.8	11.9	13.5	5.6
April	6.5	9.0	5.7	12.2	13.5	5.6
May	6.4	9.0	6.3	12.2	13.5	5.6
June	6.3	9.0	4.8	12.0	13.5	5.6
2002/03						
July	6.4	9.0	5.6	12.1	13.5	5.6
August	6.4	9.0	5.3	11.5	13.5	5.6
September	6.4	9.0	7.3	11.9	13.5	5.6
October	6.3	9.0	8.0	11.5	13.5	5.6
November	4.8	7.5	4.9	10.7	13.5	5.6
December	4.3	7.5	4.6	10.3	12.9	4.2
January	3.8	7.5	4.1	10.0	12.9	4.2
February	3.2	7.5	2.4	9.4	12.9	4.2
March	2.1	7.5	1.1	8.3	12.9	4.2
April	1.6	7.5	2.7	7.8	12.9	4.2
May	1.8	7.5	3.8	7.1	12.9	4.2
June	1.7	7.5	0.9	7.6	9.4	2.1
2003/04						
July	1.2	7.5	0.7	5.1	9.4	2.1
August	1.2	7.5	1.4	5.0	9.4	2.1
September	1.6	7.5	1.0	5.2	9.4	2.1
October	0.0	7.5	2.3	5.3	9.4	2.1
November	1.7	7.5	2.7	5.5	9.4	2.1
December	1.6	7.5	2.4	5.7	7.8	1.6
January	1.6	7.5	1.7	5.0	7.8	1.6
February	1.7	7.5	2.6	5.3	7.8	1.6
March	1.7	7.5	1.0	4.7	7.8	1.6
April	1.8	7.5	3.4	5.1	7.8	1.6
May	2.1	7.5	1.7	5.4	7.8	1.6
June	0.0	7.5	1.5	5.1	7.8	1.6

Source: State Bank of Pakistan.

1/ Primary auction rate on six-month treasury bills.
2/ SBP discount rate for its three-day repo facility.
3/ Defined as the monthly average of daily minimum and maximum rates.
4/ Weighted average lending rates for all commercial banks based on gross disbursement.
5/ Weighted average lending rates for all commercial banks based on stock data.
6/ Average rate of return on deposits under the profit and loss sharing system determined on a six-montl

Table 14. Pakistan: Foreign Currency Deposits, 1997/98–2003/04

(End-of-period stocks, in millions of U.S. dollars, unless otherwise specified)

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04
Total foreign currency deposits	9,679	5,465	3,921	3,796	3,291	2,590	2,878
Residents' deposits	6,024	2,909	2,182	2,419	2,625	2,186	2,505
Of which:							
Frozen accounts	6,024	2,354	1,303	1,069	770	232	165
New accounts	…	555	879	1,350	1,855	1,954	2,340
Nonresidents' deposits	3,655	2,556	1,739	1,377	666	404	373
Of which:							
Frozen accounts	3,655	2,494	1,641	1,184	423	61	42
With domestic banks	2,039	1,605	1,114	788	331	56	41
Institutional deposits	772	953	784	570	213	0	0
Individual accounts	1,267	652	330	218	118	56	41
With domestic nonbank financial institutions	1,616	889	527	396	92	5	1
New accounts	…	62	98	193	243	343	331
Memorandum items:							
Share of resident FCDs in M2 deposits (percent)	29.6	15.1	10.9	13.4	11.8	8.0	7.6
Share of resident FCDs in M2 (percent)	22.9	11.7	8.1	10.1	8.9	6.1	5.9

Sources: State Bank of Pakistan; and Fund staff calculations.

Table 15. Pakistan: Market Share of Banks, 1997/98–2003/04 1/

(In percent)

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04
Deposit market share 2/							
Nationalized commercial banks 3/	18.6	18.5	19.0	18.2	19.0	17.7	18.4
National Bank of Pakistan	18.3	18.3	18.8	17.8	18.6	17.3	18.0
First Women Bank	0.3	0.2	0.2	0.4	0.4	0.4	0.4
Privatized banks 4/	45.4	48.4	48.8	47.2	46.8	45.7	41.5
Muslim Commercial Bank	11.9	11.7	11.6	12.3	12.0	12.3	10.8
Allied Bank Limited	6.2	9.1	8.4	8.0	7.4	6.7	6.3
Habib Bank Limited 5/	18.6	18.5	18.9	18.6	18.4	17.8	16.1
United Bank Limited 5/	8.7	9.1	9.9	8.3	9.0	8.9	8.3
Specialized banks	1.0	1.4	1.4	0.0	0.0	1.0	0.8
Domestic private banks	12.6	14.3	14.7	17.3	20.3	24.3	29.1
Branches of foreign banks	22.4	17.5	16.0	17.2	13.9	11.2	10.2
Loan market share 6/							
Nationalized commercial banks	16.9	16.7	17.2	17.5	18.8	15.2	15.9
National Bank of Pakistan	16.8	16.6	17.1	17.4	18.7	15.0	15.7
First Women Bank	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Privatized banks 4/	40.7	41.4	42.2	41.0	37.0	35.9	34.9
Muslim Commercial Bank	9.9	8.4	8.7	8.8	7.7	7.5	7.6
Allied Bank Limited	5.3	7.3	7.8	6.7	6.1	4.7	4.0
Habib Bank Limited 5/	17.3	19.1	18.5	17.8	16.7	15.7	14.7
United Bank Limited 5/	8.2	6.6	7.2	7.7	6.5	8.0	8.6
Specialized banks	14.2	13.8	13.0	12.3	12.6	11.4	7.0
Domestic private banks	11.1	13.3	13.6	15.3	18.7	25.7	32.4
Branches of foreign banks	17.1	14.8	14.0	13.9	12.8	11.9	9.8

Source: State Bank of Pakistan.

1/ Based on end-June data.
2/ Deposits include banks' liabilities to nongovernment sector and deposits of federal and provincial governments.
3/ These do not include UBL and HBL from FY 2004.
4/ Privatized Banks also include UBL and HBL from FY 2004.
5/ Privatised as of 2003/04.
6/ Includes lending to the private sector, public enterprises, and autonomous bodies.

Table 16. Pakistan: Nonperforming Loans of Banks and Development Finance Institutions, 2000–04

(End-June)

	2000		2001		2002		2003		2004	
	In millions of Pakistani rupees	Percentage share	In millions of Pakistani rupees	Percentage share	In millions of Pakistani rupees	Percentage share	In millions of Pakistani rupees	Percentage share	In millions of Pakistani rupees	Percentage share
Total banks and DFIs	239,541	100.0	279,065	100.0	259,284	100.0	248,946	100.0	220,032	100.0
Banks	184,300	76.9	220,634	79.1	234,664	90.5	227,674	91.5	207,792	94.4
Nationalized commercial bank	87,900	36.7	104,952	37.6	113,371	43.7	89,305	35.9	152,998	69.5
Privatized banks	17,634	7.4	29,105	10.4	26,445	10.2	46,292	18.6	106,959	48.6
Specialized banks	56,988	23.8	61,164	21.9	66,941	25.8	65,248	26.2	54,794	24.9
Provincial banks 1/	2,551	1.1	2,516	0.9	4,312	1.7	0	0.0	0	0.0
Private domestic banks	12,694	5.3	9,440	3.4	15,774	6.1	19,893	8.0	106,959	48.6
Foreign banks	6,533	2.7	13,457	4.8	7,821	3.0	6,935	2.8	0	0.0
Development finance institution	55,241	23.1	58,431	20.9	24,620	9.5	21,272	8.5	12,240	5.6
Memorandum items:										
Banks' outstanding claims on nongovernment	791,562		902,603		942,084		1,048,262		1,363,669	
Share of defaults in outstanding claims on nongovernment	23.3		24.4		24.9		21.7		15.2	

Source: State Bank of Pakistan.

1/ Provincial Banks have been included in private banks as of 2003.