

ECONOMIC GROWTH IN UZBEKISTAN:

SOURCES AND POTENTIAL

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CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
A. Objective	1
B. Coverage	1
PART I: PAST TRENDS AND GROWTH POTENTIAL	3
II. SOURCES OF RECENT ECONOMIC GROWTH	4
A. Overall Growth	4
B. Sector Performances	8
C. Demand Decomposition	12
III. ECONOMIC POLICIES, SAVINGS-INVESTMENT, FINANCING AND EMPLOYMENT TRENDS	13
A. Economic Policies	14
B. Savings and Investment	15
C. Financing Requirements and FDI Inflows	18
D. Employment Trends	20
IV. EXTERNAL SECTOR PERFORMANCE AND PROSPECTS	23
A. Export Performance and Diversification	23
B. Trade Policies	25
C. Real Exchange Rates and Competitiveness	28
D. Export Growth Potential	32
PART II: FUTURE PROSPECTS AND OPPORTUNITIES	35
CHALLENGES FROM THE GOVERNMENT'S	
V. MACROECONOMIC TARGETS	36
A. Key Macroeconomic Targets	36
B. Investment Requirements	38
C. Sector Growth Constraints and Opportunities	40
MEDIUM-TERM GROWTH PROSPECTS UNDER	
VI. ALTERNATIVE REFORM SCENARIOS	42
A. The Uzbekistan Macroeconomic Simulation Models	
B. Baseline Projections with Target Growth Rates	42
C. Accelerated Reforms versus Slowdown of Reforms	44
D. Improvements in International Competition	49
E. Improvements in the Efficiency of the Private Sector Production	51
STATISTICAL APPENDIX	53
BIBLIOGRAPHY	73

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EXECUTIVE SUMMARY

The objective of this study is to support the preparation of the Asian Development Bank's (ADB) Country Strategy and Program (CSP) for 2006-2008. It therefore seeks to provide an analysis of the sources of Uzbekistan's economic growth, the challenges and opportunities for the private sector in those sectors, and policy measures that would support the expansion of the economy. Although high and sustained rates of annual economic growth in the order of 8.0 to 8.5 percent are needed to meet the Government's Living Standard Strategy (LSS), the general consensus among Uzbekistan's development partners is that a substantially structural reform effort is needed to achieve such high levels of growth and to realize widespread and visible improvements in the living standards of the population. The present study is specifically intended to provide an analysis of the macroeconomic issues surrounding the reforms needed to meet that LSS growth target, as well as to identify existing policy and structural constraints and macroeconomic policy reforms measures that would help to remove those constraints.

The first parts to this report reviews the performance of the economy and providing a detailed analysis of its major structural characteristics as a means of identifying the major constraints and potential of each of its economic sectors. In the first chapter reviews the growth trends in the last decade with a demand and factor decomposition and the contribution of those components to overall economic growth. It also assesses the impact of economic reforms undertaken during the mid-1990s and first part of the present decade. The next chapter examines employment and savings-investment trends, as well as their composition and performance. The final chapter in this part examines the country's external sector performance in terms of both the composition and geographic distribution of trade. Given the importance of exports to the medium and long-term development plans of Uzbekistan, the analysis gives special emphasis to the country's external competitiveness in terms of factors affecting past levels and the potential that improvement in the country's competitive position would have on exports.

The second part of the study assesses the potential and prospects for Uzbekistan under different policy regimes. It begins by reviewing the Government's medium-term economic plan and long-term strategy vision for social and economic development, and it examines in details the potentials and constraints on the main economic sectors and sub-sectors within agriculture, industry and services. The next chapter provides a set of forecasts under alternative policy regimes, beginning with a hypothetical base-line forecast under which the present policy mix is maintained, followed by slow versus fast-track policy reforms aimed at accelerating growth. It also provides economic growth projects under a series of measures aimed at improving the export competitiveness of the country, as well as reforms designed to stimulate private sector investment and promote the activities of this sector.

Uzbekistan has experienced several stages of economic growth that are associated with the Government of Uzbekistan's (GOU) protectionist policies and switching policies designed in some instances to promote growth and, in others, to promote stabilization. In the initial stages of reform between 1992 and 1994 the Government instituted a series of reforms aimed at gradually liberalizing prices, unifying foreign exchange markets, instituting new taxes, lowering import tariffs, and privatizing small shops and residential housing. In the second stage of the reform process between 1995 and 1996 the GOU launched a comprehensive stabilization and structural reform program aimed at promoting economic stabilization rather than growth. During the third stage of the reform process in 1997-2000 the Government reversed some of the key macroeconomic policies undertaken earlier, largely in response to declining foreign currency reserves. With the continued debt build-up by state enterprises during the fourth stage of the reform process in 2001-02, the Government elaborated a Staff Monitored Program (SMP) with the International Monetary Fund (IMF) in an effort to stabilize the economy and accelerate the

transition to a market economy. During the fifth stage of the Government's reform process in 2003-2004, there was some progress towards market reforms, especially in banking reforms, but the business climate continued to be undermined by trade restrictions and cash shortages.

The gross value added of the Uzbek economy is fairly evenly divided among (a) agriculture, (b) industry, transport and communications, and construction, and (c) trade and other services. The extent to which improvements in total factor productivity (TFP) have contributed to real GDP growth in Uzbekistan has been measured by the growth accounting framework. In the years following independence, structural adjustments in the traditional agricultural sector and those of trade and other services, as well as construction contributed significantly to efficiency improvement in those sectors. As a result of these efficiency gains, output in these sectors expanded, despite the decline in factor accumulation in the form of labor and capital. In contrast, the industrial sector was primarily driven by factor accumulation rather than TFP changes, as were transport and communications, which had a large decline in productivity in the second half of the 1990s. Overall productivity improvements driven by policy reforms in the agricultural sector led to a positive growth in overall output during that period. Moreover, with the notable exception of agriculture, output growth in 2000-03 was largely driven by factor accumulation rather than TFP changes.

With capital formation as the driving force for the economy and domestic savings as the primary means of financing investment, the Government's objective has been to accelerate the rate of investment. Since technology generally tends to ensure a stable relationship between increased capital and increased output, given by the incremental capital-output ratio (ICOR), this relationship is useful for determining the amount of new capital required to achieve the GOU's growth targets. The relatively low share of investment in GDP since Uzbekistan's independence has been associated with a weak growth performance, suggesting that investment has been relatively ineffective in generating economic growth. Part of the reason is that the capital goods sector remains small and most capital goods still need to be imported. Early on, the Government maintained an overvalued exchange rate, as well as multiple exchange rates as a means of encouraging investment, a situation that often led to balance of payment problems. To counter these pressures the Government put in place a variety of tariffs, import licenses, and exchange controls aimed at protecting consumer goods, especially durables, rather than capital goods on the grounds that their costs of production was relatively lower than those of capital goods.

These developments have given rise to three broad policy issues for the country's current medium term outlook: how to diversify the economy into the production of high value-added goods and services, how to increase saving and investment, and what needs to be done to achieve the Government's high growth targets for 2007-2010. The ambitious growth target implies the need to allocate investment requirements among the sectors of the economy. From a policy perspective, it means that increased savings will need to be generated to drive investment and meet the overall growth target as well as those of specific sectors, while at the same time balancing the need for growth with that of macroeconomic stability.

Under the LSS the GOU aims to increase incomes and reduce poverty and inequality through high economic growth rates that are targeted at between 8.0 and 8.5 percent a year in 2007-2010. With population growth of 1 to 1.1 percent a year, real per capita GDP is projected to increase by 7 to 7.5 percent a year in 2007-2010. The basis for the Government's forecast is improved production conditions that will lead to increased output. These improvements are expected to derive from the reallocation of inefficient labor from low to high productivity industries, and specifically those of agro-business enterprise in rural areas that are dominated by small and micro-businesses. On the demand side, the expansion is expected to be driven by both the external and internal sectors. The Government plans to stimulate foreign demand using

a variety of instruments, including adjustments in tariffs and non-tariff barriers (NTBs) to trade, taxes incentives, and exchange rate policies.

The indicative forecasts of Uzbekistan's economy presented in this report have been generated by two macroeconomic simulation models that were developed as part of the present economic growth analysis for Uzbekistan. The first is a Revised Minimum Standard Model - eXtended (RMSM-X) that provides a simple spreadsheet-based tool for feasibility and sustainability analysis of the economy of Uzbekistan. The present RMSM-X model for Uzbekistan has been modified from other models of this type in a number of ways to accommodate existing data constraints of the country. Essentially, a number of key economic indicators used in Uzbekistan replaced some of the standard indicators used in the RMSM-X model, while others used in the RMSM-X model for which data were not available in Uzbekistan needed to be eliminated and some of the relationships in the system altered to accommodate the changes.

The second macroeconomic simulation model that has been developed for Uzbekistan also provides a parsimonious representation of the macro economy using a simple spreadsheet framework for making rational and consistent predictions about Uzbekistan's overall economic activity, the standard components of the balance of payments, the expenditure concepts of the national accounts, and the financial sector balances. The model applies a conventional framework to the economic system and, as a policy-oriented system it incorporates key parameters for policy formulation.

The baseline projections for Uzbekistan adopt the Government's economic growth targets for 2008-10 using the RMSM-X model to analyze the implications for key economic variables. To achieve the targeted annual growth rate of 8.0 to 8.5 percent in 2007-10, the 2004 estimated growth rate of 4.5 percent is raised to 6.4 and 7.5 percent in the 2005-06 transition period. Achievement of those targeted growth rates will, of course, require continued and, in some areas, accelerated domestic policy reforms, private sector development, an improved investment climate and a strong external demand for Uzbekistan's major exports drive by improvements in the country's international competitiveness. The improved investment climate would be reflected in a deceleration of inflation to around 5 or 6 percent by 2007-10, according to the LSS forecasts. Those rates would require a substantial effort on the part of the monetary authorities since inflation, measured by the GDP deflator, was estimated at around 20 percent in 2004, based on estimates for the first three quarter of the year.

Several alternative simulations have been carried out. The first set consists of simulations of accelerated economic reforms, as well as a slowdown in those reforms have been carried out with the second econometric-based model of Uzbekistan in which behavioral equations provide a richer interaction of the relationships used to describe the economy and therefore rely much less on assumptions about the behavior of key variables needed in the RMSM-X model. The second set consists of an improvement in the international competitiveness of Uzbekistan based on macroeconomic policy variables would be brought about through changes in the real effective exchange rate. The final one consists of the acceleration of economic growth through more efficient investment activities.

I. INTRODUCTION

A. Objective

This study is intended to support the preparation of the Asian Development Bank's (ADB) Country Strategy and Program (CSP) for 2006-2008. As such, it provides an analysis of the sources of Uzbekistan's economic growth, the challenges and opportunities for the private sector in those sectors, and policy measures that would support the expansion of the economy. High and sustained rates of annual economic growth in the order of 8.0 to 8.5 percent are needed to meet the Government's Living Standard Strategy (LSS)¹. Yet there is general consensus among Uzbekistan's development partners that a substantially structural reform effort is needed to achieve such high levels of growth and to realize widespread and visible improvements in the living standards of the population.² The present study is specifically intended to provide an analysis of the macroeconomic issues surrounding the reforms needed to meet that LSS growth target, as well as to identify existing policy and structural constraints and macroeconomic policy reforms measures that would help to remove those constraints.

B. Coverage

There are two main parts to this report, which following this introductory chapter, examine the past growth performance and potential of the economy and its prospects. The first reviews the performance of the economy and providing a detailed analysis of its major structural characteristics as a means of identifying the major constraints and potential of each of its economic sectors. The first chapter in this part reviews the growth trends in the last decade with a demand and factor decomposition and the contribution of those components to overall economic growth. It also assesses the impact of economic reforms undertaken during the mid-1990s and first part of the present decade. The subsequent chapter examines employment and savings-investment trends, as well as their composition and performance. The final chapter in this part examines the country's external sector performance in terms of both the composition and geographic distribution of trade. Given the importance of exports to the medium and long-term development plans of Uzbekistan, the analysis gives special emphasis to the country's external competitiveness in terms of factors affecting past levels and the potential that improvement in the country's competitive position would have on exports.

The second part of the study assesses the potential and prospects for Uzbekistan under different policy regimes. It begins by reviewing the Government's medium-term economic plan and long-term strategy vision for social and economic development, and it examines in details the potentials and constraints on the main economic sectors and sub-sectors within agriculture, industry and services. The next chapter provides a set of forecasts under alternative policy regimes, beginning with a hypothetical base-line forecast under which the present policy mix is maintained, followed by slow versus fast-track policy reforms aimed at accelerating growth. It also provides economic growth projects under a series of measures aimed at improving the export competitiveness of the country, as well as reforms designed to stimulate private sector investment and promote the activities of this sector.

The final chapter provides the overall conclusions and macroeconomic policy implications derived from the analysis. It offers a set of best-practice guidelines for macroeconomic policies designed to accelerate and sustain economic growth in Uzbekistan over the medium and long-terms. This part of the report is intended to provide an input to the CSP and deliberations

¹ Republic of Uzbekistan: Living Standards Strategy for 2004–2006 and Period Up to 2010. Tashkent. June 2004.

² ADB, Country Strategy and Program Update 2005-2006: Uzbekistan. September 2004.

among the ADB, the Government of Uzbekistan and private sector stakeholders over future economic reforms in the country. The guidelines therefore take into account existing challenges and opportunities in each of the sectors and main sub-sectors, the objectives of the medium- and long-term development plans, and the feasibility and sequencing of the policy reforms.

PART I

PAST TRENDS AND GROWTH POTENTIAL

II. SOURCES OF RECENT ECONOMIC GROWTH

A. Overall Growth

Under the Soviet Union the economy of Uzbekistan was transformed into a producer of agriculture focusing on intensive production of cotton and grain. Although not subjected to the usual Soviet directive to Commonwealth of Independent States (CIS) to channel massive amounts of resources toward large-scale and diverse industries, overuse of agrochemicals and the depletion of water supplies damaged the land and depleted the Aral Sea and some of the country's major rivers. During the 1970s and early 1980s economic growth began to stagnate because of rigidities in the Soviet central planning system. Before reorganization could take place, *perestroika* (restructuring) was launched in the late 1980s without a clear strategy. The results were disappointing and efforts to improve the situation were undertaken in 1990. The Supreme Council of the Soviet Union examined the issue of transition to a regulated market economy, concluding that each republic should begin developing its own concepts and models of economic transformation consistent with its individual circumstances. However, implementation of these decisions was superseded by the dramatic political events in the Soviet Union in late 1991 when the leaders of Russia, Belarus and the Ukraine agreed to dissolve the Soviet Union and Uzbekistan gained its independence.

After nearly 70 years of operating under a centrally planned economy where the institutions and incentive systems were far removed from those in market economies, the Uzbek socio-economic system had to undergo extraordinary adjustments. The Government moderated the needed structural adjustments by adopting a gradualism form of transition to a market economy. The movement from administered prices to more flexible market-determined prices nevertheless brought about fundamental changes in the way that businesses and households needed to respond to economic conditions. Under the central planning system that prevailed before 1992, prices had no allocative function. The gradual introduction of price liberalization improved the allocation of resources throughout the economy, but it created assimilation difficulties for many enterprises, particularly in terms of product development and marketing strategies.

The collapse of the Soviet system resulted in an overall output contraction of over 11 percent in constant sum and output continued to register negative growth rates throughout the first half of the 1990s (see Figure 2.1).³ Several factors associated with both external and internal adjustments contributed to the large output decline: (a) the loss of access to resource transfers, first from the Soviet Union and then from Russia; (b) the severe decline in Former Soviet Union



Source: based on data from IMF, World Economic Outlook database, September 2004.

³ The pre-independence trends in economic growth of Uzbekistan are difficult to depict because of lack of data. The central planning system which prevailed until 1991 used the material product system (MPS) for the national accounts. After independence MPS was abandoned and national accounts based on the United Nations (UN) system were developed. For information on the conversion of the accounting systems, see P. Marer et al., *Historically Planned Economies: A Guide to the Data*. Washington, DC: International Bank for Reconstruction and Development. 1992, and for issues related to the transition from the trade and payments system of the Council for Mutual Economic Assistance (CMEA) see Schrenk, M. (1991), "The CMEA System of Trade and Payments: The Legacy and the Aftermath of Its Termination". PRE Working Paper, No. 753. Washington, DC: International Bank for Reconstruction and Development. 1991.

Table 2.1
Uzbekistan's Key Macroeconomic Indicators, 1992-2004

Stage	Year	GDP Growth (%)	Inflation (CPI %)	Fiscal Balance (% of GDP)
Stage I	1992	-11.1%	na	na
	1993	-2.3%	533%	-2.7%
	1994	-4.2%	1569%	-4.1%
Stage II	1995	-0.9%	305%	-2.9%
	1996	1.6%	54%	-2.0%
Stage III	1997	2.5%	71%	-2.4%
	1998	2.1%	17%	-2.0%
	1999	3.4%	45%	-2.9%
Stage IV	2000	3.2%	49%	-2.4%
	2001	4.1%	47%	-1.3%
Stage V	2002	3.1%	44%	-1.9%
	2003	1.5%	15%	0.1%
	2004	2.5%	12%	-0.5%

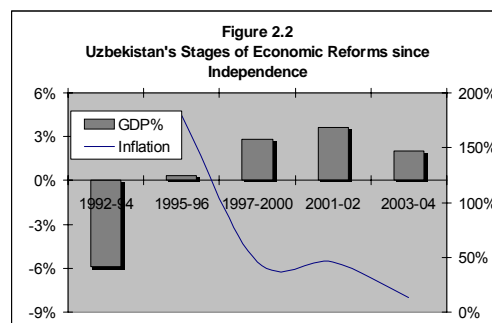
Sources: Based on IMF Staff Report for the 2004 Article IV Consultations. May 25, 2004; and IMF, Recent Economic Developments. January 12, 2000.

(FSU) trade and Uzbekistan's reliance on external trade, albeit less than many other CIS countries heavily dependent on inter-FSU trade; (c) the sharp declines in world prices of gold and cotton, the country's two leading export commodities; (d) the large output declines in Uzbekistan's industrial products because of inefficient production processes, poor maintenance and management, outdated technologies, and frequent supply disruptions, all of which contributed to high production and distribution costs and low output volumes; and (e) severe fiscal adjustment caused by the rapidly shrinking revenue base that virtually halted enterprise support, and the operation and maintenance of public services.

Uzbekistan has experienced several stages of economic growth that are associated with the Government of Uzbekistan's (GOU) protectionist policies and switching policies designed in some instances to promote growth and, in others, to promote stabilization. Figure 2.2 and Table 2.1 show the five major stages of reforms that are generally associated with the country's economic performance since independence.

In the initial stages of reform between 1992 and 1994 the Government instituted a series of reforms aimed at gradually liberalizing prices, unifying foreign exchange markets, instituting new taxes, lowering import tariffs, and privatizing small shops and residential housing. As part of the tax reforms, the GOU introduced a value-added tax and a profits tax designed to replace fiscal revenues from the Soviet-era tax structure. It also sought to develop its mineral and petroleum reserves in an effort to gradually lessen the country's dependence on agriculture. It liberalized prices but nonetheless maintained some price controls on all products and full control on prices of basic consumer goods and energy, and it introduced legislation for property and land ownership, banking, and privatization, though the legal provisions were generally limited and often not enforced. Moreover, the Government maintained control over levels of production, investment, and trade in line with the earlier Soviet model. Indeed the same type of national economic planning as that of the Soviet system based on production and consumption targets were used. Thus, while in principle the Government adopted a market-based economy, in practice it moved forward in a cautious manner. By the end of 1994 state-owned enterprises were prevalent in all sectors of the economy, laws on bankruptcy, collateral and contracts were lacking, and a system of import-substitution was adopted to protect and promote domestic industries.

In the second stage of the reform process between 1995 and 1996 the GOU launched a comprehensive stabilization and structural reform program aimed at promoting economic stabilization rather than growth. Other policies included efforts to subsidize employment, control prices of essential goods, gradually privatize large enterprises, and attain self-sufficiency in energy and food supplies. Under the privatization program during this period, mutual funds



Source: derived from data from IMF, World Economic Outlook database, September 2004.

Box 2.1: Divergences between GOU and IMF Estimates of Growth and Inflation

Estimates of economic growth in Uzbekistan by the State Statistical Committee (Goskomstat) and that of the International Monetary Fund (IMF) have diverged considerably, due mainly to different estimates of the GDP price deflator. These differences arose because of the different coverage for compiling consumer price data and methodological difficulties encountered in compiling prices of non-seasonal goods whose supply sources change frequently.^{1/} As indicated in the table below, the major source of the discrepancy between the real GDP growth of Uzbekistan calculated by the IMF and that calculated by the State Statistical Committee lies in the GDP price deflator rather than the nominal value of GDP.

Comparison of Nominal and Real GDP Growth and GDP Deflator Measures by IMF and Government of Uzbekistan (GOU)

	International Monetary Fund (IMF)			Government of Uzbekistan (GOU)		
	Price Deflator	Nominal GDP	Real GDP	Price Deflator	Nominal GDP	Real GDP
1997	70.5%	74.7%	2.5%	66.1%	74.7%	5.2%
1998	42.0%	45.0%	2.1%	39.0%	45.0%	4.3%
1999	45.4%	50.3%	3.4%	44.1%	50.3%	4.3%
2000	48.0%	52.8%	3.2%	47.3%	52.9%	3.8%
2001	45.5%	51.5%	4.1%	45.3%	51.4%	4.2%
2002	46.7%	51.3%	3.1%	45.4%	51.5%	4.2%
2003	27.8%	29.7%	1.5%	23.9%	29.4%	4.4%
2004	15.1%	18.0%	2.5%	18.2%	26.3%	6.8%

Source: Appendix Table 2.
Note: 2004 data are based on information for the first half of the year.

The nominal GDP figures from the two sources are practically the same, with the single exception of 2004. In the price deflator, large differences exist between the two sources in 1997-99 and again in 2003-04, with a resulting large difference in the corresponding years for real GDP. Between 1997 and 2004 overall inflation, measured by the GDP price deflator, averaged 40.9 percent according to the State Statistical Committee, compared with 42.6 percent measured by the IMF, a difference of 1.7 percentage points each year. During the same eight-year period, State Statistical Committee's estimates for economic growth averaged 4.9 percent a year, compared with an annual growth rate of only 2.8 percent calculated by the IMF.

^{1/} For details, see IMF, "Recent Economic Developments". Washington, DC, 12 January 2000; and IMF, "Staff Report for the 2004 Article IV Consultations". Washington, DC, 25 May 2004.

holding shares in privatized enterprises were established and made available to investors.

During the third stage of the reform process in 1997-2000 the Government reversed some of the key macroeconomic policies undertaken earlier, largely in response to declining foreign currency reserves. In 1997 the Government instituted a multiple currency exchange rate system and embarked upon an import substitution program that included restrictions on current account transactions with direct import controls. While these measures allowed the Government to conserve foreign exchange reserves, a large black market economy emerged in response to the prohibition of hard currency transactions outside the banking system and the tightening of administrative controls. By early 2000 the sum to U.S. dollar exchange rate in the black market grew to six times its official rate. Despite a resulting improvement in the trade balance, the overall balance of payments worsened in response to high interest payments on the debt. In the domestic economy, increased government expenditures combined with a contraction in tax revenues led to a deterioration in the 2000 budget deficit. This situation accelerated an already high inflation and the consumer price index (CPI) rose by nearly 50 percent in that year, up from 45 percent in 1999 and 17 percent a year earlier. While this situation allowed the country's

economic growth to improve considerably between 1997 and 2001, the expansion proved to be unsustainable.

With the continued debt build-up by state enterprises during the fourth stage of the reform process in 2001-02, the Government elaborated a Staff Monitored Program (SMP) with the International Monetary Fund (IMF) in an effort to stabilize the economy and accelerate the transition to a market economy. Notwithstanding a tightened monetary and fiscal policy and improved access to the foreign exchange market that reduced inflation to under 30 percent, the retention of trade restrictions undermined the economy's growth potential and kept the economic growth rate decelerated to 3.1 percent in 2002, down from 4.1 percent a year earlier, and then to 1.5 percent in 2003.⁴ Inflation was kept down by limiting government expenditures to offset low tax collections because of changes in tax policy affecting the profit tax, the VAT and property taxes, as well as a lower-than-expected external project financing. The growth in the supply of broad money was reduced from nearly 55 percent in 2001 to less than 30 percent in 2002 through limitations on government borrowing by the Central Bank of Uzbekistan (CBU) and its greater use of indirect monetary policy instruments.

Severe restrictions on trade limited the expansion of cotton and gold exports, notwithstanding a real effective exchange rate depreciation, and already low foreign direct investment (FDI) decreased further because of restrictive economic policies and business practices. A multitude of restrictions on imports ranging from high tariff rates, prohibitive licensing requirements, ad hoc market closures, and the prohibition of consumer good purchases, including the closing of the borders with Kazakhstan and the Kyrgyz Republic to halt the entry of consumer goods, all contributed to a sharp reduction in the demand for foreign exchange. The result was a narrowing of the spread between the curb market and over-the-counter (OTC) exchange rate from around 120 percent at the beginning of 2002 to under 10 percent by April 2003.⁵ Further disincentives to access foreign exchange resulted from police investigations of exchange bureau clients. In the OTC markets, disincentives were in the form of both long delays in the pre-registration of import contracts, and the actual granting of foreign exchange at commercial banks, especially for small enterprises.

During the fifth stage of the Government's reform process in 2003-2004, there was some progress towards market reforms, especially in banking reforms, but the business climate continued to be undermined by trade restrictions and cash shortages. The difficult economic situation in the country gave rise to a series of social unrest in late March and early April 2004 and both the World Bank and European Bank for Reconstruction and Development (EBRD) subsequently curtailed their activities. The removal of exchange restrictions and unification of the exchange rate in 2003 was followed by the elimination of specific non-tariff barriers (NTBs) to imports in the form of pre-registration of import contract, restriction on pre-payment on imports of goods and services, and lack of immediate convertibility in the foreign exchange market. Some conversion delays for imports of specific consumer goods were nonetheless reported to the IMF team that visited the country for the 2004 consultation with the GOU.⁶

Overall, the deceleration in Uzbekistan's growth rates in the first part of this decade was in sharp contrast to the general improvement in economic conditions in the other Central Asian countries. While protectionist measures and a low exposure to the international economy helped to avoid the severe output contraction experienced by other CIS countries in the years immediately following independence, Uzbekistan's average annual growth rate of less than 3

⁴ As discussed in Box 2.1, there are considerable difference between GOU and IMF GDP growth rates. In 2003 the GOU estimate for GDP growth is 4.4 percent, while that of the IMF's 1.5 percent.

⁵ IMF, Staff Report for the 2003 Article IV Consultation. April 28, 2003.

⁶ IMF, Staff Report for the 2004 Article IV Consultation. May 28, 2004.

Table 2.2
Uzbekistan's Sectoral Contribution to GDP, 1992-2003

Sector		1992-95	1996-99	2000-03
Total GDP	Growth Rate (%)	-4.6%	2.4%	3.0%
Agriculture	Growth Rate (%)	-8.0%	4.8%	2.8%
	Share in GDP (%)	33.9%	30.8%	34.0%
	Contribution to GDP Growth (%)	-2.7%	1.5%	1.0%
	Share in GDP Growth (%)	44.1%	50.4%	31.7%
Industry plus Construction plus Transport- Communication	Growth Rate (%)	-10.4%	-0.4%	3.1%
	Share in GDP (%)	37.6%	34.6%	31.7%
	Contribution to GDP Growth (%)	-3.9%	-0.1%	1.0%
	Share in GDP Growth (%)	63.8%	-4.9%	32.3%
Trade and Other Services	Growth Rate (%)	1.7%	4.6%	3.2%
	Share in GDP (%)	28.5%	34.6%	34.3%
	Contribution to GDP Growth (%)	0.5%	1.6%	1.1%
	Share in GDP Growth (%)	-7.9%	54.4%	36.0%

percent in 2000-04 was the lowest among the Central Asian countries (see Figure 2.2).

The aforementioned analysis is based on national income account data estimates by the IMF since the reliability of the national income account data provided by the Government has been questionable, particularly on the expenditure side and the constant local currency estimates of the national income accounts. On the expenditure side, the Government has compiled consumption and external trade data and treated inventories in the investment component as the residual needed to match the expenditure side of the national income accounts with the production side. More reliable data have been available for the production-side, and specifically for the valued added of the major sectors. The Government has therefore used the production side GDP aggregate on the expenditure side of the national income account in combination with consumption and trade of goods and nonfactor services. The derived investment figures have therefore included both the actual investment levels and errors and omissions in the consumption and trade data.

The second difficulty in economic growth analysis relates to the deflator used to calculate the constant local currency value of overall GDP and its components. The IMF has pointed to a number of methodological problems associated with technical deficiencies and political interference and has constructed alternative measures of both the CPI and the GDP deflator.⁷ While both the IMF data and the official government data are nearly equivalent in the estimates of the nominal GDP, large differences that sometimes occur in the GDP deflators from these two sources has resulted in large discrepancies in the estimated real GDP growth rates of the country. For example, between 1997 and 1999, the Government's average annual real GDP growth estimates of 4.6 percent compared with the IMF's 2.7 percent average annual growth. Similarly, between 2000 and 2003, the IMF's estimated real GDP growth was 3.0 percent, compared with the Government's comparable 4.2 percent growth rate. Box 2.1 describes the differences between deflators and the resulting divergences that have arisen between the Government's and IMF's real GDP growth estimates, and Appendix Table 2 shows provides details of the estimates.

B. Sector Performances

The gross value added of the Uzbek economy is fairly evenly divided among (a) agriculture, (b)

⁷ See Box 1 in IMF, "Staff Report for the 2004 Article IV Consultations". 25 May 2004.

Table 2.3
Uzbekistan's Total Factor Productivity, 1996-99 versus 2000-03

GDP by Origin	Average 1996-99	Average 2000-03	Average 1996-03
Total, of which:	3.2%	-0.9%	1.1%
Agriculture	6.5%	6.9%	6.7%
Industry	1.5%	-0.1%	0.7%
Trans/Comm	-10.6%	-4.6%	-7.6%
Construction	6.7%	-8.1%	-0.7%
Trade/ Other Services	9.4%	-13.8%	-2.2%

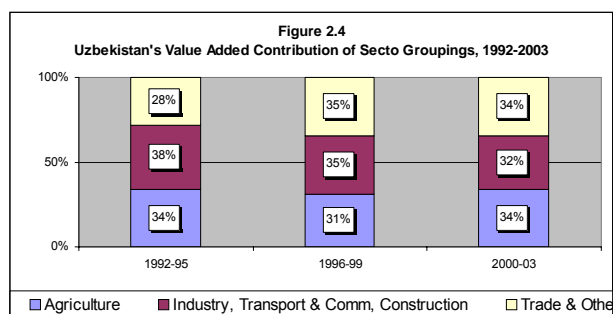
Source: Calculated from GDP by origin, employment, and investment in Statistical Appendix. Data for investment by sector from Source: Center for Effective Economic Policy (CEEP), Uzbekistan Economy: Statistical and Analytical Review January-September 2004. No. 7, December 2004.

of Economy (MOE) equals 5.9 percent in 2003, while that reported by the IMF (2004a) is 4.8. Details of the sectoral breakdown of GDP are contained in the Statistical Appendix to this report.

While the contribution of agriculture has remained fairly unchanged at around 34 percent, albeit its temporary decline in importance in the second half of the 1980s, that of trade and other services has grown from 23 to 35 percent between 1992 and 2003, whereas that of the second broad grouping covering industry, construction, transport and communications has fallen from 41 to 33 percent over the same period. Within this latter grouping, it is the industry and construction components that have accounted from the decline. The importance of industry to total value added of the economy has declined from 26 percent in 1992 to 17 percent in 2003, and that of construction has fallen from 9 to 5 percent in the same period, In contrast, the contribution of transport and communications has doubled from 5 to 10 percent since independence.

Notwithstanding the smaller contribution of trade and other services relative to the other two groupings, its growth has had a consistently positive influence on overall GDP growth in the country. In the period immediately following independence, trade and other services contributed a positive 0.5 percent a year to the average overall growth rate, whereas the agricultural sector's contraction in the same period brought the overall growth down by an average rate of 2.7 percent each year. Similarly, industry, construction, transport and communications had a negative 3.9 percent effect on the country's annual economic growth rate in 1992-95. In the second half of the 1990s this grouping had a near-neutral effect on overall economic growth, whereas the other two sector groupings had a moderately positive influence on overall economic growth. In 2000-03 all sectors contributed about the same positive growth effects on overall GDP.

industry, transport and communications, and construction, and (c) trade and other services.⁸ The contribution of these three broad groupings of activities to the gross value added of the economy has changed somewhat since independence (Table 2.2). As with the expenditures-side of the national income accounts discussed in the previous section, there are considerable divergences in the reported information about the production-side data associated with the sector-specific deflators. For example, the growth rate of the real value added by agriculture reported the Ministry



Sources: IMF, Statistical Appendix, May 2004; IMF, Selected Issues and Statistical Appendix; IMF, Recent Economic Developments, January 2000; IMF, Recent Economic Development, August 1998; IMF, WEO Sep 2004

⁸ The classification of activities into these three categories is based on the following International Standard Industrial Classification (ISIC), revision 2, breakdown: agriculture (ISIC 1), industry (ISIC 2: mining, and ISIC 3: manufacturing); construction (ISIC 5: construction); transport and communications (ISIC 7: transport storage and communications); trade (ISIC 6: wholesale and retail trade); and other services (ISIC 8: Financing, Insurance, Real Estate and Business Services, and ISIC 9: Community, Social and Personal Services).

The extent to which improvements in total factor productivity (TFP) have contributed to real GDP growth in Uzbekistan can be measured by the growth accounting framework. That framework decomposes economic growth, whether by sector or for the economy as a whole, into that portion associated with the growth rates of productivity, capital and labor. The measure of TFP growth also provides a useful consistency check for the output and input data since growing sectors should generally be associated with positive TFPs, while contracting sectors should be associated with negative TFPs. Earlier growth accounting analyses for Uzbekistan and other Commonwealth of Independent States (CIS) has been undertaken by De Broeck and Koen (2000) and updated by Loukoianova and Unigovskaya (2004).

The growth accounting framework assumes that economy-wide production is given by a Cobb-Douglas production function as follows:

$$Y_t = A_t K_t^\alpha L_t^{1-\alpha}$$

where Y_t is total output at time t , A_t is the total factor productivity (TFP) at time t , K_t is the capital stock; L_t is the labor stock; and $0 < \alpha < 1$ is the elasticity of the output with respect to capital. According to the growth accounting framework developed by Solow, output growth can be decomposed into capital growth, labor growth, and the total factor productivity growth residual. Following De Broeck and Koen's (2000) estimation procedure and that of Loukoianova and Unigovskaya (2004), it is assumed that the elasticities of output with respect to capital and labor are equal to 0.3 and 0.7 respectively. From the above equation, the expression for TFP growth in logarithmic terms is given as:

$$g_A = g_Y - \alpha g_K - (1-\alpha)g_L$$

Where g_Y is the percentage rate of growth of output, g_K is the percentage rate of growth of capital stock, g_L is the percentage rate of growth of labor supply. It is of course a heuristic assumption to assume that TFP growth, measured by g_A , is equal to the rate of exogenous technological progress. The estimate is actually a residual that accounts for changes in the efficiency with which inputs were used.

Labor is calculated by report employment, while capital stock is calculated from the standard stock accumulation formula $K_t = K_{t-1}(1-\beta) + I_t$, where I_t is investment at time t , and β is the rate of depreciation. In the absence of information on capital stocks, it was assumed that annual depreciation of stocks during the period of analysis was insignificant relative to investment levels and therefore set equal to zero in the calculations.⁹

⁹ For a discussion of efforts to calculate capital stocks in Uzbekistan and other CIS countries, see United Nations European Commission for Europe, "Measurement of Capital Stocks in Transition Economies". 2003. In the study by Loukoianova and Unigovskaya (2004) for Uzbekistan and other CIS countries, it is assumed that the annual depreciation of stocks equals 3 percent. This figure is however recognized to be a crude approximation the actual rate. Various alternative depreciation rates, ranging from 70 percent in the period immediately following independence to 1 percent for the entire period, were tested and found to not significantly influence the results. According to Loukoianova and Unigovskaya, "All the findings show very similar qualitative patterns of the changes of TFP".

Table 2.4
Decomposition of Uzbekistan's Economic Growth into
Growth of Total Factor Productivity, Capital and Labor, 1996-
2003

1996-99				
	Output	Capital	Labor	TFP
GDP, of which	2.4%	-5.5%	-1.9%	3.2%
Agriculture	5.0%	-0.6%	0.7%	6.5%
Industry	-0.6%	-8.5%	4.5%	1.5%
Trans/Comm.	0.6%	26.7%	1.6%	-10.6%
Construction	4.7%	-10.2%	2.1%	6.7%
Trade/Other Services	6.2%	-15.6%	-5.5%	9.4%
2000-2003				
	Output	Capital	Labor	TFP
GDP, of which	3.0%	8.4%	1.9%	-0.9%
Agriculture	4.8%	-3.8%	-1.4%	6.9%
Industry	2.6%	3.9%	2.1%	-0.1%
Trans/Comm.	5.8%	24.3%	4.5%	-4.6%
Construction	3.3%	28.5%	4.0%	-8.1%
Trade/Other Services	4.2%	49.6%	4.6%	-13.8%

Source: Calculated from GDP by origin, employment, and investment in Statistical Appendix. Data for investment by sector from Source: Center for Effective Economic Policy (CEEP), Uzbekistan Economy: Statistical and Analytical Review January-September 2004

sector led to a positive growth in overall output during that period.

With the notable exception of agriculture, output growth in 2000-03 was largely driven by factor accumulation rather than TFP changes. For the first half of the present decade, the growth accounting analysis indicates that TFP was substantially negative in construction and trade and other services. Capital accumulation was the driving force behind output growth in transport and communications, while both capital and labor accumulation contributed to the industrial output expansion in the present decade. In the case of agriculture, productivity improvements continued more than offset the declines in factor accumulation.

While factor accumulation is important, increases in capital and labor productivity, measured by the ratio of GDP to capital and GDP to labor respectively, are critical to the output growth of the economy. Table 2.5 shows that in the 1990's that only agriculture experienced a significant

Despite data limitations, the results presented in Tables 2.3 and 2.4 support expectations. In the years following independence, structural adjustments in the traditional agricultural sector and those of trade and other services, as well as construction contributed significantly to efficiency improvement in those sectors. As a result of these efficiency gains, output in these sectors expanded, despite the decline in factor accumulation in the form of labor and capital. In contrast, the industrial sector was primarily driven by factor accumulation rather than TFP changes, as were transport and communications, which had a large decline in productivity in the second half of the 1990s. Overall productivity improvements driven by policy reforms in the agricultural

Table 2.5
Uzbekistan's Capital and Labor Productivity, Total and by
Sector, 1996-2003

	Average 1995-96	Average 1997-96	Average 2000-03
Aggregate			
Capital Productivity	98.3	123.7	113.3
Labor Productivity	100.6	103.6	111.0
Agriculture			
Capital Productivity	92.1	119.2	141.0
Labor Productivity	112.0	139.5	181.1
Industry			
Capital Productivity	88.5	114.1	97.4
Labor Productivity	97.7	89.7	90.9
Trans/Comm.			
Capital Productivity	172.1	112.6	130.1
Labor Productivity	103.3	95.8	95.6
Construction			
Capital Productivity	146.6	102.8	110.1
Labor Productivity	93.4	93.6	95.3
Trade/Other Services			
Capital Productivity	85.9	154.4	99.1
Labor Productivity	95.3	103.5	105.9

Note: Capital and labor productivities are defined as GDP/K and GDP/L, respectively, where K refers to capital and L denotes labor. For a discussion of their measurement, see the main text.

Source: Calculated from GDP by origin, employment, and investment in Statistical Appendix. Data for investment by sector from Source: Center for Effective Economic Policy (CEEP), Uzbekistan Economy: Statistical and Analytical Review January-September 2004

expansion in productivity associated with capital and labor. All other sectors excepting trade and other services experience declining labor productivity, and industry suffered a consistent decline in capital productivity between 1997 and 2001, which remained virtually unchanged in the present decade. This low productivity helps to explain that, despite receiving about seven times more investment than agriculture, industry's contribution to GDP growth has been quite modest. In contrast, during the first part of this decade, the productivity of agriculture, transport and communications and, to a lesser extent, construction rose considerably.

Table 2.6 shows the differences between the investment growth rates and value added growth rates for agriculture and industry, as well as the total of all other sectors. Although industry received the largest share of investment in the second half of the 1990s, the growth of that investment fell during the period. As a result, the value added of industry declined during the same period. Investment in other sectors has risen faster than in either agriculture or industry in both the latter part of the 1990s and first part of this decade, and that investment growth was reflected in a rising value added throughout the period. Agriculture experienced a rising value added despite declining investment shares of the total, which was explained by the improved productivity of both labor and capital during the period, as well as improved total factor productivity in the latter part of the 1990s.

C. Demand Decomposition

The decomposition of Uzbekistan's GDP into the principal demand components since independence is shown in Table 2.7 based on the national income account data in the Statistical Appendix to this report. Since consumption has historically represented between 73 and 85 percent of total GDP, and private consumption has accounted for, on average, about three-fourths of that demand, its performance through the period under review has tended to dominate developments in economic growth. Indeed consumption and that of the private sector in particular, contributed to most of the GDP growth during 1991-97, excepting in 1994 when investment was the dominant GDP growth factor. In contrast, both investment and consumption shared equally in dominating the direction and magnitude of GDP growth in 1998-2003, with investment and consumption alternating from year to year in their importance to overall economic growth.

After the large contraction in private consumption in the years following independence, private sector demand expanded by over 8.0 percent a year in real terms during the remainder of the 1990s, excepting in 1998 when consumption only grew by 0.5 percent. Since then, consumption has decelerated substantially, especially in 2003, when it contracted by nearly 7 percent. That deceleration has largely been offset by increased government consumption, including in 2003 when it expanded by nearly 5 percent.

Investment has represented an average of 20 percent of GDP since independence and it has been an important determinant of the direction and magnitude of overall economic growth. On average it

Table 2.6
Uzbekistan's Growth and Distribution of Investment
Relative to Value Added Growth, by Sector, 1996-2003

	Average 1996-99	Average 2000-03	Average 1996-03
Investment:			
Total Growth Rate	-5.5%	8.4%	1.5%
Agriculture	-1.4%	-4.2%	-2.8%
Industry	-13.6%	6.7%	-3.5%
Other Sectors	3.1%	12.3%	7.7%
Share of Total	100.0%	100.0%	100.0%
Agriculture	6.8%	5.8%	6.3%
Industry	31.8%	32.6%	32.2%
Other Sectors	61.5%	61.7%	61.6%
Value Added:			
Total Growth Rate	3.4%	4.2%	3.8%
Agriculture	5.0%	4.8%	4.9%
Industry	-0.6%	2.6%	1.0%
Other Sectors	5.0%	4.3%	4.6%
Share of Total	100.0%	100.0%	100.0%
Agriculture	30.8%	32.7%	31.8%
Industry	18.1%	16.0%	17.1%
Other Sectors	51.1%	51.3%	51.2%

Source: Ministry of Economy, as reported in IMF, Statistical Appendix, 24 May 2004; and IMF, Recent Economic Developments, 12 January 2000.

contributed 0.8 percentage points to the 2.2 average annual growth rate between 1993 and 2003, yet on a year-to-year basis it had a negative contribution in nearly one-half of those years. In contrast, consumption only had a negative contribution in one-fourth of the years, and the external trade balance had a consistently positive influence on Uzbekistan's economic growth.

Table 2.7
Uzbekistan's Demand Decomposition of GDP Growth, 1992-2004

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Net Exports	-4.1%	-7.9%	0.5%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.2%	0.1%	3.6%
Investment	-1.9%	4.5%	2.9%	-0.2%	-2.2%	1.8%	-3.0%	2.9%	2.0%	2.9%	-0.4%
Consumption, of which:	3.7%	-0.8%	-4.4%	1.8%	4.7%	0.3%	6.4%	0.4%	1.9%	0.1%	-1.7%
Government	0.9%	-4.7%	0.3%	0.1%	-0.8%	0.3%	0.9%	-1.0%	0.4%	0.3%	0.5%
Private	2.7%	5.2%	-4.3%	1.8%	5.8%	0.0%	5.5%	1.5%	1.6%	-0.2%	-2.1%
Real GDP Growth	-2.3%	-4.2%	-0.9%	1.6%	2.5%	2.1%	3.4%	3.2%	4.1%	3.1%	1.5%

Source: Based on data from Appendix Table 3 in this report.

With the exception of 2003 when strong external demand conditions predominated, external demand has had a generally neutral effect on growth largely because protectionist measures limited imports of inputs needed to diversify and expand export-oriented activities of the private sector. For this reason, the economic performance of the country throughout the post-independence period has been dominated by internal demand conditions. Continued trade restrictions, including those related to restrictions on exchange rate transactions and administrative and bureaucratic obstacles to doing business, are likely to limit efforts to enhance exports that are otherwise critical for future growth prospects of the country and the realization of high and sustained GDP growth.

The lack of reliability of the expenditure-side data on national income accounts makes the aforementioned analysis questionable. It is also difficult to examine in any detail the driving forces behind the generally strong growth in consumption because of inaccuracies in the calculation of the domestic expenditure components. Information on government expenditures is known, as are the external components are known. The issue of reliability therefore refers to the allocation between consumption and investment expenditures. The large shadow economy that has existed in Uzbekistan affects the final consumption component rather than investment since investment is monitored by the tax authorities.

III. ECONOMIC POLICIES, SAVINGS-INVESTMENT, FINANCING AND EMPLOYMENT TRENDS

A. Economic Policies

Economic policy of the Government of Uzbekistan has reflected its gradualism approach from a transition to a market economy. As mentioned in the previous chapter, in the years immediately following independence the Government instituted a series of reforms aimed at gradually liberalizing prices, unifying foreign exchange markets, instituting new taxes, lowering import tariffs, and privatizing small shops and residential housing, but it retained control over some prices over levels of production, investment, and trade in line with the earlier Soviet model. The stabilization and structural reform program of the mid-1990s was followed by a reversal of earlier macroeconomic policies, and the Government instituted a multiple currency exchange rate system and embarked upon an import substitution program that included restrictions on current account transactions with direct import controls. In the early part of this decade, the Government worked with the IMF to institute a Staff Monitored Program (SMP) in an effort to stabilize the economy and accelerate the transition to a market economy. The removal of

Table 3.1
Analysis of Government Expenditures, 1998-2003

	1998	1999	2000	2001	2002	2003
Public expenditure ratio <i>a/</i>	35%	32%	30%	27%	26%	25%
Social allocation ratio <i>b/</i>	52%	54%	52%	45%	50%	na
Social priority ratio <i>c/</i>	49%	47%	47%	31%	50%	na
Human expenditure ratio <i>d/</i>	11%	10%	9%	4%	9%	na
Human expenditure per person <i>e/</i>	67.0	72.5	51.8	19.3	35.2	na
Human expenditure impact ratio <i>f/</i>	100%	108%	77%	29%	53%	na

Note: life expectancy is 67 years.

a/ Ratio of current public expenditures to GDP.

b/ Ratio of total government expenditures in social sectors.

c/ Ratio of health and education in social sector expenditures.

d/ Ratio of priority service expenditures to GDP.

e/ Ratio of human expenditures per capita.

f/ Human expenditures per person divided by life expectancy.

exchange restrictions and unification of the exchange rate in 2003 supported stabilization efforts and continued structural reforms helped the country to achieve satisfactory growth rates in the last two years.

Fiscal policy during the first part of this decade has targeted the reduction of the budget deficit. The budget deficit declined from 1 percent of GDP in 2000 to 0.4 percent in 2003 and was 0.6 percent in the first three quarters of 2004. Government revenue as a percentage of GDP was 24.2 percent in 2003 and 24.9 percent in the first three quarters of 2004, down from 28.5 percent in 2000. Revenue collections, however, remain low because of the poor tax administration system. Current expenditures have declined also, mainly as a consequence of decreased expenditures on centralized investment financing. Although the share of expenditures on social sectors and especially health and education has remained stable, the ratio of human expenditures per capita has fallen by nearly one-half (Table 3.1). As a result, the impact of fiscal policies on inequality and the level of poverty has eroded considerably over a relatively short period of time.

Monetary policy in the first part of the present decade continued to target inflation and the unification of the exchange rate, as the CBU limited the growth of broad money in 2003 to 27 percent from that of a year earlier, which represented an increase of less than 9 percent in real terms. In an effort to directly contain inflation, access to cash has been restricted and plastic

cards introduced as a means of preventing transactions from taking place in the informal sector. In 2004 the CBU intended to increase broad money by 22 percent through reserve controls, suggesting a moderate deceleration in the velocity of money. Restraints on government spending in light of declining tax revenue because of lower direct tax rates and a narrowing of the base for the VAT are expected to have brought the consolidated government deficit to around 2 percent of GDP for the year. Despite the Government's targeted 6-8 percent CPI-based inflation, actual inflation calculated by the IMF is expected to have reached around 15 percent because of the upturn in government deficit financing, combined with the repayment of government domestic arrears, wage increases and the rise in energy prices and tariffs.

Trade and exchange rate policies have exerted a strong influence on current and capital account movements. As discussed in Chapter 4, exchange rate movements in recent years have improved Uzbekistan's

competitiveness with its foreign trading partners, most especially in Central Asia and East Asia. The ability of producers to respond to increased foreign market demand has been limited, however, by continued problems with convertibility and the restrictive trade regime, which restricts imports of needed capital and raw material inputs. The result is likely to have increased activities in the informal sector and lowered

government revenue. Moreover, increased access to the potentially large Central Asian market through regional cooperation and the reduction in trade barriers has been hampered by restrictive trade practices that include transit charges, intermittent border closings and wide-ranging non-tariff barriers.

B. Savings and Investment

The average investment ratio since independence has been around 22 percent, with a public investment shares above 6 percent of GDP (Table 3.2). Investment levels have, nevertheless, varied considerably. Following independence, the share of investment in GDP fell to under 15 percent in 1993 and gradually recovered to 24 percent by 1995. The investment share declined again in the latter part of the 1990s as public investment contracted steadily throughout the years (Figure 3.1). In the early part of this decade, non-government investment activities, including those of state-owned enterprises, began to expand after a long period of stagnation and, as a result, non-government investment rose from less than 10 percent in 1999 to 15 percent by 2003. There has not, however, been any discernible long-term trend in non-government sector investment activities that could point to an upward or downward trend perspective during the remainder of this decade, especially since most of the investment has been generated from internal sources and present policies do not suggest any major changes in investment behavior.

Table 3.2
Uzbekistan's Savings and Investment Balances, 1992-2003
(Percent of GDP)

	1992-95	1996-99	2000-03	1992-2003
Gross Domestic Investment	25.3	20.0	20.8	22.0
Government ^{1/}	3.6	8.4	6.5	6.2
Non-Government	21.7	11.6	14.3	15.9
Gross National Savings	22.9	16.2	22.1	20.4
Government Savings ^{1/}	0.5	4.5	4.9	3.3
Non-Government Savings	22.4	11.7	17.2	17.1
Foreign Saving	3.7	2.3	(1.3)	1.5

Sources: IMF Selected Issues and Statistical Appendix, May 2003; IMF, Selected Issues and Statistical Appendix, June 1996; and own calculations.

^{1/} Government savings equals revenues minus current expenditures.

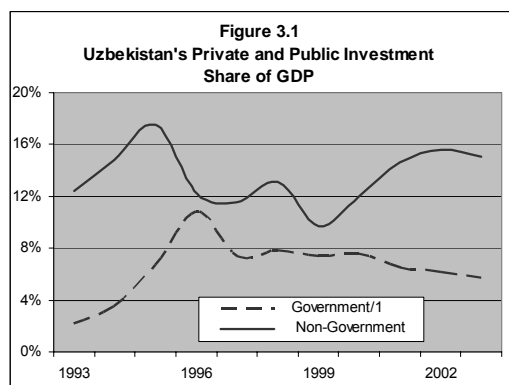
^{2/} Foreign savings equals current account deficit.

Investment patterns since independence have reflected the Government's emphasis on industrialization based on import substitution policies. Under the Soviet Union the manufacturing industry was selectively developed but processing of raw materials was limited to 15 percent of cotton output. Lack of confidence in an international market mechanism and dependence on agriculture under the Former Soviet Union (FSU) led the Government to shift its commitment towards the acceleration of manufacturing activities shortly after independence. With the petrochemical industry already established during the Soviet era, the Government sought to develop automobile and domestic appliance manufacturing, and capital goods manufacturing in the form of agricultural machinery and aircraft engine production. Most of the increase in investment during the mid-1990s focused fuel and energy, light industries such as tobacco and textiles, metallurgy (gold) and machinery in the form of automobiles and electronics. For the most part, financing of investment derived from government and non-government savings, and the contribution of foreign savings only represented less than one percent of GDP.

Box 3.1 Savings and Investment Statistics in Uzbekistan

Information on savings and investment in Uzbekistan remains extremely and the aggregates contain no breakdown into their government, state-owned-enterprises (SOE) and the private sector components. Historical data are also inconsistent. In the past the IMF separated both savings and investment into its government and non-government components. For investment the IMF calculated the government component as the reported centralized investments plus net lending; it then calculated non-government savings as the difference between total investment in the national income accounts and the estimated amount of government investment. Similarly, non-government savings were calculated as a residual. First, national savings were calculated as the difference between total savings, which equals total investment, and foreign savings, which were calculated as the current deficit valued at the official exchange rate. Next, non-government savings were derived as the difference between national savings and government savings, calculated as government revenue minus current expenditures. In the recent Statistical Appendix (IMF, 2004b), the breakdown is not reported, and only aggregate investment and national and foreign savings are presented.

The Government's investment strategy for the nation during the latter part of the 1990s was expressed in the following four basic tenants: (a) During the Soviet era Uzbekistan was delegated the low value-added job of commodity producer and could not develop the technology or the skills for broad industrial development; (b) industrial development must be heavily promoted and FDI used as an important vehicle for achieving a leap forward after long neglect of industry; (c) participation by Uzbek business partners should take place alongside FDI in order to overcome the historic neglect of Uzbek industrial technology and skill development; and (d) a range of incentives should be offered to foreign investors to encourage their participation.¹⁰ The result of this development thrust was the creation of a dual economy consisted of a small modern sector with relatively advance technology, use of capital and dependence on a market mechanism, and a large traditional sector much lower labor productivity and a lack of a conventional market mechanism. With the

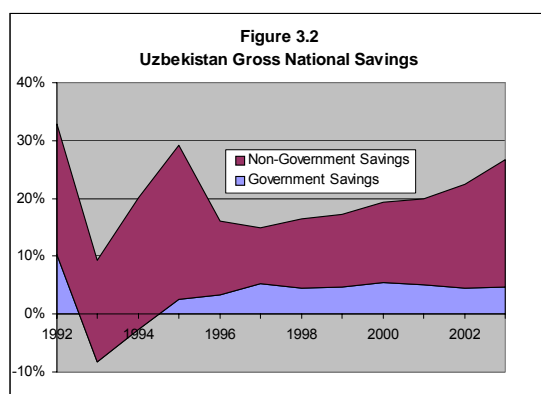


Sources: IMF, Statistical Appendix, May 2004; IMF Selected Issues and Statistical Appendix, May 2003; IMF, Selected Issues and Statistical Appendix, June 1996

¹⁰ UNCTAD, "Investment Policy Review of Uzbekistan". Geneva, 1999.

emphasis being placed on capital formation, rather than attempting to sustain a traditional economy by relying on free trade and the international market. Large-scale privatization in established industries has been given a low priority, while private investment and that from FDI inflows was promoted for the development of new industries, though incentives have been provided less in the form of standard tax incentives that special and favorable treatment to individual investors.

With capital formation as the driving force for the economy and domestic savings as the primary means of financing investment, the Government's objective during the first part of this decade has been to accelerate the rate of investment. Since technology generally tends to ensure a stable relationship between increased capital and increased output, given by the incremental



Sources: IMF, Statistical Appendix, May 2004; IMF Selected Issues and Statistical Appendix, May 2003; IMF, Selected Issues and Statistical Appendix, June 1996

capital-output ratio (ICOR), this relationship is useful for determining the amount of new capital required to achieve the GOU's growth targets. As with most transition economies, however, Uzbekistan's ICOR has tended to vary widely over time (Table 3.3). The relatively low share of investment in GDP since Uzbekistan's independence has been associated with a weak growth performance, suggesting that investment as been relatively ineffective in generating economic growth. Part of the reason is that the capital goods sector remains small and most capital goods still need to be imported. Early on, the Government maintained an overvalued exchange rate, as well as multiple exchange rates as a means of encouraging investment, a

situation that often led to balance of payment problems. To counter these pressures the Government put in place a variety of tariffs, import licenses, and exchange controls aimed at protecting consumer goods, especially durables, rather than capital goods on the grounds that their costs of production was relatively lower than those of capital goods.

These developments have given rise to three broad policy issues for the country's current medium term outlook: how to diversify the economy into the production of high value-added goods and services, how to increase saving and investment, and what needs to be done to achieve the Government's high growth targets for 2007-2010. The ambitious growth target

implies the need to allocate investment requirements among the sectors of the economy. From a policy perspective, it means that increased savings will need to be generated to drive investment and meet the overall growth target as well as those of specific sectors, while at the same time balancing the need for growth with that of macroeconomic stability.

Table 3.3

Uzbekistan: Incremental Capital Output Ratio

	Economic Growth Rate	Savings Rate	Implied ICOR
1996	1.6%	16.0%	10.0
1997	2.5%	14.9%	6.0
1998	2.1%	16.5%	7.9
1999	3.4%	17.3%	5.1
2000	3.2%	19.4%	6.1
2001	4.1%	20.0%	4.9
2002	3.1%	22.4%	7.2
2003	1.5%	26.7%	17.8
1996-99	2.4%	16.2%	7.2
2000-03	3.0%	22.1%	9.0
1996-2003	2.7%	19.2%	8.1

Source: Staff calculations.

Uzbekistan has declined from around 10 in 1996 to 5 in 2001, suggesting a low productivity of investment in the mid-1990s that have since improved. Nonetheless, even an ICOR of 5 implies

either that investment has been inefficiently managed or that investment has been undertaken in areas that did not generate growth. The slowdown in economic growth in 2002-03 combined with rising savings rates has again lowered the implied efficiency of investment. Uzbekistan's generally low economic growth rates since independence and low-return investments reflected in high ICOR values reflect distortions caused by protectionist measures, the overvalued currency, and excessive regulations. The devaluation of the currency and economic reforms made a decisive contribution to investment productivity until the early part of this decade. Productivity nevertheless remains below the standard of 3 generally expected for the ICOR value in developing countries.

C. Financing Requirements and FDI Inflows

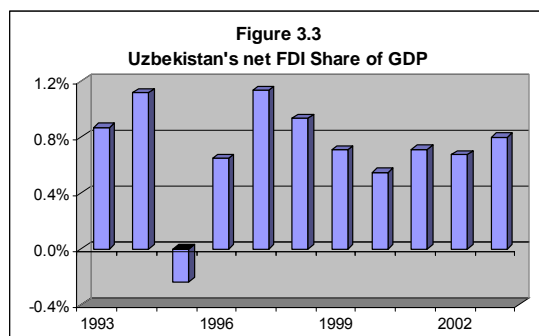
Uzbekistan has relied on national savings for an average of 92 percent of its total financing requirements, with external foreign financing only representing 8 percent of the total (Table 3.3). The strong growth of non-government savings in the early part of the 1990s was responsible for the recovery in investment after its sharp contraction in the years immediately following independence, while its contraction in the latter part of that decade was also responsible for the overall slowdown in investment activity in the country (Figure 3.2). During the present decade, non-government national savings has expanded from 12.5 percent in 1999 to 22 percent by 2003, with government savings contributing about a quarter of national savings. The relatively low share of investment in the economy, and past reliance on domestic savings suggests that the main constraint to future investment growth will remain domestic saving, and that savings will need to be supplemented by foreign savings to achieve the Government's ambitious targeted growth rates.

An important source of external financing to fill the gap between domestic savings and the high levels of investment needed to support the Government's economic growth targets is in the form of foreign direct investment (FDI). It usually provides external financing often in the form of equity rather than debt, frequently in the export or import competing sectors, all of which contributes to an improved external position, and it provides an important source of technology and management expertise in the form of more stable capital flows than those offered by short-term private capital movements, especially those in the form of short-term commercial bank loans and deposits. Private flows have become the major source of external financing for developing and transition economies following the sharp decline of official inflows to these countries during the 1990s, falling to 8 per cent of total external resource flows in 1999. This patterns has continued in the present decade and net official flows to these countries represented only 6 percent of total financing flows by 2003.¹¹

Despite the fact FDI now accounts for about 30 percent of all financial flows to developing and emerging countries, its importance to Uzbekistan has been minimal. What little FDI has occurred has been channeled to high cost, capital and import-intensive industries in which Uzbekistan has no comparative advantage, a most FDI projects are joint ventures with SOEs, which have low efficiency levels. In contrast, light manufacturing and manufactured exports have received a much lower share of FDI. Foreign direct investment was minimal during the 1990s and continues to shun Uzbekistan. In 1998 a number of foreign firms discontinued Uzbek operations, for example, and in 2000 foreign capital inflows contracted by 45 percent; capital flight continued into 2001 with the liquidation of the Uzbek-Samsung joint venture. Unfortunately, there are no details about the sectoral pattern of FDI inflows, either in the form of commitments or actual levels, so the impact of those flows is difficult to gauge.

¹¹ World Bank, "Private Capital Flows Return To A Few Developing Countries As Aid Flows To Poorest Rise Only Slightly". News Release No. 2004/284/S.

FDI generally provides a stable source of foreign capital inflows, and helps to overcome the savings-investment gap of fast growing economies without sacrificing consumption. But in Uzbekistan FDI has been a minor contributor to overall investment, averaging only 0.7 percent of GDP since independence and having no discernible upward or downward trend during the



Source: IMF, Statistical Appendix, May 2004.

period. This small contribution contrasts sharply with most other transition economies such as Kazakhstan where FDI contributed nearly 7 percent of GDP in the second half of the 1990s and the recent acceleration of economic reforms and large scale privatization have attracted further FDI inflows; in the 30 other transition economies, FDI in the latter half of the 1990s averaged 3 percent of their GDP. Table 3.4 also shows that Uzbekistan still continues to attract very small flows of FDI relative to the size of its GDP in comparison with the rest of Central Asia.

Not surprisingly, the Economic Intelligence Unit ranked Uzbekistan as having the lowest business environment score among these same countries and a position that was expected to be maintained during the first half of this decade.¹² It has also ranked low in the 2004 International Comparison of corruption perceptions surveyed by Transparency International.¹³ Lack of an independent judiciary, a weak banking sector and other governance issues were also cited as problem areas in the business environment. Under UNCTAD's FDI performance index, Uzbekistan currently ranks 113 out of 140 countries based on the amount of FDI that it received in 2001-2003 relative to its economic size, and it is classified as having both low FDI potential and performance.¹⁴ This ranking has not changed significantly since 1992-94 when the country was downgraded from a relatively favorable ranking of 74. Its FDI potential ranking also fell from 41 in 1992-94 to 88 during the same period.

Apart from its important to capital formation, FDI improves management techniques, promotes importation of advanced technologies, and supports further access to international financial markets, such as portfolio investment, which has greatly increased its importance to emerging market economies but has been virtually non-existent in Uzbekistan. Despite a sharp upturn in the foreign investment forecast by UNCTAD for the medium-term, the current rise in policy competition for FDI among transition economies will be unlikely to favor Uzbekistan's effort to promote foreign investment as a means of accelerating economic growth without significant initiatives being made to liberalize the country's regulatory regime. Moreover, FDI flows to transition economies are likely

Table 3.4
Central Asia FDI Stocks as a Percent of GDP, 1995-2003

	1995	2000	2002	2003
Uzbekistan	1.0	5.1	8.8	10.6
Armenia	2.6	26.8	29.0	31.9
Azerbaijan	13.7	70.8	84.3	117.7
Georgia	1.7	13.7	20.6	26.3
Kazakhstan	17.4	55.1	63.4	60.1
Kyrgyzstan	9.7	32.1	29.5	28.6
Tajikistan	7.6	14.7	15.9	14.1
Turkmenistan	7.1	19.1	15.8	16.8

Source: UNCTAD, World Investment Report 2004.

¹² Economic Intelligence Unit (EIU), "Foreign Investment Boom in Transition Economies Will Withstand Global Slowdown". Available: <http://www.worldbank.org/transitionnewsletter/octnovdec01/pgs52-54.htm>

¹³ Transparency International, "Transparency International Corruption Perceptions Index 2004". Berlin, German. Available: <http://www.transparency.org>.

¹⁴ The Inward FDI Performance Index is calculated as the ratio of a country's share in global FDI inflows to its share in global GDP. For details, see UNCTAD, "World Investment Report 2004". Geneva, 2004.

to target service sector activities related to business services, tourism, computers, retail and wholesale, construction, energy services, banking and insurance, and transport, all of which remain heavily regulated in Uzbekistan.¹⁵ Instead FDI stocks are primarily concentrated in manufacturing activities and telecommunications, with little or none directed at the primary activities. Strategic investments, such as those of Daewoo in automobile assembly and component manufacturing, BAT in cigarette manufacturing, and Coca Cola in beverages fit the strategic vision of the Government. According to the survey by UNCTAD, these so-called strategic investments appear to be introducing improved technology and also new skills to the industrial sector, and in some instances backward linkages are being introduced from foreign suppliers relocating to Uzbekistan. Other FDI investors that have made non-strategic investments are dissatisfied with the cost and quality of local supplies and services but have so far not taken proactive measures to bring about improvements.¹⁶ These conditions led to IMF to conclude that in the case of Uzbekistan, the discretionary implementation of pervasive regulations constraining almost every aspect of economic activity and the establishment of a nontransparent system of privileges and tax exemptions has virtually discouraged any foreign investment since independence.¹⁷ The country is now an important destination for FDI projects from the Russian Federation, with over 4 percent of that country's FDI directed to Uzbekistan in 2002-2003. Overall there were two parent corporations based in Uzbekistan and 27 foreign affiliates.¹⁸

The growth prospects for investment are closely linked to the country's ability to attract a significantly greater amount of FDI than in the past. The obstacles and opportunities for FDI are closely tied to private sector development and have been covered extensively in the ADB's recent assessment.¹⁹ Nevertheless the major strengths and opportunities for FDI expansion are worth reiterating in terms of the main factors that are likely to determine the future growth of investment in the country. Among the major factors attracting investors to Uzbekistan are (a) a large natural resource endowment, (b) a relatively large domestic and regional market, (c) an educated and skilled workforce, and (d) macroeconomic stability. Against these strengths are a number of weaknesses: (a) a relatively isolated and landlocked geographic location, (b) poor economic management and excessive restrictions, (c) excessive bureaucratic and administrative obstacles to doing business in the country, (d) lack of transparency in government decision-making, and (e) costly and poor quality of business services.

D. Employment Trends

Employment in Uzbekistan has been estimated at around 10.6 million in 2003, with 68 percent of this amount employed in the official sectors of the economy, another 28 percent employed in the unofficial sectors of the economy, and the remaining 4 percent officially unemployed and another 2 percent registered as part of hidden unemployment.²⁰ This total unemployment figure of 6 percent differs from others, however. The official rate of unemployment has been between 0.3 and 0.4 percent since 1996. In contrast, the World Bank's Living Standards Assessment (LSA) estimates the unemployment rate at approximately 6 percent. The World Bank's LSA has also found that the employment rate, that is, the ratio of employment to working age population,

¹⁵ UNCTAD, "Prospects for Foreign Direct Investment and the Strategies of Transnational Corporations, 2004-2007." Geneva, 2004.

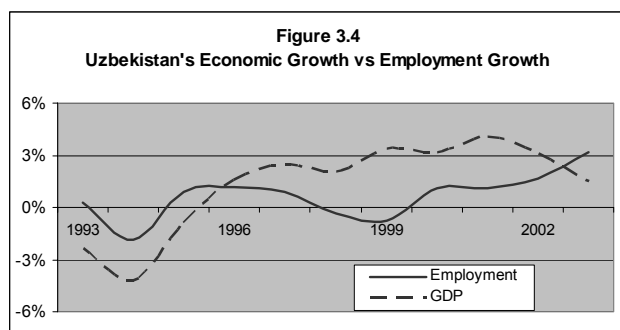
¹⁶ UNCTAD, "Investment Policy Review of Uzbekistan". Geneva, 1999.

¹⁷ Shiells, C.R., "FDI and the Investment Climate in CIS Countries". IMF Policy Discussion Paper, PDP/03/5, November 2003.

¹⁸ UNCTAD, "World Investment Report 2004". Geneva, 2004.

¹⁹ ADB, Private Sector Development in Uzbekistan. Manila, 2004.

²⁰ Republic of Uzbekistan, "Living Standards Strategy for 2004-2006 and the Period Up to 2010".



Sources: IMF, Statistical Appendix, May 2004; IMF, Selected Issues and Statistical Appendix; IMF, Recent Economic Developments, January 2000; IMF, Recent Economic Development, August 1998

and 30 percent of the labor force.²² More strikingly, only about 45 percent of the population between the ages of 16 and 64 participate in the labor market in Uzbekistan, according to the Family Budget Survey (FBS).²³ Moreover, those that do participate often do so through the informal economy. A recent study that estimated the importance of the informal sector in a number of countries found that the size of the informal economy in Uzbekistan is equal to one-third of the country's GDP.²⁴ However, the World Bank's Living Standard Assessment puts the size of the informal sector at over one half of that of the formal economy. Regardless of the methodology employed, all estimates suggest that the size of the informal sector is high relative to that of the formal economy, particularly in sectors like agriculture and trade and other services, and especially in the poorer regions of the country. In addition to these estimates of the size of the informal sector ranging from 33 to 50 percent of GDP, temporary work arrangements affect nearly approximately 20 percent of employed workers in the formal sector, and another 10 percent are partially employment with less than 80 hours of work each month.

The main problem facing labor is the lack of sufficient employment opportunities in the country. The growth of employment has generally been proportional to the long-term economic growth of the country, especially in 2000-03, suggesting a relatively small absorption of the large number of entrants in the market (Table 3.5). Yet despite relatively high average levels of education in the population, there are

shortage of skilled workers since prior to independence the manufacturing and mining industries were dominated by Russians and non-indigenous workers that left after independence, as did indigenous high skilled workers that were able to emigrate outside the region. Shortages remain despite technical training programs in a number of sectors.

Table 3.5 shows that labor is currently distribution among trade and other services (37 percent), agriculture (36 percent), and industry, construction, and transport and communications (27 percent). Within these sectors, that of agriculture has experienced the largest decline in labor

has declined steadily since independence, specifically, by 12 percentage points between 1991 and 2002, with activity rates for woman being particularly low at only 33 percent. Moreover, the recent upturn in economic activity has failed to reverse that trend.

The majority of the unemployed are, nevertheless, unregistered since only 8 percent registered for unemployment benefits with the labor offices.²¹ Unreported unemployment is therefore much higher and is currently estimated at between 20

Table 3.5
Uzbekistan Ratio of Growth in Employment to Growth of Real GDP, by Sector, 1993-2003

	1993-95	1996-99	2000-03	1992-2003
Agriculture	1.0	0.7	1.0	0.7
Industry	1.3	1.2	1.0	1.3
Construction	0.8	1.1	1.0	0.6
Trans. & Comm.	1.3	1.2	1.1	1.8
Trade	1.2	0.8	1.1	0.7
Other Services	1.5	1.1	1.0	1.4
Total	1.1	0.9	1.0	1.0

²¹ World Bank, "Uzbekistan: Living Standards Assessment". Washington, DC. May 2003.

²² Center for Economic Research (CER), "Review of Agricultural Development in Uzbekistan". 2004 (unpublished).

²³ World Bank, Uzbekistan: Living Standards Assessment". Washington, DC. May 2003.

²⁴ Schneider, Friedrich. 2002. "The Size and Development of the Shadow Economies and the Shadow Economy Labor Force: What Do We Really Know?," working paper, University of Linz, Austria.

participation, with the share of workers employed in that sector contracting from 45 percent in the early 1990s to 36 percent in the early 2000s. In contrast, the share of labor employed in trade and other services has expanded from 30 percent to 36.5 percent during the same period. The construction sector has also expanded somewhat in terms of the proportion of total labor that it absorbs, while the share of the industry sector has remained stable at around 14 percent.

Although Figure 3.4 shows that on a year-to-year basis overall labor employment growth varies from economic growth, changes in real GDP growth tend to produce a proportional change in employment over the long run.

The pattern is apparent for total employment growth since 1993, and it also characterizes the sector employment growth pattern in the present decade. Over the medium to

long run, Uzbekistan's employment growth potential is therefore closely associated with economic growth. Among the channels suggested by the LSS for generating employment are (a) in the formal economy, continuing the conversion of large collective farms into small and more efficient units and restructuring unprofitable SOEs; (b) increasing the size of the private sector, including the expansion of the share of SMEs in the economy; and (c) increasingly incorporating activities of the informal economy into the formal economy.

Table 3.6
Uzbekistan Distribution of Employment by Sector
(Percent)

	1992-95	1996-99	2000-03	1992-2003
Agriculture	44.6	41.9	36.2	40.9
Industry	13.9	13.6	14.0	13.8
Construction	6.9	7.0	8.5	7.5
Transp. & Comm.	4.3	4.4	4.8	4.5
Other Services	23.6	24.2	27.1	25.0
Trade	6.7	8.8	9.4	8.3
Total	100.0	100.0	100.0	100.0

IV. EXTERNAL SECTOR PERFORMANCE AND PROSPECTS

The Government of Uzbekistan is increasingly relying on the external sector as the engine of growth in its development plans, since Uzbekistan's internal market is not sufficiently large to be the major source of rapid job and income growth. While import substitution provided much of the initial impetus to the external sector in the 1990s, the small internal market and anti-export bias of import substitution policies means that such a strategy is unlikely to be sustainable in the present decade. Uzbekistan has considerable room to improve its export performance, and especially in agro-industrial products and manufactures, and its proximity to FSU countries provides it with a location advantage to access fast growing markets in the region. This chapter begins by examining Uzbekistan's trade performance and diversification. It then analyzes the country's international competitiveness in terms of trade policies affecting export incentives, domestic trade barriers and foreign market access, and exchange rate policies as they affect the export potential of the country.

A. Export Performance and Diversification

Uzbekistan's exports are dominated not only by cotton, gold and energy products. These three products have accounted for an average of 72 percent of total exports between 1995 and 2003 (Table 4.1). There has been some diversification towards other types of goods and, as a result, the contribution of these products fell from 74 percent in 1995-99 to 69 percent in 2000-03. Nevertheless, within these major export products it is cotton that has accounted for the declining overall share of the top three products, as its share of total exports fell from 39 to 26 percent between the latter half of the 1990s and the first half of the 2000s. In contrast, energy products have expanded in their importance, from an average of 11 percent in 1995-99 to 16 percent in 2000-03. Gold has remained fairly stable in its contribution to overall export revenue, contributing an average of 24 percent in 1995-99 and 26 percent in 2000-03.

On the import side, Uzbekistan also tends to have a high degree of product concentration. On average, 64 of its total imports are in the form of foodstuff and machinery. This high degree of product concentration has changed little over the years. In 1995-99 these two product groups accounted for 64 percent of all imports, and in 2000-03 the same product groups accounted for 58 percent. The main source of the relative decline in importance of these product groups has been foodstuffs, whose contribution fell from 20 to 13 percent between 1995-99 and 2000-03. In contrast, machinery imports maintained nearly the same importance in total imports in both of those periods (44 and 45 percent respectively).

Table 4.1
Commodity Composition of Merchandise Trade, 1995-2003
(Percent)

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Exports	100%	100%	100%	100%	100%	100%	100%	100%	100%
Cotton Fiber	46%	44%	38%	39%	30%	31%	26%	27%	23%
Gold	18%	26%	20%	26%	29%	28%	28%	34%	14%
Energy	13%	8%	14%	7%	13%	11%	12%	10%	32%
Other	24%	23%	28%	28%	28%	30%	34%	30%	31%
Imports	100%	100%	100%	100%	100%	100%	100%	100%	100%
Foodstuff	19%	30%	21%	15%	14%	13%	12%	14%	11%
Machinery	36%	36%	50%	49%	51%	39%	46%	46%	49%
Other	45%	34%	30%	36%	35%	48%	42%	40%	40%

Source: IMF, Republic of Uzbekistan: Statistical Appendix. May 24, 2004. IMF, Republic of Uzbekistan: Recent Developments. August 19, 1998.

The export performance since independence has been moderate, averaging a growth of 2.8 percent a year, its measurement in U.S. dollars overstates growth since the dollar appreciated considerably during this period. In the first ten years following independence, the U.S. dollar rose by nearly 10 percent relative to a basket of currencies measured by the Special Drawing Rights (SDRs). As a consequence, Uzbekistan's export performance measured in terms of SDRs was considerably more modest than its dollar-denominated exports showed for the period. Between 1992 and 2003 the SDR-denominated value of exports grew at an average annual rate of 2.2 percent, compared with 2.8 percent for the U.S. dollar denominated growth rate of exports. Table 4.2 shows the U.S. dollar and SDR denominated export performance during 1992-95, when the dollar fell relative to the SDR; 1996-2001, when the dollar rose against the SDR; and 2002-2003, when the dollar fell against the SDR. The country's early export performance benefited from the Government's import substitution policies, particularly because of the constraints imposed on imports during the sharp fall in exports following the Russian financial crisis, as well as the concurrent drop in world prices and domestic output of cotton in 1998-2001.

Table 4.2
Export Performance Measures in Dollars and SDRs, 1992-2003

	1992-95	1996-2001	2002-03
Export Value			
Dollar denominated	2,679	3,124	2,875
SDR denominated	1,870	2,304	2,013
Export Index (1992=100)			
Dollar denominated	188	219	202
SDR denominated	181	223	194
Export Growth			
Dollar denominated	8.6%	-3.5%	10.3%
SDR denominated	6.8%	-0.5%	1.4%

Source: IMF, Republic of Uzbekistan: Statistical Appendix. May 24, 2004. IMF, Republic of Uzbekistan: Recent Developments. August 19, 1998.

Table 4.3
World Market Prices of Uzbekistan's Major Exports, 1992-2003
(Average Annual Percent Changes)

		1992-95	1996-99	2000-03	1992-2003
Cotton Fiber	Liverpool Index	9.1%	-14.0%	6.5%	0.5%
Gold	UK (London)	-1.2%	-7.5%	7.2%	-0.5%
Energy	World Bank Energy Index	-7.2%	2.8%	15.2%	3.6%

Source: IMF, International Financial Statistics, December 2004.

The high degree of concentration in exports makes Uzbekistan highly vulnerable to external shocks from the large price fluctuations that tend to characterize primary commodity markets. World prices of cotton fiber have risen by only an average of 0.5 percent in 1992-2003, and those of gold have fallen an average of 0.5 percent a year since 1992 (Table 4.3). While much of the decline in cotton and gold prices occurred in the latter part of the 1990s, year-to-year variations have been high through the last 12 years. Year-to-year changes in prices for cotton averaged 24 percent for both cotton and energy prices, and 7 percent for gold. Uzbekistan's

Table 4.4
Uzbekistan's Major Export Markets, 1992-2003
(Percent of Total Exports)

	1992-95	1996-99	2000-03	1992-2003
Russia	25.6%	24.1%	22.8%	24.1%
Germany	19.0%	9.4%	7.1%	11.2%
Korea	na	12.9%	9.3%	10.5%
Tajikistan	5.0%	7.7%	5.7%	6.4%
United States	3.5%	6.8%	6.4%	5.7%
Turkey	8.1%	4.8%	4.5%	5.6%
Italy	5.3%	4.5%	4.7%	4.8%
Kazakhstan	3.8%	4.2%	5.5%	4.6%
Ukraine	2.6%	4.5%	5.7%	4.4%
France	4.2%	3.6%	2.6%	3.4%
China	3.2%	2.2%	3.7%	3.0%

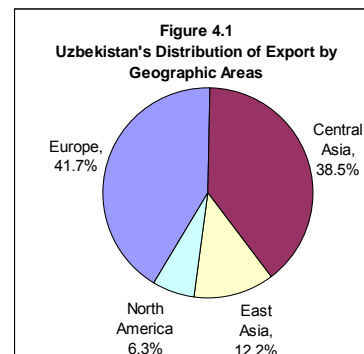
Source: IMF, Direction of Trade.

vulnerability to fluctuations of these world market prices and their poor long-term growth performance suggests a need to diversify the external sector into more dynamic product markets.

Moreover, trade in manufactures has historically grown faster than trade in primary commodities, with the volume of world trade of manufactures 1.8 times than that of primary commodities in 1990-

2003.²⁵ As a result, three-fourths of all products traded in the world economy are now in the form of manufactures, compared with less than two-thirds three decades ago. Uzbekistan's rich natural resource base suggests that diversification into high value added resource-based products would provide it with more dynamic long-term export growth in the medium to long term.

Although there has been a marked shift of exports towards new export markets, as the share of the top industrialized countries of Western Europe and North America has fallen from 75 percent in 1992-95 to under 60 percent in 2000-03 (Table 4.4). These changes are somewhat surprising in light of the breakup of the Soviet Union and the expected dislocation in trade from those markets that would otherwise have been anticipated. Instead, the share of the leading FSU trading partners has remained nearly unchanged at around 34 percent during that same period. Among the leading export markets, significant increases in export market shares occurred in Korea and, to a somewhat lesser extent, the United States Ukraine and Poland.



B. Trade Policies

1. Nominal Rates of Protection

Uzbekistan's tariffs have been altered a number of times, though the average rate has remained high and continues to largely reflect the Government's protectionist strategy. The IMF reported that in May 2002 the tariff regime was amended in such a manner as to simplify tariff rates applied to legal entities, but that on average those changes increased the unweighted average tariff rate from 10.4 percent to 15.4 percent.²⁶ Most recently the Government lowered tariffs somewhat to an unweighted average of 14.6 percent in 2004. These rates applied to Most-Favored-Nation (MFN) countries, even though Uzbekistan is currently not a member of the World Trade Organization (WTO) or the General Agreement on Tariffs and Trade (GATT). For non-MFN countries, the rates are double those of the MFN countries.

Table 4.5
Characteristics of Uzbekistan's Tariff Structure

- Current version in use: May 2002
- Unweighted average: 15.4%
- Maximum tariff: 30%
- Minimum tariff: 0%
- Tariff escalation
- Anti-export bias

There are only three tariff bands (5, 10, and 30 percent) and there is escalation in the tariff structure, with considerably lower tariffs applied to inputs than to intermediate and final goods. Uzbekistan's continued use of tariff escalation by stages of production reinforces import-substitution policies and favors the least beneficial kinds of production that have little value added for the economy.²⁷ There are three tariff classifications: (a) for goods that Uzbekistan

²⁵ Based on data from WTO, International Trade Statistics 2004. Available: http://www.wto.org/english/res_e/statis_e/its2004_e/its04_toc_e.htm

²⁶ Unless otherwise noted, the material in this section draws from IMF, Staff Report for the 2003 Article IV Consultations. 28 April 2003

²⁷ The effect of tariff escalation on the economy can be measured through effective rates of protection (ERPs). In contrast to the nominal rate of protection (NRP) that measures the extent of protection by the difference between the border price of foreign-made products and the price of domestic import-substitutes made by local producers, the ERP measures the increase in value-added of the protected industry over value added of that same industry measured in

Table 4.6
Uzbekistan's Imports and Tariffs, 1992-2003

	Imports	Customs Duties	Implicit Tariff (%)	Unweighted Tariff (%)
	(million US\$)			
1992	300.085	14.35	4.8%	20.7%
1993	918.035	38.23	4.2%	18.0%
1994	2,609.5	90.36	3.5%	15.0%
1995	2,892.7	94.29	3.3%	14.1%
1996	4,721.1	148.67	3.1%	13.6%
1997	4,523.0	132.30	2.9%	12.7%
1998	3,288.7	93.94	2.9%	12.4%
1999	3,110.7	66.45	2.1%	9.3%
2000	2,947.4	94.80	3.2%	13.9%
2001	3,136.9	75.34	2.4%	10.4%
2002	2,712.0	69.61	2.6%	15.4%
2003	2,964.2	77.76	2.6%	15.7%

Source: Imports and customs duties in US\$ from IMF, Selected Issues and Statistical Appendix; implicit tariff equals customs duties divided by imports; unweighted tariffs are based on actual data reported for 2001-2002, with other years calculated from variations in implicit tariffs.

does not produce, customs tariffs and the excise rate are set at zero, with only the value added tax (VAT) needing to be paid; (b) for goods that the country currently produces, there is a tariff of either 5 or 10 percent; and (c) for goods that are domestically produced and exported, the tariff is 30 percent and the excise tax is set between 20 and 30 percent. Under Presidential Decrees Numbers 1702 of January 1997 and 1987 of April 2000, small and medium sized enterprises (SMEs) are exempted from payment of customs duties on production equipment and other inputs required for their production needs.

Still, there are a large number of imported goods used in production processes that remain subject to high import duties, and for Uzbekistan's export competitiveness, tariffs on these tradable inputs used in export-oriented industries can create an anti-export bias. Those industries attempting to export rather than sell in the domestic market receive no output tariff protection but must nevertheless pay the protected input costs of tradable inputs. While these duties on inputs are in principle offset by the existing duty-drawback scheme in Uzbekistan, a number of firms have reported that administrative obstacles and delays prevent them from using the scheme. Additionally, exporters must present either a letter of credit or bank guarantee for export transactions, and income earned from exports is subjected to a wide variety of payments in the form of profit and property taxes. These taxes undermine the ability of private enterprises of all types to compete with state-owned trading companies involved in exports of cotton, energy and metals.

The VAT rate is 20 percent on all goods and services imported, the only exception being technological equipment imported into the country to facilitate investments, including their use in enterprises manufacturing consumer goods. As part of the 2002 reform to the tariff schedule, the number of imported goods subject to excise tax was expanded to include tea, sugar, refrigerators, sunglasses, with those taxes ranging from 5.25 to 90 percent of their total customs value. In August 2002 a further 30 percent surcharge was applied to imports of non-consumer goods by legal entities, which needed to be paid in hard currency. It was reduced to 20 percent and made payable in domestic currency a month later. Another surcharge was imposed on January 2003 on imports of non-food consumer goods imported without certificate of origin from contiguous countries but produced in non-contiguous countries. Finally, effective 1 January 2004 import duties were reduced to zero on machinery, machine tool stations and manufacturing equipment imported by legal entities.

Nontariff barriers (NTB) to trade range from numerous administrative controls on trade to direct

terms of border prices. For an industry or firm, the value added is the difference between the total value of output and the cost of the intermediate inputs used in the production of the final product. Calculation of the ERP is based on the measurement of the difference between the observed value added with the existing tariff structure and that estimated for the industry under free trade. The value added under free trade is calculated by deducting from the observed value added the revenue equivalent of the tariff on the industry's output and the cost equivalent of the tariffs affecting intermediate inputs used in production. Specifically, the ERP for a product is the percentage excess of domestic value added, V , over the international market value added, W , would have been realized in the absence of the existing tariff structure. The difference between V and W , expressed as a percentage of W is the ERP, i.e. $ERP = (V - W) / W$.

bans on certain imports. Banned items include published materials, manuscripts, videos, pictures, films and other items aimed at undermining the state and public order. Import licenses are required for imports of weapons and military ammunition, precious metals and gems, scrap metals, radioactive substances, ecologically hazardous waste and toxic substances, and narcotics and psychotropic substances. All import contracts have to be registered, a procedure that remains cumbersome and problematic, despite the streamlining of the process in recent years. Antidumping and countervailing duties are widely used as safeguard measures, although procedural measures are planned as part of the WTO accession process. These administrative activities are handled by a number of institutions, including the CBU for foreign exchange regulations, the Agency for Foreign Economic Relations (AFER) for general trade matters, the Cabinet of Ministers of overall trade policies, and the State Customs Committee for matters related to customs policies and their implementation.

Shuttle trade by nationals mainly importing consumer goods into Uzbekistan was subjected to a special tariff on June 2002. Prior to that date, shuttle trade was subjected to the usual customs tariffs and fees, excises and VAT, plus a customs fee

of 25 percent on food items and 50 percent on nonfood items. After June 2002 all of these payments were subjected to a unified customs payment in the amount of 50 percent for food items and 90 percent for nonfood items, irrespective of the country of origin of the import. After September 2002 goods imported for commercial purposes by individuals also had to be registered by individual entrepreneurs with the right to engage in foreign trade and retail activities. After October 2002 that unified customs payment was lowered to 40 percent for foods and 70 percent for nonfoods. Additionally, payment of the unified customs tariff had to be made in convertible currencies.

2. Foreign Market Access

The GOU has applied for membership in the WTO in December 1994 and it currently has observer status. A detailed Memorandum on Uzbek Foreign Trade and Economic Policy was submitted to the WTO Working Party on October 1998, and replies to questions arising from the Memorandum were submitted in April 2001. A number of meetings have taken place between the Government and the Working Party to address questions after the necessary legislative changes are instituted to bring the country's trading system in line with WTO standards. After

Box 4.1: Limitations of Uzbekistan's Trade Data

Standard commodity-based trade data based on the Harmonized System (HS) nomenclature are not readily available for Uzbekistan. Nearly 200 countries representing about 98% of world trade used this information system for customs classification and other purposes such as tax rationalization, trade policies, monitoring of controlled goods, rules of origin, freight tariffs, transport statistics, price monitoring, quota controls, compilation of national accounts, and economic research needed for the type of analysis contained in this report. Although Uzbekistan's State Statistics Committee, or Goskomstat, reported having the data, the information was not made available for this study, nor are they available through the United Nations statistical reporting system.

An alternative approach, though time consuming and potentially costly, is the use of mirror statistics, that is, statistics on Uzbekistan's trade provided by each of its trading partners. These mirror statistics can provide valuable insights into trade patterns they were used in the case of Uzbekistan in an earlier study to examine the potential impact of country's accession to the WTO (Lord, Alzhanova and Moiseev, 1998). Notwithstanding limitations related to re-exports and transshipments, the exchange rate applied to convert trade flows to U.S. dollar denominated values, and unreported flows between bordering countries, mirror trade data provides a viable approach to the collection of data for a country when the information is not directly available in that country.

those changes have been completed, negotiations at the bilateral level need to be concluded.

The Government has also established bilateral agreements with ten CIS countries, comprising Azerbaijan, Georgia, Kazakhstan, the Kyrgyz Republic, Moldova, Russia, Tajikistan, Turkmenistan and Ukraine. A multilateral FTA on the CIS Agreement on Creation of a Free Trade Area was signed with these same countries in 1994, plus Armenia. Recent closings of borders with Kazakhstan and the Kyrgyz Republic, however, have restricted movements of goods and people with these countries.

In 2004 Uzbekistan became a signatory to the Agreement between the United States and Central Asian Countries Concerning Regional Trade and Investment Framework, along with Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan. The agreement provides general guidelines to promote the investment climate and expand trade in products and services by instituting appropriate measures to encourage and facilitate the exchange of goods and services and secure favorable conditions for long-term development and diversification of trade. An institutional mechanism in the form of the United States-Central Asian Council on Trade and Investment was established to identify opportunities for expanding trade and investment, and to identify issues relevant to trade or investment such as intellectual property, labor and environmental issues. It also provides for efforts to identify and work toward the removal of impediments to trade and investment flows.

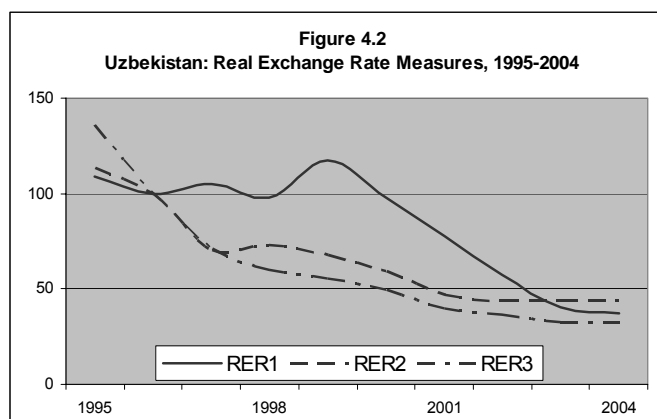
C. Real Exchange Rate and Competitiveness

1. Real Exchange Rate Trends

The international competitiveness of Uzbekistan is generally reflected in the real effective exchange rate (RER), which takes into account both general price movements in Uzbekistan relative to that of each of its trading partners, and the cross exchange rate between Uzbekistan and each of its trading partners. The real exchange rate is a measure of the relative price of non-tradables to tradables and, as such, it measures the cost of producing a good domestically. A relative price rise, for example, reflects an increase in the domestic cost of producing tradable goods, since it makes production of tradables less profitable and induces resources to move to the non-tradables sector. While the concept is straightforward, its empirical measurement is difficult for a country like Uzbekistan where price series for tradable and non-tradable products are not readily available.

Two alternative measures of the real exchange rate can be constructed within the context of Uzbekistan's data limitations. The first uses partner-country and domestic price measured in terms of CPI data to construct a real exchange rate index that represents the ratio between non-tradable and tradable prices. Specifically, the real exchange rate is defined in this case as $e^r_t = P^n_t/P^f_t$, where e^n is the

nominal exchange rate, P^f is the foreign currency price of goods purchased abroad, and P is the domestic price level. The second uses purchasing power parity (PPP) definition to correct the nominal exchange rate by the relative price of domestic to foreign prices, as measured by CPI data. Using this approach, the real exchange rate is defined as $e^r_t = (1/e^n)_t P^n_t/P^f_t$, where e^n is



Source: Staff estimates.

Table 4.7
Uzbekistan's Nominal and Real Exchange Rate
Indices (1996=100)

	Nominal Exchange Rate	Real Exchange Rates		
		RER1	RER2	RER3
1994	24.8	104.8	319.1	461.4
1995	74.2	108.9	113.6	135.4
1996	100.0	100.0	100.0	100.0
1997	165.4	105.1	70.6	71.4
1998	235.9	97.8	73.0	60.3
1999	311.1	117.2	67.9	55.6
2000	591.0	97.6	59.4	49.7
2001	1,054.5	77.4	47.2	40.1
2002	1,921.2	57.1	43.4	36.5
2003	2,757.4	40.2	43.9	32.9
2004	3,068.0	36.9	43.4	32.3

Note: RER1 is the nominal exchange rate adjusted for inflation of each trading partner; RER2 is the ratio of partner-country and domestic price measured in terms of CPI; and RER3 is the ratio of partner-country and domestic price measured in terms of the GDP deflator.
Source: Country-specific estimates in Uzbekistan macro-model database

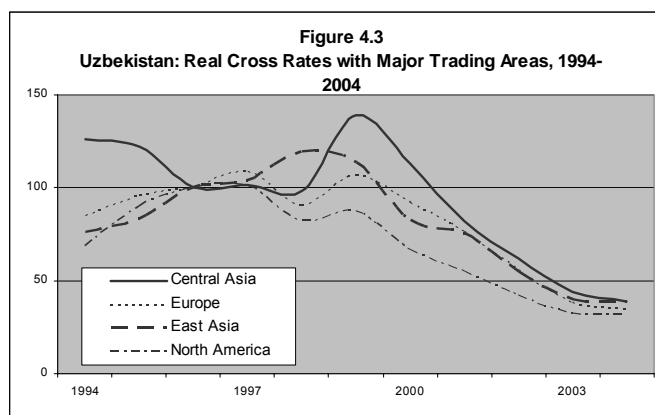
the nominal exchange rate, P^f is the foreign currency price of goods purchased abroad, and P is the domestic price level.

Table 4.7 shows the calculations of Uzbekistan's real exchange rate index using these two measures. Series RER1 refers to the purchasing power based definition of the double-deflated nominal exchange rate of Uzbekistan with each of its trading partners, RER2 refers to the ratio of partner-country and domestic price, measured in terms of the CPI, and RER3 refers to the ratio of partner-country and domestic price, measured in terms of the GDP deflator. The CPI and GDP deflator for Uzbekistan's trading partners is derived from the trade-weighted average of its trading partners.

Although all measures of the real exchange rate show the same trending direction towards a revaluation of the sum, there are considerable divergences in movements during 1997-2002. As expected, there were relatively similar year-to-year changes in RER2 and RER3, which are variations on the ratio of partner-country and domestic prices using different prices (CPI and the GDP deflator). Year-to-year changes in the purchasing power parity (PPP) based measure, however, differs considerably from the two other measures because movements in the nominal exchange rate did not adequately reflect market conditions.

2. Real Cross Exchange Rates and Competitiveness

Table 4.8 presents the real cross-rates of Uzbekistan with its major trading partners and all partners. The real cross-rate for the world is equal to the real effective exchange rate. Figure 4.2 shows the movements of the real cross-rate indices for Uzbekistan's four major trading regions: Central Asia, which in 2001-03 accounted for 37 percent of trade (exports plus imports), Europe (35 percent), East Asia (19 percent) and North America (7 percent). In the late 1990s and early part of this decade there was considerable divergence among the cross-rates for the major trading regions (Figure 4.2). There was a real devaluation of Uzbekistan's cross-rate with the other Central and East Asian countries in 1996-99, and starting in 2002 the real cross rates for all regions began to converge as a result of efforts by the Central Bank of



Source: Staff estimates.

Uzbekistan (CBU) to devalue the cash and OTC exchange rates to bring it to broadly the same level as that prevailing in the curb market. A number of impediments to the foreign exchange market, however, kept the OTC exchange rate considerably higher than the curb rate. A tightening of monetary and fiscal policy accompanied the liberalization of the foreign exchange market in an effort to control imports. The consolidated government budget deficit and net credit

to the government from the CBU were kept well below the program ceilings for 2002, and reserve requirements were increased to slow the growth of broad money. Since that time, the rate of change in the real cross rate has been relatively similar across regions.

As a consequence of these developments, in recent year Uzbekistan's competitiveness has improved in all regions, and most especially in Central Asia where it has recovered from the loss of competitiveness in 1999 as a result of the sharp appreciation of

the sum relative to other currencies in the area. It has also recovered from the loss of competitiveness in the East Asia following the large devaluations of currencies in that region after 1997. As a result, Uzbek exporters face a more favorable position in both its traditional and non-traditional markets. To the extent that foreign market importers are responsive to relative

Table 4.9
Income and Real Exchange Rate Elasticities of Demand for Uzbekistan's Trade

		Elasticity with respect to:	
		Real Exch. Rate	Income
Exports	Short-run	-0.5	0.8
	Long-run	-0.6	1.0
Imports	Short-run	-0.2	0.9
	Long-run	-0.2	1.0

3. Trade and Exchange Rate Transmissions

Since the real exchange rate measures changes in the purchasing power between the domestic and the foreign economy, it provides an indicator of changes in the international competitiveness of the domestic economy in its ability to purchase more (or less) goods and services per unit of foreign currency.²⁸ As a result, estimates of the real effective exchange rate of Uzbekistan provide a means by which to measure the effect that trade price changes caused by exchange rate variations will have on the quantity of exports demanded by foreign buyers, as well as changes that will be produced in the quantity of imports demanded by domestic buyers. In the case of Uzbekistan, measures of the international transmission of price changes, including those caused by exchange rate variations, are especially important to an assessment of whether changes in the country's international competitiveness have produced significant changes in external demand, and thereby impacted the balance of payments and national income accounts.²⁹

Table 4.8
Uzbekistan's Real Cross-Rates Indices with Major Trading Partners and the World (1996=100)

	Real Cross-Rates					
	World	Central Asia	Europe	East Asia	North America	Middle East
1992	57.5	-	57.7	58.8	55.0	57.9
1993	55.8	137.9	52.5	44.3	44.0	50.9
1994	104.8	126.2	84.5	76.3	68.3	71.1
1995	108.9	121.9	96.0	83.4	90.1	90.7
1996	100.0	100.0	100.0	100.0	100.0	100.0
1997	105.1	101.8	108.5	104.0	101.0	118.0
1998	97.8	98.2	90.3	119.8	81.8	87.6
1999	117.2	138.7	106.9	113.9	87.5	99.5
2000	97.6	112.9	91.9	82.7	66.9	76.2
2001	77.4	82.1	76.1	75.8	54.7	97.0
2002	57.1	62.0	55.4	55.0	41.9	62.3
2003	40.2	43.7	38.1	40.4	32.6	48.4
2004	36.9	38.7	34.5	38.7	31.8	47.9

Source: Country-specific estimates in Uzbekistan macro-model database

price differences between Uzbekistan and competing suppliers to those markets, the demand for exports of Uzbekistan would be favorably influenced by current exchange rates, while the country's demand for imports would become more expensive and therefore likely to contract as a result of the higher prices for foreign goods relative to those in the domestic market.

²⁸ For details of the estimated equations and the resulting elasticity estimates, see ADB, A Macroeconomic Simulations Model for Uzbekistan: Technical Guide for Macroeconomic Applications. June 2005.

²⁹ When unit price data are available, the real value of exports, or their volume, as specified as a function of both the export prices, P , such that $P = P^e/R$, where P is the US dollar price of the imported product, P^e is the Uzbek sum price of the imported product, and R is the real effective exchange rate (RER). Since unit prices are not readily available for Uzbekistan for all exports, we need to specify exports in terms of their US dollar price, and focus on the RER

Estimates of the effect of exchange rate transmissions on Uzbekistan's trade indicate that both exports and imports have responded to real exchange rate variations. The magnitude of the price competitiveness and income elasticities of demand for Uzbekistan's exports are shown in Tables 5.9. The elasticity of trade with respect to the real exchange rate is less than unity in both the short run and long run, specifically, one percent appreciation (depreciation) of the real exchange rate of the sum will cause a 0.5 percent decrease in the quantity demanded of exports and a 0.2 percent decline in the quantity demanded of imports.

Table 4.9 also reports the estimated income elasticities of exports and imports. The estimates

Table 4.10
Shadow Exchange Rate of Uzbekistan, 1995-2004

	Official Exchange Rate		Shadow Exchange Rate Factor	Shadow Exchange Rate	
	Nominal	Real a/		Nominal	Real a/
1994	10	3,499	1.162	11	3,043
1995	30	3,636	1.162	34	3,186
1996	40	3,339	1.163	46	2,938
1997	66	3,509	1.136	75	3,114
1998	95	3,265	1.134	106	2,906
1999	125	3,913	1.155	136	3,582
2000	237	3,259	1.154	270	2,860
2001	423	2,584	1.160	467	2,341
2002	771	1,906	1.149	890	1,652
2003	1,107	1,342	1.148	1,282	1,160
2004	1,232	1,232	1.147	1,426	1,064

a/ Realexchangerate is RER1 in Table 5.1 relative to the exchangerate in 2004.

show that the elasticity of both exports and imports with respect to income is unity, indicating that a one percent change in real GDP will lead to a one percent change in the real value of both exports and imports.

In general, the results confirm expectations about the relatively high income and price elasticities of foreign demand for Uzbekistan's exports and domestic demand for imports. Given the relatively strong competitive position of exports in both traditional and non-traditional markets, Uzbekistan could

favorably influence external demand through pricing-based export promotion policies.

4. Shadow Exchange Rate

Market distortions influence the domestic price level relative to the border price level, and therefore they affect the extent to which Uzbekistan's exchange rate is over or under-valued. We measure the degree of boarder distortions on the official exchange rate through the shadow exchange rate (SER), which incorporates into the official exchange rate the effect of relative price changes arising from commercial policies in the form of tariffs and nontariff barriers to trade and export subsidies and taxes.³⁰ When tariff distortions are the only distortion to trade, the shadow exchange rate can be approximated by the product of the market exchange rate and the shadow exchange rate factor, calculated as one plus the weighted average tariff rate.³¹

variable. At the bilateral trade level, the real exchange rate is measured by the 'real cross-rate', which takes into account changes in the nominal exchange rate of Uzbekistan with the foreign country and the relative price levels between Uzbekistan and that country.

³⁰ Other variants of the SER are those that determine the exchange rate that would balance trade (referred to as SER2), and the exchange rate that would balance the current account (referred to as SER3). For estimates of these two shadow exchange rates for Viet Nam, see Lord (1998b).

³¹ The shadow exchange rate is meant to establish the correct relationship between prices of tradable and nontradable goods. It is, however, subject to a number of interpretations. The present definition does not consider whether the shadow exchange rate is consistent with a trade balance, since its primary use is for project appraisals rather than macroeconomic policy determination. Tradable goods valued at the border price level can be revalued to the domestic price level by multiplying their value by the shadow exchange rate factor and, alternatively, nontradable

Table 4.10 shows Uzbekistan's estimated shadow exchange rate. In 2003, for example, the shadow exchange rate for the sum was nearly 1,282 sum per US dollar, in contrast to the official exchange rate of 1,107 sum per US dollar.³² Hence, the official sum exchange rate was overvalued relative to its shadow exchange rate, and investments using the official exchange rate rather than the shadow exchange rate would have favored projects producing non-tradables relative to projects producing tradable goods. In practice, however, the shadow exchange rate factor should be applied to the equilibrium exchange rate instead of the market exchange rate. If we assume that Uzbekistan's exchange rate was in equilibrium in any one year, then the tariffs on imports partially offset the sharper rise in prices of domestic goods relative to those of foreign suppliers. As a result, any realignment of the sum, taking into account tariff distortions, would be less than it would otherwise have taken place had those commercial policy distortions not been in place.

D. Export Growth Potential

Uzbekistan has not yet realized its full potential for exports because of continued import substitution policies and exchange controls that have inhibited free trade and the efficient allocation of resources in the economy. Moreover, exports continue to be concentrated in a few number of products with that are characterized by fairly volatile world markets and relatively stagnant growth prospects. Exports have also been directed towards CIS countries that are also experiencing adjustment problems. Finally, the lack of an incentive structure, combined with exchange restrictions and heavy tax penalties, have further hampered the country's export growth performance. Under these circumstances, it is unlikely that exports will be the country's engine of growth in the medium to long term, and economic growth will be limited to developments in its relatively small domestic market.

The basic macroeconomic conditions for a stable environment with relatively low inflation already exist; the remaining macroeconomic condition that provides the sufficient condition is that of ready access to foreign exchange at a market determined rate that ensures stable and competitive over a short to medium-term horizon. The necessary microeconomic conditions are unrestricted access to imports of material inputs for export-oriented activities, as well as a neutral trade tax structure that does not discriminate against foreign competition and thereby ensures an efficient allocation of resources in the domestic economy. There is also the need for the development of an export infrastructure providing for a modernized telecommunications system, and multi-modal transport networks for air, rail and highway transportation. A third element is that of the development of human capital for upgrading management and skilled labor, as well as public enterprise facilities that can effectively support private sector development. Finally, there is the creation of neutral export promotion schemes that include free trade zones, access to credit facilities for SMEs as well as other private sector entities, and the creation of effective and transparent duty drawback schemes.

The proposed policy reforms in Table 4.11 aim to support the aforementioned strategy for trade and investment. In the identification of policy reforms, particular attention has been given to their consistency with the national plans, and the support that the identified initiatives could offer. In addition, there are a large number of programs and projects already underway within Honduras. Recent efforts by international agencies to accelerate the recovery process have led to what have sometimes been contradictory plans. Moreover, the likely effects of these projects are often not adequately considered within the scope of new proposals impacting on the trade and

goods valued at the domestic price level can be revalued to the border price level by multiplying their value by the reciprocal of the shadow exchange rate factor, the product of which is known as the standard conversion factor.

³² For details on the methodology for calculating the shadow exchange rate, see ADB (1997) and World Bank (1991).

investment. The present trade and investment strategy therefore seeks to build on existing initiatives to ensure that they generate results that are consistent with other programs affecting the country.

Table 4.11
Uzbekistan's Export Constraints and Opportunities for Their Expansion

Constraint	Opportunity	Proposed Initiative
Tariff-Related Policies		
Prohibitively high tariffs on imports of goods produced in Uzbekistan prevent the lack of an effective allocation of resources in the economy.	Provide a neutral incentive structure for export-oriented production activities that will help to promote non-traditional, high value added activities.	Provide estimates of the effective rates of protection (ERP) in the economy and use those ERPs to calculate the impact on industry-specific activities and employment levels.
The effective rate of protection (ERP) is likely to be high, and has probably led to consumer welfare loss and misallocation of resources.	A uniform tariff would encourage the development of industries that have a natural comparative advantage, and would promote downstream industries from increased technology transfers. Moreover, its neutral incentive structure would reduce political lobbying, eliminate smuggling, introduce administrative transparency and improve customs clearance.	Gradually move to a uniform tariff by beginning to adopt a generalized <i>concertina</i> strategy that lowers the highest tariffs to a given level with no change in the lower tariffs, followed by successive rounds until the prevailing high tariffs are lowered to a uniform tariff at the end of the transition period.
Non-Tariff Related Import Policies		
To date, little attention has been given to 'second-generation' reforms that address the way that non-tariff distortions restrict trade and create obstacles to doing business. Existing non-tariff constraints include use of improper technical regulations (difficult market and labeling rules, arcane technical standards), unclear rules of origin, and ad-hoc valuation.	Since there has been relatively little undertaken in the way of measurement, evaluation and remedies to non-tariff distortions in Uzbekistan, the initiative will address significantly high potential tariff-equivalent measures and lay the groundwork for their elimination.	The proposal is based on a sequential approach to the design and implementation of policies to redress existing distortions to trade that will be used in the upcoming WTO Trade Policy Review: (a) prepare an inventory of trade control measures using the TRAINS classification system, (b) use the results of (a) to quantify trade control measures, (c) measure effects of trade control measures, and (d) adopt policies to eliminate non-tariff distortions to trade.
Information on the complete set and rankings of the remaining bureaucratic and administrative factors influencing the business environment is inadequate.	Allow the private sector a more active role than in the recent past to identify and eliminate the bureaucratic and administrative obstacles to doing business in Uzbekistan.	Review, streamline and publish a short list of export and import regulations and procedures on ongoing basis using the guidelines in the ADB's recent "Private Sector Development in Uzbekistan" study.
Export-Related Policies		
Uzbekistan' international competitiveness remains low relative to other countries in Central Asia	It is likely that Uzbekistan could significantly affect the demand for its exports in the global market, as well as particular export markets such as the United States and the European Union, by improving its international competitiveness based on the real exchange rate of the sum.	Examine the conditions needed to determine the fundamental equilibrium exchange rate (FEER) for the balance of payments with guidelines for the optimal real effective exchange rate (and associated nominal exchange rate) needed to achieve overall equilibrium in the balance of payments.
Trade and Investment Policies		
Adverse transitory terms-of-trade movements decrease income, reduce aggregate savings and worsen the current account.	Until Uzbekistan diversifies its exports sufficiently to ameliorate external shocks, the benefits to stabilizing national income from a buffer stock fund are likely to outweigh the opportunity cost of holding a large amount of reserves.	Establish buffer stock schemes or those that operate a buffer fund to reduce the effects of volatile world commodity prices on export returns.

Constraint	Opportunity	Proposed Initiative
<p>Export processing zones (EPZ) remain highly concentrated in the textile industry and have few backward linkages to locally produced raw materials.</p>	<p>The integration of the outward-oriented export policies to support an EPZ diversification and backward linkages program will also encourage foreign direct investment into diversified industries, facilitate foreign technology inflows, thereby developing entrepreneurial capability, and fostering the pace of private sector expansion in supporting industries.</p>	<p>Make outward-oriented economic policies central to the EPZ industry diversification program with backward linkages through the liberalization of investment code and regulation, elimination of discretionary trade barriers, and promotion of foreign technology inflows.</p>
<p>Tariff reform is narrowly viewed in the context of market access. Rather, it would be beneficial from a policy viewpoint to consider tariff liberalization as part of a broader program of tax reform that supports the transition from a large dependence on trade taxes for fiscal revenue to a broad tax revenue base that ensures revenue growth and stability. At the same time, tax reform program would strive to increase productivity at the firm level from the more efficient use of existing resources under freer trade.</p>	<p>While trade liberalization by itself is likely to improve the efficiency of the economy and therefore impact on output and employment, it may also aggravate the current account imbalance. Policy reforms will also be able to consider complementary exchange rate adjustments that would help to produce a sustainable balance of payments and move the economy closer to overall equilibrium.</p>	<p>Coordinate trade and macroeconomic policies within the GOU through the design and implementation of macro-modeling capabilities.</p>

PART II
FUTURE PROSPECTS AND OPPORTUNITIES

V. CHALLENGES FROM THE GOVERNMENT'S MACROECONOMIC TARGETS

A. Key Macroeconomic Targets

The Government of Uzbekistan's medium-term economic growth strategy and targets are contained in the Living Standards Survey (LSS), which is expected to form the basis for a more detailed strategy in an interim poverty reduction strategy (IPRS) paper. Under the LSS the GOU aims to increase incomes and reduce poverty and inequality through high economic growth rates that are targeted at between 8.0 and 8.5 percent a year in 2007-2010. With population growth of 1 to 1.1 percent a year, real per capita GDP is projected to increase by 7 to 7.5 percent a year in 2007-2010.

The basis for the Government's forecast is improved production conditions that will lead to increased output. These improvements are expected to derive from the reallocation of inefficient labor from low to high productivity industries, and specifically those of agro-business enterprise in rural areas that are dominated by small and micro-businesses. On the demand side, the expansion is expected to be driven by both the external and internal sectors. The Government plans to stimulate foreign demand using a variety of instruments, including adjustments in tariffs and non-tariff barriers (NTBs) to trade, taxes incentives, and exchange rate policies.

Accelerated economic growth are believed to require macroeconomic stability and protection against external and internal threats, while the reduction in inequality are believed to necessitate special economic policy measures that include: (a) appropriate budgetary and financial policies; (b) sensible fiscal and customs policies; (c) investment policies aimed at stimulating and promoting private entrepreneurial activity; (d) priority investments in social sector.

Table 5.1 shows the forecasts through 2010 for the key macroeconomic variables reported in the LSS, based on proposed policy measures. Among the major targets are the following:

- (1) On the expenditure side, investment activity is projected to grow by 10 to 12 percent a year in 2007-2010, compared with under 8 percent forecast for 2005, as a result of the policies aimed at expanding the share of savings in GDP from 25 to 26-28 percent, as well as efforts to promote domestic investment activity and encourage foreign investment flows. Private sector development and that of small and medium-

Table 5.1
LSS Forecasts for Key Macroeconomic Indicators, 2005-2010 (percent)

	2005	2006	2007-2010
GDP Growth rates	6.4	7.5	8-8.5
GDP Growth rates per capita	5.3	6.4	7-7.5
GDP deflator	12	9	5-6
Consumer price index	6-7	5.8	4-5
Gross savings, % of GDP	25	26	26-28
Investment growth rates	7.7	8.1	10-12
Consolidated budget income, % of GDP	28.4	28.2	26-27
Industrial growth rate	9.2	10.7	11-13
Agricultural growth rate	4-5	4-5	4-5
Non-government share in GDP, %	77	80	85
SME share in GDP	38.3	41.3	45-50
Foreign trade growth	10	11	10-12

Source: Republic of Uzbekistan, Living Standards Survey for 2004-2006 and period up to 2010.

size enterprises (SMEs) in particular is expected to follow the liberalization of the economy, as well as the elimination of administrative methods of managing and allocating resources. Several reforms are planned as a means of improving the investment climate and reducing the transaction costs of doing business. They include (a) the rationalisation of the structure and operations of central and local government; (b) decentralisation of the functions of state administration; (c) a reduction in the administrative barriers to entry, operation and exit of businesses; (d) an improved decision-making process by government authorities; and (e)

the development of a corporate management system. Among some the measures that will be taken to achieve these reforms are the elimination of administrative methods of resource allocation and the creation of a free market system for the allocation of resources, and the elimination of existing agencies responsible for economic management and transfer of their responsibilities to state administrative bodies.

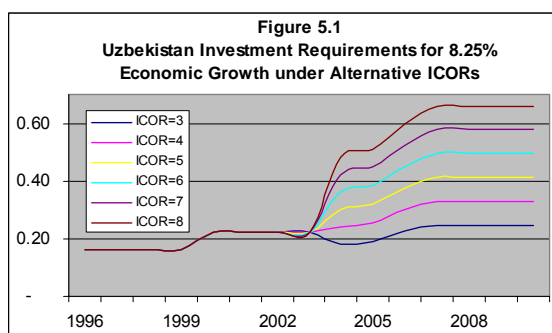
- (2) Government expenditures are projected to decline in importance during the forecast period, with non-government demand projected to expand from 77 to 85 percent of GDP during the forecast period. The main reforms planned for the achievement of these targets are (a) a decrease in the tax burden from 33 to 26-27 percent during the forecast period, while ensuring a more equitable distribution of the tax burden that includes a reduction in social security deductions from 37% to 27.5 percent; (b) an improved tax administration; (c) more efficient state expenditure allocations through the establishment of a treasury; and (d) fiscal decentralisation through extended responsibilities and autonomy to local governments in the areas of budget collection and allocation. A decreased the tax burden is expected to be achieved through the elimination of tax privileges, reduced tax rates and improvements in tax schedules.
- (3) On the production side of the economy, the growth of industrial activity is expected to lead other sectors with an average annual expansion of 11-13 percent during the forecast period, up from 9 percent forecast for 2005, resulting in an increase in its GDP share from 15 percent in 2003 to 19-20 percent. The establishment of an industrial policy is expected to lower the country's dependence of unstable and sluggish primary commodity markets. Industrial policy will target: (a) restructuring of unprofitable industrial enterprises by selling state shares to domestic and foreign investors; (b) developing a competitive environment by eliminating administrative barriers and creating equal conditions for conducting business, liberalizing foreign trade, strengthening the process of privatization and eliminating monopolies; (c) improving the regulatory system; (d) targeting support to efficient enterprises by providing them with credit facilities at favourable terms; (e) improving the foreign investment environment as a means of attracting investment in the agricultural processing and production industries; (f) developing market mechanisms for the distribution of investment resources; (g) modernizing fuel and energy supplies, and creating incentives for energy saving using new technologies; (h) providing incentives for stimulating innovative activities; and (i) creating level playing field for domestic and foreign investors.
- (4) The growth of agriculture is expected to remain constant growth of between 4 and 5 percent during the forecast period, resulting in a contraction of its share in GDP from nearly 29 percent to 23.5 percent by the end of the period. The reform of the agricultural sector is viewed as an essential means of improving the efficient use of resources, and the creation of an enabling environment for SMEs, especially in rural areas where activities are more labour-intensive than in the large urban-based areas that rely on capital-intensive production methods. To create an enabling environment for the development of the private sector and small business, the Government believes that it should continue to play a leading role in initiating reforms across all sectors of the economy, though it has made commitment to (i) promote private sector development by strengthening the legal and institutional framework, and (ii) allow greater involvement of nongovernmental institutions in the implementation of the national strategy for improving living standards. The main objectives for agricultural reform are: (a) restructuring of agricultural enterprises and their conversion into efficient farms and dekhan farms; (b) carrying out land reform by providing land to farmers on the basis of long term leasing arrangements; improving the system of land registration; (c) improving the system of pricing and state procurement for the main types of agricultural products; (d) providing more independence to agricultural producers in choosing the

produce which they grow and how they sell it; (e) eliminating administrative methods of allocating material-technical resources and creation of a competitive market for these resources; (f) reforming the system of water use, with gradual transfer to payment for water consumption in agriculture, in order to stimulate water-savings; (g) improving the system of irrigation and amelioration through more state, private and foreign investments; (h) facilitating leasing of agricultural equipment and technology; (i) improving the system of credit provision to the agricultural sector by facilitating the development of bank and non-bank credit institutions in rural areas; (j) undertaking measures to eliminate monopolies in raw cotton processing; (k) providing state support for the development of market infrastructure in the rural areas; and (l) supporting SME development for producing, processing and trading agricultural produce.

- (5) Reduced government expenditures are expected to put downward pressure on inflation, with the CPI forecast to rise between 4 and 5 percent in 2007-2010, down from 12 percent projected for 2005. The main reforms planned by the monetary authorities during the forecast period are (a) restructuring of commercial banks; (b) liberalization of entry and operation requirements for foreign banks; (c) decreasing the share of the state in commercial banks; and (d) creating an enabling environment for diversification of commercial banks' activities and development of a secondary market in securities.
- (6) The share of SME-based activities in GDP is projected to rise from 38 percent to 45-50 percent over the forecast period. The following reforms are considered a necessary means of expanding the role of small businesses: (a) improving the access of small enterprises to credit facilities; (b) reducing the number of business activities requiring licensing and obligatory certification; (c) simplifying licensing and certification procedures; (d) reducing the number of permissions and approvals required for entry and operation of business activities; (e) reducing the number of checks on legal entities and the number of authorities entitled to carry out those checks; (f) improving the legal framework for the development of private business; (g) improving the system of economic courts and the implementation of the court decisions; and (h) improving mechanisms for the execution of the laws and regulations.
- (7) External demand is projected to expand as a result of trade liberalization, greater regional integration and an acceleration in the growth export-orientated activities. Lack of a sufficiently large market means that Uzbekistan will need to become more integrated into the world economy to achieve the Government's targeted economic growth rates. The main channels for achieving globalization are expected to be through regional economic cooperation and membership into the World Trade Organization (WTO). The major reforms that are planned are: (a) improving tariff and non-tariff regulation; (b) implementing international standards of quality certification for goods; (c) simplifying procedures for licensing, certification and granting of permits for entering foreign markets; (d) improving the mechanisms for granting VAT exemptions to exporters; (e) creating infrastructure for facilitating export activities, including goods produced by SMEs, as well as simplification of the procedures for opening trade representative offices of domestic firms overseas; (f) developing channels for penetrating world markets; and (g) supporting the process of free trade zones (FTZs) within the CIS countries, as well as promoting the integration processes within Central Asia.

B. Investment Requirements

The ICOR is the basic instrument that indicates the amount of investment required to generate the target growth rate for the economy. The domestic savings rate of Uzbekistan has been somewhat below 20 percent since 1996. Using the simple growth accounting framework implied by the Harrod-Domar model with a 20 percent savings rate, an 8.25 percent annual growth rate



Source: staff calculations.

in 2007-2010 would require that the incremental capital/output ratio (ICOR) be around 2.5, which is below the ICOR of 3 that is normally adopted for developing and transition economies. Table 5.2 summarizes the savings rates associated with different ICORs needed to attain an economic growth rate of 8.25 percent. Savings rates of over 33 percent are clearly outside the range of probability for Uzbekistan, so the economy would need to reduce its ICOR to below 4 to achieve an 8.25 percent growth rate.

The marginal product of capital, that is, the reciprocal of the ICOR, is normally assumed constant in growth accounting. In practice, however, it varies considerably from year to year, as it has in Uzbekistan, where the marginal product of capital fell from a high of 0.21 in 2001 to 0.06 in 2003. Hence, it is common practice to use the long-term averages of countries when using the ICOR to calculate the amount of investment needed to achieve targeted growth rates by estimating the investment requirement as product of the target growth rate and the ICOR. The resulting financing gap can then be calculated as the difference between available financing for investment from domestic saving and the required investment, which in turn could be filled by foreign financing and/or FDI. While growth accounting does not presuppose causality, and the Harrod-Domar model was never intended as a growth model, use of the ICOR and financing gap framework helps to focus attention on what is feasible and important in framing policy objectives and policy instruments.

Table 5.2
Uzbekistan: Investment Required for 8.25% Economic Growth in 2007-2010

ICOR	Savings Share of GDP	Real GDP Growth
3	24.8%	8.25%
4	33.0%	8.25%
5	41.3%	8.25%
6	49.5%	8.25%
7	57.8%	8.25%
8	66.0%	8.25%

The four-year Incremental Capital Output Ratio (ICOR) was 9 in 2000-03, whereas the LSS investment and growth targets for 2007-2010 imply an average ICOR of less than 3 at existing savings rates. Figure 5.1 shows the various savings rates that would be associated with the 8.25 percent economic growth rate targeted by the LSS under various ICORs. Table 5.3 provides details about the implied savings rates and associated investment growth rates under the LSS economic growth targets for Uzbekistan in 2004-2010. Uzbekistan's savings rate would need to increase from around 30 percent in 2004 to over 40 percent by 2007-2010, rates that are clearly outside of the realm of what can reasonably be expected to occur in the economy, especially within a relatively short period of time. At those savings rates, gross domestic investment would accelerate from 6.5 percent in 2004 to 11 percent by the end of the decade.

Table 5.3
Uzbekistan: Investment Requirements Implied by LSS Targets for 2004-2010 with ICOR of 5.0

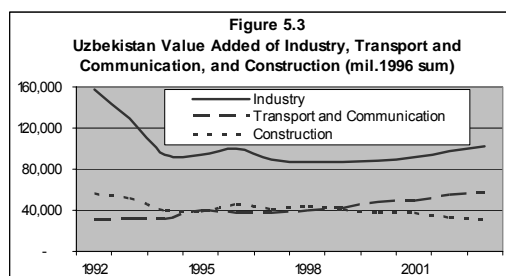
	Actual Figures				LSS Targets			
	2000	2001	2002	2003	2004	2005	2006	2007-2010
GDI to GDP	0.20	0.21	0.22	0.21	0.30	0.32	0.38	0.41
GDI growth rate (%)	-8.8%	12.2%	6.3%	-3.2%	6.5%	7.7%	8.1%	11.0%
GDP growth rate (%)	3.2%	4.1%	3.1%	1.5%	6.0%	6.4%	7.5%	8.3%
Savings Rate (%)	19.4%	20.0%	22.4%	26.7%	30.0%	32.0%	37.5%	41.3%
ICOR	6.1	4.9	7.2	17.8	5.0	5.0	5.0	5.0

Note: GDI = gross domestic investment; GDP = gross domestic product; ICOR = incremental capital output ratio.

Improvements in investment efficiency levels envisaged under the LSS may therefore be overly ambitious for the targeted GDP growth rate of 8.25. At existing savings rates, an ICOR of 2.85 does not seem to be feasible in the medium term from the empirical evidence for the ICORs of some countries whose growth experiences are similar to those of Uzbekistan, so it is unlikely that Uzbekistan will be able to sustain an ICOR that is below 3. Ultimately, whether or not increased savings could generate higher growth rates in Uzbekistan will depend on the ability and willingness of the Government and the private sector to increase their savings rate, the capacity of institutions to effectively channel increased savings into investment activities, and the creation of a favorable investment environment for both domestic and foreign investors.

C. Sector- Growth Constraints and Opportunities

Agriculture - The economy of Uzbekistan depends heavily on agriculture, with cotton accounting for a large portion of the gross value of agricultural production. Under the Soviet system, cotton cultivation was promoted at the expense of other commodities, with the result that Uzbekistan had to import large quantities of grains and other food items. Production has increasingly shifted from state-owned farms before independence, to cooperatives, or *Shirkats*, that have been increasingly privatized in the last five years. Private farms represented 56.5 percent of the total land under cultivation in 2003, compared with less than have that share in 2000.³³ About 40 percent of the country's cultivated area is dedicated to cotton planting, of which over one-quarter was owned by private farms in 2003. Nevertheless, the Government controls production of both the private and public-held farms by setting output targets that are determined by the amount of fertilizers distributed to the farms and various other norms such as labor inputs and number of machine hours. The Government also administers prices and provides subsidized services and farm credits.³⁴ The Ministry of Cotton Processing Industry, or *Uzkhopkopromsbyt* (UZB), implements government policies determining the provision of inputs, including the procurement and processing of cotton seed, and the marketing of the fiber. While nearly all cotton farmers had to sell their harvest to UZH prior to 2002, since then farmers have been allowed to sell up to 50 percent of their output on the free market.



Source: IMF, Statistical Appendix, May 2004; IMF, Selected Issues and Statistical Appendix; IMF, Recent Economic Developments, January 2000; IMF, Recent Economic Development, August 1998; IMF, WEO Sep 2004

Developments, January 2000; IMF, Recent Economic Development, August 1998; IMF, WEO Sep 2004

Although Uzbekistan is the second largest world exporter of cotton after the United States, its production has been falling steadily since independence.³⁵ The US dollar value of cotton exports fell from an annual average of 1,400 in the 1990s to nearly one-half that amount in 2003 because of the Government's efforts to reduce its dependence on foreign supplies of food grains and therefore promote domestic production of wheat and other food grains. Cotton production has also suffered from low yields resulting from water shortages and high salinity levels in the soil throughout the Soviet era, as well as the lack of investment incentives for farmers. Prices paid to

cotton farmers are inevitably lower than the world market prices and, according to IMF

³³ Based on data from State Statistics Committee of Uzbekistan, Statistical Review of the Republic of Uzbekistan, January-September 2004.

³⁴ For details, see IMF, Selected Issues, May 2004.

³⁵ The state-owned trading companies operating under the Agency of Foreign Economic Relations (AFER) process exports of cotton fiber, and its transportation within the country is handled by UZH, while the AFER-owned Uzvneshtrans (UZV) agency handles transportation outside the country.

calculations, the average price paid to farmers represented less than 40 percent of the world price for cotton in 2003.³⁶ Recent improvements in world cotton prices have accrued to the Government rather than farmers, and while the Government's decision to allow farmers to keep 50 percent of their production may promote investment in the sector, it will not be effective until storage, transport and marketing facilities are privatized. Other important products in agriculture include grains, primarily in the form of wheat, oats, corn, barley, and rice, fodder crops, as well as fruits and vegetables in the form of potatoes, tomatoes, grapes and apples. While productivity in the cultivation of these products has a large potential for improvement, efforts to diversify the economy and promote the expansion of grains and fruits and vegetables are constrained by the existence of an agricultural infrastructure that is geared towards cotton production in terms of its irrigation system, farm machinery and land distribution.

Industry - Uzbekistan's major industrial activities are power and fuel, non-ferrous metallurgy, agro-industry, chemicals, mainly in the form of synthetic ammonia and fertilizers. Raw material extraction and processing dominate the industrial sector. Gold is one of the country's most abundant and strategic resources. Before independence Uzbekistan accounted for about one-third of Soviet gold production, at a time when the Soviet Union ranked third in world gold production. It also has large deposits of copper, zinc, lead, tungsten, molybdenum and uranium that are used in well-developed metallurgical processing industries. The country is also rich in energy resources and it has large reserves of natural gas to support its electrical power industries. The country's heavy industry is directed towards the production of agricultural machinery, especially equipment for cotton cultivation and the textile industry. The predominant light industries are processing of cotton, wool, and silk into fabric for export, and food processing. Food processing has diversified to some degree, with some specialization in the production of dried apricots, raisins, peaches, as well as cottonseed oil, wine, and tobacco.

Uzbekistan's gas reserves rank among the 15 largest in the world, and state oil and gas company *Uzbekneftegaz* accounts for virtually all of the oil and gas drilling in the country. Foreign oil and gas investments have been limited compared with countries surrounding the Caspian Sea because of limited privatization in the sector, and the country's difficult business climate.³⁷ Although oil production, including that of natural gas liquids, has increased significantly since independence, lack of export pipelines in the Caspian Sea region makes it difficult to sell its oil on world markets. Uzbekistan's only current option is to reverse an existing crude oil pipeline that brings oil from Omsk, Russia to Uzbek refineries. Gas production has also expanded rapidly and the country is now the eighth largest producer in the world, and most of the gas is consumed domestically for power generation and for petrochemicals. As part of an effort to become self-sufficient in energy, Uzbekistan has been developing domestic uses for gas, including the use of compressed natural gas (CNG) to fuel cars and trucks. Increasing domestic consumption of gas has lowered supplies available for export, which have been further discouraged by the lack of export pipeline alternatives to the Central Asia-Central Russia pipeline connecting Uzbekistan to Russia and other FSU countries.

³⁶ IMF, Selected Issues. May 2004.

³⁷ The recent private sector assessment by the ADB (Private Sector Development in Uzbekistan. Report prepared by C. Lin under RSC No. C31822-REG (Regional Private Sector Assessment). October 2004) points to disincentives to foreign investment by the heavy and aggressive tax burden, and widespread bureaucratic and administrative obstacles to doing business that includes corruption and a lack of transparency in business transactions.

VI. MEDIUM-TERM GROWTH PROSPECTS UNDER ALTERNATIVE REFORM SCENARIOS

A. The Uzbekistan Macroeconomic Simulation Models

The indicative forecasts of Uzbekistan's economy presented in this report have been generating by two macroeconomic simulation models that were developed as part of the present economic growth analysis for Uzbekistan.³⁸ The first is a Revised Minimum Standard Model - eXtended (RMSM-X) that provides a simple spreadsheet-based tool for feasibility and sustainability analysis of the economy of Uzbekistan. The spreadsheet model and user guide are contained in companion reports to this study.³⁹ Briefly, the model concentrates on the demand side of the economy using an economy-wide consistency framework that includes the national income accounts, the balance of payments, the consolidated government account, the monetary survey and a rest of the economy account. A key element of the adjustment process in the model occurs through the user-defined efficiency of capital, which is measured by the incremental capital-output ratio (ICOR). The ICOR is, in fact, lagged since there is no simultaneity in the system of equations, i.e., the system solves each equation recursively rather than simultaneously.

With many of the key economic components predetermined in the RMSM-X model, there needs to be at least one key variable that balances the user-defined economic growth rate with that of many of the user-defined GDP components. In the RMSM-X model it is the consumption component that serves as a residual to balance the user-specified economic growth of the country with many of the GDP components, once the ICOR determines the level of investment that will drive much of the economic growth. Additionally, since consumption is separated into government and private, there is a further assumption made by the model, depending on whether Public Closure or Private Closure is selected in the menu. When the user specifies Public Closure, private sector is predetermined and government consumption becomes the residual; alternatively when Private Closure is selected, it is private consumption that becomes the residual in the system of equations. The user can, of course, adjust the individual component assumptions until the desired results are attained, for example, to reduce the amount of net foreign borrowing to a desired level over the projection period.

The present RMSM-X model for Uzbekistan has been modified from other models of this type in a number of ways to accommodate existing data constraints of the country. Essentially, a number of key economic indicators used in Uzbekistan replaced some of the standard indicators used in the RMSM-X model, while others used in the RMSM-X model for which data were not available in Uzbekistan needed to be eliminated and some of the relationships in the system altered to accommodate the changes.

The advantage of the RMSM-X model for Uzbekistan is that requires no time-series data or estimation of behavioral relationships that would require those times series. It instead relies on data for a single point of time that is used as the base-year start point for projections that depend on a large number of assumptions about expectations for key variables in the economy. Indeed, in the basic version of the model, assumptions are made about the overall economic growth rate of the economy and driving variables like the incremental capital-output ratio (ICOR).

³⁸ ADB, *A Macroeconomic Simulation Model for Uzbekistan: Technical Guide to Macroeconomic Applications*. Manila. Interim Report. December 2004.

³⁹ For the user guide to the spreadsheet model entitled !UZB_Rx.xls, see ADB, "A RMSM-X Based Macroeconomic Simulation Model for Uzbekistan: User Guide". Manila. January 2004.

The second macroeconomic simulation model that has been developed for Uzbekistan also provides a parsimonious representation of the macro economy using a simple spreadsheet framework for making rational and consistent predictions about Uzbekistan's overall economic activity, the standard components of the balance of payments, the expenditure concepts of the national accounts, and the financial sector balances. The model applies a conventional framework to the economic system and, as a policy-oriented system it incorporates key parameters for policy formulation.

At the onset, this second model has been designed as a parsimonious representation of the underlying data generating system for key behavior relationships using behavioral equations. Its conceptual approach is based on conventional economic theory, although the empirical specification of the conventional theory is not well established since there are numerous approaches to the specification, estimation and testing procedures in standard macro models. Nevertheless, the use of theory-consistent structural models, particularly those based on systems of dynamic time-series equations, has been found to forecast better for long horizons, especially when the equations take the form of the error-correction mechanism (ECM). As a result, a medium-size model was developed for Uzbekistan that provides details as to the overall structure and operation of the economy, and that can be modified and expanded according to the needs of the authorities and the ADB. This approach is a considerable expansion of other RMSM-X based model for Uzbekistan that provided only limited forecasting and simulation capabilities for the economy.

This second macroeconomic model aims to provide a theory-consistent representation of the general structure of the economy of Uzbekistan and, as such, it offers real and financial sector forecasting and policy simulation capabilities targeted to the needs of the ADB. The model serves a dual purpose. First, it provides a framework for

making rational and consistent predictions about overall economic activity in Uzbekistan, the standard components of the balance of payments, and the production and expenditure concepts of the national accounts. Secondly, it offers a means of quantitatively evaluating the impact of exchange rate policies and other policy changes on the economy of Uzbekistan, and assessing the feedback effects that changes in key macroeconomic variables of the economy produce in other sectors. These two objectives are, of course, closely related since the capacity to make successful predictions depends on the model's ability to capture the interrelationships between

Box 6.1: Early Macroeconomic Simulations Models for Uzbekistan

Earlier macroeconomic simulation models for Uzbekistan have been RMSM-X based since data limitations prevented the development of systems of equations using behavioral equations estimated from time-series data. The first was a RMSM-X model constructed in 1997 with minimal data available at that time.^{1/} Like the present RMSM-X model, it did not include a debt block to calculate various scenarios of the country's indebtedness. The second model was a three-gap model designed to calculate the need for additional foreign savings based on the so-called savings/investment gap calculated by these types of models.^{2/} Like other gap models, it was used to calculate the additional foreign exchange requirements for purchasing the imports that were critically needed in the growth process. In the case of Uzbekistan, that model was used to examine the impact of the elimination of the multiple exchange rate system that existed at the time that the model was constructed. It simulated the effects of the unification of the exchange rate, as well as the implementation of current account convertibility during the forecast period. Neither of these models has been maintained or updated since their original estimation.

^{1/} See K.M. Muradova, "Experience of Uzbekistan on constructing and developing macroeconomic models for the sake of sustainable economic growth". Presented at the CER – ESCAP Inter-Regional Seminar on the Analysis for Macroeconomic Policy and modeling in Central Asian economics, held on 20-22 June 2001.

^{2/} See T. Ranaweera, "Alternative Paths to Structural Adjustment in Uzbekistan in a Three-gap Framework". World Bank Policy Research Working Paper 3145, October 2003.

the real and financial sectors of the economy.

Both of the models developed for Uzbekistan have sought to account for the structure of the economy of Uzbekistan, the availability of data, and the degree of stability of time-series estimates of parameters during the country's transition process. The nature of the transition process of the economy has motivated the design of models that can grow and evolve with the economy. The present models therefore aims to provide a mechanism to link policies and targets while, at the same time, providing an easy and adaptable means of both forecasting key macroeconomic variables and simulating the interrelationships between economic policy initiatives.

B. Baseline Projections with Target Growth Rates

The baseline projections for Uzbekistan adopt the Government's economic growth targets for 2008-10 described in Chapter V, Section A above, using the RMSM-X model to analyze the implications for key economic variables. To achieve the targeted annual growth rate of 8.0 to 8.5 percent in 2007-10, the 2004 estimated growth rate of 4.5 percent is raised to 6.4 and 7.5 percent in the 2005-06 transition period, in line with the LSS assumptions (Republic of Uzbekistan, 2004). Achievement of those targets growth rates will, of course, require continued and, in some areas, accelerated domestic policy reforms, private sector development, an improved investment climate and a strong external demand for Uzbekistan's major exports drive by improvements in the country's international competitiveness. The improved investment climate would be reflected in a deceleration of inflation to around 5 or 6 percent by 2007-10, according to the LSS forecasts. Those rates would require a substantial effort on the part of the monetary authorities since inflation, measured by the GDP deflator, was estimated at around 20 percent in 2004, based on estimates for the first three quarter of the year (CEEP, 2004).

The relationship between the targeted growth and required investment is reflected in the assumptions made about the *ICOR* indicator over the projected period. In the long run, the relationship is stable, though year-to-year levels can vary greatly for countries in transition such as Uzbekistan. Even though the current *ICOR* for Uzbekistan is high and a targeted economic growth rate of 8.5 percent by the end of the decade is ambitious, an initial *ICOR* of 5.0 improving to 3.8 provides reasonable forecasts for a realistic growth rate of investment (average of under 12 percent in 2008-10 compared with half that rate in 1994-2003), as well as investment as a ratio to GDP (average of 26 percent in 2005-10 versus 21 percent). The ratio of investment to GDP is expected to rise from around 21 percent to 25 percent by the end of that decade, with the increase originating in both the private and public sectors.

Under the existing exchange rate regime, it is likely that the authorities will continue to devalue the sum in line with changes in the ratio between foreign and domestic prices in order to keep the real exchange rate constant. Foreign prices are measured by the World Bank's manufactured unit value (MUV) index and their expected rise by an average of 3.3 percent over the remainder of the decade is based on the recent global economic prospects projects by the World Bank (2005). Under these conditions, the authorities would need to devalue the sum by nearly 8 percent in 2005 and gradually reduce the annual devaluation rate to around 2.5 percent by the end of the decade.

Developments in the external sector will be driven by global market conditions and the Government's trade and exchange rate policies. In the global market, the World Bank's medium-term forecast is for the world's real GDP to maintain a robust growth through 2005-2010, but at a more modest rate than in 2004.⁴⁰ The recently released forecast by the World

⁴⁰ IMF, World Economic Outlook, September 2004. Washington, DC. 2005. Available:

Bank shows overall economic growth slowing in 2005 and 2006 to 3.2 percent in each year, down from 4 percent in 2004. The major factors accounting for the slowdown are a deceleration in U.S. and E.U. economic growth rates, moderating demand for oil and other primary commodities because of recent price hikes, slower investment growth because of higher interest rates, and efforts by China to moderate its growth. The longer term forecast is for economic growth to remain strong and average 3 percent a year through 2015.

The assumptions that have been made relate to the anticipated price and volume expansion for key export products and the expected price rises for major import categories, as well as the income and exchange rate elasticities of exports and imports. The growth rates of key export products, namely, cotton fiber, gold and energy, are based on the average annual growth rates of those products in the recent past, while their international prices are based on the World Bank's commodity price projections used in the recent global economic prospects projects by the World Bank (2005). The elasticity estimates are based on empirical estimates of price, income and exchange rate elasticities estimated for the world commodity markets of these products.⁴¹ With these parameters and expected price and volume movements, imports of goods and nonfactor services expand somewhat faster than that of exports and by 2010 the resource balance contracts to one-half of its 2003 level.

Table 6.1
Prices of Uzbekistan's Major Exports,
Actual 2000-2004 and Forecast 2005-2010.
(1990=100; prices deflated by MUV)

	Cotton	Gold	Energy
2000	134.0	287.1	127.0
2001	112.2	287.3	112.8
2002	109.4	332.8	117.0
2003	139.9	363.4	126.3
2004	133.1	380.2	162.0
2005	143.6	359.2	150.7
2006	144.9	336.4	134.4
2007	144.6	309.9	125.0
2008	144.9	285.0	116.3
2009	144.9	283.4	107.3
2010	144.9	281.7	106.7
Avg1990-99	151.9	332.0	75.6
Avg2000-04	125.7	330.2	129.0
Avg2005-10	144.6	309.3	123.4

Note: MUV is the Manufactured Unit Value (MUV) index of the World Bank.
 Source: World Bank, Commodity Price Projects. Washington, DC, 2004.

The recent improvement in Uzbekistan's export performance and overall economic growth was largely driven by an increase in foreign market demand for cotton, gold and energy. While global economic conditions are likely to continue to play an important role in determining overall export demand for Uzbekistan's exports, export demand will continue to be dominated by developments in the country's major export products. In cotton, the International Cotton Advisory Committee (ICAC) expects production growth from areas in China, Brazil and Turkey to expand output by over one million tons more than global consumption and therefore put downward pressure on prices and overall import demand. The World Bank accordingly projects cotton prices to remain virtually unchanged in constant dollar terms during 2005-2010.⁴² At the same time, demand for imports is expected to remain sluggish during the remainder of this decade, following the sharp 8 percent decline of world imports in the 2004/05 season. The market for gold is also expected to retreat from its recent upsurge as new supplies enter the market in response to higher prices. The World Bank has therefore projected gold prices to fall back by over 25 percent in 2010 from their record high in 2004.⁴³ The energy market will continue to be dominated by developments in oil prices, which will remain highly volatile and characterized by uncertainty. Despite uncertainties, the World Bank projects prices to fall by over one-third of their 2004 levels by 2010 as a result of moderating demand and a continued

And World Bank, Global Economic Prospects 2005: Trade, Regionalism and Development. Available: <http://web.worldbank.org/external/default/main?theSitePK=538170&contentMDK=20279992&menuPK=538178&pagePK=64167689&piPK=64167673>

⁴¹ For estimates of the elasticities, see M. Lord, *Imperfect Competition and International Commodity Trade: Theory, Dynamics, and Policy Modelling* Oxford: Clarendon Press, 1991.

⁴² Measured in 1990 prices deflated by the Manufactured Unit Value (MUV) index of the World Bank.

⁴³ Measured in 1990 prices deflated by the Manufactured Unit Value (MUV) index of the World Bank.

growth in supplies of world supplies during the period.

In the capital account, net foreign direct investment (FDI) is predetermined and for Uzbekistan has been assumed to match 2003 growth of 7.7 percent. Prior to that year and beginning in 1995, FDI only had positive growth rates in two years, 1986 and 2001. With continued policy reforms and an improved domestic investment environment, FDI is likely to be attracted to the country's large natural resource base and human capital endowment. The other large item in Uzbekistan's capital account is 'capital not elsewhere classified', which covers errors and omissions and includes short-term capital flight. Since no discernible pattern could be identified for this item, its value was held constant over the forecast period. Finally, the stocks of foreign reserves are an important buffer against external shocks and as a means of maintaining the flow of imports. Gross official foreign reserves at the end of 2004 were estimated to represent somewhat over six months of imports, which represents a favorable level of reserves for the country. In the forecast period, it was assumed that those reserves would continue to represent six months of imports.

In the monetary sector the major assumptions relate to credit ratios, interest rates and the growth of the money supply. The credit ratios refer to the share of non-financial public sector credit relative to total credit, which is expected to decline with increased privatization of the economy, as well as credit from other financial institutions. For interest rates, a distinction is made between lending to the private sector and the government to reflect the risk differential. Interest rates on deposits have fallen below lending rates and the forecast assumes that this situation will not occur during the forecast period. The projected interest rates for time deposits assumes a lending-deposit spread equal to that of the past, and a 3 percentage point difference between demand deposits and time deposits. In the case of the money supply, it is assumed that the first year projection is equal to recent average levels for currency in circulation, M2 and time deposits, with the growth rate of each declining over the forecast period.

For the national income accounts, one of the key assumptions to be made is the level of public sector investment relative to total GDP. Since information on the level of public sector investment in Uzbekistan is not available, RMSM-X assumes that the initial estimate of public sector investment relative to total investment is the same as public sector consumption relative to the total. If it is assumed that this same ratio is maintained over the forecast period, then the level of private sector investment needed to generate the target level of overall economic growth will depend on the ICOR assumption made earlier. For the change in stocks, it is assumed that changes in the recent past are reduced continue in 2004-05 and that no further changes occur in the subsequent years.

The other key assumption in the model for the national income accounts is the level of private and public investment. Since total investment represents nearly three-fourths of total GDP, this assumption is central to the results that the model will generate for private sector investment. In the case of Uzbekistan, it is assumed that the ratio of private sector consumption relative to disposable income remains constant over the forecast period, as does the ratio of public sector consumption relative to GDP, which in both cases have been set to the base-year level, that is, 2003.

Equally important assumptions are also made for the growth in the value added of each of the major sectors in the production-side of the national income account, as well as the rise of prices that will take place over the forecast period. In most cases, the growth rate of each sector and its corresponding price for Uzbekistan has been based on the average growth rate in 2001-03. In the case of construction, which has experienced a substantial negative growth, a longer period of time was used, namely, 1996-2003, in order to ameliorate the decline.

On the current account side of the government accounts, the major predetermined items are tariffs, subsidies and transfers to the non-government sector. In the projections for Uzbekistan these items have been set relative to the actual value in the last year for which data were available, i.e., 2003. In the case of tariffs, the current rates of 3.2 percent based on the government revenue accounts appear to be substantially lower than that of over 15 percent reported by the IMF and based on information provided to them on the tariff structure.⁴⁴ Over the forecast period it is assumed that the 1.5 rise in the tariff rate in 2003 will continue through 2010 and that the tariff rate will then thereafter remain unaltered. A breakdown of tariff rates by product category, as specified in the standard RMSM-X model, is unavailable and the product-category rate has been assumed to be equal across all categories of the period in which the projections were made. Similarly, no information is available on subsidies or their corresponding rates and, as a result, the subsidy rate in the RMSM-X model has been set equal to zero. Finally, transfers to the private sector covering unallocated expenditures and recoveries have been assumed to be equal to that of 2003, at which time the transfer rate relative to GDP was nearly 18 percent.

The projections generated by these presuppositions about the future behavior of key variables in the Uzbek economy are summarized in Table 6.2.⁴⁵ The results show that investment will need to accelerate to nearly 12 percent a year in 2005-10 to achieve the target growth rate. With consumption expanding by over 6 percent a year in constant local currency terms, and the contribution of the resource balance remaining nearly unchanged, the investment share in GDP will need to increase from 22 percent to 26 percent over the forecast period.

The production side of the national income accounts simply reflects the assumptions that were made about the expansion of each sector during the forecast period, with net direct taxes acting as a residual between the target GDP growth rate and GDP at factor costs. Since it has been assumed that the average growth rate of the sector components approximates the target growth rate, with industry, transport and communications, and trade and other services leading the expansion, indirect taxes also need to expand but at a decelerating rate over the period of the forecast.

Inflation is projected to decelerate to 11 percent in 2005 and 7.5 percent in 2006, and average around 5.5 percent in 2007-10. Assuming that the Government's exchange rate policy objective is to maintain an unchanged real exchange rate, the nominal exchange rate would need to be devalued by 9 percent in 2005 and another 6 percent in 2007, after which a 3 percent average annual devaluation would be sufficient to maintain the real exchange rate constant over the forecast period. The growth in the supply of M2 decelerates considerably but the velocity of money remains nearly unchanged.

In the base forecast, the structure of public sector revenue and expenditures remain fairly constant. Both direct and indirect taxes, as well as non-tax revenue, remain nearly unchanged relative to GDP. Total expenditures relative to GDP decline from 38 to 33.5 percent over the period. The government deficit also improves and, in fact, moves from a deficit balance to a small surplus by the end of the period.

In the balance of payments, the growth of imports outpaces that of exports, despite a deceleration in the elasticity of imports with respect to income. On the export side, both cotton fiber and gold decrease in importance relative to total foreign exchange earnings, while energy and other types of exports become increasingly important as a source of foreign exchange. On

⁴⁴ The calculation of trade taxes is based on the level of trade taxes reported in the government accounts relative to total merchandise imports reported in the balance of payments converted to local currency. The unweighted average tariff rate is based on information contained in IMF, Staff Report for the 2003 Article IV Consultations. 28 April 2003.

⁴⁵ Further details can be found in the in the baseline forecast of DIT worksheet of the !UZB_Rx.xls model.

the import side, foreign exchange is increasingly directed at machinery and, to a lesser extent, energy relative to foodstuff and other types of goods.

Table 6.2
Uzbekistan Base-Line Projections of RMSM-X Model, 2005-2010

	Actual	Estimated	Projected		Average 2007-10
	2003	2004	2005	2006	
Growth Rate of GDP	1.5%	4.5%	6.4%	7.5%	8.2%
Absorption Growth	4.0%	4.4%	7.5%	8.5%	8.8%
Consumption Growth	-4.1%	3.4%	4.1%	5.7%	7.6%
Private Consumption	4.0%	-4.6%	-1.4%	8.0%	8.9%
Investment Growth (GDFI)	1.3%	12.3%	12.8%	11.8%	11.7%
Real Per Capita Growth:	1.5%	3.3%	5.1%	6.2%	6.9%
GOODS MARKET: As a Share of GDP in LCU:					
Resource Balance	5.9%	6.1%	6.8%	6.9%	6.3%
Exports	37.4%	36.6%	35.0%	33.2%	28.6%
Imports	31.5%	30.5%	28.3%	26.3%	22.3%
Consumption	73.3%	71.8%	68.5%	67.0%	67.3%
Private	54.8%	49.5%	44.7%	44.7%	46.4%
Public	18.5%	22.3%	23.7%	22.3%	20.9%
Investment	20.8%	22.1%	24.8%	26.2%	26.4%
Private	15.5%	15.9%	16.0%	16.5%	17.5%
Public	5.3%	6.2%	8.8%	9.7%	8.9%
Gross Domestic Savings	26.7%	28.2%	31.5%	33.0%	32.7%
Gross National Savings	20.8%	22.1%	24.8%	26.2%	26.4%
Government Savings	0.9%	4.4%	4.0%	3.9%	3.7%
Non Government savings	19.9%	17.7%	20.8%	22.3%	22.8%
VALUE ADDED: Growth Rates					
GDP at factor costs	1.5%	4.5%	1.0%	8.1%	8.8%
Agriculture	-3.0%	1.2%	-1.1%	7.5%	8.2%
Industry	5.7%	6.6%	7.6%	8.5%	9.2%
Construction	4.8%	1.2%	6.7%	7.0%	7.7%
Transport and Communication	-6.8%	-0.9%	-4.9%	9.0%	9.7%
Trade services	1.8%	3.4%	3.7%	8.5%	9.2%
Other services	-3.6%	3.4%	-1.7%	8.5%	9.2%
VALUE ADDED: As a Share of GDP in LCU					
GDP at factor costs	86.6%	82.0%	77.8%	78.3%	79.4%
Agriculture	28.8%	26.7%	24.8%	24.8%	24.8%
Industry	15.1%	15.3%	15.4%	15.6%	15.9%
Construction	4.5%	4.5%	4.5%	4.5%	4.5%
Transport and Communication	8.5%	7.6%	6.8%	6.9%	7.1%
Trade services	9.4%	9.1%	8.9%	9.0%	9.2%
Other services	20.4%	18.8%	17.4%	17.5%	17.9%
PRICES					
Nominal Exchange Rate (p.a.) (LCU/US\$)	1107	1280	1399	1487	1,611
Devaluation Rate (p.a.)		15.6%	9.3%	6.3%	3.0%
Terms of Trade	1.00	1.01	1.06	1.11	1.16
Inflation (p.a.)	14.8%	18.5%	12.0%	9.0%	5.6%
PUBLIC SECTOR					
Direct Taxes/GDP	7.2%	7.2%	7.2%	7.2%	7.2%
Indirect Taxes/GDP	15.9%	15.9%	15.8%	15.7%	15.6%
Non-Tax revenue/GDP	10.9%	11.4%	11.0%	10.9%	10.8%
Total Revenues/GDP	34.6%	34.4%	34.0%	33.9%	33.7%
Interest Payments/GDP	9.0%	8.4%	7.7%	7.0%	5.4%
Total Expenditures/GDP	43.5%	38.4%	37.0%	36.0%	34.3%
Government Deficit(-)/GDP	0.1%	-3.9%	-3.0%	-2.1%	-0.7%
Government Savings/GDP	0.9%	4.4%	4.0%	3.9%	3.7%
BALANCE OF PAYMENTS					
Export real growth rate (MERCH FOB)		1.8%	1.9%	1.9%	2.2%
Export real growth rate (GNFS)		1.8%	1.9%	1.9%	2.2%
Import real growth rate (MERCH CIF)		1.1%	4.4%	4.4%	3.5%
Import real growth rate (GNFS)		1.1%	4.4%	4.4%	3.5%

	Actual	Estimated	Projected		Average 2007-10
	2003	2004	2005	2006	
Import (Merch) to GDP elasticity		0.2	0.7	0.6	0.4
Import (GNFS) to GDP elasticity		0.3	0.7	0.6	0.4
Gross Reserves (months imports GFS)	10.2	11.3	11.2	11.0	10.6
Net Transfers: As a share of GDP in LC	4.2%	3.9%	3.6%	3.3%	2.6%
TRADE					
As share of Merchandise imports					
Foodstuff	11.0%	12.3%	11.5%	11.2%	11.0%
Energy Products	3.3%	3.4%	3.5%	3.5%	3.6%
Machinery	49.2%	47.0%	47.6%	48.2%	49.8%
Other	36.5%	37.3%	37.3%	37.0%	35.6%
As Share of Merchandise Exports:					
Cotton fiber	22.8%	22.1%	21.3%	20.6%	19.3%
Gold	14.0%	13.8%	13.4%	12.9%	12.1%
Energy	32.3%	32.8%	33.4%	33.9%	34.3%
Other	30.9%	31.3%	32.0%	32.6%	34.3%
ASSET MARKETS					
Money Growth	27.0%	34.1%	19.2%	17.2%	14.3%
Income-Velocity	11.7	10.8	10.8	10.8	10.8

C. Accelerated Reforms versus Slowdown of Reforms

Simulations of accelerated economic reforms, as well as a slowdown in those reforms have been carried out with the second econometric-based model of Uzbekistan in which behavioral equations provide a richer interaction of the relationships used to describe the economy and therefore rely much less on assumptions about the behavior of key variables needed in the RMSM-X model. As a first step in the exercise, the model has been calibrated to generate the same target growth rate of GDP as in the base forecast described above. Although GDP growth rates between the two models have been calibrated to be equal to one another, projections of the other key economic components differ because most are endogenous to the econometric model and most are exogenous in the RMSM-X model. For example, all the sector growth rates on the production side of the model are exogenous in the RMSM-X model and all are endogenous to the system of equations in the econometric model. The base solutions between the two models therefore match one another in terms of overall economic growth but differ in the behavior of their components. Table 6.3 presents the base solution of the econometric model and compares it with that of solutions generated from alternative economic policy reforms of the Government.

An accelerated set of policy reforms would consist of the following core initiatives: (a) an overall reduction in consolidated government expenditures; (b) an accelerated devaluation of the nominal exchange rate; and (c) a deceleration in the growth rate of the supply of broad money. With respect to fiscal policy, both the RMSM-X and econometric models assume a 6 percent average annual growth in fiscal expenditures in the base-line forecast. Under an accelerated economic reform program, the growth of annual fiscal expenditures is cut by one-fifth to less than 5 percent. For the exchange rate policy, it is assumed that the sum to U.S. dollar exchange rate is devalued by 5 percent less than in the base-line forecast. For monetary policy, the rate of growth of M2 is assumed to accelerate by 20 percent more than in the base-line forecast.

Table 6.3
Uzbekistan: Key Macroeconomic Indicators under
Accelerated Economic Policy Reforms, 2005-2010
(Annual percent changes)

	Slowdown	Sustained	Accelerated
Real GDP	7.3%	7.8%	8.3%
Real GDP per capita	5.8%	6.3%	6.8%
Export Growth	8.3%	9.3%	11.0%
Import Growth	7.6%	8.3%	9.2%
Agricultural growth rate	4.6%	4.9%	5.1%
Industrial growth rate	8.8%	9.0%	9.2%
Trans.&Com.	3.4%	3.5%	3.6%
Construction	4.3%	4.3%	4.3%
Trade and Other Services	12.6%	13.7%	14.7%
CPI Index	15.8%	14.0%	12.1%
Investment growth rates	7.9%	8.3%	8.7%

Under these conditions, the forecasts for Uzbekistan show there would be a substantial improvement in growth, specifically by 0.5 percentage points each year. Specifically real GDP would expand at an average annual rate of 8.3 percent, compared with 7.8 percent in the base-line forecast. The higher rate of devaluation would cause export growth to accelerate and imports to expand by less than they would have with just the improved domestic income growth. The result would be an improved trade balance. The reduction in the growth of current expenditures

by the Government would lower the deficit below what it would otherwise have been, and the fiscal deficit reduction would also help to lower the rate of inflation from 14 percent to around 12 percent over the forecast period. Overall, the forecast shows that modest improvements in policy reforms could lead to significant gains for the economy in terms of both stability and growth.

The alternative projections based on a slowdown of economic reforms assume a 20 percent increase in the rate of growth of government expenditures, from an average of 6 percent to somewhat over 7 percent, a deceleration in the growth rate the money supply from 15.5 to 13 percent and a slower rate of devaluation, from 16 to 15 percent during the period. The external sector assumptions related to foreign market conditions are the same as those for the earlier forecasts, that is, a real GDP growth for Uzbekistan's major trading partners equal to 3.25 percent in 2005-2006 and 3 percent in the remainder of the decade.

The symmetrical nature of the model ensures that the results of the slowdown are symmetrical to those under an acceleration of economic policy reforms. Under the slowdown, Uzbekistan would grow by half a percentage less in its GDP growth rates, largely driven by the continued expansion of government expenditures. The government driven demand expansion would, however, result in a reduced savings rate. Inflation would be nearly two percentage points higher than in the base-line solution.

D. Improvements in International Competition

An improvement in the international competitiveness of Uzbekistan based on macroeconomic policy variables would be brought about through changes in the real effective exchange rate (RER). In the present forecast, the nominal exchange rate is devalued by the same rate as in 2004, that is, 11 percent, substantially improving the competitiveness of the country. As expected, exports accelerate to around 8 percent a year from nearly 6 percent a year in the aforementioned scenario of continued reform summarized in Section A. While the demand for imports would decrease somewhat because of higher relative prices for foreign goods, the acceleration in the country's economic growth would lead to a near 2 percentage point annual expansion in imports. Under these conditions the Government could also increase trade taxes to further improve the fiscal deficit, as well as improve the trade balance. There would also be a modest improvement in the savings rate and a substantial expansion in the growth rate of investment following the improved international competitive position of the country.

Table 6.4
Uzbekistan: Key Macroeconomic Indicators with Improved International Competitiveness
and Continued Policy Reforms, 2005-2010
(Annual percent changes)

	2004 Est.	2005-2006	2007-2010
Real GDP	4.5%	4.2%	6.7%
Real GDP per capita	3.3%	3.0%	5.5%
Export Growth	4.5%	6.5%	9.3%
Import Growth	2.5%	2.7%	8.2%
Agricultural growth rate	5.0%	-5.1%	4.2%
Industrial growth rate	2.0%	3.2%	9.4%
Trans.&Com.	0.0%	0.9%	3.3%
Construction	0.0%	1.7%	5.3%
Trade and Other Services	2.1%	13.1%	11.4%
Real effective exchange rate	-6.4%	-10.0%	-9.7%
CPI Index	15.1%	11.9%	12.3%
Gross savings, % of GDP	20.4%	20.5%	18.9%
Investment growth rates	2.5%	3.1%	10.0%
Consolidated Government Revenue minus Current Expenses, % of GDP	0.2%	-0.3%	-0.6%

E. Improvements in the Efficiency of the Private Sector Production

There is considerable scope for accelerating economic growth through more efficient investment activities. As mentioned in Chapter 3, Uzbekistan's ICOR has declined from around 10 in 1996 to 5 in 2001, suggesting a low productivity of investment in the mid-1990s that have since improved. It nevertheless rose in the 2002-03, indicating a recent decline in productivity, implying continued inefficiencies associated with low-return investments caused by domestic and external distortions associated with protectionist measures, the overvalued currency, and excessive regulations.

Improvements in Uzbekistan's efficiency are likely to accompany the development of the private sector and the diversification of the economy into the production of high value-added goods and services. Without improvements in efficiency, achievements of the Government's ambitious growth targets for 2007-2010 would need to derive from a rapid and widespread accelerated investment, a result that is probably unachievable in the medium term because of the magnitude of the acceleration that would need to be attained. For example, based on the RMSM-X model,

Table 6.5
Uzbekistan Simulations of Improved Production Efficiency by Private Sector

	BASE-LINE FORECAST			EFFICIENCY IMPROVEMENT			DIFFERENCE		
	2005	2006	Average 2007-10	2005	2006	Average 2007-10	2005	2006	Average 2007-10
Growth Rate of GDP	6.4%	7.5%	8.2%	6.4%	7.5%	8.2%	0.0%	0.0%	0.0%
Absorption Growth	7.8%	9.0%	8.7%	6.4%	8.5%	8.4%	-1.4%	-0.4%	-0.3%
Consumption Growth	1.8%	1.8%	7.1%	9.1%	5.7%	10.2%	7.3%	3.9%	3.1%
Private Consumption	0.1%	-0.4%	6.6%	10.1%	5.1%	10.9%	10.0%	5.5%	4.3%
Investment Growth (GDI)	23.9%	24.7%	11.4%	-0.9%	16.9%	3.1%	-24.8%	-7.8%	-8.3%
Resource Balance (share of GDP)	5.6%	5.4%	5.0%	6.7%	6.8%	6.9%	1.1%	1.4%	1.9%
Exports	35.0%	33.2%	28.6%	35.0%	33.2%	28.6%	0.0%	0.0%	0.0%
Imports	29.4%	27.7%	23.6%	28.3%	26.4%	21.7%	-1.1%	-1.4%	-1.9%
Consumption (share of GDP)	63.4%	59.7%	59.9%	68.5%	67.0%	71.2%	5.1%	7.4%	11.3%
Private	45.7%	42.0%	41.7%	50.6%	49.2%	53.1%	5.0%	7.2%	11.4%
Public	17.7%	17.6%	18.2%	17.9%	17.8%	18.1%	0.1%	0.2%	-0.1%
Investment (share of GDP)	31.0%	34.9%	35.0%	24.8%	26.2%	21.9%	-6.2%	-8.7%	-13.1%
Private	28.9%	33.1%	33.7%	22.7%	24.4%	20.6%	-6.2%	-8.7%	-13.1%
Public	2.1%	1.8%	1.3%	2.1%	1.8%	1.3%	0.0%	0.0%	0.0%
Gross National Savings	31.0%	34.9%	35.0%	24.8%	26.2%	21.9%	-6.2%	-8.7%	-13.1%
Government Savings	4.0%	3.9%	3.7%	4.0%	3.9%	3.7%	0.0%	0.0%	0.0%
Non Government savings	26.9%	31.0%	31.3%	20.8%	22.3%	18.2%	-6.2%	-8.7%	-13.1%

achievement of the Governments growth targets with an ICOR of 7, as was the case in 2002, would imply an average annual growth of investment equal to 20 percent a year in 2005-10, with higher growth rates at the beginning of the period than in the latter years. Moreover, the share of private sector investment in GDP would need to rise from 28 percent in 2004 to 47 percent by the end of the decade, a situation that is clearly unattainable. A more viable solution is therefore to achieve the needed growth of investment by improving the efficiency of investment activities undertaken by the private sector.

Table 6.5 shows the implications of improvements in private sector investment activities on the way that economic growth goals would be achieved. With an ICOR of 5 in the base solutions, achievement of the growth target would come about through very high investment growth rates, averaging around 25 percent in 2005-06, followed by average rates of 11 percent in the latter years. In contrast, with gradual improvements in the ICOR so that by 2010 it reached 3 implies that private investment growth would need to average 8 percent in 2005-06, followed by an average annual growth in 2007-10 of only 3 percent. Moreover the share of private sector investment relative to GDP would remain nearly unchanged, with consumption of the private sector expanding somewhat during the period.

STATISTICAL APPENDIX

Appendix Table 1														
Uzbekistan: Key Indicators														
	Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Population	Thousands	21,360	21,853	22,282	22,690	23,130	23,561	23,954	24,311	24,650	24,964	25,271	25,565	Na
Population Growth	Percent	2.4%	2.3%	2.0%	2.0%	1.9%	1.8%	1.7%	1.5%	1.4%	1.3%	1.2%	1.2%	Na
Nominal GDP	Billion sum	0.4	5.1	64.9	303	559	977	1,416	2,1289	3,252	4,925	7,450	9,664	11,401
Real GDP 1996 Prices	Billion sum	na	na	na	550.3	559.1	573.0	585.1	605.1	624.5	649.9	670.0	680.1	697.1
Real GDP Growth	Percent	-11.1%	-2.3%	-4.2%	-0.9%	1.6%	2.5%	2.1%	3.4%	3.2%	4.1%	3.1%	1.5%	2.5%
GDP Per Capita	US dollars	166.9	255.5	296.1	454.2	609.7	628.9	624.0	700.1	557.0	466.8	382.6	341.3	357.3

Sources: IMF, World Economic Outlook (WEO), September 2004; IMF, Statistical Appendix, May2004; IMF, Selected Issues and Statistical Appendix, May 2003.

Appendix Table 2 Comparison of Real GDP Calculations Using Relative and Base-Year Prices												
	IMF: Base-Year (1996=100) Real GDP											
	Price Deflator			Real GDP				Nom GDP				
	WEO Deflator (1)	WEO Deflator 1996=100 (2)	Percent Change (3)	WEO's Constant Sum (4)	1996=100 (5)	Percent Change (6)	Real value, Bns of 1996 sums (7)	Sum Bn (8)	Percent Change (9)			
1995	583,584	55.0		0.0520	98.1	-0.9%	550.3	303				
1996	1,060,570	100.0	81.7%	0.0530	100.0	1.6%	559.1	559	85%			
1997	1,807,869	170.5	70.5%	0.0540	101.9	2.5%	573.0	977	75%			
1998	2,566,816	242.0	42.0%	0.0550	103.8	2.1%	585.1	1,416	45%			
1999	3,730,985	351.8	45.4%	0.0570	107.5	3.4%	605.1	2,129	50%			
2000	5,522,627	520.7	48.0%	0.0590	111.3	3.2%	624.5	3,252	53%			
2001	8,037,980	757.9	45.5%	0.0610	115.1	4.1%	649.9	4,925	51%			
2002	11,792,951	1111.9	46.7%	0.0630	118.9	3.1%	670.0	7,450	51%			
2003	15,071,186	1421.0	27.8%	0.0640	120.8	1.5%	680.1	9,664	30%			
2004	17,346,668	1635.6	15.1%	0.0660	124.5	2.5%	697.1	11,401	18%			
GOU: Relative Price-Based Real GDP												
	Nom GDP				Price Deflator			Real GDP				
	Value, Bn of Sum (10)	Index, previous year=100 (11)	Index, 1996=100 (12)	Percent Change (13)	Implicit Relative Price, previous yr=100 (14)	Percent Change (15)	Price Index 1996=100 (16)	Relative price based GDP (17)	Percent Change (18)	Real GDP Index 1996=100 (19)	Percent Change (20)	Real value, Bns of 1996 sums (21)
1995	303							99.1	-0.9%	98.3		
1996	559	184.6	100.0		181.6		100.0	101.7	1.7%	100.0	1.7%	559.10
1997	977	174.7	174.7	75%	166.1	66.1%	166.1	105.2	5.2%	105.2	5.2%	588.17
1998	1,416	145.0	253.3	45%	139.0	39.0%	230.9	104.3	4.3%	109.7	4.3%	613.46
1999	2,129	150.3	380.7	50%	144.1	44.1%	332.7	104.3	4.3%	114.4	4.3%	639.84
2000	3,256	152.9	582.3	53%	147.3	47.3%	490.2	103.8	3.8%	118.8	3.8%	664.16
2001	4,929	151.4	881.6	51%	145.3	45.3%	712.3	104.2	4.2%	123.8	4.2%	692.05
2002	7,469	151.5	1336.0	52%	145.4	45.4%	1035.8	104.2	4.2%	129.0	4.2%	721.12
2003	9,664	129.4	1728.5	29%	123.9	23.9%	1283.7	104.4	4.4%	134.7	4.4%	752.85
2004	12,202	126.3	2182.4	26%	115.9	15.9%	1488.3	108.9	8.9%	146.6	8.9%	819.85

Notes:

- (1) From IMF, World Economic Outlook (WEO), September 2004.
- (2) $[P_t / P_{96}] * 100$, ie, price deflator where 1996=100
- (3) Year-to-year %age change of column 2
- (4) From IMF, World Economic Outlook (WEO), September 2004.
- (5) $[(P_{96} * Q_t) / (P_{96} * Q_{69})] * 100$, ie, GDP in 1996 prices/GDP value in 1996 *100
- (6) Year-to-year %age change of column 2
- (7) $[(P_t * Q_t) / (P_t * P_{96})] * (1/100)$, ie, nominal GDP (col.8) / Price deflator, base 1996 (col. 2).
- (8) From IMF, World Economic Outlook (WEO), September 2004.

Appendix Table 2

Comparison of Real GDP Calculations Using Relative and Base-Year Prices

- (9) Year-to-year %age change of column 8
- (10) From Center for Effective Economic Policy (CEEP), Uzbekistan Economy No. 6, September 2004, Table 1.1.1.
- (11) $[(P_t * Q_t) / (P_{t-1} * Q_{t-1})] * 100$, ie, nominal GDP /nominal GDP in previous year *100
- (12) $[P_t / P_{96}] * 100$, ie, price deflator where 1996=100
- (13) Year-to-year %age change of column 12.
- (14) $\{[(P_t * Q_t) / (P_{t-1} * Q_{t-1})] / [(P_{t-1} * Q_t) / (P_{t-1} * Q_{t-1})]\} * 100$, ie, nominal GDP (col 10) /relative priced-based real GDP (col16) *100
- (15) Year-to-year %age change of column 14
- (16) $[P_t / P_{96}] * 100$, ie, price deflator where 1996=100
- (17) From Center for Effective Economic Policy (CEEP), Uzbekistan Economy No. 6, September 2004, Table 1.1.1.
- (18) Year-to-year %age change of column 16
- (19) $[(P_{96} * Q_t) / (P_{96} * Q_{69})] * 100$, ie, GDP in 1996 prices/GDP value in 1996 *100
- (20) Year-to-year %age change of column 17
- (21) $[(P_t * Q_t) / (P_t / P_{96})] * (1/100)$, ie, nominal GDP (col.10) / Price deflator, base 1996 (col.16).
- (22) 2004 data are based on information for the first half of the year.

Appendix Table 3														
Uzbekistan: National Income Accounts														
Current Prices		Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1	Balance of Goods & NFS	million sum	(41)	163	(2,450)	8,815	(1,888)	(2,368)	(14,320)	3,117	(5,290)	(54,913)	43,690	568,367
	Exports of Goods and NFS	million sum	151	1,724	10,884	95,629	191,271	291,482	354,057	462,693	863,987	1,517,478	2,352,607	3,615,671
	Imports of Goods and NFS	million sum	192	1,561	13,334	86,814	193,159	293,850	368,376	459,576	869,278	1,572,391	2,308,916	3,047,304
2	Total Investment	million sum	195	747	11,863	73,345	128,774	185,058	295,768	364,176	637,206	1,040,915	1,624,068	2,008,521
2a	Gross Fixed Capital Formation	million sum	118	1,284	17,022	99,889	205,694	329,990	421,084	578,685	780,991	1,375,378	1,648,530	2,134,190
2b	Increase in Stocks	million sum	77	(537)	(5,159)	(26,544)	(76,920)	(144,933)	(125,316)	(214,509)	(143,785)	(334,463)	(24,462)	(125,669)
2c	Foreign direct investment, BOP based	million sum	na	44	726	(715)	3,614	11,094	13,263	15,114	17,800	35,146	50,146	77,509
2d	Other investment	million sum	na	703	11,137	74,060	125,160	173,964	282,504	349,062	619,406	1,005,770	1,573,921	1,931,012
3	Total Consumption	million sum	290	4,203	55,465	220,628	432,186	794,140	1,134,709	1,761,367	2,623,651	3,939,267	5,782,477	7,087,224
	Government Consumption	million sum	89	1,255	13,773	67,404	123,589	200,242	290,908	439,258	607,265	906,810	1,339,170	1,791,296
	Private Consumption	million sum	201	2,948	41,691	153,223	308,597	593,898	843,801	1,322,109	2,016,386	3,032,457	4,443,307	5,295,929
4	Statistical Discrepancy	million sum	0	(18)	0	(0)	0	-	(0)	0	(3,884)	70	8	(12)
	Gross Domestic Product (1+2+3+4)	million sum	444	5,095	64,878	302,787	559,072	976,830	1,416,157	2,128,660	3,251,683	4,925,340	7,450,243	9,664,100
Constant Prices		Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1	Balance of Goods & NFS	million 1996 sum	(55,013)	18,542	(20,970)	16,019	(1,888)	(1,389)	(5,917)	886	(1,016)	(7,245)	3,929	39,996
	Exports of Goods and NFS	million 1996 sum	201,170	196,115	93,148	173,790	191,271	170,996	146,291	131,525	165,921	200,223	211,576	254,437
	Imports of Goods and NFS	million 1996 sum	256,183	177,573	114,119	157,771	193,159	172,385	152,208	130,639	166,937	207,469	207,647	214,441
2	Total Investment	million 1996 sum	260,464	84,976	101,532	133,293	128,774	108,562	122,207	103,521	122,370	137,343	146,057	141,341
2a	Gross Fixed Capital Formation	million 1996 sum	157,098	146,062	145,683	181,533	205,694	193,586	173,985	164,497	149,982	181,474	148,257	150,184
2b	Increase in Stocks	million 1996 sum	103,366	(61,087)	(44,151)	(48,239)	(76,920)	(85,023)	(51,779)	(60,976)	(27,613)	(44,131)	(2,200)	(8,843)
2c	Foreign direct investment, BOP based	million 1996 sum	na	5,056	6,216	(1,299)	3,614	6,508	5,480	4,296	3,418	4,637	4,510	5,454
2d	Other investment	million 1996 sum	na	79,919	95,316	134,592	125,160	102,054	116,727	99,224	118,951	132,706	141,547	135,887
3	Total Consumption	million 1996 sum	387,784	478,116	474,700	400,955	432,186	465,875	468,845	500,686	503,848	519,766	520,033	498,733
	Government Consumption	million 1996 sum	118,998	142,764	117,880	122,497	123,589	117,470	120,199	124,864	116,620	119,649	120,435	126,055
	Private Consumption	million 1996 sum	268,786	335,352	356,820	278,459	308,597	348,405	348,646	375,823	387,229	400,117	399,598	372,678
4	Statistical Discrepancy	million 1996 sum	152	(2,048)	3	(1)	0	-	(0)	0	(746)	9	1	(1)
	Gross Domestic Product (1+2+3+4)	million 1996 sum	593,387	579,586	555,265	550,267	559,072	573,049	585,135	605,093	624,456	649,873	670,019	680,070
	GDP Deflator WEO	1996=100	0.1	0.9	11.7	55.0	100.0	170.5	242.0	351.8	520.7	757.9	1,111.9	1,421.0

Sources: IMF, World Economic Outlook (WEO), September 2004; IMF, Statistical Appendix, May 2004; IMF, Selected Issues and Statistical Appendix, May 2003.

Appendix Table 4 Uzbekistan: Value Added by Sector													
	Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Current Prices													
Agriculture	mn sums	157	1,421	22,356	85,113	125,383	276,037	379,506	617,746	978,507	1,476,256	2,244,241	2,781,356
Industry	mn sums	118	1,140	11,031	51,735	99,713	152,449	211,506	304,744	462,423	696,229	1,079,273	1,457,480
Transport and Communication	mn sums	23	281	3,768	22,053	37,646	63,962	95,900	147,187	250,565	371,259	612,868	820,889
Construction	mn sums	42	457	4,704	21,369	46,111	70,984	106,319	143,298	196,180	286,489	365,163	434,793
Other Services/1	mn sums	83	1,016	12,845	66,878	130,243	209,991	299,929	437,511	644,694	999,555	1,515,361	1,971,556
Trade	mn sums	25	317	4,834	15,844	39,315	82,473	119,533	192,348	315,556	511,411	735,202	905,423
GDP at current factor costs		448	4,632	59,538	262,992	478,411	855,896	1,212,693	1,842,834	2,847,925	4,341,199	6,552,108	8,371,497
Indirect taxes less subsidies	mn sums	(4)	481	5,340	39,798	80,662	120,931	203,464	285,826	407,641	584,070	898,127	1,292,615
Statistical Discrepancy	mn sums	0	(18)	-	(3)	(1)	3	-	-	(3,883)	71	8	(12)
GDP WEO		444	5,095	64,878	302,787	559,072	976,830	1,416,157	2,128,660	3,251,683	4,925,340	7,450,243	9,664,100
Constant Prices 1996=100 (Computed)													
Agriculture	mn 1996 sums	210,153	161,647	191,336	154,679	125,383	161,935	156,806	175,601	187,913	194,784	201,830	195,726
Industry	mn 1996 sums	157,915	129,682	94,410	94,020	99,713	89,433	87,391	86,627	88,804	91,864	97,062	102,564
Transport and Communication	mn 1996 sums	30,952	31,965	32,249	40,078	37,646	37,523	39,624	41,839	48,119	48,986	55,117	57,767
Construction	mn 1996 sums	56,400	51,986	40,260	38,835	46,111	41,642	43,929	40,734	37,675	37,801	32,840	30,597
Other Services	mn 1996 sums	110,274	115,576	109,935	121,540	130,243	123,189	123,926	124,367	123,808	131,886	136,280	138,740
Trade	mn 1996 sums	32,851	36,061	41,372	28,794	39,315	48,382	49,389	54,677	60,600	67,478	66,119	63,715
GDP at current factor costs	mn 1996 sums	598,545	526,917	509,562	477,946	478,411	502,104	501,067	523,844	546,918	572,799	589,248	589,108
Indirect taxes less subsidies	mn 1996 sums	(5,308)	54,717	45,703	72,327	80,662	70,943	84,068	81,249	78,284	77,065	80,771	90,962
Statistical Discrepancy	mn 1996 sums	151	(2,048)	-	(5)	(1)	2	-	-	(746)	9	1	(1)
GDP WEO	mn 1996 sums	593,387	579,586	555,265	550,267	559,072	573,049	585,135	605,093	624,456	649,873	670,019	680,070

Sources: IMF, Statistical Appendix, May 2004; IMF, Selected Issues and Statistical Appendix; IMF, Recent Economic Developments, January 2000; IMF, Recent Economic Development, August 1998; IMF, WEO Sep 2004

Appendix Table 5
Uzbekistan: Employment by Sector

	Units	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Agriculture	Thousand	3470	3612	3688	3622	3,485	3,505	3,533	3467	3220	3093	3062	3030	3041
Industry	Thousand	1202	1147	1,167	1,067	1,093	1,107	1,109	1,114	1,124	1,145	1,160	1,186	1,223
Construction	Thousand	680	598	561	520	538	539	550	573	640	676	702	729	763
Transport and Communication	Thousand	400	367	348	342	347	358	360	362	370	382	394	411	433
Other Services	Thousand	1978	1939	1,919	1,871	1,892	1,935	1,965	1,971	2,052	2,182	2,226	2,297	2,453
Trade	Thousand	470	452	456	565	705	713	715	717	735	754	778	808	815
Total	Thousand	8255	8271	8,259	8,150	8,449	8,561	8,680	8,800	8,885	8,983	9,136	9,333	9,589
Official number of unemployed	Thousand		9	13	22	25	28	29	33	39	35	38	35	32
Unemployment rate	Percent		0.1%	0.2%	0.3%	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.3%
Percent change in employment	Percent		0.2%	-0.1%	-1.3%	3.7%	1.3%	1.4%	1.4%	1.0%	1.1%	1.7%	2.2%	2.7%

Sources: IMF, Statistical Appendix, May 2004; IMF, Selected Issues and Statistical Appendix; IMF, Recent Economic Developments, January 2000; IMF, Recent Economic Development, August 1998.
1/ Officially registered.

Appendix Table 7 Uzbekistan: Balance of Payments												
	Units	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
CURRENT ACCOUNT	Mill US\$	-429	120	-21	-980	-583	-102	-163	215	-113	117	881
Merchandise Trade Balance	Mill US\$	-378	214	237	-706	-72	110	203	494	186	324	835
Exports	Mill US\$	2,877	2,940	3,475	3,534	3,695	3,048	2,790	2,935	2,740	2,510	3,240
Cotton Fiber	Mill US\$	1,172	1,508	1,584	1,539	1,390	1,198	833	897	699	669	739
Gold	Mill US\$	559	375	611	906	738	788	810	809	776	844	454
Energy	Mill US\$	-	-	436	277	528	223	372	335	323	243	1,046
Other	Mill US\$	1,147	1,057	844	813	1,039	840	776	893	942	754	1,001
Imports	Mill US\$	-3,255	-2,726	-3,238	-4,240	-3,767	-2,938	-2,587	-2,441	-2,554	-2,186	-2,405
Foodstuff	Mill US\$	-625	-861	-618	-1,252	-786	-438	-355	-325	-304	-306	-264
Energy Products	Mill US\$	-658	-674	-53	-45	-23	-23	-67	-113	-59	-35	-80
Machinery	Mill US\$	-	-	-1,151	-1,542	-1,868	-1,454	-1,320	-940	-1,179	-1,011	-1,183
Other	Mill US\$	-1,973	-1,190	-1,415	-1,402	-1,091	-1,023	-846	-1,063	-1,013	-835	-878
Services, net /1	Mill US\$	-63	-107	-277	-272	-540	-154	-247	-73	-137	-182	-156
Shipment and transportation	Mill US\$	-49	-62	-218	-165	-348	-113	-163	-21	-82	24	56
Travel	Mill US\$	1	-2	8	0	26	7	27	33	23	22	25
Interest	Mill US\$	-19	-22	-26	-73	-175	-	-	-	-	-	-
Other	Mill US\$	4	-21	-41	-33	-44	-48	-111	-84	-78	-107	-237
Income	Mill US\$	-	-	-	-	-	-101	-168	-219	-185	-124	-130
Interest	Mill US\$	-	-	-	-	-	-101	-168	-219	-185	-124	-130
Other	Mill US\$	-	-	-	-	-	-	-	-	-21	-21	14
Transfers	Mill US\$	12	13	19	-2	29	43	49	13	43	120	318
CAPITAL ACCOUNT	Mill US\$	386	-38	255	634	288	276	263	-119	96	-93	-417
Capital Transfers	Mill US\$	1,045	-38	255	634	288	276	263	-119	96	-93	-417
Direct Investment, net /2	Mill US\$	48	73	-24	90	167	140	121	75	83	65	70
Public and Publicly Guaranteed debt (net)	Mill US\$	382	50	491	465	196	666	631	258	325	-96	-109
Drawings	Mill US\$	548	326	1,054	679	558	-	-	-	-	-	-
Repayments	Mill US\$	-166	-276	-563	-214	-362	-	-	-	-	-	-
Commercial Banks	Mill US\$	-53	-91	-3	-1	432	173	215	-107	-76	-13	52
Other Capital and statistical discrepancy /3	Mill US\$	9	-70	-209	80	-507	-653	-690	-295	-168	11	-382
Errors and Omissions	Mill US\$	58	244	197	296	-185	-	-	-	-	-	-
OVERALL BALANCE	Mill US\$	15	326	431	-50	-480	174	100	96	-17	24	464
FINANCING	Mill US\$	-15	-326	-431	50	480	-174	-100	-96	17	-24	-464
Net International Reserves	Mill US\$	-	-	-	-	836.0	845.8	861.8	1,170.9	1,133.6	1,176.6	1,696.1
Gross official reserves (- increase)	Mill US\$	-492	-309	-578	-33	480	-1	-74	-31	61	-3	-444
IMF Transactions	Mill US\$	0	0	158	83	0	0	-25	-65	-45	-22	-22
Arrears	Mill US\$	5	11	-11	0	0	0	0	0	0	0	0
Memorandum Items												
Current Account Balance percent of GDP	Percent	-12.0%	2.2%	-0.3%	-9.6%	-4.2%	-0.7%	-1.1%	1.3%	-0.8%	1.0%	9.1%
Gross Official Reserves	Mill US\$	1,022.0	1,330.0	1,867.0	1,901.0	1,167	1,168.0	1,242.0	1,273.0	1,212.0	1,215.0	1,659.0
In months of imports goods	Months	3.8	5.9	6.9	5.4	3.7	4.8	5.8	6.3	5.7	6.7	8.3
In months of imports of goods and services	Months	7.9	9.5	16.7	7.8	2.9	3.2	3.8	4.2	4.0	3.9	6.7

1/For the period 1998-onwards, services do not include interest.

2/FDI in 1995 is negative due to a one time large investment of an Uzbek insurance company abroad.

3/For the period 1993-1997, reflects Other capital only, errors and omissions were reflected separately

Sources: IMF, Statistical Appendix, May 2004

Appendix Table 8 Uzbekistan: Monetary Survey								
	Units	1997	1998	1999	2000	2001	2002	2003
MONETARY ACCOUNTS								
1 Net Foreign Assets (reserves concept)	Bn Sum	67.5	93.0	120.6	380.5	779.9	1,141.4	1,662.2
Gold	Bn Sum	63.6	69.9	67.0	191.5	367.3	490.7	546.8
Net Foreign Exchange	Bn Sum	3.9	23.1	53.6	189.0	412.6	650.7	1,115.4
2 Net Domestic assets	Bn Sum	103.7	125.8	168.4	15.8	(168.3)	(348.2)	(653.8)
Domestic Credit	Bn Sum	208.1	373.0	501.8	947.2	1,807.3	2,547.1	2,530.6
Government, net (excluding treasury bills)	Bn Sum	4.5	(8.2)	(4.3)	10.7	(35.9)	(13.1)	(208.4)
Treasury bills (inc People's bank)	Bn Sum		33.8	49.6	27.8	26.9	28.8	32.8
Rest of the Economy	Bn Sum	203.7	347.4	456.5	908.7	1,816.3	2,531.4	2,706.2
Loans in domestic currency	Bn Sum	104.9	175.8	210.5	257.8	367.7	433.4	529.4
Loans in Foreign Currency	Bn Sum	98.8	171.6	246.0	650.9	1,448.6	2,098.0	2,176.8
Other items, net	Bn Sum	(100.9)	(232.3)	(315.9)	(881.6)	(1,919.7)	(2,786.1)	(3,014.1)
Of which: Long term liabilities	Bn Sum	(58.8)	(110.4)	(169.1)	(482.6)	(1,065.4)	(1,459.6)	(1,532.1)
Non-budgetary deposits of budgetary organizations	Bn Sum	(3.5)	(14.9)	(17.5)	(49.8)	(55.9)	(109.2)	(170.3)
3 Total Liquidity	Bn Sum	171.2	218.8	289.0	396.3	611.6	793.2	1,008.4
MONEY SUPPLY								
Broad Money	Bn Sum	141.3	218.8	289.0	396.3	611.6	793.3	1,008.6
M1 (=CC + DD)	Bn Sum	130.1	171.8	231.8	278.0	379.9	479.9	599.9
Currency in Circulation (CC)	Bn Sum	71.6	102.7	137.3	168.9	213.8	273.3	404.9
Demand Deposits (DD)	Bn Sum	58.4	69.1	94.5	109.1	166.1	206.6	195.0
Term Deposits (TD) /1	Bn Sum	11.2	47.0	57.2	118.3	231.7	313.4	408.7
Quasi Money	Bn Sum		41.3	44.8	79.2	137.0	237.2	339.0
Of which: foreign currency deposits	Bn Sum		15.1	18.0	41.6	81.2	145.0	185.2
Other Deposits	Bn Sum	11.2	5.7	12.4	39.1	94.7	76.2	69.7
M2 (=m1 + TD)	Bn Sum	141.3	203.7	271.0	354.7	530.4	648.3	823.4
Real M1 (=M1/CPI)	Bn 1996 Sum	76.1	86.2	80.4	64.5	59.7	52.3	56.9
Real M2 (=M2/CPI)	Bn 1996 Sum	82.7	102.1	94.0	82.3	83.4	70.6	78.2
MONETARY INDICATORS								
Velocity of M1 (V1) = GDP*P/ M1	Percent	7.5	8.2	9.2	11.7	13.0	15.5	16.1
Velocity of M2 (V2) = GDP*P/ M2	Percent	6.9	7.0	7.9	9.2	9.3	11.5	11.7
Growth of M1	Percent	184.3%	32.1%	34.9%	19.9%	36.7%	26.3%	25.0%
Growth of M2	Percent	20.5%	44.1%	33.0%	30.9%	49.5%	22.2%	27.0%
Growth of real M1	Percent	66.4%	13.2%	-6.7%	-19.8%	-7.4%	-12.5%	8.9%
Growth of real M2	Percent	-29.5%	23.5%	-8.0%	-12.5%	1.4%	-15.3%	10.6%

Sources: Based on data from IMF Statistical Appendix, May 2004; Selected Issues and Statistical Appendix, May 2003

1/ Term Deposits= IMF's quasi money+ other deposits

Appendix Table 9 Uzbekistan: Government Revenue and Expenditure							
CURRENT PRICES	Units	1998	1999	2000	2001	2002 ^{/5}	2003
Current revenue	Bln Sum	569.7	821.0	1,197.6	1,698.6	2,660.3	3,288.0
Taxes	Bln Sum	416.4	593.4	853.8	1,150.8	1,702.7	2,233.7
Direct Taxes	Bln Sum	159.0	209.0	273.5	408.4	566.2	698.5
Indirect Taxes	Bln Sum	257.4	384.4	580.3	742.4	1,136.5	1,535.2
Trade Taxes	Bln Sum	8.9	8.3	22.5	31.9	53.7	86.1
Other Indirect Taxes	Bln Sum	248.5	376.1	557.8	710.5	1,082.8	1,449.1
Non-taxes	Bln Sum	153.3	227.6	343.8	547.8	957.6	1,054.3
Other budget revenue (tax and nontax)	Bln Sum	23.8	30.6	57.0	116.1	161.4	108.4
Interest paid by on govt debt	Bln Sum	0.5	0.9	6.2	10.6	16.1	19.9
Social payroll contributions	Bln Sum	106.7	163.9	227.9	346.9	489.1	623.5
Road Fund and other revenue	Bln Sum	22.3	32.2	52.7	74.2	122.0	194.6
Grants	Bln Sum	-	-	-	-	169.0	107.9
Current expenditure	Bln Sum	596.3	857.5	1,234.7	1,463.2	2,713.5	3,261.8
Social sectors	Bln Sum	309.2	465.4	642.4	664.2	1,365.5	
Health	Bln Sum	44.6	60.9	83.8	52.8	184.8	
Education	Bln Sum	107.5	159.6	218.4	150.9	500.9	
Other	Bln Sum	157.1	244.9	340.2	460.5	679.8	
Culture, Mass media and science	Bln Sum	12.3	18.9	21.2	10.5	28.1	
Social Security and welfare	Bln Sum	2.7	5.1	14.4	2.6	18.6	
Social safety net	Bln Sum	142.1	220.9	304.6	447.4	633.1	805.2
Other	Bln Sum	287.1	392.1	592.3	799.0	1,348.0	1,543.9
Economy	Bln Sum	54.7	75.6	94.3	110.0	188.8	311.6
Public authorities and administration	Bln Sum	11.0	16.6	23.0	34.7	54.2	67.1
Public Investment	Bln Sum	106.6	152.5	225.9	302.9	389.0	432.3
Interests	Bln Sum	10.2	13.7	24.3	37.9	43.8	51.8
Othr expenditure in the budget	Bln Sum	82.6	101.7	173.1	241.1	380.1	478.5
Road Fund	Bln Sum	22.0	32.0	51.7	72.4	123.1	140.4
Extrabudgetary expenditure	Bln Sum	-	-	-	-	169.0	62.2
Net lending	Bln Sum	11.2	12.8	30.6	28.7	61.5	74.2
Extrabudgetary Fund	Bln Sum	(8.3)	(2.5)	4.0	4.0	-	-
Statistical Discrepancy, net/2	Bln Sum	(7.6)	(12.8)	(17.5)	8.1	(25.7)	55.1
Overall Balance /3	Bln Sum	(53.7)	(64.6)	(81.2)	218.8	(140.4)	7.1
Financing	Bln Sum	53.7	64.4	81.2	63.2	140.6	(7.2)
Foreign Financing	Bln Sum		17.6	32.1	20.8	14.4	93.8
General Budget Support	Bln Sum						
Project Financing	Bln Sum						
New Borrowing	Bln Sum						
Amortization	Bln Sum						
Domestic Financing	Bln Sum	33.9	46.8	49.1	42.4	126.2	(101.0)

Domestic banking system/4	Bln Sum	25.0	35.1	37.0	28.7	85.8	(156.7)
Monetary authorities (net lending)	Bln Sum	24.9	26.2	46.3	26.2	45.1	(83.0)
o/w CBU credit under res.423	Bln Sum	-	-	-	19.0	29.3	-
Deposit money banks	Bln Sum	(0.4)	8.8	(9.3)	2.5	40.7	(73.7)
Treasury bills outside banks	Bln Sum	8.1	10.2	8.1	7.8	(3.2)	(0.3)
Privatization proceeds	Bln Sum	0.7	1.5	4.0	5.9	43.6	56.1
CONSTANT PRICES							
Current revenue	Bln 1996 Sum	235.4	233.4	230.0	224.1	239.2	231.4
Taxes	Bln 1996 Sum	172.1	168.7	164.0	151.8	153.1	157.2
Direct Taxes	Bln 1996 Sum	65.7	59.4	52.5	53.9	50.9	49.2
Indirect Taxes	Bln 1996 Sum	106.4	109.3	111.4	98.0	102.2	108.0
Trade Taxes	Bln 1996 Sum	3.7	2.4	4.3	4.2	4.8	6.1
Other Indirect Taxes	Bln 1996 Sum	102.7	106.9	107.1	93.7	97.4	102.0
Non-taxes	Bln 1996 Sum	63.3	64.7	66.0	72.3	86.1	74.2
Current expenditure	Bln 1996 Sum	246.4	243.8	237.1	193.1	244.0	229.5
Social sectors	Bln 1996 Sum	127.8	132.3	123.4	87.6	122.8	-
Health	Bln 1996 Sum	18.4	17.3	16.1	7.0	16.6	-
Education	Bln 1996 Sum	44.4	45.4	41.9	19.9	45.0	-
Other	Bln 1996 Sum	64.9	69.6	65.3	60.8	61.1	-
Other	Bln 1996 Sum	118.6	111.5	113.7	105.4	121.2	108.6
Net Lending and Stat. Discrepancy	Bln 1996 Sum	(1.9)	(0.7)	3.3	5.4	3.2	9.1
Overall Balance	Bln 1996 Sum	(12.9)	(11.1)	(3.8)	36.4	(1.6)	10.9

Sources: IMF, Statistical Appendix, May 2004.

Notes:

1/ Trade Taxes= Customs duties

2/ Excluding pension, employment and road fund

3/ Overall balance=revenue-expenditure-net lending+extrabudgetary fund,net+stat discrepancy

4/ Adjusted for valuation charges

5/ From 2002, receipts from privatization not accruing to the budget have been included as a financing item and as extrabudgetary spending.

Appendix Table 10

Uzbekistan: Prices, Interest Rates and Exchange Rates

	Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Price Deflators														
GDP Deflator, implicitWEO	1996=100	0.1	0.9	11.7	55.0	100.0	170.5	242.0	351.8	520.7	757.9	1,111.9	1,421.0	1,635.6
Percent change in GDP deflator	%		1074.8%	1229.1%	370.9%	81.7%	70.5%	42.0%	45.4%	48.0%	45.5%	46.7%	27.8%	15.1%
CPI base 1996, WEO	1996=100	0.2	1.0	16.1	65.0	100.0	170.9	199.4	288.4	431.1	635.9	917.7	1,053.5	1,177.8
Percent change in CPI deflator	%		532.9%	1568.9%	304.6%	54.0%	70.9%	16.7%	44.6%	49.5%	47.5%	44.3%	14.8%	11.8%
Producer Price Index (PPI)	1996=100				100.0	232.7	359.5	507.3	701.1	1128.0	1604.0	2374.0	3083.8	362963%
Percent change in PPI	%					132.7%	54.5%	41.1%	38.2%	60.9%	42.2%	48.0%	29.9%	17.7%
Interest Rate														
Nominal Interest Rates on Loans	%		1093.5%	1237.4%	373.6%	83.7%	72.4%	25.2%	24.6%	24.9%	23.8%	24.0%	26%	20%
Real Interest Rate on Loans	%		18.7%	8.3%	2.7%	1.9%	1.9%	8.5%	-20.0%	-24.6%	-23.7%	-20.3%	11%	8%
Nominal Interest Rates on Deposits	%		1089.7%	1241.2%	369.8%	87.5%	68.6%	29.0%	21.0%	30.0%	27.0%	31.0%	26%	23%
Real Interest Rate on Deposits	%		14.9%	12.1%	-1.1%	5.7%	-1.9%	12.3%	-23.6%	-19.5%	-20.5%	-13.3%	11%	11%
Exchange Rate														
Nominal Exchange Rate	Sum / US\$	0.1	0.9	9.9	29.8	40.2	66.4	94.7	124.9	237.3	423.4	771.5	1,107.3	1,232.0
Percent change in NER	%		646.8%	974.4%	199.3%	34.8%	65.4%	42.6%	31.8%	90.0%	78.4%	82.2%	43.5%	11.3%
Real Exchange Rate (RER)	1996=100	57.5	55.8	104.8	108.9	100.0	105.1	97.8	117.2	97.6	77.4	57.1	40.2	36.9
Percent change in RER	%		-2.9%	87.7%	4.0%	-8.2%	5.1%	-6.9%	19.8%	-16.7%	-20.7%	-26.2%	-29.5%	-8.4%
Nominal Cross-Rate with US	1996=100	0.3	2.3	24.8	74.2	100.0	165.4	235.9	311.1	591.0	1,054.5	1,921.2	2,757.4	3,068.0
Nominal Cross-Rate with Europe	1996=100	0.4	2.9	27.1	80.2	100.0	135.5	157.0	137.1	173.3	217.9	263.9	335.9	378.2
Nominal Cross-Rate with Central Asia	1996=100	na	3.7	56.1	91.8	100.0	130.7	123.3	76.8	121.2	202.0	334.6	483.2	551.0
Nominal Cross-Rate with Other Asia	1996=100	0.4	2.7	24.8	80.8	100.0	160.0	150.8	227.0	461.8	711.0	1,429.8	2,236.6	2,518.1
Nominal Cross-Rate with Middle East	1996=100	0.4	2.6	26.8	77.5	100.0	135.8	198.2	239.8	462.6	310.6	739.5	844.3	902.3
Real Cross-Rate of US	1996=100	55.0	45.3	68.6	90.2	100.0	100.9	81.3	87.3	66.5	53.4	41.7	32.6	31.8
Real Cross-Rate of EU	1996=100	57.7	52.5	84.5	96.0	100.0	108.5	90.3	106.9	91.9	76.1	55.4	38.1	34.5
Real Cross-Rate of Central Asia	1996=100	-	137.9	126.2	121.9	100.0	101.8	98.2	138.7	112.9	82.1	62.0	43.7	38.7
Real Cross-Rate of Other Asia	1996=100	58.8	44.3	76.3	83.4	100.0	104.0	119.8	113.9	82.7	75.8	55.0	40.4	38.7
Real Cross-Rate of Middle East	1996=100	57.9	50.9	71.1	90.7	100.0	118.0	87.6	99.5	76.2	97.0	62.3	48.4	47.9
Official Exchange Rate (sum/US Dollar, eop)	Sum / US\$						80.2	110.0	140.0	325.0	688.0	970.0	979.4	
World Trade Prices														
Manufactures	1996=100	104.9	98.9	102.0	112.3	108.9	100.0	94.9	83.7	83.5	87.6	89.8	92.0	
Fuels	1996=100	98.8	87.1	82.7	89.3	105.7	100.0	101.5	102.9	105.0	107.6	110.8	114.2	
Primary Commodities	1996=100	83.6	85.1	96.6	104.7	103.4	100.0	101.3	102.5	103.5	105.1	107.7	110.4	
CPI of Trading Partners	1996=100	76.0	69.0	51.2	73.8	100.0	120.6	145.7	195.8	256.0	300.1	398.7	462.4	511.3
World Real GDP	1996=100	87.3	89.4	92.7	96.2	100.0	104.2	107.1	111.0	116.3	119.1	122.7	126.6	131.8

Sources: Based on data from IMF Statistical Appendix, May 2004; Selected Issues and Statistical Appendix, May 2003

Appendix Table 11													
Uzbekistan: Merchandise Trade													
	Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Exports f.o.b (BOP basis)	Mn \$	162	693	1,991	2,718	2,620	2,896	2,310	1,963	2,133	2,079	1,539	1,953
Exports f.o.b (DOT Statistics)			693	1,991	2,718	2,620	2,896	2,310	1,963	2,132	2,087	1,562	1,911
Export Value	Mn \$			2,690	3,720	4,590	4,388	3,528	3,236	3,265	3,170	2,988	3,725
Imports f.o.b (BOP basis)	Mn \$	300	918	2,455	3,030	4,854	4,538	2,931	2,481	2,072	2,293	2,079	2,481
Imports f.o.b (DOT Statistics)			918	2,455	3,030	4,854	4,538	2,931	2,481	2,067	2,293	2,077	2,477
Import Value Index	Mn \$			2,610	2,893	4,721	4,523	3,289	3,111	2,947	3,137	2,712	2,964

Source: CEEP, Uzbekistan Economy: Statistical and Analytical Review for 1st Half of 2004.

Appendix Table 12															
Uzbekistan: Real Exchange Rate Indices (RER3), measured by ratio of partner-country and domestic GDP deflators (1996=100)															
	Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Uzbekistan	1996=100	103,073	7,922	461	135	100.0	71.4	60.3	55.6	49.7	40.1	36.5	32.9	32.3	32.2
All Trading Partners	1996=100	103,073	7,922	461	135	100.0	71.4	60.3	55.6	49.7	40.1	36.5	32.9	32.3	32.2
North America	1996=100	123,014	10,745	823	178	100.0	59.6	42.4	29.6	20.5	14.4	10.0	7.9	7.1	6.6
United States	1996=100	123,014	10,712	823	178	100.0	59.6	42.5	29.6	20.5	14.4	10.0	7.9	7.1	6.6
Canada	1996=100	125,349	10,823	824	179	100.0	59.4	41.6	29.1	20.5	14.2	9.8	7.9	7.1	6.6
Europe	1996=100	100,964	7,833	672	159	100.0	68.8	59.7	55.6	52.0	46.6	52.7	54.7	54.2	55.2
Germany	1996=100	122,011	10,766	830	180	100.0	59.1	42.1	29.1	19.6	13.6	9.4	7.5	6.6	6.0
Turkey	1996=100	12,415	1,779	275	108	100.0	109.4	139.2	156.3	151.1	165.2	154.3	147.2	142.9	142.9
Italy	1996=100	112,385	9,942	774	173	100.0	60.1	43.5	30.4	21.0	14.8	10.4	8.4	7.5	7.0
France	1996=100	124,250	10,834	830	179	100.0	59.4	42.2	29.1	19.8	13.9	9.7	7.7	6.8	6.3
Poland	1996=100	47,366	5,242	539	153	100.0	66.8	52.5	38.4	27.7	19.8	13.7	10.7	9.7	9.1
United Kingdom	1996=100	120,915	10,570	808	176	100.0	60.3	43.7	30.7	21.0	14.8	10.4	8.4	7.5	7.0
Ukraine	1996=100	42	126	100	109	100.0	69.3	54.7	47.9	39.9	30.1	21.6	18.1	17.3	17.2
Belgium	1996=100	122,868	10,876	835	180	100.0	59.5	42.6	29.7	20.3	14.2	9.9	7.8	6.9	6.4
Czech Republic	1996=100	81,216	8,366	714	167	100.0	63.4	49.4	35.0	23.9	17.2	12.1	9.6	8.6	8.1
Netherlands	1996=100	124,245	10,774	829	180	100.0	59.8	42.9	30.0	21.0	15.2	10.7	8.6	7.6	7.0
Belarus	1996=100	48	47	73	118	100.0	100.7	125.2	359.1	692.1	853.8	843.5	849.5	888.3	946.4
Austria	1996=100	121,720	10,665	824	179	100.0	59.2	41.9	29.0	19.9	13.9	9.6	7.7	6.8	6.2
Switzerland	1996=100	127,547	11,115	849	182	100.0	58.6	41.2	28.5	19.4	13.4	9.2	7.3	6.4	5.9
Greece	1996=100	89,102	8,678	726	169	100.0	62.7	46.4	32.9	23.0	16.3	11.6	9.4	8.4	7.9
Lithuania	1996=100	11,791	4,076	496	150	100.0	66.9	49.5	33.8	23.1	15.8	10.8	8.4	7.4	6.9
Estonia	1996=100	28,979	5,014	524	146	100.0	64.8	49.8	35.7	25.4	18.5	13.2	10.5	9.5	8.9
Spain	1996=100	113,295	10,081	788	176	100.0	60.0	43.3	30.6	21.4	15.3	10.9	8.9	8.0	7.5
Portugal	1996=100	109,139	9,783	786	176	100.0	60.9	44.5	31.6	22.1	15.8	11.3	9.0	8.0	7.5
Central Asia	1996=100	-	2,107	241	112	100.0	76.6	70.3	77.0	61.5	48.9	39.0	35.2	34.7	33.8
Russia	1996=100	931	784	241	125	100.0	67.5	56.4	66.9	62.2	49.8	39.3	35.1	35.4	34.9
Kazakhstan	1996=100	168	194	236	131	100.0	68.2	50.8	39.5	31.4	23.7	17.1	14.5	13.5	13.1
Tajikistan	1996=100	183	170	47	37	100.0	118.2	128.2	111.6	93.5	81.1	67.4	68.1	65.0	61.4
Kyrgyz Republic	1996=100	2,980	2,107	445	134	100.0	70.0	53.8	50.9	43.8	32.3	22.6	18.2	16.5	15.7
Turkmenistan	1996=100	5	10	8	14	100.0	94.8	78.9	66.8	48.6	38.0	28.7	23.6	21.6	20.6
East Asia	1996=100	96,570	9,681	765	178	100.0	59.2	44.6	30.8	20.7	14.8	10.0	7.8	7.0	6.5
Korea	1996=100	102,964	9,383	760	173	100.0	61.4	45.7	31.4	21.4	15.2	10.7	8.5	7.7	7.1
China, P.R.: Mainland	1996=100	81,170	7,914	714	172	100.0	59.1	40.6	27.3	18.6	13.0	8.8	7.0	6.4	5.9
Japan	1996=100	134,513	11,513	867	183	100.0	58.8	41.4	28.1	18.6	12.6	8.5	6.5	5.5	4.9
Bangladesh	1996=100	113,146	9,830	781	175	100.0	61.1	45.2	32.1	22.0	15.5	11.0	9.0	8.3	7.9
India	1996=100	94,894	8,831	729	169	100.0	62.4	47.5	34.1	24.0	17.2	12.0	9.8	8.9	8.5
Middle East	1996=100	87,089	8,313	715	167	100.0	65.8	47.8	35.0	23.9	30.3	18.4	19.8	18.2	17.5
Iran, I.R. of	1996=100	95,503	8,851	718	167	100.0	66.1	81.6	64.1	47.5	36.6	26.4	22.0	20.3	19.6
Israel	1996=100	87,089	8,313	700	163	100.0	63.7	47.8	35.0	23.9	16.8	11.9	9.3	8.1	7.4

Note: REER3 = Pyd/Pyf , where Pyd is the domestic GDP deflator and Pyf is the foreign GDP deflator.

Appendix Table 13															
Uzbekistan: Real Exchange Rate Indices (RER2), measured by ratio of partner-country and domestic price measured in terms of CPI															
(1996=100)															
	Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Uzbekistan	1996=100	49,988	7,170	319	114	100.0	70.6	73.0	67.9	59.4	47.2	43.4	43.9	43.4	43.1
All Trading Partners	1996=100	49,988	7,170	319	114	100.0	70.6	73.0	67.9	59.4	47.2	43.4	43.9	43.4	43.1
North America	1996=100	58,853	9,702	591	150	100.0	59.9	52.1	36.8	25.4	17.7	12.5	11.1	10.2	9.5
United States	1996=100	58,853	9,575	589	150	100.0	59.9	52.1	36.8	25.5	17.7	12.5	11.1	10.3	9.6
Canada	1996=100	62,144	10,002	600	152	100.0	59.5	51.5	36.2	24.9	17.3	12.3	11.0	10.0	9.2
Europe	1996=100	49,687	7,123	489	133	100.0	68.3	72.2	66.3	61.9	51.7	60.5	72.1	72.7	73.5
Germany	1996=100	59,550	9,830	605	152	100.0	59.4	51.2	35.6	24.2	16.7	11.7	10.3	9.4	8.6
Turkey	1996=100	5,441	1,428	176	84	100.0	108.7	172.0	196.1	203.2	212.7	213.6	233.2	232.3	233.0
Italy	1996=100	55,150	9,107	568	148	100.0	59.6	52.1	36.6	25.1	17.4	12.4	11.1	10.1	9.4
France	1996=100	61,007	9,842	600	151	100.0	59.3	51.1	35.6	24.2	16.7	11.8	10.5	9.6	8.9
Poland	1996=100	23,991	5,129	406	128	100.0	67.2	64.4	47.8	35.2	25.2	17.8	15.6	14.5	13.6
United Kingdom	1996=100	59,808	9,689	592	150	100.0	59.6	51.9	36.3	24.5	16.8	11.8	10.4	9.5	8.7
Ukraine	1996=100	16	122	73	85	100.0	67.8	64.3	54.5	46.7	35.5	24.8	22.7	22.0	21.5
Belgium	1996=100	60,564	9,833	603	151	100.0	59.4	51.4	35.9	24.7	17.1	12.1	10.7	9.7	8.9
Czech Republic	1996=100	41,692	7,961	525	142	100.0	63.5	60.2	42.5	29.5	21.0	14.8	12.9	11.9	11.1
Netherlands	1996=100	60,355	9,784	602	152	100.0	59.6	52.0	36.7	25.1	17.9	12.9	11.5	10.4	9.5
Belarus	1996=100	18	36	50	101	100.0	95.9	142.1	387.0	695.3	759.5	750.4	839.2	897.0	953.0
Austria	1996=100	60,061	9,791	602	151	100.0	59.2	51.1	35.5	24.2	16.8	11.8	10.5	9.5	8.7
Switzerland	1996=100	61,543	10,044	607	153	100.0	58.8	50.4	35.1	23.9	16.3	11.4	10.0	9.0	8.2
Greece	1996=100	44,155	7,981	530	143	100.0	61.7	55.3	39.0	26.9	18.9	13.6	12.2	11.3	10.6
Lithuania	1996=100	4,308	3,475	358	123	100.0	63.7	57.3	40.0	27.0	18.5	12.9	11.1	10.0	9.3
Estonia	1996=100	14,788	4,435	392	125	100.0	65.1	60.3	43.1	30.0	21.5	15.4	13.6	12.5	11.6
Spain	1996=100	54,740	9,136	572	148	100.0	59.7	52.2	37.0	25.4	17.6	12.7	11.4	10.5	9.7
Portugal	1996=100	55,316	9,258	582	150	100.0	59.6	52.3	37.0	25.4	18.0	12.9	11.6	10.7	9.9
Finland	1996=100	62,396	10,076	610	152	100.0	59.2	51.4	36.0	24.8	17.3	12.2	10.8	9.6	8.8
Central Asia	1996=100	-	1,957	146	94	100.0	75.3	84.6	94.8	73.1	60.3	48.0	47.2	46.1	45.0
Russia	1996=100	375	579	141	104	100.0	67.2	73.5	94.4	76.2	62.8	50.4	49.9	49.2	48.5
Kazakhstan	1996=100	49	137	162	111	100.0	68.7	63.2	47.4	35.9	26.4	19.4	18.0	17.2	16.6
Tajikistan	1996=100	17	63	17	30	100.0	110.0	134.9	119.0	105.7	99.3	77.3	78.3	75.1	71.9
Kyrgyz Republic	1996=100	1,044	1,957	329	117	100.0	72.2	68.3	64.2	51.0	36.9	26.1	23.5	21.9	20.8
Turkmenistan	1996=100	1	5	5	14	100.0	107.5	107.6	91.8	66.4	50.2	37.9	34.8	32.7	31.1
East Asia	1996=100	44,567	8,437	536	149	100.0	60.1	55.1	38.6	26.1	18.5	12.7	11.0	10.2	9.6
Korea	1996=100	53,892	8,924	568	147	100.0	61.1	56.3	39.3	26.8	18.9	13.5	12.2	11.3	10.6
China,P.R.: Mainland	1996=100	36,448	6,605	491	142	100.0	60.2	51.1	34.9	23.4	16.0	11.0	9.7	9.0	8.4
Japan	1996=100	64,570	10,325	623	154	100.0	59.5	51.3	35.4	23.5	15.8	10.8	9.4	8.4	7.6
Bangladesh	1996=100	53,015	8,629	549	150	100.0	61.4	57.2	42.0	28.7	19.8	14.2	13.0	12.4	11.9
India	1996=100	46,727	7,853	519	141	100.0	62.7	60.8	44.0	30.6	21.6	15.6	14.1	13.2	12.5
Middle East	1996=100	43,107	7,556	525	142	100.0	62.4	57.6	41.9	28.4	31.3	20.7	24.1	22.8	21.9
Iran, I.R. of	1996=100	46,803	8,111	527	143	100.0	62.2	84.2	70.3	48.8	36.9	28.6	26.6	25.3	24.4
Israel	1996=100	43,107	7,556	509	138	100.0	63.8	57.6	41.9	28.4	19.4	14.2	12.5	11.1	10.2

Note: REER = CPI_d/CPI_f, where CPI_d and CPI_f are the domestic and foreign CPIs respectively.

Appendix Table 14													
Uzbekistan: Real Cross Exchange Rate Indices (RER1), Total and by Trading Partner, against Sum and CPI of Uzbekistan (1996=100)													
	Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Uzbekistan, of which:	1996=100	57.5	55.8	104.8	108.9	100.0	105.1	97.8	117.2	97.6	77.4	57.1	40.2
All Trading Partners	1996=100	57.5	55.8	104.8	108.9	100.0	105.1	97.8	117.2	97.6	77.4	57.1	40.2
North America	1996=100	55.0	44.0	68.3	90.1	100.0	101.0	81.8	87.5	66.9	54.7	41.9	32.6
United States	1996=100	55.0	45.3	68.6	90.2	100.0	100.9	81.3	87.3	66.5	53.4	41.7	32.6
Canada	1996=100	46.2	41.0	67.3	89.5	100.0	103.2	89.6	96.8	74.1	62.3	48.9	34.0
Europe	1996=100	57.7	52.5	84.5	96.0	100.0	108.5	90.3	106.9	91.9	76.1	55.4	38.1
Germany	1996=100	56.3	48.5	71.8	84.4	100.0	117.1	96.7	109.9	98.5	82.4	61.1	40.4
Turkey	1996=100	50.5	38.2	83.8	90.1	100.0	104.0	79.1	84.5	64.1	67.4	45.2	28.7
Italy	1996=100	46.7	48.5	74.1	96.1	100.0	111.8	91.4	103.3	91.5	76.2	55.8	36.3
France	1996=100	54.8	48.7	72.9	87.2	100.0	116.2	95.5	108.7	97.0	81.3	59.9	39.2
Poland	1996=100	68.2	56.9	83.7	94.4	100.0	109.4	85.3	99.0	77.5	57.2	44.3	33.5
United Kingdom	1996=100	47.9	46.5	69.5	88.8	100.0	96.7	77.1	85.4	71.2	61.2	45.9	33.3
Ukraine	1996=100	267.1	207.2	155.0	127.2	100.0	90.8	88.4	133.3	107.7	78.5	61.2	46.6
Belgium	1996=100	55.4	49.2	72.2	84.8	100.0	117.5	96.6	109.4	96.8	80.6	59.6	39.2
Czech Republic	1996=100	81.0	58.5	81.6	93.2	100.0	111.2	83.7	96.3	81.4	63.3	42.4	29.2
Netherlands	1996=100	55.9	48.8	72.2	84.6	100.0	117.2	95.8	107.4	95.4	77.4	56.0	36.6
Belarus	1996=100	312.7	243.1	221.6	116.4	100.0	124.6	104.4	156.8	131.7	130.4	93.4	66.9
Austria	1996=100	55.9	48.7	72.2	84.8	100.0	117.6	96.8	110.2	98.2	81.9	60.5	39.9
Greece	1996=100	58.0	51.6	76.7	90.9	100.0	111.0	94.0	104.4	95.3	79.4	57.4	37.1
Lithuania	1996=100	332.6	133.2	112.0	109.2	100.0	94.9	73.9	80.4	62.7	51.1	36.7	25.0
Estonia	1996=100	234.9	107.4	111.0	102.6	100.0	107.1	82.1	91.0	79.5	64.1	46.6	30.7
Spain	1996=100	47.7	47.5	74.5	89.4	100.0	117.0	95.6	107.0	94.9	78.9	57.1	37.0
Portugal	1996=100	51.1	48.6	74.4	88.2	100.0	115.0	94.6	106.0	93.7	76.5	55.4	35.9
Finland	1996=100	50.4	53.5	74.9	84.1	100.0	115.2	95.8	108.3	95.6	79.4	58.5	38.5
Central Asia	1996=100	-	137.9	126.2	121.9	100.0	101.8	98.2	138.7	112.9	82.1	62.0	43.7
Russia	1996=100	375.0	136.4	122.9	115.2	100.0	101.7	109.3	163.8	121.9	86.0	63.3	43.6
Kazakhstan	1996=100	822.4	271.7	133.6	109.9	100.0	98.1	77.7	119.1	98.8	77.9	60.9	44.6
Tajikistan	1996=100	#####	241.7	196.1	188.6	100.0	104.3	82.4	113.0	98.6	77.8	63.0	46.9
Kyrgyz Republic	1996=100	193.5	137.9	103.3	96.8	100.0	112.8	100.9	151.6	122.8	96.2	72.5	56.2
Turkmenistan	1996=100	440.1	51.4	57.6	32.6	100.0	71.5	59.1	55.9	40.7	30.1	21.9	16.6
East Asia	1996=100	58.8	44.3	76.3	83.4	100.0	104.0	119.8	113.9	82.7	75.8	55.0	40.4
Korea	1996=100	58.3	48.5	70.9	88.1	100.0	116.9	131.1	121.0	88.6	80.3	60.0	44.2
China,P.R.: Mainland	1996=100	58.9	45.5	85.2	95.3	100.0	100.1	82.5	91.8	71.9	59.0	47.1	37.3
Japan	1996=100	58.4	42.9	60.9	75.7	100.0	112.9	99.4	95.1	71.4	67.1	55.3	41.0
Bangladesh	1996=100	56.9	47.6	70.8	86.5	100.0	107.0	86.0	93.4	76.2	65.5	50.7	39.0
India	1996=100	50.7	47.5	68.9	87.3	100.0	98.8	81.1	88.7	70.0	58.6	45.8	33.8
Middle East	1996=100	57.9	50.9	71.1	90.7	100.0	118.0	87.6	99.5	76.2	97.0	62.3	48.4
Iran, I.R. of	1996=100	59.8	47.5	70.5	90.6	100.0	120.5	214.9	153.1	124.5	112.3	72.1	49.9
Israel	1996=100	57.9	50.9	74.9	92.0	100.0	102.4	87.6	99.5	76.2	64.3	54.3	41.4

Note: REER = 1/CRI*(CPId/CPIf), where CRI is the cross-rate index, and CPIf and CPId are the foreign and domestic CPIs respectively.

Appendix Table 15													
Uzbekistan: General Price Index of Uzbekistan and Trading Partners													
(Based on Consumer Price Index)													
	Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Uzbekistan	1996=100	0.1	0.9	11.7	55.0	100.0	170.5	242.0	351.8	520.7	757.9	1,111.9	1,421.0
All Trading Partners	1996=100	77.1	69.6	53.9	74.5	100.0	121.6	146.0	195.8	258.8	304.0	406.3	468.1
North America	1996=100	92.0	94.5	96.2	98.2	100.0	101.6	102.7	104.2	106.6	108.9	110.8	112.9
United States	1996=100	92.0	94.2	96.2	98.1	100.0	101.7	102.8	104.3	106.6	109.1	110.9	112.9
Canada	1996=100	93.8	95.1	96.2	98.4	100.0	101.2	100.8	102.5	106.8	108.0	109.1	112.5
Europe	1996=100	75.5	68.9	78.6	87.5	100.0	117.3	144.4	195.6	270.8	352.8	586.2	777.1
Germany	1996=100	91.3	94.6	97.0	99.0	100.0	100.7	101.8	102.3	102.0	103.4	104.9	106.1
Turkey	1996=100	9.3	15.6	32.1	59.2	100.0	186.4	337.0	549.8	786.9	1,251.8	1,716.0	2,091.4
Italy	1996=100	84.1	87.4	90.4	95.0	100.0	102.4	105.2	106.8	109.2	112.0	115.5	118.9
France	1996=100	93.0	95.2	96.9	98.6	100.0	101.3	102.1	102.5	103.3	105.0	107.6	109.1
Poland	1996=100	35.4	46.1	62.9	84.3	100.0	113.9	127.1	135.1	144.2	150.0	151.9	152.7
United Kingdom	1996=100	90.5	92.9	94.4	96.9	100.0	102.9	105.7	108.1	109.6	112.1	115.6	119.1
Ukraine	1996=100	0.0	1.1	11.7	60.2	100.0	118.1	132.3	168.6	207.7	228.4	239.9	256.5
Belgium	1996=100	91.9	95.6	97.6	98.8	100.0	101.4	103.1	104.6	105.9	107.8	109.6	111.5
Czech Republic	1996=100	60.8	73.5	83.4	91.9	100.0	108.0	119.5	123.0	124.3	130.5	134.1	136.3
Netherlands	1996=100	93.0	94.7	96.9	98.8	100.0	102.0	103.8	105.4	109.5	115.2	118.8	122.3
Belarus	1996=100	0.0	0.4	8.5	65.0	100.0	171.6	303.0	1,263.4	3,604.1	6,470.7	9,379.7	12,072.5
Austria	1996=100	91.1	93.8	96.3	98.7	100.0	100.9	101.4	102.1	103.6	105.7	107.1	109.2
Switzerland	1996=100	95.4	97.7	99.2	100.1	100.0	99.9	99.6	100.2	101.1	101.7	102.7	104.0
Greece	1996=100	66.7	76.3	84.8	93.1	100.0	106.8	112.4	115.8	119.7	123.9	128.7	133.2
Lithuania	1996=100	8.8	35.8	57.9	82.3	100.0	114.0	119.7	119.0	120.2	120.1	120.1	119.0
Estonia	1996=100	21.7	44.1	61.2	80.4	100.0	110.5	120.4	125.6	132.3	140.0	146.2	149.8
Spain	1996=100	84.8	88.6	92.1	96.6	100.0	102.3	104.8	107.7	111.3	116.0	121.2	126.1
Portugal	1996=100	81.7	86.0	91.9	97.1	100.0	103.8	107.7	111.0	114.9	119.9	125.3	128.2
Finland	1996=100	91.7	94.1	95.8	100.3	100.0	102.1	105.7	105.5	108.8	112.1	113.1	113.0
Central Asia	1996=100	-	18.5	28.2	61.7	100.0	130.5	170.1	270.8	320.0	370.6	433.8	500.8
Russia	1996=100	0.7	6.9	28.1	68.6	100.0	115.1	136.5	235.4	324.0	377.4	436.8	498.9
Kazakhstan	1996=100	0.1	1.7	27.6	72.0	100.0	116.2	122.8	139.1	163.3	179.9	190.3	205.4
Tajikistan	1996=100	0.1	1.5	5.5	20.1	100.0	201.5	310.4	392.7	487.0	614.5	749.9	968.1
Kyrgyz Republic	1996=100	2.2	18.5	52.0	73.9	100.0	119.3	130.2	179.1	228.0	244.6	250.8	258.8
Turkmenistan	1996=100	0.0	0.1	1.0	7.8	100.0	161.6	190.9	234.9	253.3	288.0	319.6	335.9
East Asia	1996=100	72.3	85.1	89.4	98.1	100.0	101.0	107.9	108.2	107.9	112.4	111.1	110.6
Korea	1996=100	77.0	82.5	88.8	95.1	100.0	104.6	110.7	110.6	111.4	115.4	118.6	121.3
China,P.R.: Mainland	1996=100	60.7	69.6	83.4	94.4	100.0	100.8	98.4	96.2	97.1	98.2	98.0	99.9
Japan	1996=100	100.6	101.2	101.3	100.8	100.0	100.3	100.2	98.7	96.8	95.3	94.2	91.8
Bangladesh	1996=100	84.7	86.4	91.3	96.5	100.0	104.2	109.4	112.9	114.8	117.6	122.1	128.2
India	1996=100	71.0	77.6	85.1	92.9	100.0	106.4	114.9	119.9	125.2	130.1	133.8	139.5
Middle East	1996=100	65.2	73.1	83.6	91.9	100.0	112.2	115.6	123.3	124.4	229.5	205.1	281.3
Iran, I.R. of	1996=100	71.5	77.8	83.9	92.1	100.0	112.7	197.6	225.6	247.3	277.3	293.5	312.8
Israel	1996=100	65.2	73.1	81.8	89.6	100.0	108.6	115.6	123.3	124.4	127.1	132.7	132.3

Source: IMF, World Economic Outlook database.

Appendix Table 16													
Uzbekistan: General Price Index of Uzbekistan and Trading Partners													
(Based on Consumer Price Index)													
	Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Uzbekistan	1996=100	0.2	1.0	16.1	65.0	100.0	170.9	199.4	288.4	431.1	635.9	917.7	1,053.5
All Trading Partners	1996=100	76.0	69.0	51.2	73.8	100.0	120.6	145.7	195.8	256.0	300.1	398.7	462.4
North America	1996=100	89.4	93.3	94.9	97.2	100.0	102.3	103.8	106.2	109.6	112.4	114.6	117.2
United States	1996=100	89.4	92.1	94.5	97.1	100.0	102.3	103.9	106.2	109.8	112.9	114.7	117.3
Canada	1996=100	94.5	96.2	96.4	98.4	100.0	101.6	102.6	104.4	107.3	109.9	112.5	115.5
Europe	1996=100	75.5	68.5	78.4	86.6	100.0	116.8	144.0	191.2	266.8	328.7	555.5	759.8
Germany	1996=100	90.5	94.6	97.1	98.8	100.0	101.5	102.1	102.8	104.2	106.2	107.6	108.8
Turkey	1996=100	8.3	13.7	28.3	54.9	100.0	185.7	342.9	565.4	875.9	1,352.4	1,960.4	2,456.5
Italy	1996=100	83.8	87.6	91.3	96.2	100.0	101.9	103.9	105.6	108.4	110.9	113.8	117.0
France	1996=100	92.7	94.7	96.2	98.0	100.0	101.3	102.0	102.5	104.4	106.3	108.3	110.7
Poland	1996=100	36.5	49.3	65.2	83.4	100.0	114.9	128.5	137.8	151.8	160.1	163.1	164.5
United Kingdom	1996=100	90.9	93.2	95.1	97.6	100.0	101.8	103.4	104.8	105.6	106.9	108.3	109.8
Ukraine	1996=100	0.0	1.2	11.6	55.5	100.0	115.9	128.1	157.2	201.5	225.7	227.4	239.2
Belgium	1996=100	92.0	94.6	96.8	98.3	100.0	101.5	102.4	103.6	106.3	108.9	110.6	112.3
Czech Republic	1996=100	63.4	76.6	84.2	91.9	100.0	108.5	120.0	122.6	127.4	133.5	135.9	136.1
Netherlands	1996=100	91.7	94.1	96.7	98.6	100.0	101.9	103.7	105.8	108.3	113.8	118.2	120.8
Belarus	1996=100	0.0	0.3	8.1	65.5	100.0	163.8	283.4	1,116.0	2,997.6	4,830.1	6,886.1	8,840.8
Austria	1996=100	91.3	94.2	96.7	98.3	100.0	101.2	102.0	102.5	104.5	106.9	108.7	110.1
Switzerland	1996=100	93.5	96.6	97.4	99.2	100.0	100.5	100.5	101.3	102.9	103.9	104.6	105.3
Greece	1996=100	67.1	76.8	85.1	92.7	100.0	105.4	110.2	112.6	115.8	120.1	124.8	129.0
Lithuania	1996=100	6.5	33.4	57.5	80.2	100.0	108.8	114.4	115.2	116.4	118.0	118.2	116.8
Estonia	1996=100	22.5	42.7	63.0	81.3	100.0	111.2	120.3	124.3	129.3	136.7	141.6	143.5
Spain	1996=100	83.2	87.9	91.9	96.4	100.0	101.9	104.2	106.7	109.4	112.2	116.5	120.0
Finland	1996=100	94.8	96.9	98.0	98.9	100.0	101.2	102.6	103.9	107.0	109.9	112.1	113.5
Central Asia	1996=100	-	18.8	23.5	61.1	100.0	128.7	168.7	273.4	315.3	383.5	440.6	496.9
Russia	1996=100	0.6	5.6	22.7	67.7	100.0	114.8	146.5	272.2	328.7	399.3	462.3	525.4
Kazakhstan	1996=100	0.1	1.3	26.0	71.9	100.0	117.4	126.0	136.6	154.8	167.8	177.7	189.1
Tajikistan	1996=100	0.0	0.6	2.7	19.3	100.0	188.0	269.1	343.1	455.8	631.7	709.0	825.3
Kyrgyz Republic	1996=100	1.6	18.8	52.8	75.8	100.0	123.4	136.3	185.2	219.8	235.0	239.9	247.3
Turkmenistan	1996=100	0.0	0.0	0.8	9.2	100.0	183.7	214.5	264.9	286.2	319.5	347.4	366.9
East Asia	1996=100	67.7	81.2	86.1	96.8	100.0	102.7	109.9	111.3	112.4	117.5	116.1	116.2
Korea	1996=100	81.9	85.8	91.2	95.3	100.0	104.4	112.3	113.2	115.8	120.5	123.8	128.1
China,P.R.: Mainland	1996=100	55.4	63.5	78.9	92.3	100.0	102.8	102.0	100.6	101.0	101.7	100.8	102.1
Japan	1996=100	98.1	99.3	100.0	100.0	100.0	101.7	102.4	102.1	101.2	100.4	99.5	99.3
Bangladesh	1996=100	80.6	83.0	88.1	97.6	100.0	105.0	114.0	121.1	123.7	125.6	130.4	137.4
India	1996=100	71.0	75.5	83.3	91.8	100.0	107.2	121.3	127.0	132.1	137.1	143.0	148.4
Middle East	1996=100	65.5	72.7	84.2	92.4	100.0	106.6	114.9	120.9	122.3	199.2	189.8	254.0
Iran, I.R. of	1996=100	71.1	78.0	84.7	92.7	100.0	106.2	167.8	202.6	210.3	234.4	262.1	279.9
Israel	1996=100	65.5	72.7	81.7	89.9	100.0	109.0	114.9	120.9	122.3	123.6	130.6	131.5

Source: Derived from data in IMF, World Economic Outlook database.

Appendix Table 17													
Uzbekistan: General Price Index of Uzbekistan and Trading Partners													
(Based on Consumer Price Index)													
	Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Uzbekistan	1995=100	0.2	1.5	24.7	100.0	154.0	263.1	307.0	444.0	663.8	979.1	1,412.8	1,621.9
All Trading Partners													
North America													
United States	1995=100	92.1	94.8	97.3	100.0	102.9	105.3	107.0	109.3	113.0	116.2	118.0	120.7
Canada	1995=100	95.9	97.7	97.9	100.0	101.6	103.2	104.2	106.0	108.9	111.7	114.2	117.4
Europe	1995=100												
Germany	1995=100	91.6	95.7	98.3	100.0	101.2	102.7	103.4	104.0	105.5	107.5	108.9	110.1
Turkey	1995=100	15.1	25.0	51.6	100.0	182.3	338.6	625.2	1,030.7	1,596.7	2,465.3	3,573.8	4,477.9
Italy	1995=100	87.2	91.1	94.9	100.0	104.0	106.0	108.0	109.8	112.7	115.3	118.3	121.6
France	1995=100	94.7	96.6	98.3	100.0	102.1	103.4	104.1	104.7	106.6	108.5	110.6	113.0
Poland	1995=100	43.7	59.2	78.2	100.0	119.9	137.8	154.0	165.3	182.0	192.0	195.6	197.2
United Kingdom	1995=100	93.1	95.5	97.4	100.0	102.5	104.3	105.9	107.4	108.2	109.5	111.0	112.5
Ukraine	1995=100	0.0	2.1	21.0	100.0	180.2	208.9	231.0	283.3	363.3	406.7	409.8	431.1
Belgium	1995=100	93.7	96.3	98.6	100.0	101.8	103.3	104.2	105.4	108.2	110.8	112.6	114.3
Czech Republic	1995=100	68.9	83.3	91.6	100.0	108.8	118.1	130.6	133.4	138.6	145.3	147.9	148.1
Netherlands	1995=100	93.0	95.5	98.0	100.0	101.4	103.3	105.1	107.3	109.8	115.4	119.9	122.6
Austria	1995=100	92.9	95.9	98.4	100.0	101.8	103.0	103.8	104.3	106.4	108.8	110.7	112.1
Switzerland	1995=100	94.3	97.4	98.2	100.0	100.8	101.3	101.4	102.2	103.8	104.8	105.5	106.1
Greece	1995=100	72.4	82.8	91.8	100.0	107.9	113.7	118.9	121.5	124.9	129.6	134.6	139.2
Lithuania	1995=100	8.2	41.7	71.7	100.0	124.7	135.7	142.6	143.7	145.1	147.1	147.4	145.7
Estonia	1995=100	27.7	52.5	77.5	100.0	123.1	136.8	148.0	152.9	159.1	168.2	174.2	176.6
Spain	1995=100	86.3	91.2	95.3	100.0	103.7	105.7	108.0	110.7	113.4	116.3	120.8	124.5
Portugal	1995=100	86.5	91.6	96.2	100.0	102.9	104.8	107.2	109.7	112.7	117.7	122.1	126.0
Finland	1995=100	95.8	98.0	99.0	100.0	101.1	102.3	103.7	105.0	108.1	111.0	113.3	114.7
Central Asia													
Russia	1995=100	0.8	8.2	33.6	100.0	147.7	169.6	216.5	402.1	485.6	589.9	683.0	776.3
Kazakhstan	1995=100	0.1	1.8	36.2	100.0	139.1	163.4	175.3	190.0	215.4	233.4	247.1	263.0
Tajikistan	1995=100	0.1	3.1	14.1	100.0	518.2	974.0	1,394.6	1,778.1	2,362.2	3,273.8	3,674.1	4,276.6
Kyrgyz Republic	1995=100	2.1	24.8	69.7	100.0	132.0	162.9	179.9	244.4	290.1	310.2	316.7	326.5
Turkmenistan	1995=100	0.0	0.5	9.0	100.0	1,092.4	2,007.0	2,343.6	2,893.5	3,126.1	3,489.8	3,795.2	4,008.0
East Asia													
Korea	1995=100	85.9	90.1	95.7	100.0	104.9	109.6	117.8	118.8	121.5	126.4	129.9	134.5
China,P.R.: Mainland	1995=100	60.0	68.8	85.4	100.0	108.3	111.3	110.4	108.9	109.3	110.1	109.2	110.5
Japan	1995=100	98.2	99.3	100.1	100.0	100.0	101.7	102.4	102.1	101.2	100.4	99.5	99.3
Bangladesh	1995=100	82.6	85.0	90.3	100.0	102.5	107.5	116.8	124.1	126.8	128.7	133.6	140.8
India	1995=100	77.4	82.3	90.7	100.0	109.0	116.8	132.2	138.4	144.0	149.4	155.8	161.8
Middle East													
Iran, I.R. of	1995=100	76.8	84.2	91.4	100.0	107.9	114.6	181.1	218.7	226.9	253.0	282.8	302.0
Israel	1995=100	72.9	80.9	90.9	100.0	111.3	121.3	127.9	134.5	136.0	137.6	145.4	146.4

Source: Derived from data in IMF, World Economic Outlook database.

Appendix Table 18													
Nominal Cross Exchange Rate Indices for Uzbekistan													
Trading Partner	Units	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
All Trading Partners	1996=100	0.36	2.85	36.46	85.93	100.00	135.45	143.58	120.25	165.72	251.85	372.92	541.25
North America	1996=100	0.31	2.34	24.77	74.13	100.00	165.31	234.65	310.51	587.87	1,033.99	1,911.36	2,755.75
United States	1996=100	0.31	2.31	24.78	74.16	100.00	165.43	235.93	311.06	591.03	1,054.49	1,921.21	2,757.42
Canada	1996=100	0.35	2.44	24.74	73.67	100.00	162.90	216.84	285.47	542.62	928.33	1,669.20	2,683.45
Europe	1996=100	0.36	2.89	27.06	80.20	100.00	135.46	157.02	137.09	173.30	217.94	263.92	335.95
Germany	1996=100	0.30	2.10	23.02	77.91	100.00	143.69	201.96	255.24	419.90	726.43	1,395.00	2,397.97
Turkey	1996=100	3.64	18.35	67.66	131.42	100.00	88.48	73.48	60.39	76.83	69.79	103.51	149.52
Italy	1996=100	0.39	2.26	23.72	70.26	100.00	150.00	209.88	264.38	434.95	752.45	1,444.97	2,483.86
France	1996=100	0.30	2.08	22.87	76.04	100.00	145.13	204.82	258.76	425.69	736.43	1,414.21	2,431.00
Poland	1996=100	0.61	3.43	29.40	82.46	100.00	135.97	182.09	211.41	366.67	694.55	1,269.90	1,911.95
United Kingdom	1996=100	0.35	2.22	24.30	74.95	100.00	173.48	250.23	322.31	573.76	972.27	1,846.80	2,885.66
Ukraine	1996=100	233.06	39.51	88.92	92.06	100.00	162.42	176.09	137.61	198.58	358.79	659.29	945.17
Belgium	1996=100	0.30	2.07	22.97	77.93	100.00	143.31	201.44	254.62	418.88	724.66	1,391.59	2,392.12
Czech Republic	1996=100	0.30	2.15	23.36	75.85	100.00	141.56	198.39	244.26	415.64	752.56	1,592.94	2,653.38
Netherlands	1996=100	0.30	2.09	22.99	77.91	100.00	143.07	200.71	253.79	417.52	722.31	1,387.09	2,384.37
Belarus	1996=100	181.01	113.56	89.53	85.21	100.00	83.67	67.38	16.48	10.92	10.10	14.27	17.80
Austria	1996=100	0.30	2.10	23.01	77.92	100.00	143.63	201.98	255.23	419.89	726.40	1,394.95	2,397.88
Switzerland	1996=100	0.27	1.93	22.39	77.52	100.00	140.89	201.13	255.95	432.55	772.31	1,523.56	2,530.87
Greece	1996=100	0.39	2.43	24.60	77.10	100.00	146.02	192.49	245.28	390.87	667.09	1,281.05	2,202.09
Lithuania	1996=100	0.70	2.16	24.93	74.16	100.00	165.43	235.92	311.06	591.03	1,054.49	2,111.83	3,611.86
Estonia	1996=100	0.29	2.10	22.96	77.87	100.00	143.46	201.79	255.12	419.29	726.28	1,392.23	2,394.34
Spain	1996=100	0.38	2.31	23.46	75.38	100.00	143.25	200.22	252.55	415.48	718.77	1,380.30	2,372.70
Portugal	1996=100	0.35	2.22	23.07	75.73	100.00	145.76	202.30	255.28	419.97	726.54	1,395.21	2,398.32
Finland	1996=100	0.32	1.86	21.87	78.07	100.00	146.52	202.98	256.29	421.63	729.41	1,400.72	2,407.80
Central Asia	1996=100	na	3.71	56.10	91.81	100.00	130.71	123.32	76.75	121.16	202.01	334.61	483.24
Russia	1996=100	7.12	12.66	57.53	83.33	100.00	146.44	124.52	64.70	107.59	185.11	313.83	460.00
Kazakhstan	1996=100	24.72	26.94	46.18	82.22	100.00	148.36	203.58	177.24	281.83	486.57	848.07	1,248.56
Tajikistan	1996=100	36.87	65.96	301.12	178.46	100.00	87.13	89.88	74.37	95.96	129.38	205.30	272.07
Kyrgyz Republic	1996=100	4.95	3.71	29.43	88.56	100.00	122.74	145.04	102.71	159.70	281.27	527.72	757.41
Turkmenistan	1996=100	2,515.18	4,173.87	3,363.32	2,176.64	100.00	130.09	157.19	194.89	370.30	660.68	1,203.71	1,727.63
East Asia	1996=100	0.38	2.69	24.85	80.80	100.00	160.03	150.78	226.97	461.82	711.01	1,429.80	2,236.57
Korea	1996=100	0.32	2.31	24.81	77.35	100.00	139.90	135.43	210.49	420.40	657.08	1,235.34	1,861.52
China, P.R.: Mainland	1996=100	0.47	3.33	23.90	73.83	100.00	165.97	236.95	312.44	593.64	1,059.43	1,930.05	2,770.07
Japan	1996=100	0.27	2.26	26.37	85.76	100.00	148.73	196.05	297.06	596.58	943.86	1,666.72	2,587.25
Bangladesh	1996=100	0.33	2.44	25.75	76.95	100.00	152.12	203.31	254.91	457.43	773.19	1,386.79	1,964.76
India	1996=100	0.42	2.68	27.98	81.03	100.00	161.42	202.61	256.00	465.98	791.84	1,400.42	2,097.56
Middle East	1996=100	0.40	2.60	26.82	77.53	100.00	135.83	198.15	239.83	462.64	310.57	739.46	844.33
Iran, I.R. of	1996=100	0.36	2.59	26.91	77.40	100.00	133.45	55.30	92.94	164.71	241.56	485.32	754.70
Israel	1996=100	0.40	2.60	26.26	78.60	100.00	153.07	198.15	239.83	462.64	800.25	1,294.23	1,932.47

Source: Derived from data in IMF, World Economic Outlook database.

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