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(Note: Page 84, Table 18, has been corrected in this printing of the report.)

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REPUBLIC OF KAZAKHSTAN

Selected Issues and Statistical Appendix

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Approved by the European II Department

January 7, 2002

Contents Page

Text Tables

Figures

Statistical Appendix Tables

I. The Petroleum Sector—A Brief Overview of Developments and Prospects [1]

1. Kazakhstan's petroleum sector continued to develop rapidly, with a 14 percent output increase in 2001 (Text Table 1). Volume growth would have been 2 percent greater in the absence of a 2-month shutdown of the major gas condensate field, owing to a dispute with the Russian authorities about the application of the VAT subsequent to the conversion to the destination principle (except on energy products) from July 1, 2001. The difference of interpretation over the classification of condensate was resolved in October. With average prices declining about 14 percent, export revenues are estimated to have stagnated at around $4.5 billion in 2001. Nevertheless, several oil producers in Kazakhstan are investing heavily to expand production over the coming years. TengizChevroil, with production of around 12 million mt in 2001 and operating the largest field in Central Asia with recoverable oil in the range of 6–9 billion barrels, is investing heavily to almost double production within 5 years. The operators of the Karachaganak gas and gas condensate field in the northwest of the country are also investing heavily over the next three years, largely to expand production and reorient export transport capacity to link-up to the Caspian Pipeline Consortion (CPC) pipeline (a $2.6 billion, 1,500 km pipeline from the Tengiz field through Russia to Novorossiysk on the Black Sea). Production at Karachaganak will also broadly double by 2005. Long-term prospects Kazakhstan as a whole depend on the size of the offshore Caspian field of Kashagan. Though exploration work continues and the exact size of the deposit is not expected to be announced before late-2002/early 2003, preliminary indications suggest a very large field. Commercial production would not begin before 2005.

Text Table 1. Petroleum Production, Exports, and Fiscal Revenue
(In millions of metric tons, unless otherwise indicated)

	1998	1999	2000	2001	2002	2003	2004	2005
	Estimates			Projections				
Production	25.6	29.4	35.4	40.4	47.2	52.8	58.6	66.9
Domestic consumption	5.2	5.7	6.0	7.5	7.9	8.3	8.7	9.2
Exports	20.4	23.7	29.4	32.9	39.3	44.6	49.9	57.7
of which: through CPC	...	...	...	1.0	20.0	28.0	28.0	32.0
(In millions of dollars)	1,650	2,164	4,682	4,458	4,063	4,658	5,262	6,136
Budget revenue from oil	...	158	604	1,430	967	1,018	1,212	1,544
(In millions of dollars)								
Memorandum items:								
World oil price ($/bbl)	13.1	18.0	28.2	24.3	19.0	19.0	19.0	19.0
Oil revenue/Budget revenue (in percent)	...	5.5	15.3	25.8	18.2	...	...	...

Sources: Data provided by Kazakhstan authorities and Fund staff estimates and projections.

2. Until very recently, Kazakhstan has been virtually entirely dependent on the Russian Transneft pipeline system (from Atyrau, Kazakhstan to Samara, Russia) for its primary

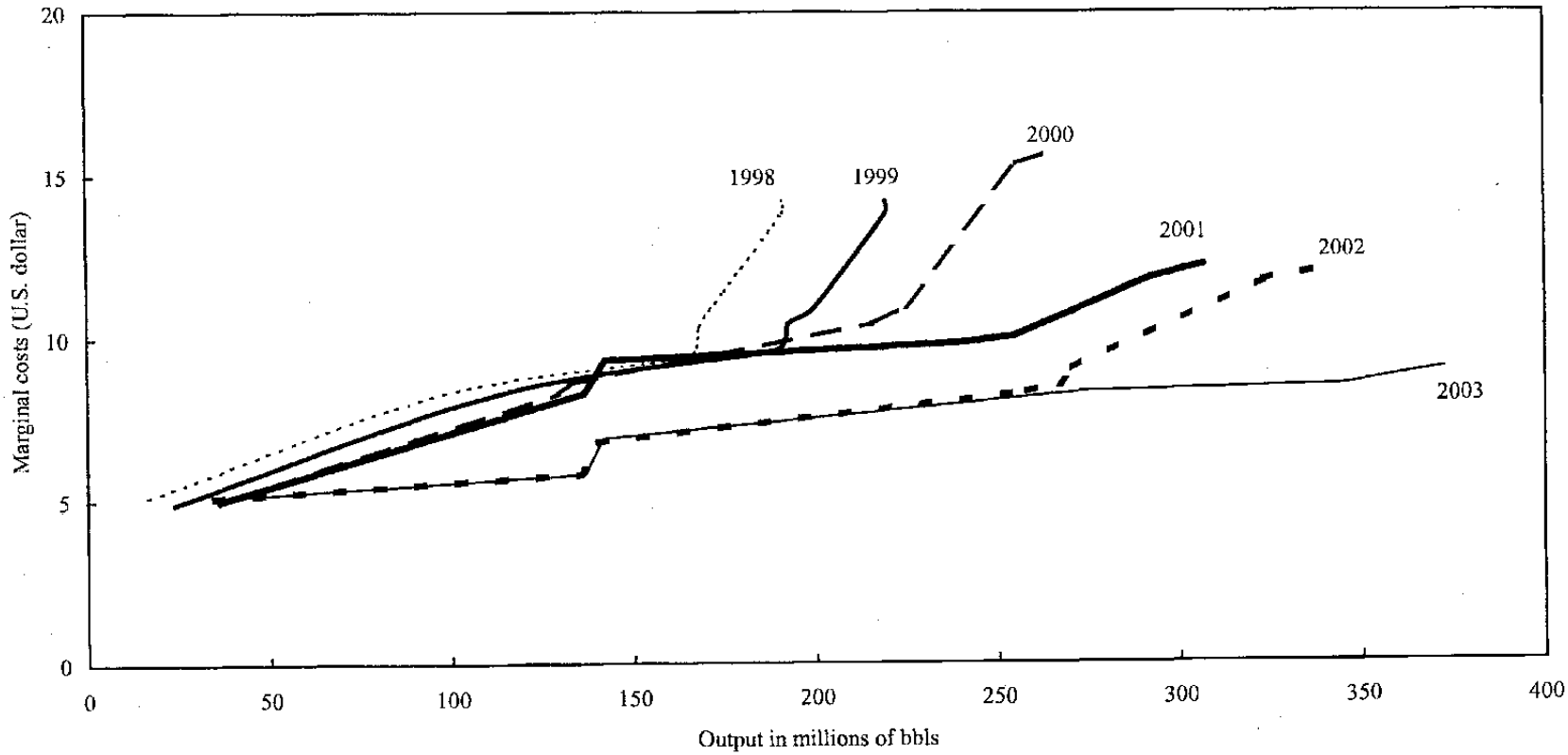
[1] Prepared by Paul Mathieu.

access to international markets. This dependence has involved monopsony practices—binding quotas on the volume transiting the Russian system, the absence of a quality bank resulting in significant discounts on better quality Kazakhstan crude, and the application of Russian domestic prices for exports to Russia. With the coming into operation of the CPC in the autumn of 2001, the situation has improved dramatically. While the CPC runs through Russia, it is independently owned and operated on commercial grounds and includes a quality bank mechanism. In addition, it covers a shorter distance, with the result that export costs from Tengiz will be cut about in half. The CPC has an initial rated capacity of 28 million mt per annum, which would rise to 67 million mt in the medium term. Initially, only crude from the Tengiz field is using the CPC. However, with these developments in view, several important fields are rushing to link up with the CPC over the next 2 years, notably the large gas and condensate field at Karachaganak (by end 2003), the Aktobe oil field in the north (by end 2002); and the Hurricane/Kumkol complex to the east of the Aral sea. One of the key challenges facing the operators of the CPC pipeline, and which resulted in some delays, has been to ensure that an oil quality bank was in place and approved by the Russian tax authorities.

3. Perhaps as importantly, the CPC has provided a competitive alternative to the monopsony position of the Transneft pipeline system of Russia. The staff estimates that for the industry as a whole, export costs (operating and transport costs) will have dropped by at least 20 percent over the period 1998–2003, with an output increase of about 100 percent. Perhaps more strikingly stated, the export costs of the highest cost producer would have dropped 40 percent from around $14/bbl in 1998 to around $9/bbl in 2003 (Figure 1). In part also reflecting competitive pressures emerging from the CPC, Kazakhstan's quota through the Samara pipeline has risen steadily. For 2002 it has been announced that 12.5 million mt will be allocated to Kazakhstan (up from 10 million mt in 2001 and out of total pipeline capacity of 15 million mt). Government-to-government talks have also reportedly resulted in agreement on a quota of 2.5 million mt to be shipped through the pipeline from the Russian Caspian port of Makhachkala, through Chechnya, to Novorossiysk.

4. Two other developments are worthy of note as they reflect structural changes in the industry. Firstly, the share of exports going to CIS countries has been steadily declining (from 40 percent in 1998 to about 17 percent in the first 10 months of 2001) as producers find ways to reach international markets where prices are much higher. This trend is expected to continue and even accelerate in coming years as export capacity develops further. A second trend involves the growing role of swaps. As the major petroleum producing areas of Kazakhstan are in the extreme west (around the Caspian Sea and northward), while the main industrial area is in the north and northeast and the large population area is in the south and southeast, there are clear benefits for swap operations involving Russia and this has been developing rapidly in recent years. Since 2000, a triangulation with the Ukraine has developed. Oil is delivered from western Kazakhstan to a refinery at Orsk in the Urals and to a refinery at Kherson in the Ukraine from fields operated by the parastatal Kazakhoil. Kazakhoil purchased a share in the Kherson refinery in 2000. In exchange, Russian oil from

Figure 1. Kazakhstan: Marginal Cost of Crude Petroleum Exports (Supply) 1/
1998-2003



Source: Fund staff estimates and projections.

1/ Defined as the well operating cost plus transport cost to world markets for the major fields, normalized for quality.

Siberia is shipped to the Pavlodar refinery in northeastern Kazakhstan. In 2000, this transaction involved about 1 million mt (up 25 percent from 1999). For the first 10 months of 2001 this has risen further to 1.8 million mt. For 2002 press reports indicate a target of 2.5 million mt, although some is part of a new transit arrangement to China. There has not be any significant transit of oil, but this may change in the near future as there are proposals to develop use the pipeline from Omsk, Russia through Pavlodar in the east and then by rail to northwestern China.

II. Assessing Fiscal Vulnerability, Fiscal Sustainability, and Fiscal Stance in a Natural Resource Rich-Country[2]

A. Introduction

5. Kazakhstan is a country rich in natural resources. With its crude oil reserves estimated at 30 billion barrels,[3] Kazakhstan has slightly higher reserves than Mexico, representing roughly 45 percent of Russia's reserves, 11 percent of Saudi Arabia's and almost three times the size of Norway (Text Table 2). Kazakhstan's daily production in 2000 stood at 0.7 million barrels which is about 10 percent of Russia, the second largest producer in the world after Saudi Arabia, and almost twice the level of Yemen. By 2017, Kazakhstan's production of crude oil could quadruple to reach a peak of 3 million barrels per day, roughly the level of Kuwait's daily production at its peak in 1972 and that of Norway in 2000.[4] Revenues from the oil sector collected by the government in Kazakhstan has increased from about 5 percent of general government revenues in 1999 to 15 percent in 2000 and are projected to rise to 26 percent of general government revenues in 2001 before falling to 18 percent in 2002 as oil prices are expected to decline. These swings in revenue and the sheer size of the expected oil wealth in the ground pose significant challenges for fiscal and macroeconomic policies.[5]

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[2] Prepared by Hamid R. Davoodi.

[3] This estimate assumes 15 billion barrels will be discovered in the offshore Caspian field of Kashgan; production is not expected to begin before 2005. The estimated 30 billion reserves correspond to what is known as "proven" crude oil reserves. The latter is "an estimated quantity of all hydrocarbons statistically defined as crude oil or natural gas, which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoir under existing economic and operating conditions. Reservoirs are considered proven if economic producibility is supported by either actual production or conclusive formation testing." (Organization of the Petroleum Exporting Countries, 2000)

[4] See Amuzegar (1999).

[5] The analytical section of this chapter relies exclusively on the oil sector in Kazakhstan, but the same issues are also relevant for other primary commodities produced in Kazakhstan such as copper and zinc.

Text Table 2. Kazakhstan: Proven Crude Oil Reserves and Daily Crude Oil Production in Selected Countries and Regions 1/

Country	Reserves as of end-2000	Daily production in 2000
	(In billions of barrels)	(In millions of barrels)
Kazakshtan	30.0	0.7
Russia	65.3	7.50
Middle East		
Saudia Arabia	262.8	8.09
Iraq	112.5	2.80
Islamic Republic of Iran	99.5	3.70
United Arab Emirates	97.8	2.17
Kuwait	96.5	1.99
Qatar	13.2	0.65
Yemen 2/	2.8	0.44
Western Europe and North America		
United States	21.7	5.80
Norway	13.2	3.18
Canada	8.7	1.40
United Kingdom	5.0	2.40
Latin America		
Venezuela	76.8	2.89
Mexico	28.3	3.00
Africa		
Libya	36.0	1.34
Nigeria	34.5	2.10
Asia and Pacific		
China	24.0	3.20
Indonesia	5.0	1.27
OPEC (average) 3/	77	2.52
OPEC (total)	846.0	27.75
World (Total)	1,078	65.80

Sources: Organization of Petroleum Exporting Countries (OPEC), 2000; the Kazakhstani authorities; and Fund staff estimates.

1/ See the text for the definition of proven crude oil reserves.

2/ SM/01/56.

3/ Organization of Petroleum Exporting Countries (OPEC) consists of Algeria, Indonesia, Islamic Republic of Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

6. It has been recognized for some time that in economies endowed with rich natural resources the conventional assessment of fiscal vulnerability, fiscal sustainability and fiscal stance can often be misleading.[6] This recognition is driven by the increasing awareness of the characteristics unique to these economies. These are: (i) natural resource wealth can be a significant source of government revenues at least for an extended period of time and is often not treated as part of overall government wealth and national wealth;[7] (ii) natural resource is non-renewable and its size is often subject to considerable uncertainty;[8] (iii) prices of resource-based commodities (e.g., oil, copper) are volatile, with no discernible trends or cycles;[9] (iv) economy can be subject to so-called "Dutch disease" phenomenon of real exchange rate appreciation, loss of competitiveness in non-resource intensive tradable sector and perhaps de-industrialization;[10] and (v) extensive research has shown that, even after controlling for other factors, resource-rich countries tend to grow slower than resource-poor countries,[11] and that land-locked countries grow at a lower rate than countries that are not landlocked.[12] The last point is a significant finding as Kazakhstan is the largest landlocked country in the world. A growing number of studies of fiscal policy in resource-rich countries

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[6] The literature on fiscal vulnerability, though closely related to fiscal sustainability, is rather new. Hemming and Petrie (2000), for example, provide an overview of the relevant issues and provide a framework for assessing sources of fiscal vulnerability. However, the literature on fiscal sustainability is much older. The conventional view of fiscal sustainability tests for departure of government's observed fiscal policy from that implied by the present value intertemporal budget constraint; for this theory and some applications, see Barro (1979, 1989) and Chalk and Hemming (2000), respectively.

[7] Some studies have also indicated that conventional national income accounting in resource-rich countries is also misleading since they do not incorporate natural resource wealth, changes in natural resource wealth and environmental degradation associated with extraction of natural resource. These aspects are also expected to affect fiscal policy stance. These arguments date back to at least Kuznets; See Auty (1998) for a discussion.

[8] See the strict requirements for the definition of size of proven reserves in footnote 3.

[9] See Cashin, McDermott, and Scott (1999).

[10] See Auty (1998) and Sachs and Warner (2001).

[11] See Sachs and Warner (1997) and Auty (1998). Auty (1998), for example, shows that the growth rate of real per capita GDP in large resource-poor countries in 1970–93 was 3.7 percent, while that of resource-rich countries was 1.3 percent, and that of oil exporters only 0.8 percent.

[12] See Sachs and Warner (1997). This empirical regularity has been uncovered in many empirical studies of growth; see Sachs and Warner (1997) and Valdivieso et al (2001). These studies have found that being landlocked implies annual real per capita GDP growth would be lower by some 0.6 percentage point, a significant magnitude, enough to pose a challenge for a landlocked country to converge to the economies of countries that are not landlocked. These challenges can be overcome in part, as shown, for example, by the construction of the Caspian Consortium Pipeline carrying Kazakhstan oil to Russia. However, access to the sea, as in the case of Iran to the Persian Gulf is far superior in terms of costs, sales and profitability.

have started incorporating some of these characteristics in assessing various aspects of fiscal policy.[13]

7. An oil-rich country has to solve a difficult portfolio problem in the short run as well as the long run. Should it leave for future generations a significant reserve of oil deposits (implying a slow rate of depletion of reserves), financial wealth accumulated from years of sustained oil extraction (suggesting a fast rate of depletion), or a higher productive capacity as a result of a sustained build up of the economy's capital stock, broadly defined to include human as well as physical capital. This chapter is an attempt to solve only part of the problem.

8. In particular, the purpose of the chapter is to conduct a comprehensive assessment of fiscal vulnerability, fiscal sustainability, and fiscal stance in Kazakhstan focusing on the government's nonoil budget balance while taking into account some of the key characteristics of resource-rich countries. Simply stated, the key issue is how much the government should consume and save out of oil revenues and how these decisions should change in response to changes in key aspects of fiscal vulnerability in Kazakhstan.[14] The private sector response is obviously of paramount importance in such a setting as oil wealth is part of national wealth, and fiscal policy would influence private sector activities and vice versa. However, an analysis of the private sector response and its role in the economy is beyond the scope of this chapter.

B. Measuring Fiscal Stance in a Natural Resource-Rich Economy

9. An important lesson that has emerged from the previous studies of fiscal policy in natural resource-rich countries is that non-resource fiscal balance (i.e., the overall balance excluding resource receipts to the government) or the nonoil fiscal balance (i.e., the overall balance excluding oil revenues) in the case of oil-rich countries is the key variable for assessing the fiscal stance which, as will be shown in the chapter, is an important indicator for assessing fiscal sustainability and fiscal vulnerability; see, for example, Tersman's (1991) and Bascand and Razin's (1997) analyses of Norway and Indonesia, respectively.

10. There are at least four reasons why the emphasis on nonoil fiscal balance is important.[15] First, if during periods of rising oil prices, oil revenues are used to finance permanent expenditure increases, then a permanent demand is placed on the budget which would be difficult to reverse during periods of falling oil prices or when oil reserves are exhausted. In

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[13] See Davis, Ossowski, Daniel and Barnett (2001) who provide a review of some of these studies.

[14] See SM//00/260 for a detailed discussion of the key aspects of fiscal vulnerability in Kazakhstan.

[15] In this chapter, nonoil fiscal balance and non-resource fiscal balance are used interchangeably as oil is more important than other natural resources in Kazakhstan, but otherwise the issues are the same regardless of the type of the natural resource.

the absence of compensating fiscal adjustment, the resulting nonoil balance would be unsustainable which would be the case whether or not oil reserves are depleted. Cost of fiscal adjustment (e.g., a higher tax burden) may be shifted to future generations that have to live with lower oil reserves or none at all.

11. Second, in oil-rich countries the nonoil balance is a better indicator of the subsequent growth performance than the overall balance. Extensive research has shown that, after controlling for other factors, higher deficit is associated with lower economic growth.[16] This finding would hold even stronger when the nonoil deficit is the measure of deficit rather than the overall balance; and in circumstances in which the budget relies heavily on oil receipts. The nonoil deficit in such oil-dependent economies would be higher than otherwise would be the case; hence, growth would be lower. The poor growth track record of resource-rich countries has shown that their natural resource wealth has not been the blessing that one might have expected.[17]

12. Third, the emphasis on the nonoil balance rather than the overall balance would lead to a closer scrutiny of the nonoil revenue and the spending sides of the budget, and points towards sources of fiscal adjustment. On the revenue side, the emphasis would direct attention of the policymakers to the issue of broadening the nonoil tax base, which is crucial as oil reserves are non-renewable. On the spending side, closer attention would be placed on scrutinizing the productivity of each additional spending which the country cannot afford to live without even when oil reserves have not been depleted.[18] A high nonoil deficit can also be an indicator of unproductive and wasteful spending which not only does not enhance the productive capacity of the country but may even lead to persistently higher nonoil deficits in the subsequent budgets. This is a cause for concern in low-income, resource-rich economies, given their weak institutional capacity for screening projects for public investment, budget implementation and their weak governance structure.[19]

13. Finally, for policymakers who may have a shorter horizon, the nonoil balance is a useful indicator for assessing the short-run fiscal policy stance, particularly in the transition from an oil-rich state to an oil-poor state and vice versa. The nonoil balance can be used to assess whether a proposed fiscal policy is too loose or too tight at a given point in time or

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[16] See Fischer (1993) and Sachs and Warner (1997).

[17] Sachs and Warner (2001) review this literature. They conclude that the reason for the poor growth performance is that natural resource abundant countries have systematically failed to achieve a strong export-led growth or other kinds of growth.

[18] The nonoil balance should also perhaps exclude oil-related spending at least to the extent that some oil revenues are earmarked for special projects.

[19] See Tanzi and Davoodi (1998) who provide a useful discussion of wasteful spending and corruption in public investment projects.

whether fiscal policy has been loose or tight over time. The latter is particularly important when a significant oil deposit is discovered or when oil reserves are close to being depleted. In terms of a positive analysis, movements in the nonoil balance are an important guide for policymakers for developing the subsequent fiscal stance during the transition process.

14. Any assessment of fiscal policy stance, whether using the overall balance or nonoil balance, requires a normative framework. Building on the lead of previous studies of resource-rich countries, the framework used in this chapter relies on the government's intertemporal budget constraint and the Permanent Income Hypothesis (PIH) of consumption. After describing some essential elements of the economics of natural resources and optimal consumption of such resources under a PIH framework, the simple analytics of the PIH is presented and then applied to Kazakhstan. The framework is also used to formally derive the relationship between nonoil balance and government consumption out of oil wealth.

C. Economics of Natural Resources Within a PIH Framework

15. The framework used for the analysis of this chapter is the PIH of consumption. This framework has been applied previously to varying degrees to ten resource-rich countries.[20] The PIH has several desirable properties, which makes it suitable for the purpose of this chapter. First, the hypothesis is forward-looking as it assumes that government does not spend out of its current income (or resources), but out of its permanent income or total wealth. In its simplest form, government's permanent income is merely the annuity value of its net wealth, the discounted net present value of future flows of earnings available to the government. This approach imposes fiscal discipline on the government in that its spending is guided by the available total net wealth, sum of financial and non-financial wealth defined to be net of debt. Without this discipline, value of total wealth can be eroded over time if natural resource wealth is consumed too fast and financial wealth is accumulated too slowly. If this happens to be the case, interest of future generations will be sacrificed at the expense of the current generation. Moreover, it is also possible, as illustrated by the history of some oil exporting countries, that even interest of a large segment of the current generation may not be served if prudent macroeconomic policies and proper safeguards are not put in place to protect the integrity of the rent extracted from a finite and exhaustible natural resource.[21]

16. The second property of PIH is that the government is assumed to be able to freely borrow from and lend to international and domestic capital markets in anticipation of future

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[20] These countries are: Norway (Tersman, 1991), Egypt, Indonesia, Mexico, Nigeria, Saudi Arabia and Venezuela (Liuksila, Garcia and Basset, 1994; Bascand and Razin, 1997; Chalk, 1998; SM/01/31), Kuwait (Chalk, 1998), Yemen (SM/01/56) and Azerbaijan (EBS/01/91). For theoretical treatments, see Chalk (1998), Alier and Kaufman (1999), and Engle and Valdes (2000).

[21] See the discussion of Venezuela and Nigeria in Davis, Ossowski, Daniel and Barnett (2001); see also Gelb and others (1988).

oil revenues. [22] This property, along with the assumption that the government is no more or less patient than the discount rate implied by the prevailing interest rate on international capital markets, ensures that government smoothes its consumption of oil wealth over time, thus providing a steady level of public services. These two assumptions are admittedly too strong, but they are needed to produce a simple rule and a benchmark for evaluating alternative government consumption of natural resource wealth. For example, these two assumptions imply that in response to a boost in its permanent income, say, due to the discovery of higher natural resource wealth (e.g., a new oil field), government can choose to raise its spending or lower taxes in line with permanent income equivalent of change in wealth and retire the debt thus accumulated with future oil revenues. Third, the path of fiscal policy dictated by the PIH is by construction fiscally sustainable. This feature allows for an assessment of alternative fiscal policies and point towards the nature and size of fiscal adjustment needed to bring the fiscal policy back on track in response to changes in the economic environment.

17. Given the PIH and assuming that the government is no more or less patient than the discount rate implied by the prevailing interest rate on international capital markets, government should consume at most the real interest rate on its total wealth or the permanent income.[23] The assumption made on the rate of impatience (i.e., government's rate of time preference) refers to the celebrated case of permanent income as discussed by Friedman (1957). It is the permanent rent obtained each period from extraction of the natural resource and is equal to the real interest rate times initial oil wealth. Therefore, the nonoil deficit that is indefinitely sustainable should be no higher than this rent. Essentially, government consumes at most the annuity value of oil wealth, thus keeping oil wealth constant forever and providing the same real level of services for future generations as the current one.

18. Alternative assumptions on the rate of impatience imply either a decreasing or an increasing path for government consumption out of oil wealth, which would imply that one generation is sacrificed at the expense of the other as far as use of wealth from natural resources is concerned.[24] In this regard, intergenerational equity considerations play an important role, i.e., the current generation should leave behind sufficient resources to allow future generations at least the same level of consumption out of natural resource wealth as that enjoyed by the current generation. This path corresponds to Friedman's so-called

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[22] Application of the PIH to Kazakhstan incorporates country-specific risk premium.

[23] The empirical analysis would actually allow for net debt.

[24] Note that an increasing or decreasing paths are both optimal under the permanent income framework, but imply different intergenerational equity considerations and certainly different paths from the Friedman's case.

constant consumption path, the highest consumption that can be enjoyed indefinitely by all generations without increasing the country's debt and depleting its total wealth.[25]

19. An argument can be made that the current generation does not need to leave the same level of resources for future generations (i.e., the constant consumption path) since future generations will be better off. Taking the simplest case of no population growth and zero total factor productivity (TFP) growth or zero technical progress, this argument essentially assumes that the decline in the stock of exhaustible natural resource capital by the current generation is more than offset by future accumulation of human capital and reproducible physical capital, the two proximate sources of growth.[26] However, this assumption is not supported by the growth experiences of resource-rich countries.[27] This experience is consistent with the observation that in resource-rich economies, the rate of depletion of natural resource has been too fast relative to the speed with which other factors of production have been accumulated.[28] Moreover, future generations will be better off only if appropriate economic policies, incentives and institutions are put in place to ensure the required accumulation of factors of production.

20. Allowing for a positive and economically significant TFP growth would naturally weaken the case for intergenerational equity and constant consumption path, but extensive recent research has shown that economic policies, incentives and institutions that drive TFP growth are also the same factors that drive accumulation of factors of production.[29] This new body of research has shown that TFP growth as well as factor accumulation are all endogenous variables. Therefore, in theory a positive and economically significant TFP growth weakens the intergenerational argument, but it does not eliminate it. In practice, the TFP argument is weak, given the historical growth performances of resource-abundant economies.

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[25] This path has also been referred to as Solow's definition of intergenerational equity; see Solow (1974).

[26] The case of constant consumption path corresponds to an exact offset.

[27] Technically, Stiglitz (1974) has shown that with no technical progress sustained growth can still occur so long as marginal product of physical capital is higher than that of natural resource capital; see also Solow (1974) for the same conclusion. Again growth history of resource-rich countries has shown that this condition may not have been met in practice either because the initial capital stock is not large enough to support sustained growth or escape a poverty a trap or negative TFP growth has dominated any positive contribution from physical capital or both. The brief history of Kazakhstan since independence has shown a strong negative TFP growth in aggregate and across all industries; see Mark De Broeck and Kostial (1998).

[28] If physical capital has a higher marginal productivity than natural resource capital, as assumed by Stiglitz (1974) and Solow (1974), also known as the Hotelling rule, then earlier or current generation should accelerate depletion of natural resources and build up the stock of physical and human capital stock in turn. The former seems to have been the case in the history of resource-rich countries, but not the latter.

[29] See Barro (1999) and Easterly and Levine (2000).

21. More recent formal economic theories have also studied the intergenerational equity argument. Gerlach and Keyzer (2001), for example, analyze three policy prescriptions for a resource-rich country. First, a "zero extraction" policy; second, a "grand fathering" policy that endows the current generation with all the resources, and that ensures efficiency but cannot prevent a persistent decline in lifetime utility from one generation to the next. Third, a "trust fund" policy, where future generations receive claims for the natural resource. Of the three, only the trust fund ensures efficiency and protects welfare of all generations.

22. Although the constant consumption path provides a useful benchmark for analysis, and one adopted here as well, the framework analyzed so far does not allow for growth in consumption out of oil wealth. Under the version of permanent income framework discussed so far, oil wealth can decline relative to nonoil GDP. Indeed, under the PIH studied so far any positive consumption growth path (with a positive trend above the Friedman's zero growth rule) will either deplete oil wealth too rapidly, lead to costly borrowing to finance the extra consumption, lead to unproductive investment or a combination thereof. None of these paths are sustainable.

23. In contrast, standard models of optimal growth, such as the neoclassical model with exogenous TFP growth, the steady state balanced growth path implies that consumption and output grow at the same rate as the exogenous TFP growth.[30] In the next section this possibility is also explored. It is assumed that real consumption out of oil wealth grows in line with real nonoil GDP, an assumption that admits future generations would be better off by the mere fact that they would come later. Under this additional assumption and continuing to maintain the PIH, maintaining oil wealth constant relative to nonoil GDP requires that the government consumes each period not the real interest rate, but the growth-adjusted real interest rate. Hence, permanent income would now be the growth-adjusted real interest rate (i.e., real interest rate minus real nonoil GDP growth rate) times initial oil wealth. However, for a growing consumption to take place, it is still the case that appropriate set of economic policies and institutions needs to be adopted such that they do bring about the assumed "exogenous" TFP growth and result in the build up of non-financial wealth that not only replaces the foregone oil in the ground, but ensures that total wealth grows in line with real nonoil GDP. These are much stronger requirements than the benchmark permanent income case which illustrates perhaps the simplicity and power of the benchmark case.

D. Analytics of the PIH and its Application to Kazakhstan

24. The starting point of analysis is the government intertemporal budget constraint which can be written as:

$$P_t^r(E_{t-1} - E_t) + NO_t + i_t A_{t-1} - C_t = A_t - A_{t-1} \qquad t=1, 2, 3, \ldots (1)$$

[30] See Barro and Sala-I-Martin (1995).

where P_t^r is the rent accrued to the government from each unit of oil production during period t, and E_t is the stock of proven oil reserves at the beginning of time t. Therefore, $E_{t-1} - E_t$ represents oil production during period t. Per period total rent, $P_t^r(E_{t-1} - E_t)$, represents taxes paid to the government which in the case of Kazakhstan correspond to corporate income taxes, personal income taxes, royalties, local taxes, withholding tax on interest and dividend, oil bonuses, payments related to production sharing arrangements, VAT, import duties, excises and social tax; NO_t stands for nonoil tax and non-tax revenues (excluding interest income on savings on oil revenues); A_t for the stock of net government financial assets at the beginning of period t; i_t for the interest rate during time t; and C_t for the government's total expenditure and net lending. Equation (1) can also be written as:

$$NO_t + i_t A_{t-1} - C_t = (A_t - A_{t-1}) + P_t^r(E_t - E_{t-1}) \qquad t=1, 2, 3, \ldots. (2)$$

that is, nonoil balance (or nonoil savings), the left side of equation (2), is equal to the change in total net government wealth, with the latter consisting of change in the net financial claims on the government and change in the oil wealth (oil in the ground). If nonoil balance was zero for all time periods, then total government net wealth would not change; only its composition would; oil is taken out of the ground and sold; various oil taxes are collected which are then converted to financial wealth and saved at the interest rate i_t to augment the stock of net wealth for the next period. This corresponds exactly to the permanent income framework discussed in the previous section as total wealth is kept constant and the government consumes only the permanent income each period ($i_t A_{t-1}$). To a first approximation, this intuition is correct, but its exact solution is somewhat different and needs to be worked out. An important implication of the PIH of consumption is that it does not distinguish between oil and nonoil wealth, as marginal propensity to consume out of each is the same.

25. The case of a zero nonoil saving or a balanced nonoil fiscal balance corresponds to the permanent income framework under the twin assumptions of zero inflation and zero population growth. Positive nonoil savings (or lower nonoil deficits) are required for a positive inflation rate and a growing population such that the same level of services is offered to each generation. In other words, what should be nonoil balance such that total real wealth per capita stays constant indefinitely? In this case, the exact analytics of how much should be saved and consumed out of per period oil revenues is as follows. First, the concept of oil wealth and its dynamics needs to be defined and quantified.[31]

26. Value of oil in the ground at the beginning of period t, denoted as W_t, is defined as present value of cash tax revenues from the oil sector. Hence,

[31] This is equivalent to writing government intertemporal budget constraint, equation (1), in its present value form.

$$W_t = \sum_{j=0}^{T} \frac{O_{t-j}}{\prod_{j=0}^{T}(1+i_{t+j})(1+i_t)^{-1}} \qquad \text{for } t = 0,1,2,...,T \qquad (3)$$

where O_t denotes tax revenues from oil extracted during time t or $P_t^r(E_{t-1} - E_t)$, T is the period when oil reserves are depleted, and i_t is the per period nominal interest rate which is assumed to vary over time.[32] The base period for discounting tax revenues is time t, which corresponds to year 2000 in the calculations. Therefore, O_t and its present value coincide in period t. The present value calculation in equation (1) implies the following dynamics for the value of (residual) oil reserves in the ground:

$$W_{t+1} = (W_t - O_t)(1+i_{t+1}) \qquad (4)$$

27. Dynamic path of W_t depends on the following assumptions about the economy and the oil sector: path of interest rate, stock of proven oil reserves, per period extraction of oil reserves, price of oil, date of depletion of oil reserves (T), and the nature of tax regime and cost conditions in the oil industry. These assumptions have been incorporated in a detailed model of oil sector in Kazakhstan, which has been developed jointly by the staff of the World Bank and International Monetary Fund.

28. This model is used to generate data on O_t. Under these assumptions, the current proven stock of oil reserves in Kazakhstan will be depleted by 2048 and value of oil reserves or oil wealth available to the government as of end 2000 is estimated at about $59 billion (289 percent of 2001 GDP).[33] The exact path of W_t, derived from equation (4), is shown in (Figure 2). Although oil reserves in the ground will be gradually depleted with each additional barrel of oil taken out of the ground, value of the residual oil in the ground can be increasing, as shown in (Figure 2), for two reasons.[34]

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[32] Use of nominal vs. real rate for discounting depends on the assumption used for the oil price path. Given that Fischerian equation holds in the long run and base line oil price is assumed to grow in line with inflation, the two approaches are equivalent so long as real interest rate is used for a constant oil price path and nominal interest rate for the nominal oil price path. This is derived formally later in the chapter.

[33] This represents only value of oil reserves to the government, given the stated assumptions and existing government's stake in the joint ventures, and not the gross value of oil reserves or oil sales, which is much higher. For example, using the same path of oil prices, the extraction rate and the interest rate, present value of gross oil reserves as of 2000 amounts to $141 billion. Both sets of estimates are obtained using equation (3).

[34] Figure 2 is also placed in Figure 4 to illustrate its relative size over time.

29. First, given the oil model, growth in tax revenues in Kazakhstan from oil extraction can and does exceed the interest rate used for discounting these revenues.[35] Second, each point in (Figure 2) represents present value of the residual oil reserves in the ground where the year associated with that point, and not 2000, is the base year used for present value calculation.[36] The hump-shaped pattern of value of oil in the ground mirrors the pattern of oil production (Figure 3), with both peaking in 2017. Despite the fall in oil production thereafter, tax revenues from oil continue would continue to rise because of the rising nominal oil prices. Value of the residual oil in the ground starts declining after 2017 as oil reserves are being depleted until year 2048 when tax revenues from the production in the year is exactly the value of the residual oil in the ground in that year. Hence, value of the residual oil reserve in 2049 is zero. From 2048 onwards, stock of wealth consists entirely of financial wealth from accumulation of savings from oil. In 2049 for example, wealth in current U.S. dollar represents 866 percent of 2001 GDP.

30. At any point in time, total (net) government wealth (TW_{t+1}) consists of the value of residual oil in the ground and financial net wealth:

$$TW_{t+1} = W_{t+1} + A_{t+1} \qquad t=1, 2,3, \ldots \qquad (5)$$

which would be equal to $W_{t+1} + S_t^o(1+i_{t+1})$ where S_t^o is per period saving from oil revenues O_t such that this saving and consumption from oil revenues, denoted as C_t^o, exhaust oil revenues, i.e., $O_t = S_t^o + C_t^o$. Equating the two wealth concepts defines savings,

$$S_t^o = \frac{A_{t+1}}{1+i_{t+1}} \qquad (6)$$

31. Equation (6) illustrates that with zero initial wealth, saving is merely the present value of future net financial wealth. Writing out equation (5) for the next time period ($t+2$) and carrying over oil savings from periods t and $t+1$ to $t+2$ implies:

$$TW_{t+2} = W_{t+2} + S_t^o(1+i_{t+1})(1+i_{t+2}) + S_{t+1}^o(1+i_{t+2}) \qquad (7)$$

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[35] Over the 2001–17 periods when oil production is continually rising, oil revenues in current U.S. dollar grows on average at 14.6 percent rate each year vs. annual nominal interest rate of 6 percent.

[36] If year 2000 was the year used for defining value of residual oil in the ground, this value will be declining monotonically until oil reserves are depleted. In this regard, it should be noted that equation (4) should not be taken as implying that all tax revenues from oil sector are consumed by the government in each period; a fraction of the revenue is saved each period. This issue is analyzed further below.

Figure 2. Kazakhstan: Value of Oil in the Ground, 2001-48

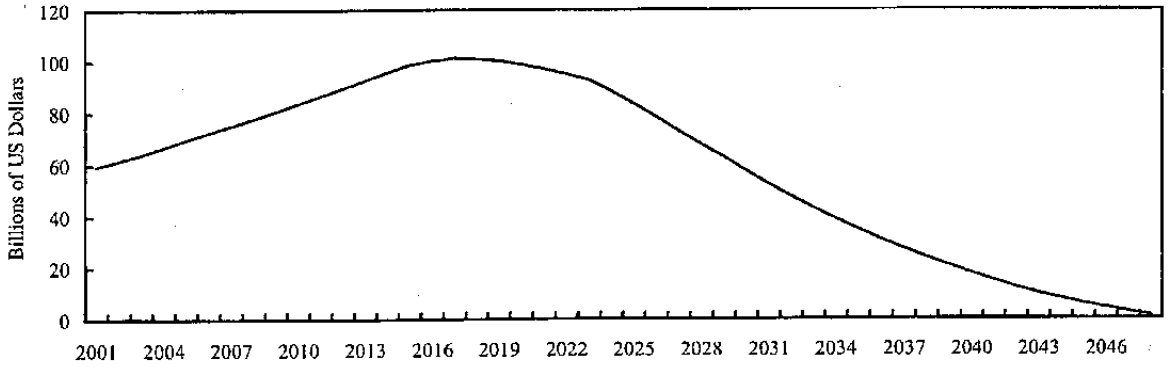


Figure 3. Kazakhstan: Oil Production, 2001-48

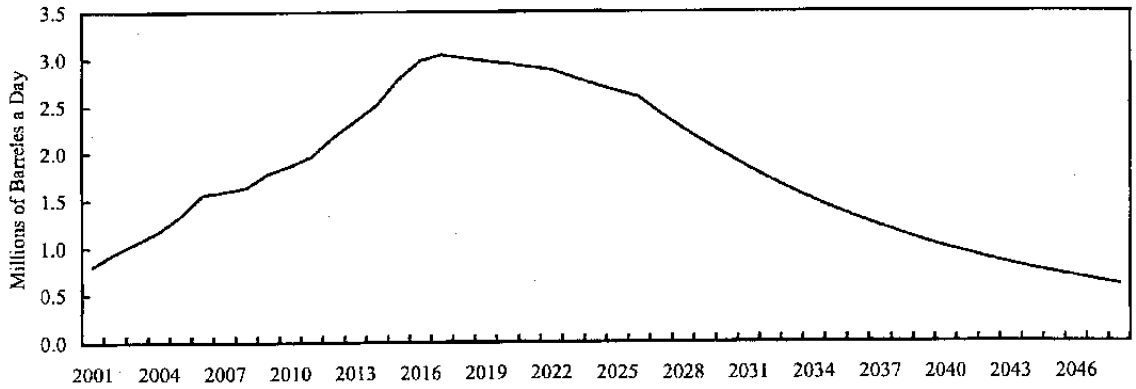
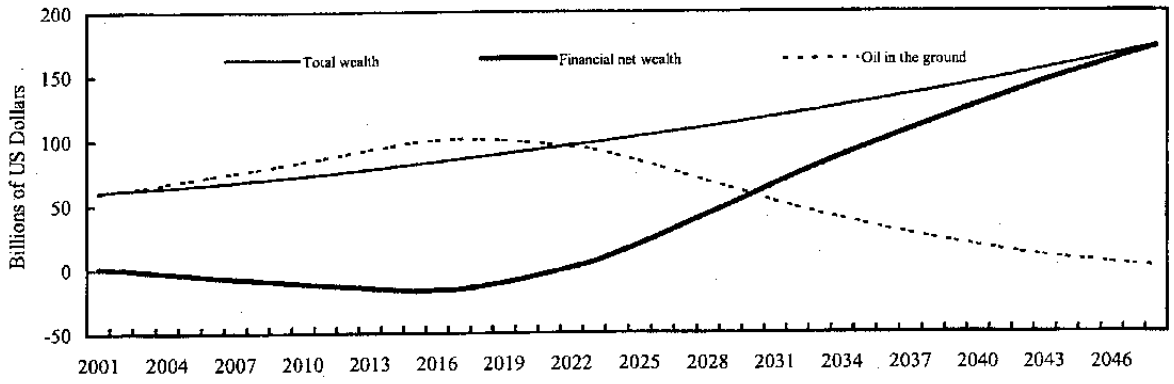


Figure 4. Kazakhstan: Dynamics of Wealth, 2001-48



Source: The Kazakhstan authoritics; and Fund staff estimates and projections.

Therefore, given that equation (5) holds for all time periods, equation (7) defines financial net wealth at the beginning of period $t+2$ and is given by

$$A_{t+2} = S_t^o(1+i_{t+1})(1+i_{t+2}) + S_{t+1}^o(1+i_{t+2}) \tag{8}$$

Upon substituting for S_t^o from Equation (6) in equation (8) and rearranging:

$$S_{t+1}^o = \frac{A_{t+2}}{(1+i_{t+2})} - A_{t+1} \tag{9}$$

which holds for the period $t+1$ onwards. So far these formulations respect the accounting identities and do not describe any behavioral relationship. In particular, they do not in any way ensure that the resulting saving path $\{S_t^o, S_{t+1}^o, \ldots\}$ is that dictated under the PIH. The saving path under the PIH would ensure that total real net wealth is kept constant in per capita terms. Therefore, total net wealth has to grow in line with inflation and population growth. Thus,

$$TW_{t+j+1} = TW_{t+j}(1+n_t)(1+\pi_t) \qquad \text{for j=0,1,2,...} \tag{10}$$

where n_t and π_t are population growth and inflation during period t, respectively. For the initial period t it is assumed that [37]

$$TW_t = W_t \tag{11}$$

and from period t onwards, evolution of total net wealth is governed by equation (10). Consumption of oil wealth is given by $C_t^o = O_t - S_t^o$ which upon substituting S_t^o from (6) and using (4), (5), and (10) to put every term in terms of the initial value of oil in the ground, the following expression is obtained:

$$C_t^o = \frac{(1+i_{t+1}) - (1+n_t)(1+\pi_t)}{(1+i_{t+1})} W_t \tag{12}$$

and

$$C_{t+j}^o = \frac{(1+i_{t+1}) - (1+n_t)(1+\pi_t)}{(1+i_{t+1})} TW_{t+j} \qquad \text{for j=1,2,...} \tag{13}$$

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[37] Note that country's initial indebtedness can be subtracted from W_t which would imply that saving from oil has to be higher in order to allow future debt repayment, i.e., future generations share the benefit of oil wealth as well as cost of the past debt build up.

where TW_{t+j} is given by equation (10). Equations (13) and (14) are the optimal consumption under the PIH. They can also be written in terms of real interest rate, r_t. For example, equation (12) can be written as:

$$C_t^o = \frac{(1+r_{t+1})(1+\pi_{t+1}) - (1+n_t)(1+\pi_t)}{(1+r_{t+1})(1+\pi_{t+1})} W_t \qquad (14)$$

which makes use of the usual relationship linking inflation, nominal and real interest rates. Upon an additional assumption of constant inflation rate and constant real interest rate in the steady state (i.e., $\pi_{t+1} = \pi_t = \pi$ and $r_{t+1} = r$), optimal consumption of oil wealth under the PIH, equation (14), can be written as:

$$C_t^o = \frac{r-n}{1+r} W_t \qquad (15)$$

32. Thus, the government should only consume the real annuity value of wealth adjusted for populating growth so that per capita real wealth remains constant over time. Assuming a zero population growth rate in equation (15) produces the familiar textbook expression of optimal consumption under the PIH.[38]

33. Without any loss of generality, equation (15) can also be written in terms of nominal interest rate.[39] Assuming that the Fischerian equation holds in the long run, equation (15) becomes:[40]

$$C_t^o = \frac{i-\pi-n}{1+i-\pi} W_t \qquad (16)$$

34. As expected, equation (15) and (16) state that for wealth per capita to be constant in real terms, each generation should consume population growth-adjusted real interest rate or population-cum-inflation adjusted nominal rate, respectively.

35. Maintaining oil wealth per capita constant means that future generations would benefit the same as the current generations from oil reserves. If the country consumes more than what is dictated by the PIH, then oil wealth would decline faster and the current generation would naturally receive a higher share of wealth than future generations.

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[38] See Blanchard and Fischer (1989, pp. 285) and Engle and Valdes (2000).

[39] Note that same deflators are used for converting nominal consumption, nominal GDP and nominal total net wealth from nominal to real. As a result, nominal and real variables are identical up to the inflation discount factor.

[40] Even if it is assumed that the Fischer equation does not hold in the long run, the path of consumption is not affected since the interaction terms involving inflation and population growth rate are too small, which can be ignored.

Conversely, consuming less than the level indicated by the PIH implies that current generation is saving more and leaving more of oil wealth to future generations, thus wealth accumulation is higher.

36. Dynamics of wealth in Kazakhstan, corresponding to equations (4), (5), (8), (9), (10) and (11) is shown in (Figure 4). As expected, it shows that financial net wealth has to grow as oil reserves are being depleted such that total wealth grows in line with inflation and population growth rate.

37. As discussed in the previous section, there is nothing in the above framework that would preclude the value of total net wealth from declining when measured relative to real nonoil GDP. This is a simple mathematical implication and indeed the case in Kazakhstan as well. In this formulation, the emphasis is on real nonoil GDP rather than real GDP because the long-run balanced growth path would refer to growth in real GDP when oil reserves are depleted, i.e., it is the sustainability of real nonoil GDP growth that would matter in the long run when oil production and its associated real activities no longer contribute to real GDP and the entire real GDP is nonoil.

38. Therefore, allowing total net wealth, TW_t, to grow in line with inflation and real nonoil GDP implies replacing equation (10) with:

$$TW_{t+j+1} = TW_{t+j}(1+\pi_t)(1+x_t) \qquad \text{for j=0,1,2,...} \qquad (17)$$

where x_t is growth of real nonoil GDP.

Optimal consumption can then be written as

$$C_t^o = \frac{r-x}{1+r} W_t \qquad (18)$$

39. This is the version of equation (15) in the steady state, which simply states that optimal consumption should take place out of growth-adjusted real interest rate so that enough real wealth is set aside to allow wealth to grow in line with real nonoil GDP. Under this rule, less consumption would take place; hence, more of oil revenue is saved.

40. Equation (18) can also be written in terms of nominal interest rate, making use of the Fischerian relationship:

$$C_t^o = \frac{i-\pi-x}{1+i-\pi} W_t \qquad (19)$$

41. Equation (19) is the counterpart of equation (16) when wealth grows in line nonoil GDP.

42. (Text Table 3) shows the summary of evolution of wealth, nonoil deficit and the implied saving rate over the 2001–48 period, given the PIH under the two cases of constant real wealth per capita, the benchmark case, and constant ratio of wealth to nonoil GDP. The

table also shows two sub-periods, 2001–15 and 2016–48, to analyze the implications of the hump-shaped pattern of value of oil in the ground, which occurs in 2015.

43. Given the estimates of about $59 billion in the value of oil in the ground and the current Kazakhstan population of about 15 million, the level of wealth per capita that would be kept constant forever stands at $3,974.[41] Keeping wealth constant at this level implies that oil revenue per capita would average to about $288 of which $238 is consumed by the government on average, implying a saving rate of 17 percent. By contrast, under the current NFRK rules and given the oil price assumption, 10 percent of oil revenues are saved. The path of saving is, however, completely different during the sub-periods as expected under the PIH. With a rising wealth in the ground during the first sub-period, and a low initial financial wealth, and assuming perfect capital markets, the government can borrow against the oil wealth, dissaving for almost the entire period 2001–15, and then start saving thereafter and paying off its debt. This behavior may stand in marked contrast to a simplistic interpretation of the life cycle hypothesis of consumption, according to which saving would occur as oil wealth is rising and dissaving would occur when oil wealth is falling. But this interpretation is not correct for two reasons. First, under a PIH, the government consumes and saves out of its total net wealth and not just oil wealth in the ground. Significant consumption smoothing occurs under a PIH as the government can borrow against the oil wealth in the ground since its financial wealth is too small by comparison. Second, in contrast to an individual, government lives forever, an assumption built into the PIH.[42]

44. Under the PIH and assuming that wealth is kept constant in per capita terms, the implied saving rate amounts to –35 percent and 26 percent during 2001–15 and 2016–48, respectively (Text Table 3). Therefore, under the current NFRK rules, too much is being saved in the first sub-period and too little in the second sub-period.

45. This saving and dissaving path under the PIH can also be shown in terms of GDP. The nonoil fiscal deficit would average at 7.8 percent of nominal GDP during the 2001–15 period and is expected to decline to 5.5 percent of nominal GDP in the 2016–48 period, averaging at about 6.3 percent of nominal GDP during the entire period. This figure is above the nonoil deficit in Kazakhstan as Kazakhstan's highest nonoil deficit was at 5.7 percent of nominal GDP recorded in 1999, given available data on the brief history of oil in Kazakhstan.[43] By implication, estimates of nonoil fiscal deficit in 2000, and in 2001 as

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[41] This estimate uses the exact figures and not approximate value of each since the orders of magnitude can make a significant difference in per capita terms.

[42] The life cycle hypothesis is equivalent to the PIH by building, for example, bequest motives in the life cycle hypothesis; hence, the term life cycle/permanent income hypothesis is also used quite often in practice.

[43] Estimates of nonoil deficit in countries with a long history of oil extraction show that these governments have dissaved significantly as is the case in Yemen; see SM/01/56.

projected, indicates that that the government is taking a conservative view of the size of the oil wealth at least for the 2001–16 period, a view that is justified given that estimate of wealth is sensitive to the many assumptions made, principally the size of the oil reserves in Kazakhstan, the evolution of oil prices, and the as-yet-to-be-announced discovery of the Kashgan field.

46. Under the benchmark case, the implied wealth will decline continuously in relation to nonoil GDP as the latter grows faster than wealth (see Text Table 3). Oil wealth represents about 401 percent of nominal nonoil GDP in 2000.[44] Keeping total wealth constant at this level indefinitely would produce a path for and size of saving from each barrel of oil, which is entirely different from the benchmark case. For example, a much higher saving rate is required, estimated at an average of 28 percent out of every barrel of oil for the period 2001–48. The saving rate is much higher in the period 2001–15 (at 56 percent) than 2016–48 (at 24 percent) as initial financial nonoil wealth is too low for total wealth to be constant in relation to nonoil GDP. As a result, this shortfall has to be compensated out of higher saving from oil wealth and per period oil revenue. However, as saving is accumulated over time sufficiently from oil wealth and financial wealth has been built up accordingly, then the saving rate out of each barrel of oil can decline. As a result, consumption per capita (out of per period oil revenues) increases significantly, rising from $55 in the 2001–15 periods to $276 in the 2016–48 periods, a five-fold increase. This result is expected since by maintaining wealth constant relative to nonoil GDP, the objective of keeping a constant consumption per capita had to be given up. Nevertheless, consumption smoothing still occurs, as expected under a PIH, but the yardstick for this evaluation has changed to measuring it relative to real nonoil GDP rather than the population.

47. The objective of maintaining wealth constant in relation to nonoil GDP also implies a different size for and path of nonoil fiscal balance than the benchmark case. Nonoil fiscal deficit would average at about 4 percent of nominal GDP over the 2001–48 period and rising in the second sub-period, opposite of what occurs in the benchmark case. An important implication of keeping wealth constant in relation to nonoil GDP is that the government has to run a surplus for the first decade of the millennium and a balanced nonoil fiscal balance for the 2001–15 period. The temporary surplus in the first decade is consistent with the theoretical models of Alier and Kaufman (1999) and Engel and Valdes (2001), and with the interpretation that the government is perhaps more patient under the constant wealth to nonoil GDP case than the benchmark case.

[44] Choice of the year 2000 seems to be plausible as was the case for the benchmark case. However, this does not imply that other ratios cannot be entertained.

Text Table 3. Kazakhstan: Fiscal Indicators Under the Permanent Income Hypothesis

	2001-15	2016-48	2001-48	2001-15	2016-48	2001-48
	Case 1: Constant Wealth Per Capita 1/			Case 2: Constant Wealth to Non-Oil Nominal GDP Ratio		
Growth in real per capita wealth (in percent) 2/	0	0	0	2.3	1.7	1.9
Growth in wealth-nominal non-oil GDP ratio (in percent)	-2.5	-1.7	-1.9	0	0	0
Oil revenue per capita (current $US)	125	362	288	125	362	288
Oil consumption per capita (current $US)	169	267	238	55	276	207
Implied saving rate out of per period oil revenue per capita (in percent)	-35	26	17	56	24	28
Non-oil fiscal deficit to nominal GDP (in percent)	7.8	5.5	6.3	0.8	5.5	4.1
Non-oil fiscal deficit to nominal non-oil GDP (in percent)	11.2	7.3	8.5	1.7	7.1	5.4

Source: Fund staff estimates and projections.
1/ This is also referred to as the benchmark case in the text.
2/ In 2000 prices

48. Fiscal vulnerability in response to changes in oil prices and interest rate points towards considerable fiscal adjustment and changes in nonoil fiscal balance under the PIH. If the oil price drop $1 permanently from baseline oil price path (approximately a 5 percent annual reduction during 2001–06), then oil wealth would drop to about $51 billion (250 percent of 2001 GDP) from $59 billion (289 percent of 2001 GDP) and the sustainable nonoil fiscal deficit would fall to about 5.3 percent of GDP from 6.3 percent of GDP.[45] Failure to adjust permanently would imply that the resulting fiscal path is unsustainable. These results also show that permanent income, hence, the nonoil fiscal balance, is more sensitive to oil price movements than is oil wealth. The analysis also shows an important aspect of the PIH; revisions in wealth would imply revisions to fiscal stance, which would not have been the case if fiscal stance had not been based on the permanent income.

49. If the interest rate is assumed to be lower permanently by one percentage point from the baseline 6 percent, then the estimate of wealth would rise to almost $72 billion (353 percent of 2001 GDP) from $59 billion (289 percent of 2001 GDP) and the sustainable nonoil fiscal deficit would fall to 5.6 percent of GDP from 6.3 percent of GDP. The drop in the nonoil fiscal deficit, in spite of the increase in wealth, is because permanent income declines in response to lower interest rate as the government consumes the annuity value of the wealth using a lower interest rate. The analysis also shows that nonoil fiscal balance is more sensitive to oil prices changes than changes in interest rate, with the elasticity of 3.2 and 0.7, respectively.

50. If oil prices drop permanently to $15 per barrel from the base line path, oil wealth would decline to about $29 billion (143 percent of 2001 GDP) from $59 billion (289 percent of 2001 GDP) and the sustainable nonoil fiscal deficit would be 3 percent, almost half the baseline scenario. This analysis underscores the point made earlier of the need to base fiscal policy on a conservative estimate of nonoil deficit. The elasticity of nonoil deficit with respect to this change in oil price is 2 which is much lower than the elasticity of 3.2 when oil prices dropped by only $1, implying that these elasticities depend on the initial value of oil price and presence of some non-linearities. It should be noted, however, that elasticities for such large changes in wealth, oil prices and deficit should be treated with caution.

E. Conclusion

51. This chapter used the permanent income hypothesis (PIH) to assess fiscal vulnerability, fiscal sustainability and fiscal stance in Kazakhstan. It was argued that in resource-rich countries, assessment of fiscal stance should rely on the non-resource fiscal balance, the overall balance excluding natural resource receipts accrued to the government, rather than the overall balance including these receipts. The chapter focused exclusively on the oil sector in Kazakhstan, but the analysis applies equally to other primary commodities produced in Kazakhstan, which are taxed by the government. In applying the PIH, two rather different objectives about future evolution of oil wealth were analyzed. The first objective

[45] This and subsequent analyses are based on the benchmark case of constant per capita wealth.

assumed that the government would keep wealth constant in per capita terms, thus leaving future generations with the same real level of public services financed from oil revenues as the current generation. The second objective assumed that wealth would be kept constant in relation to nonoil GDP, thus assuming that society would be richer in the future as the economy grows at its "exogenous" positive TFP growth rate. However, it was also shown that for any positive TFP growth rate, pursuing the second objective would come at a cost of higher foregone current consumption out of the oil wealth and higher saving than indicated under the first objective. However, regardless of which objective is pursued or some variation of the two, appropriate macroeconomic and structural reforms need to be put in place to ensure a steady rise in per capita income, albeit a higher TFP growth is need under the second objective. Although this observation may seem to be straightforward at first, given Kazakhstan's recent growth track record, the history of resource-rich countries has shown quite the opposite and the challenges are even more for Kazakhstan as its makes its transition to a market economy. The main lessons of the chapter can be summarized as follows:

- The PIH provides a useful rule of thumb for evaluating fiscal stance; that the government should consume at most the annuity value of its total wealth. The PIH imposes fiscal discipline on the government by requiring the government's total net wealth, hence, its permanent income, be the basis for its fiscal policy rather than current resources available to the government. The case of keeping wealth constant in per capita terms provides an easy rule for setting long-term fiscal policy and is the most-heavily used assumption in studies of economies with significant natural resources.

- The PIH hypothesis provides a useful benchmark for the analysis, but its assumptions are perhaps too strong. However, these assumptions are needed to produce an-easy-to-use rule of thumb for policymakers. The rule should be used knowing its strengths and weaknesses along with the knowledge of the other aspects of the Kazakshtani economy (see below). The chapter provided a lengthy discussion of the limitations of the PIH.

- Kazakhstan is undergoing a significant pension reform. Given the uncertainties associated with any implicit pension liability and size of the oil wealth, the PIH needs to interpreted with caution when deciding on the short to medium-term fiscal stance; higher saving than that implied by the PIH may be required, thus building an additional precautionary motive for saving. In fact, one motivation behind the significant build up of oil wealth in Norway's State Petroleum Fund has been to save for the future pension liabilities that grow with an aging population. This could potentially be a problem in Kazakhstan, given its low birth rate and slow population growth rate.

- The PIH shows that Kazakhstan's nonoil fiscal balance in recent years has been well within the long-run sustainability path as measured relatively to GDP; this prudence in fiscal policy stance is welcomed, given the uncertainties associated with discovery of the new oil reserves, their timing, and future evolution of oil prices, to name a few.

The extensive sensitivity analysis conducted in the chapter provides further support to adopting a cautious nonoil fiscal stance.

- Long-term fiscal policy as dictated by the PIH was shown to be vulnerable to swings in oil prices and interest rate, as these require drastic changes in nonoil fiscal stance. This is indeed a major advantage of the PIH since swings in oil prices and interest rate result in revisions in oil wealth. The record of many current oil-producing countries suggests that governments may follow a "quasi-asymmetric" fiscal policy stance; they respond to upward revisions in wealth during price booms by spending more, but find it hard to respond symmetrically to downward revisions in wealth during price busts. Prudent short-run fiscal stance should also pay attention to other macroeconomic objectives such as inflation and the balance of payment.

- Formation of the National Fund for the Republic of Kazakhstan (NFRK) is a welcomed step for saving oil revenues for the future and for sterilizing oil windfalls. In this regard, analysis of the PIH was conduced under the assumption of a constant real exchange rate. Deviations from this assumption will require reassessment of saving implied under the PIH and underscores adoption of complementary policies to prevent the occurrence of the Dutch disease.

- Under the current NFRK rules, and assuming that these rules are maintained indefinitely into the future, the PIH implied that Kazakhstan is saving too little of the oil revenue in the NFRK. Future simplification of the complex NFRK rules can benefit from the PIH's easy-to-use rule for thumb for saving.

- Kazakhstan is the largest landlocked country in the world; it does not have easy access to markets for trade and has significant infrastructure needs, but it enjoys favorable initial fiscal stance, and a low debt-GDP ratio and. The challenge is how to build its capital stock and develop its infrastructure, while balancing in this regard the need to accumulate financial wealth and use the proceeds from the depletion of its oil reserves with borrowing (from domestic markets, international capital markets, international financial institutions), and entering in joint ventures to attract foreign direct investment.

- A main lesson of economic theory is that given the larger share of physical capital in output than non-renewable natural resource capital, and given the low initial capital stock of a typical low-income, resource-rich country, earlier generations should use up the natural resource quite fast, while building the capital stock in turn (Solow, 1974; Stiglitz, 1974). But to do so also requires that the current and future generations adopt complementary policies that diversify the economy, create a productive capital stock, defined broadly to include physical and human capital, and a skilled labor force which bring about a sustained rise in TFP growth in the nonoil economy.

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III. Financial Sector [46]

A. Introduction

52. This chapter analyses the development of the financial sector in Kazakhstan and assesses the sector's ability to withstand internal or external negative shocks. This chapter builds upon and extends analyses undertaken in the framework of the Financial Sector Stability Assessment (FSSA) and the 2000 Article IV consultation.[47]

53. The FSSA characterized the Kazakhstan banking system as of mid-2000 as fragile and other parts of the financial system as little developed. Since then, commercial bank balance sheets have grown sharply; the increase in credit to the private sector, from T 208 billion at end-June 2000 to T 467 billion at end-September 2001, has been particularly striking. On the one hand, this development undoubtedly represents a process of financial deepening that is to be welcomed because a well-developed financial sector is a precondition for sustained economic growth. Specifically, access to commercial bank credit in Kazakhstan was traditionally limited to a relatively narrow group of firms but has now become more widely available. On the other hand, the very rapid credit growth raises questions of loan quality and places greater demands on banking supervision. Section B explores in further depth banking sector developments in 2000 and 2001.

54. While financial sector assets are still heavily concentrated in commercial banks, the assets of accumulative pension funds have also grown considerably, surpassing $1 billion in mid-2001. Similar to commercial banks, pension funds are faced with the question of how to invest their rapidly growing assets, given that the stock of government securities has grown little in 2000 and 2001 and is also unlikely to grow significantly in the future. Actuarial calculations on behalf of the Kazakhstan government indicate that the long-term fiscal consequences of a real rate of return on pension fund assets much below 5 percent could be significant as shortfalls in funded pensions would trigger supplementary payments from the budget. Section C reviews the policy challenges arising from this situation.

B. Commercial Banks

55. Although the growth of commercial bank balance sheets in Kazakhstan since early 2000 has been impressive by any standard, a comparison with other transition and developing economies suggests that the financial sector in Kazakhstan is still at an early stage of development (Text Table 4). Broad money relative to GDP, which is considered a general indicator of financial system depth, stood at 15.3 percent at end-2000. This was not only far lower than the corresponding figures for emerging markets in Asia (e.g., South Korea: 79.9 percent; Thailand: 105.9 percent), but also lower than Latin American economies

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[46] Prepared by Matthias Luecke.

[47] See documents FO/DIS/00/142 and SM/00/257.

(Brazil: 28.8 percent; Mexico: 21.2 percent) and Russia (22.1 percent) and Ukraine (18.1 percent).

56. A more nuanced picture emerges for banking system credit to the private sector, which provides a more focused measure of the intermediation function of commercial banks. At 11.6 percent of GDP at end-2000 and 15.6 percent at end-September 2001; (Text Table 5), credit to the private sector is still lower in Kazakhstan than in most of the comparator countries.[48] However, it is already in the same order of magnitude as in Russia (12.3 percent), Ukraine (10.6 percent) and Mexico (13.9 percent). It is noteworthy that, among developing economies, countries that suffered high inflation in the past (such as Argentina, Brazil, and Turkey) show lower ratios than Asian comparator countries (Indonesia until 1997, South Korea, Thailand).[49] With continuing macroeconomic stability and economic growth, it therefore seems reasonable to expect that the financial deepening in Kazakhstan could continue in the medium to long term, though not necessarily at the speed observed during the last two years.

57. In contrast to some Asian emerging economies in the mid-1990s, credit expansion in Kazakhstan in 2000 and 2001 was financed predominantly by domestic rather than foreign liabilities. While credit to the private sector grew from T 154 billion at end-1999 to T 467 billion at end-September 2001, the net foreign assets of commercial banks declined by only T 49 billion (Text Table 4). Credit growth was driven by an increase in domestic loanable funds, with deposits of enterprises doubling from T 111 billion to T 223 billion and deposits of individuals tripling from T 53 billion to T 169 billion.

58. Legal entities accounted for most of the growth of deposits through end-2000, probably reflecting their improved profitability relative to 1999. By contrast, during 2001 individual deposits grew particularly fast, reflecting higher confidence in commercial banks not least because of the newly introduced deposit insurance scheme for individual depositors. Accordingly, the ratio of currency in circulation to total deposits decreased from 0.61 at end-1999 to 0.30 at end-September 2001. The implementation of a capital amnesty in June and July 2001, which lead to the conversion of U.S. dollar cash holdings of close to $300 million into term deposits, provides further evidence of strengthened confidence in commercial banks.

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[48] The private sector is defined as in the monetary survey to include households as well as all non-bank institutions except central and local governments. Thus, it includes public enterprises.

[49] Some concern has been expressed recently about the stagnation of credit especially in Latin American countries: see Adolfo Barajas and Roberto Steiner, Credit Stagnation in Latin America. Paper Present at the Second IMF Research Conference. November 2001.

Text Table 4. Kazakhstan: International Comparison: Selected Indicators of Financial System Depth, 1995-2000

(stocks at year-end in percent of annual GDP)

	Broad Money						Banking System Credit to the Private Sector					
	1995	1996	1997	1998	1999	2000	1995	1996	1997	1998	1999	2000
Kazakhstan	11.6	9.5	10.3	8.5	13.6	15.3	7.1	4.9	4.7	5.8	8.2	11.6
Transition Economies												
Czech Republic	78.6	73.7	69.9	66.1	66.0	73.8	58.1	56.1	65.7	58.2	54.3	49.7
Hungary	48.4	48.1	46.5	45.6	46.7	46.3	22.6	22.1	24.3	24.2	26.0	30.9
Latvia	23.4	23.2	27.4	26.7	26.6	30.4	7.8	7.2	10.5	14.9	15.7	18.6
Russia	17.9	16.7	18.4	23.3	21.7	22.1	8.7	7.4	9.6	12.8	11.5	12.3
Ukraine	12.7	11.5	13.4	14.9	16.6	18.1	1.5	1.4	2.5	7.8	8.6	10.6
Developing Economies												
Argentina	20.1	22.7	26.5	28.7	31.5	31.8	19.7	19.9	21.6	23.6	24.2	23.1
Brazil	29.7	27.7	29.3	30.7	31.3	28.8	30.8	26.3	25.9	28.5	28.5	31.5
Indonesia	48.0	52.2	55.4	59.5	57.6	57.5	53.5	55.4	60.8	53.2	20.3	20.9
Malaysia	84.7	92.3	97.6	95.3	105.7	102.6	83.6	91.6	101.5	105.7	105.3	100.3
Mexico	29.1	26.5	28.2	27.9	26.2	21.2	25.2	15.6	17.8	17.4	14.5	11.5
South Korea	40.8	42.6	44.9	58.2	68.2	79.9	56.6	61.2	68.2	75.0	82.2	90.7
Thailand	79.0	80.6	91.6	102.9	108.7	105.9	97.5	101.4	120.9	114.5	108.6	85.9
Turkey	32.4	37.0	37.4	38.3	49.0	44.6	17.5	21.7	25.2	21.5	20.0	22.4

Source: IMF, International Financial Statistics Database; and Fund staff estimates.

Text Table 5. Kazakhstan: Consolidated Balance Sheet of Commercial Banks, 1998-2001
(In billions of tenge)

	1998	1999				2000				2001		
	Dec.	March	June	Sept.	Dec.	March	June	Sept.	Dec.	March	June	Sept.
Net Foreign Assets	-3.9	1.0	21.1	31.3	39.6	38.7	35.4	19.2	4.0	-8.0	-13.4	-9.7
Short-Term	-5.8	-4.0	29.2	38.4	45.0	34.3	42.4	31.3	25.5	28.1	30.3	22.4
Medium- and Long-Term	1.9	5.0	-8.1	-7.1	-5.4	4.4	-7.0	-12.2	-21.5	-36.1	-43.7	-32.1
Reserves	12.1	9.2	12.4	13.2	28.2	13.3	21.8	27.5	27.6	27.7	30.5	33.1
NBK Notes	2.0	2.6	0.0	4.6	4.2	4.0	7.5	17.3	41.6	23.5	6.7	5.4
Credit to Government	9.5	0.1	12.7	10.5	26.4	38.0	53.6	54.3	54.7	61.7	61.2	66.2
Credit to the Private Sector	103.1	107.2	136.3	152.1	154.2	166.7	195.8	229.5	289.5	328.4	401.4	466.6
Enterprises	96.7	100.6	127.8	142.6	144.7	157.2	180.9	215.5	273.6	309.4	376.6	433.3
Of Which: Convertible Currency	40.5	45.5	65.1	79.9	80.3	83.5	95.7	113.9	143.1	161.0	192.3	228.9
Non-Bank Financial Institutions	0.5	0.6	1.1	1.4	0.9	0.6	4.2	1.2	0.9	1.6	2.7	4.4
Households	6.0	6.0	7.4	8.1	8.5	8.8	10.7	12.9	14.9	17.4	22.1	28.9
Other Items Net	-43.7	-48.0	-83.1	-84.3	-84.7	-88.7	-94.1	-97.3	-127.9	-117.4	-129.8	-153.7
Of Which: Capital	-59.0	-61.6	-73.9	-77.3	-88.0	-90.0	-94.1	-98.7	-111.6	-113.3	-115.3	-137.4
Deposits	79.3	72.1	99.3	123.6	167.9	171.8	219.8	249.8	288.7	315.1	355.4	407.2
Enterprises	45.7	39.0	58.1	79.5	110.5	108.3	146.9	167.2	193.9	204.8	205.9	222.52
Of Which: Convertible Currency	17.8	16.9	28.6	38.1	51.9	45.8	80.4	78.1	89.9	94.9	86.0	108.5
Non-Bank Financial Institutions	3.2	3.1	4.3	2.9	4.3	4.0	5.4	7.3	6.5	9.8	16.8	16.4
Households	30.4	29.9	36.9	41.2	53.0	59.5	67.4	75.3	88.3	100.6	132.6	168.3
Of Which: Convertible Currency	9.5	11.5	17.8	20.6	24.7	35.2	41.2	46.7	55.4	64.6	90.1	123.9
Securities and Notes (Liabilities)	0.0	0.0	0.0	3.7	0.0	0.2	0.2	0.8	0.7	0.7	1.2	0.7
Memorandum Items:												
Foreign Open Position 1/	8.5	17.6	39.3	50.1	41.6	26.2	7.6	5.1	9.0	-2.2	11.1	1.2
Capital / Credit to Non-Gov't Sector	0.572	0.575	0.542	0.508	0.571	0.540	0.481	0.430	0.386	0.345	0.287	0.295
Nominal GDP (annual) 2/	1,733.2	...	...	...	2,016.5	...	...	...	2,596.1	...	...	2,995.1
Annual Real GDP Growth (percent) 2/	-1.9	...	...	...	2.7	...	...	...	9.5	...	...	9.0
Deposits / GDP (percent)	4.6	...	...	...	8.3	...	...	...	11.1	...	...	13.6
Credit to Private Sector / GDP (percent)	5.9	...	...	...	7.6	...	...	...	11.1	...	...	15.6

Source: National Bank of Kazakhstan.

1/ Assets denominated in foreign currency minus liabilities denominated in foreign currency.
2/ 2001: projected.

59. Although confidence in Kazakhstani commercial banks has increased, the national currency does not appear to inspire the same measure of trust and dollarization remains high. At end-September 2001, enterprises held 48.8 percent of their deposits in U.S. dollars, a little more than at the end of 1999 (46.5 percent). For households, the corresponding shares are 73.6 percent at end-September 2001 vs. 46.6 percent at end-1999. As prudential regulations limit banks' net exposure to any one foreign currency to 30 percent of equity capital, more than one half of all bank loans are also denominated in U.S. dollars.

60. Faced with the increase in deposits, banks had only a limited choice of assets in which to invest additional loanable funds. Prudential regulations stipulate that liabilities to residents must be matched by domestic assets (which include eurobonds of domestic issuers) and thus preclude large investments abroad. Net credit to general government grew from T 26 billion at end-1999 to T 66 billion at end-September 2001. However, with deposits growing by a total of T 239 billion during the same period, banks massively expanded their lending to domestic firms and also began to develop new markets such as consumer credit, and primary and secondary mortgage financing.

61. As a result, access to commercial bank credit became more widespread among firms and households. In addition, some larger firms also gained access to other external sources of finance such as the corporate bond market. As late as mid-1999, a survey undertaken on behalf of the World Bank had found that bank credit was available only to a small number of large enterprises, mostly in the natural resources sector. As this situation was found to be an obstacle to sustained economic growth, especially in the non-resource economy, the much wider access to bank loans now enjoyed by many non-resource firms represents an important achievement in the process of economic transition in Kazakhstan.

62. At the same time, the rapid expansion of credit raises the question of how the structure and quality of banks' loan books have been affected and whether the banking system has become more vulnerable to a downturn in the economy. The composition of loans by maturity, sector of the economy, and use has changed remarkably little (Text Table 6). Short-term (up to one year) and medium to long-term loans each account for about half the total, with only minor fluctuations since end-1999. Industry and trade each receive about one third of total loans, with a marginal increase in the share of industry since early 2000.[50] The share of loans for the purchase of fixed assets has remained at about 10 percent since end-1999, while the share of working capital loans grew from just over half at end-1999 to about 64 percent at end-September 2001.

[50] There appears to be a break in the data series so that end-1999 figures are not strictly comparable.

Text Table 6. Kazakhstan: Commercial Bank Credit to the Private Sector--Sectoral Distribution, Maturity, and Classification, 1998-2001
(In billions of tenge)

	1999	2000				2001			
	December	March	June	September	December	March	June	September	September Provisions (percent of principal)
Claims on the Private Sector (Monetary Survey)	154	167	196	230	289	328	401	467	...
To Enterprises	145	157	181	215	274	309	377	433	...
To Non-Bank Financial Institutions	1	1	4	1	1	2	3	4	...
To Households	8	9	11	13	15	17	22	29	...
Aggregated Quarterly Financial Reporting System									
Loans	167	183	199	231	286	323	397	...	...
Of which: To Financial Intermediaries	...	...	...	...	7	7	11	...	...
Securities	42	53	73	84	114	106	91	...	...
Contingent Assets	148	154	187	200	207	235	306	...	...
Ratio of Contingent Assets to Loans (percent)	88.1	84.3	94.0	86.6	72.1	72.9	77.1	...	...
Bank Credit to Customers	149	166	184	219	276	313	382	425	...
				(In percent of total)					
By Maturity									
Amortization in Arrears	6.6	5.4	4.2	4.5	1.7	2.1	2.4	2.7	...
Short-term	46.4	48.0	47.4	49.2	50.7	48.9	49.9	46.5	...
Medium and Long-term	47.0	46.6	48.4	46.3	47.7	48.9	47.7	50.8	...
				(In percent of total, excluding arrears)					
By Sector									
Industry	23.2	28.9	27.9	30.5	30.5	28.6	31.2	32.6	...
Agriculture	8.5	7.8	8.0	10.1	9.3	8.4	7.5	8.5	...
Construction	4.1	2.7	4.7	4.1	4.4	4.2	4.2	4.9	...
Transportation	3.4	3.7	4.2	3.2	6.1	6.0	5.0	4.9	...
Communication	2.1	0.8	1.1	1.1	2.2	1.8	2.4	2.5	...
Trade	29.8	39.4	37.1	34.7	33.1	36.6	36.2	32.2	...
Other	29.0	16.7	17.0	16.2	14.4	14.4	13.5	14.3	...
By Use									
Working Capital	52.9	55.7	58.1	60.7	61.6	65.3	64.5	64.4	...
Fixed Assets	10.6	10.9	10.2	10.5	10.2	9.8	9.0	9.5	...
Other	36.5	33.4	31.7	28.8	28.3	24.9	26.5	26.2	...
Loan Classification: Principal	167	183	199	231	286	323	397	444	...
					(In percent of total)				
Standard	56.8	62.5	70.0	72.0	76.8	76.7	74.6	70.5	0.0
Doubtful	37.8	32.0	24.9	25.1	21.2	21.8	23.7	27.6	10.0
Substandard	32.1	27.9	21.0	18.3	16.4	17.1	19.4	22.0	5.9
Unsatisfactory	2.9	2.6	2.1	2.4	3.0	4.1	3.4	4.6	21.3
Doubtful with High Risk Level	2.7	1.5	1.7	4.4	1.9	0.7	0.9	1.0	50.0
Loss	5.5	5.5	5.1	2.9	2.0	1.5	1.7	1.9	100.0

Source: NBK and Fund staff calculations.

63. The continuing heavy emphasis on relatively short-term loans for working capital finance suggests that banks still view the overall economic and legal environment as too uncertain to move into longer maturities on a larger scale or expand into other types of loans (such as longer-term loans to finance capital goods and equipment). For example, in collateralizing loans, banks reportedly tend to rely not on individual assets (such as a particular piece of machinery) but rather seek legal title to the firm as a whole. This practice is apparently conditioned both by the current legal environment and by the widespread practice of firms conducting a significant share of their business in the informal economy. At the same time, banks are reportedly refining their procedures for credit risk appraisal to assess firms' formal as well as informal cash flow.

64. The classification of loans according to the NBK's provisioning requirements provides some insight into the evolution of loan quality.[51] In principle, the share of under-performing or non-performing loans should decline at a time when credit grows rapidly because, presumably, problems will typically emerge only some time after a loan is paid out. The share of "doubtful" loans did indeed decline until late 2000 and the share of "loss" loans declined until early 2001. Since then, however, both shares have gradually increased again. It can be argued that "doubtful" loans do not involve serious credit risk because, for example, most loans to new borrowers are automatically allocated to this category. However, the two categories with the highest provision requirements combined (doubtful with high risk level and loss) also declined to 2.2 percent until March 2001 and subsequently increased to 2.9 percent at end-September 2001. This observation supports the conclusion that credit quality has recently deteriorated perceptibly, though not dramatically.[52]

65. The profitability of banks in 2000 was lower than during the previous two years with gross profits at 5.5 percent of assets and net profits (after provisions, taxes, and extraordinary items) at 1.3 percent (Text Table 7). In 2001, judging from results for the first half of the

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[51] NBK regulations require the classification of bank assets on the basis of the timeliness of payments, the borrower's financial status, linkages between borrower and bank, the borrower's credit history, and the collateral offered. Provision requirements differ accordingly. Abstracting from much detail, the categories are the following: Standard loans show no sign of problems (financially stable borrower, reliable and liquid collateral, credit history) and require no provision. At the opposite end of the spectrum, loss loans show payment delays for principal or interest of more than 90 days or a declaration of bankruptcy by the borrower, and require 100 percent provisioning. In between, doubtful loans are subdivided into three categories: Substandard loans (5–10 percent provision) show a payment delay of up to 30 days or a prolongation no more than once. Unsatisfactory loans (20–25 percent provision) show payment delays of up to 60 days, prolongation more than once, or no credit history on the part of the borrower. Doubtful loans with a high-risk level (50 percent provision) show payment delays of up to 90 days, a systematic shortfall of revenue on the part of the borrower, or significant material damage to the borrower from force majeure.

[52] It is noteworthy that even non-performing ("loss") loans appear to be frequently recovered by banks. Reportedly, new tax-deductible provisions for loss loans are broadly balanced by cancellations of provisions previously made but not used as principal have been recovered. It appears that banks have considerable clout to enforce loan contracts with or without relying on the court system.

year, profitability appears to have held up. Interest rates on both deposits and loans declined slightly from mid-2000 (Figure 5), with the gross interest margin by and large unchanged. As inflation also declined, both rates remained broadly constant in real terms the same time, the return on government securities has fallen substantially; government securities have usually made up more than one tenth of banks' total assets over the last two years (with some seasonal spikes). Low returns on government paper help to explain the decline in profitability as well as banks' willingness to increase lending to customers where returns as well as risks are higher.

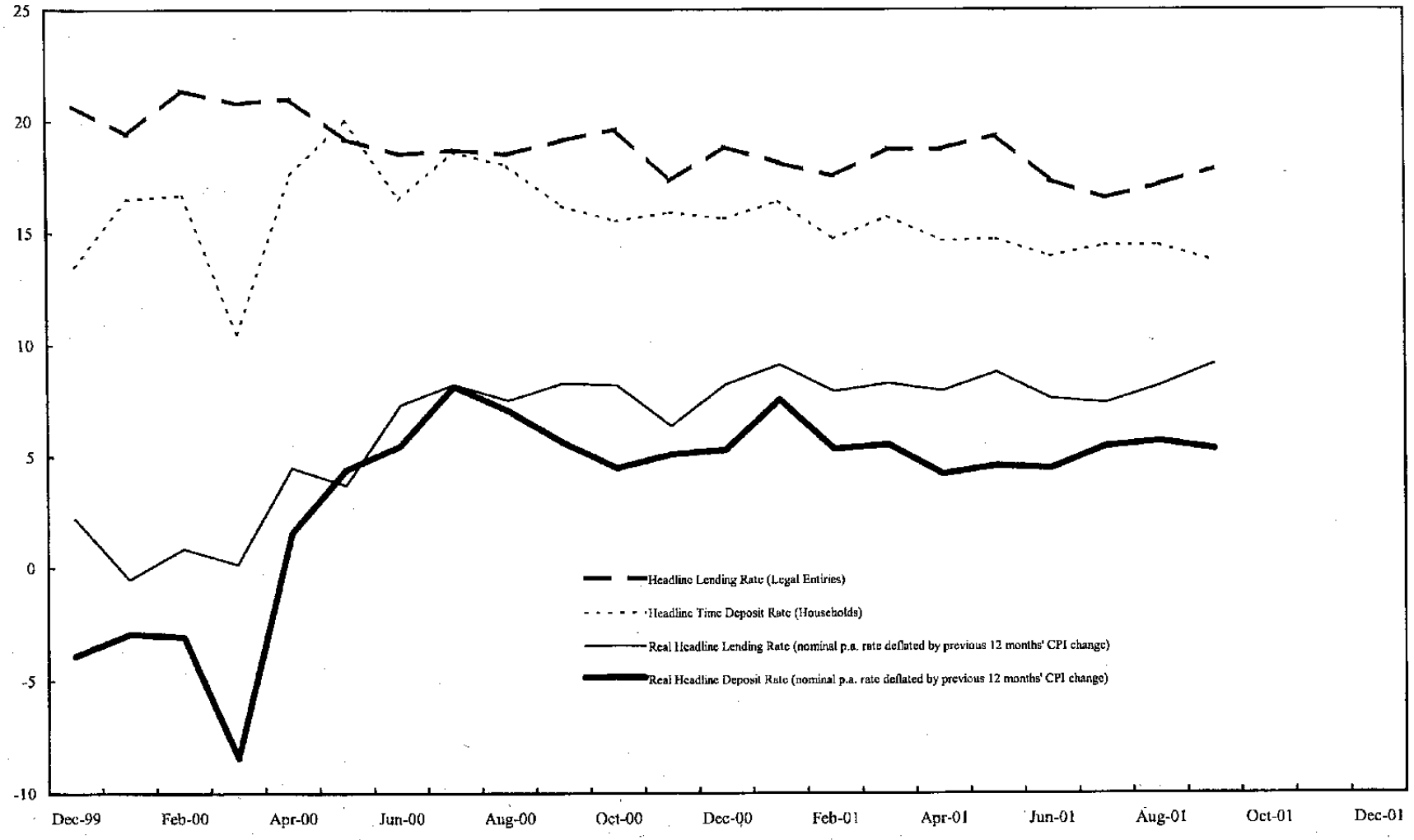
66. Because of the rapid expansion of bank balance sheets, the capital adequacy ratio (BIS Tier 1 plus 2 capital over risk-weighted assets) for the banking system as a whole has declined from 28 percent at end-1999 to 20 percent at mid-2001. The corresponding prudential norm calls for a minimum level of 12 percent; NBK data indicate that it was met by all banks but one in mid-2001. Largely as a result of the tightening of minimum capital requirements by the NBK, the number of commercial banks in Kazakhstan declined from 55 at end-November 1999 to 43 at mid-2001. In the process, some very small banks some were converted into non-bank financial institutions with more limited activities such as credit unions.

67. With profitability at best stagnating over the last two years, pressure has increased on banks to cut costs by streamlining operations. Because of economies of scale especially in retail banking, concentration in the industry looks set to increase. The most obvious example is the ongoing struggle for the control of Halyk Savings Bank, the formerly state-owned, second-largest commercial bank which has a large deposit base and an extensive retail banking network throughout Kazakhstan. The recent auction of the remaining state shares (one third of capital) saw the largest commercial bank, Kazkommertsbank (KKB), vying for control with two consortia consisting of financial institutions and industrial firms. The auction was won by a group led by Mangistaumunaigaz, but as KKB already controls nearly one third of Halyk Bank, the future structure of the bank is not yet clear.

68. Once the new control structure at Halyk Bank evolves, more mergers are likely to follow, as medium-sized banks may need to reposition themselves to compete with the larger banks. From the point of view of banking supervision, this process will require continuing vigilance as it raises concerns about a possible increase in monopoly power. In addition to banking supervision, international competition can help to maintain a competitive environment. Already, free entry of foreign banks to the country has led to the establishment of two large foreign banks as well as smaller ones. The planned, gradual liberalization of capital outflows will give Kazakhstan investors additional options for investing abroad.

69. Several Kazakhstan banks have obtained credit ratings from international rating agencies. Apart from providing an assessment of the financial health of individual banks, these ratings are comparable across countries and thus give a sense of the state of the financial system in Kazakhstan (or more precisely, its largest banks) in relations to other developing and transition economies. As of December 2001, Moody's had given identical

Figure 5. Kazakhstan: Commercial Bank Lending and Deposit Rates, 1999-2001



Source: Data provided by the Kazakhstan authorities; and Fund staff estimates.

Text Table 7. Kazakhstan: Capital Adequacy Ratios and Profitability of Commercial Banks, 1998-2001

	1998 December	1999 December	2000 December	2001 June
Number of Operating Commercial Banks	71	55	47	43
Total Statutory Capital (T billion)	41.8	52.7	68.8	70.6
Size Distribution of Statutory Capital (number of banks)				
Less than T 1 billion	60	40	22	17
T 1 billion to T 2 billion	5	9	18	16
Greater than T 2 billion	6	6	7	10
Total Equity (T billion)	47.3	69.0	97.6	109.7
Total Equity in Percent of Total Assets	24.1	20.2	18.5	17.1
Total Assets (T billion)	195.8	341.1	527.9	641.9
Share of 3 Largest Banks (Percent)	55.7	51.8	55.4	55.6 3/
Capital Adquacy Coefficient (K2; in Percent) 1/	29.5	27.6	25.7	20.2
Liquidity Ratio (K4) 2/	0.69	0.95	0.98	0.78
Profitability (Percent of total assets)				
Total Income	15.7	15.6	10.8	11.0 4/
Total Expenses	9.0	7.8	5.3	5.2 4/
Gross Profits	6.7	7.8	5.5	5.8 4/
Net Profits after Provisions, Taxes, Extraordinary Items	1.9	2.8	1.3	1.0 4/

Source: NBK and Fund staff estimates.

1/ K2: BIS Tier 1 plus Tier 2 Capital over Risk-Weighted Assets.
2/ K4: Liquid Assets (Cash plus T-Bills) over Demand Deposits.
3/ End-April.
4/ Half-year flows multiplied by 2 to make them comparable with annual flows.

ratings to the three largest banks (KKB, TuranAlem, and Halyk) for their long-term bank deposits (Ba3), financial strength (D-), and short-term deposits (not prime: NP). These ratings are more favorable than those for the six Russian banks covered by Moody's (long-term deposits: B3; financial strength: between E and D-; short-term deposits: NP). By contrast, the ratings are lower than the corresponding ratings for Korean banks, which range from Ba3 to Baa3, D- to E+, and NP to P-3 (i.e., one step above NP), respectively. Ratings for Polish banks are even higher on average, ranging from Baa3 to Baa1, E+ to C-, and P-3 to P-2. Standard and Poor's ratings paint a broadly similar picture. While Kazakhstan banks are probably the most advanced among the CIS countries, they still lag significantly behind many of the advanced emerging markets.

70. In sum, the financial deepening that occurred in Kazakhstan in 2000 and 2001 represents substantial progress in the development of the financial sector. It was driven by the growth of domestic deposits that reflected local customers' enhanced confidence in the banking system. Although growth has been rapid during the last two years, the levels of broad money and bank credit relative to GDP are still substantially lower than in most of the more advanced transition and developing economies. At the same time, the financial health of banks is probably stronger in Kazakhstan today than in other CIS countries with similar financial system depth.

71. Loan quality improved significantly through the end of 2000, but has deteriorated somewhat since then as credit was extended to a large number of new borrowers. Although banks have begun to develop new markets such as consumer loans and mortgages, most additional lending occurred along traditional lines, providing relatively short-term fully collateralized working capital financing. With a booming economy, there was strong demand for such credit even though real interest rates remained relatively high (Figure 5). Also, the strong emphasis on familiar types of loans economized on the banks' limited administrative and risk assessment capacity. The deterioration in loan quality is counterbalanced by the high level of provisioning for problem loans, the history of banks recovering a large share even of "loss" loans, and the extensive use of collateral. While this situation does not appear to pose an immediate risk to the stability of the financial system, a large, sustained downturn in the Kazakh economy could depress the profitability of firms and hence the value of collateral to the point where widespread borrower insolvency becomes a serious threat. Banking supervision has an important role to play in containing inappropriate risk-taking by helping to strengthen the risk assessment capacity of commercial banks and by fully implementing the recent improvements in consolidated supervision.

C. Pension Funds

72. Apart from banks, the only other major financial institutions in Kazakhstan are the accumulative pension funds with invested assets of $1.1 billion as of October 1, 2001. The funds were created through a far-reaching reform of the traditional, pay-as-you-go pension system that took effect on January 1, 1998. The old ("solidarity") pension system was terminated and accumulated pension claims became a liability of the central government

budget. In its place, a funded ("accumulative") pension system was instituted with mandatory contributions set at 10 percent of wages and salaries. As a result, most retirees over the next several decades will draw two pensions, one (the "solidarity" pension) reflecting their work history through the end of 1997, and another (the "accumulative" pension) based solely on their mandatory contribution to the new funded system since the beginning of 1998. The government will guarantee a minimum pension level for those retirees whose combined pension is very low and it will also pay a (slightly lower) minimum social benefit to people of old age who do not have a sufficient work history in the formal sector to be covered by the pension system.[53]

73. After four years of rapid asset growth, there are now several areas in which regulatory action is underway in order to make the accumulative pension system fully functional and to ensure that deposits (and hence pension incomes) are safeguarded into the future. These include: (i) the organizational structure of the system and its supervision; (ii) the privatization of the state accumulative pension fund; (iii) the development of an annuities market and rules for scheduled withdrawals upon retirement; and (iv) rules regarding the funds' investment portfolios.

Organization and supervision

74. When the accumulative pension system was established, a complex organizational framework was put in place with the intention to safeguard pension savings in a still volatile economic and legal environment. Pension funds (supervised by the Pensions Committee of the Ministry of Labor and Social Protection) receive the obligatory contributions of their members from the responsible government agency. The funds are then invested by asset management companies (supervised by the National Securities Commission). Finally, each pension fund must hold all its funds in one designated fiduciary bank (supervised by the NBK). In addition to private pension funds, which are owned mostly by banks, a state

[53] Two recent studies undertaken on behalf of the Ministry of Finance and the Ministry of Labor and Social Protection assess in detail the explicit and implicit pension liabilities of the government and the adequacy of pensions over the next half-century under several scenarios. In contrast to the solidarity system, the accumulative system does not redistribute old-age incomes in favor of lower-income workers and women (who work fewer years and live longer than men). Therefore, these groups, who constitute the majority of pensioners, will see their individual replacement ratios decline from their present level, the more so the later they retire. Once the pensions accumulated until 1997 become insignificant for new retirees around 2030, government outlays to top up individual pensions to the guaranteed minimum will increase somewhat, with around one half of all pensioners benefiting from such supplementary payments. The minimum pension level itself is assumed to be less than fully indexed to the growth of wages for most of the period. Government expenditures on all pensions, including for old age, survivor benefits, and disability, are expected to remain below 5 percent of GDP from 2002 onwards, with a decline to between 3–4 percent of GDP after 2030. On the basis of these studies, the current pension system appears fiscally sustainable and will maintain pension levels at least constant in real terms for nearly all retirees; however, individual replacement ratios will decline for most groups of pensioners as the minimum pension is not fully indexed to wage growth and accumulated mandatory pension contributions remain low compared with the earnings they replace.

accumulative pension fund was also set up. Its deposits are guaranteed by the government while its investment options are limited to particularly low-risk assets.

75. As part of the recent move towards a unified supervision of the financial services industry, the NBK has already absorbed the National Securities Commission and may absorb the Pensions Committee in the near future. Such a move would render the separation between pension funds and asset management companies redundant, especially since commercial banks are already the major owners of both. Against this background, the NBK also plans to allow pension funds to manage their own assets.

76. Unified financial sector supervision will also strengthen the hand of supervisors in ensuring that the funds' exposure to related parties remains under close scrutiny. Many pension funds, together with their parent banks, are part of larger financial and financial-industrial groups. Especially when related companies are in difficulty, they may be tempted to seek financing from a related pension fund, for example through a bonds issue at conditions that would not be accepted by non-related investors. Currently bonds bought by pension funds must be A-listed at the Kazakhstan Stock Exchange; reportedly, however, this requirement has not always been sufficient to prevent inappropriate investments. While credit ratings from international rating agencies would provide an alternative, independent assessment of a bond issuer's creditworthiness, only a few Kazakhstan companies obtain such ratings. Therefore, effectively enforced limits on exposure to related parties have an important role to play in preventing inappropriate risk-taking by pension funds.

State Accumulative Pension Fund

77. Since 1998, contributors' confidence in private pension funds has increased markedly. Their share in total monthly pension contributions increased from less than 20 percent during the first half of 1998 to around 70 percent around mid-2001 (Figure 6a). Accordingly, private funds now hold more than two thirds of pension fund assets (Figure 6b). Given the much reduced importance of the state pension fund in ensuring contributors' confidence in the accumulative pension system, the authorities' intend to privatize the state fund in the foreseeable future. However, it is noteworthy that a significant number of contributors still choose the state fund over its private competitors in spite of the latters' higher rates of return. As most people's accumulated savings are very small, it is a natural choice for many contributors to opt for a government guarantee of their pension savings.

Pension payments

78. Payments from the accumulative pension system have so far been made in lump-sum form. As they reflect less than four years' of contributions, they are still small and typically only supplement a solidarity pension. In the medium-term, however, as accumulative pensions contribute more substantially to old-age incomes, retirees will need to be able to convert their accumulated contributions into a life-long income flow. So far, however, there is no market for annuities in Kazakhstan. Given the small size of the pension savings of most

Figure 6a. Kazakhstan: Share of Private and State Pension Funds in Monthly Inflows, 1998-2001 (In percent)

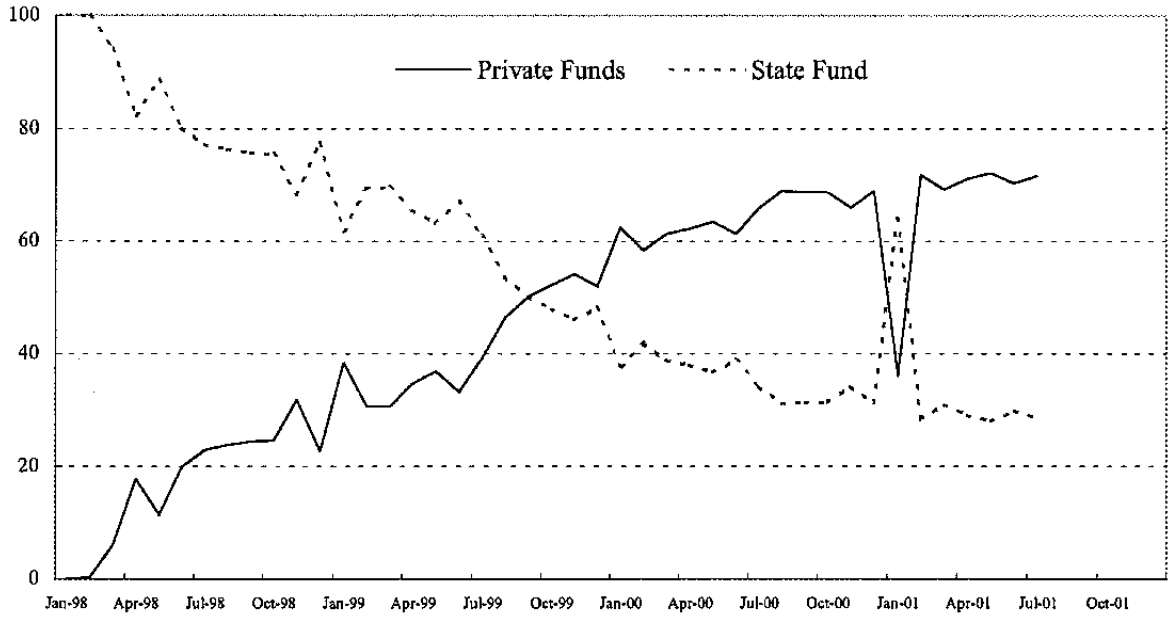
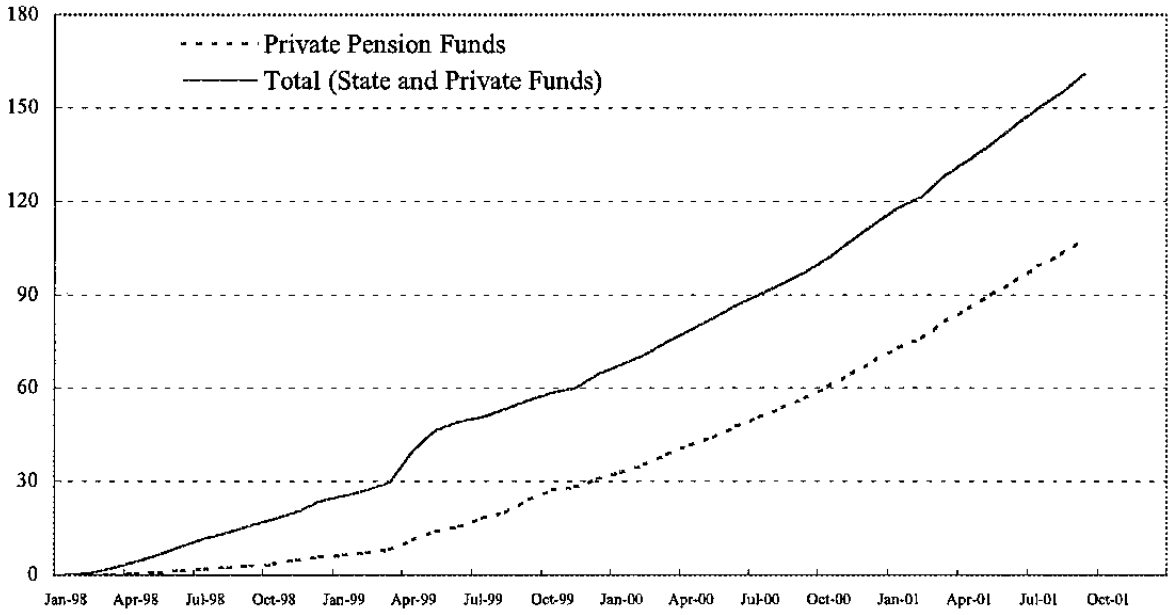


Figure 6b. Kazakhstan: Pension Fund Assets, 1998-2001 (In billions of tenge)



Source: National Bank of Kazakhstan.

retirees over the coming decade (typically, several hundred to a few thousand U.S. dollar), it is also unlikely that annuities will ever become an attractive option for the majority of retirees once administrative costs are taken into account.

79. A less administratively cumbersome alternative would involve requiring retirees to withdraw their savings according to a fixed schedule (say, withdraw a given percentage of the balance in the account remaining each year). This approach would maintain a regular income flow and would help to reduce claims for budget-financed social support payments from those who have spent their pension savings.

Pension Fund assets

80. The investment guidelines for pension funds distinguish between private funds and the state fund. For all funds, a large minimum weight is assigned to Kazakhstan government securities, incl. eurobonds (private funds: minimum 40 percent; state fund: minimum 50 percent). Kazakhstani municipal bonds may account for up to 5 percent and securities of international financial organizations for up to 10 percent of invested assets. Beyond this, private funds only are permitted to hold up to 10 percent of assets in bank deposits, up to 15 percent in foreign non-government securities (rated at AA/Aa or higher), up to 45 percent in domestic corporate securities (stocks or bonds), and up to 5 percent in domestic mortgage-backed bonds.

81. Currently, the share of government securities in total pension fund assets is still much higher than required by the investment guidelines, although it has declined substantially over the last two years. Long-term securities went from 78.5 percent on January 1, 2000 to 61.7 percent on October 1, 2001, and short-term securities from 13.1 percent to 0.3 percent (Figures 7a and 7b). Correspondingly, the largest increase has occurred in the share of domestic corporate bonds from 1.2 percent to 19.2 percent; bank deposits have also increased from 1.7 percent to 9.4 percent. Pension funds have evidently sought to compensate for the decline in the interest rates especially of short-term government paper by shifting funds into higher-yielding assets. In contrast to domestic corporate bonds, investment in shares has remained small at 2.9 percent as of October 1, 2001.

82. When the accumulative pension system was established in 1998, it was hoped that the domestic capital market would develop in step with it and would provide a natural outlet for pension savings. This expectation has not been fulfilled so far, although turnover in the corporate securities sector of the Kazakhstan Stock Exchange (i.e., stocks and bonds) more than doubled from one year ago to just over $ 400 million during the first 11 months of 2001. However, this amount still represents only about 2 percent of GDP, while available data suggest that in the more advanced emerging market economies stock market turnover alone (i.e., excluding bonds) is typically in the 10–40 percent range. In particular, stock market turnover in Kazakhstan is low although market capitalization on paper is significant. This reflects the fact that only a small proportion of shares even in listed companies are ever traded. Much of the increase in market turnover in 2001 was probably the result of the issuing

Figure 7a. Kazakhstan: Pension Fund Assets by Type, January 1, 2000
Total Invested Assets: T 53 billion

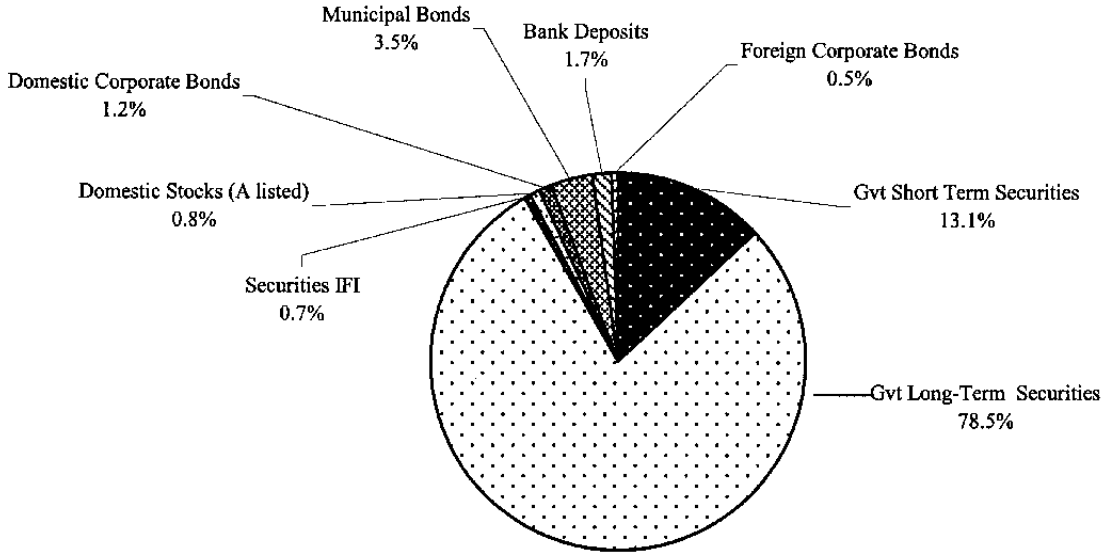
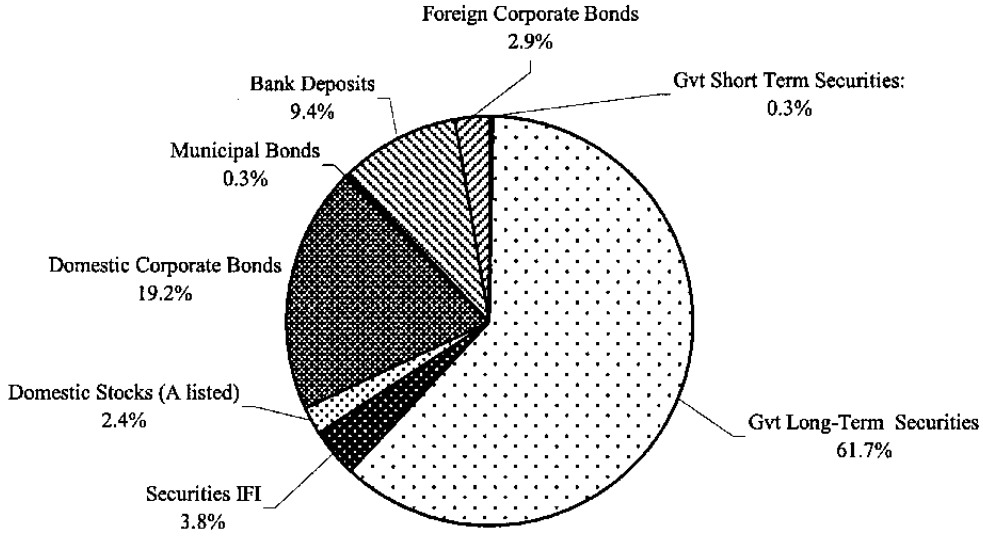


Figure 7b. Kazakhstan: Pension Fund Assets by Type, October 1, 2001
Total Invested Assets: T 160 billion



Source: The Kazakhstan authorities.

of corporate bonds. At end-1999, only 1 bond was listed in Category A, which implies a variety of formal requirements on the issuer, compared to 17 as of mid-2001. However, the concerns that have been raised about the fast growth in bank credit (Section B above) also apply to corporate borrowing through bonds.

83. So far, pension fund investment in foreign bonds has remained small at 2.9 percent of assets as of October 1, 2001. Such investment is limited to AA/Aa-rated securities (or issuers) and to 15 percent of each fund's assets (there are plans to increase this share to 30 percent). Clearly, the low level of investment in foreign bonds reflects the choices of asset managers, not legal restrictions. Apart from a lack of familiarity with the international capital markets on the part of fund managers, the low rates of return of foreign bonds have probably made them unattractive.

84. In sum, pension funds face a continuing challenge of finding safe investments with a reasonable return for the steady inflow of mandatory pension savings. The declining supply of government paper and the risks inherent in corporate bonds as the Kazakhstan economy begins to slow suggest that some international diversification of assets would be appropriate in the medium term. Actuarial calculations undertaken on behalf of the Kazakhstan government suggest that a real rate of return of 5 percent is required to maintain pensions at least constant in real terms for most groups of future retirees. Even at this high rate of return, individual replacement ratios would decline over time as wages and salaries grow. It remains to be seen whether this benchmark rate of return can be attained in the medium to long run at an acceptable risk level. If not, the fiscal cost of supplementary solidarity pensions would increase and, beyond a certain level, a higher retirement age or higher mandatory contributions to the accumulative pension system may need to be contemplated.

IV. An Assessment Of External Vulnerability[54]

A. Introduction

85. This chapter will examine Kazakhstan's external vulnerability both in historical context and in a forward-looking assessment:

- Following the Russian crisis, Kazakhstan experienced intensified exchange market pressure and large external adjustments, including floating the tenge, from late 1998 to early 1999. This chapter examines various external vulnerability indicators in a cross-country and cross-time manner to see whether the indicators had indeed signaled Kazakhstan's vulnerability to a crisis and to illustrate the nature of external pressure during late 1998 and early 1999.

[54] Prepared by Yan Sun.

- This chapter will also evaluate Kazakhstan's current external position by reviewing the movement of vulnerability indicators and by comparing Kazakhstan's indicators with those of selected transition/emerging economies from 1999 till now.

- Finally, chapter will discuss critical factors underlying Kazakhstan's future external vulnerability.

B. A Historical Perspective

Background: what happened during 1998–99?

86. During 1998, Kazakhstan was hit by a series of external shocks: weakness in oil and raw material markets, a poor grain harvest, turmoil in international financial markets, and spillovers of the Russian crisis (especially the sharp depreciation of the ruble). As a result, economic activity contracted from the third quarter of 1998 through the first quarter of 1999. On the domestic side, fiscal policy was loosened in late 1998. In view of deteriorating confidence in the tenge and loss of competitiveness, the government announced a shift to a freely floating exchange regime on April 4, 1999 [55] following which the tenge depreciated sharply. As of end-June 1999, the tenge had depreciated about 51 percent compared to the level on the eve of the regime switch.

Is the episode of April 1999 a currency crisis?

87. Three widely used standards in the economic literature are adopted to measure the exchange market pressure from 1997–2000 and to identify the nature of the regime switch in April 1999.

88. **Frankel and Rose (1996)** defined a currency crisis "as a nominal depreciation of the currency of at least 25 percent that is also at least a 10 percent increase in the rate of depreciation". The episode in 1999 easily satisfies this definition. The tenge depreciated by about 65 percent in 1999, against 11 percent in 1998. In the month of April 1999 alone, the tenge depreciated by 31 percent, against 2.5 percent in March 1999.

89. **Kaminsky, Lizondo and Reinhart (1998)** used an index based on a weighted average of the monthly changes of the nominal exchange rates (e) and reserves (R) to measure exchange market pressure. The weights were calculated to equal the conditional variances of the two variables in the index.

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[55] Though being officially announced as a managed float, the exchange arrangement before April 1999 behaved more like a crawling peg.

$$Index = \frac{\Delta e}{e} - \frac{\sigma_{\frac{\Delta e}{e}}}{\sigma_{\frac{\Delta R}{R}}} \times \frac{\Delta R}{R}$$

90. They defined a crisis as a month in which the index was at least three standard deviations from its mean. Again, the episode in April 1999 falls into this definition.

91. **Eichengreen, Rose and Wyplosz (1996)** constructed an index based on a weighted average of the monthly changes of the nominal exchange rates (e), reserves (R) and interest rates (i). The formula is:

$$Index = \frac{\Delta e}{e} - \frac{\sigma_{\frac{\Delta e}{e}}}{\sigma_{\frac{\Delta R}{R}}} \times \frac{\Delta R}{R} + \frac{\sigma_{\frac{\Delta e}{e}}}{\sigma_{\frac{\Delta i}{i}}} \frac{\Delta i}{i}$$

92. They defined a crisis as a month in which the index was at least two standard deviations from its mean. The episode in April 1999 easily satisfies their definition. The above two indexes are provided in Text Table 8 and Figure 8. It is clear that both indexes peaked in the month of April 1999.

93. In sum, the shift to a floating exchange rate regime in April 1999 can be classified as a response to a balance of payments crisis under three widely used standards. This result is robust to different sample periods and different data sources. Given the intensified exchange market pressure, we would expect some indicators to have picked up Kazakhstan's vulnerability before early 1999.

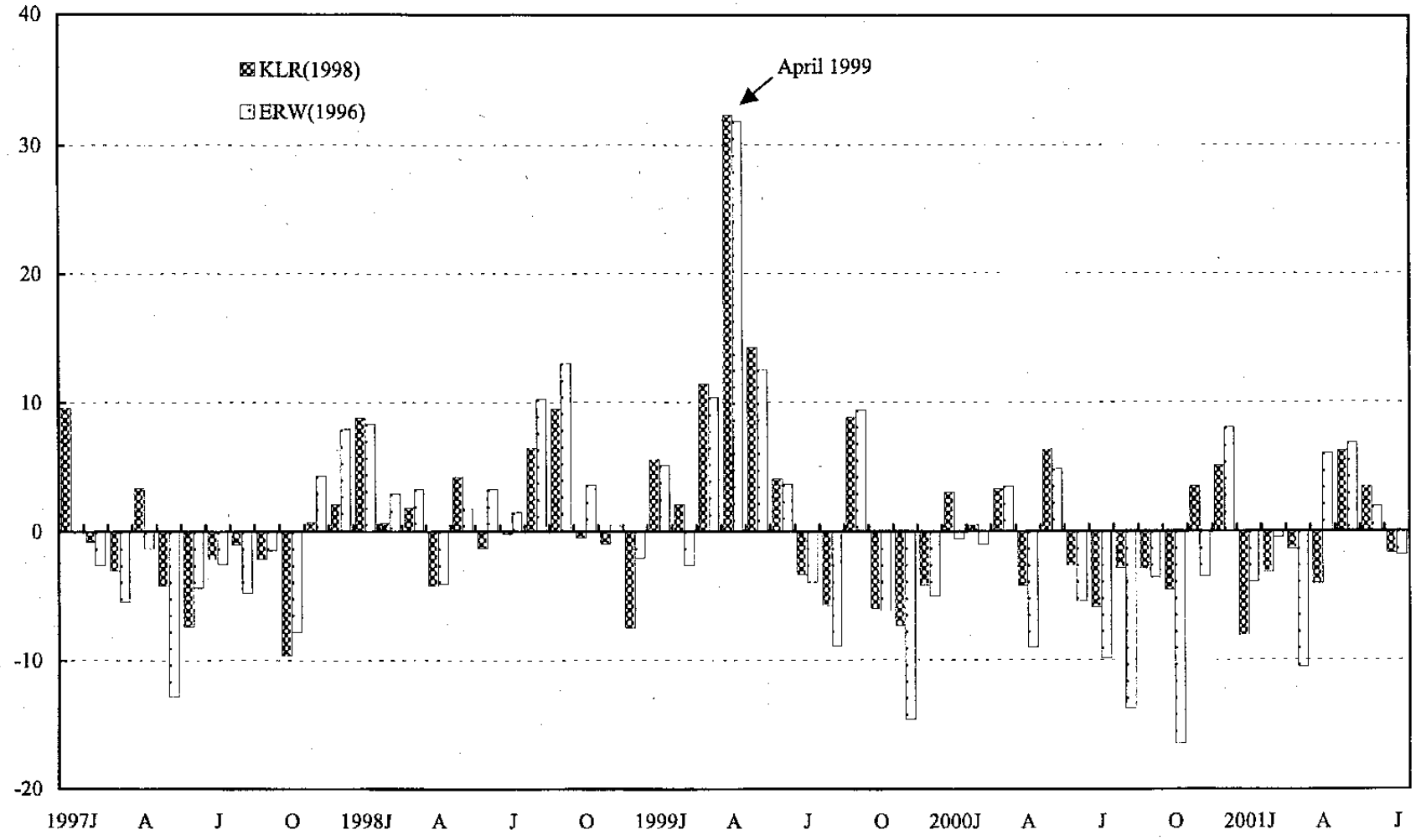
Vulnerability indicators before the early 1999 crisis

94. In this section, a number of indicators for 1997–98 are examined to see whether they would have signaled the intense balance of payments pressure before April 1999. Cross-country comparisons of the indicators are also made in order to see Kazakhstan's position among the 16 selected transition/emerging market economies.[56] The indicators fall into three groups: competitiveness-related (Text Tables 9–12), debt-related (Text Tables 13–15) and reserves-related (Text Tables 16–19).

95. The economic situation looked worrisome by end-1998. After scoring slightly positive real growth in 1996 and 1997, output contracted by about 2 percent in 1998. Due to the weakness in world oil and raw material markets, Kazakhstan's terms of trade deteriorated by 11 percent in 1998. In U.S. dollar terms, the nominal export growth rate was on a sharply

[56] To mitigate the problem of comparability, the data for cross-country comparisons (Table 9–22) are taken from the WEO and the Joint BIS/IMF/OECD/WB database. The Kazakhstan-specific database (Table 23) is also used to examine the movement of economic indicators across time.

Figure 8. Kazakhstan: Indexes of Exchange Market Pressure, 1997-2001



Source: The Kazakhstan authorities, IFS and Fund staff estimates.

Text Table 8. Kazakhstan: Indexes of Exchange Market Pressure, 1998-1999

	KLR (1998) Indexes	ERW (1996) Indexes	Monthly Percent Changes		
			Exchange Rate 1/	Official Reserves 2/	Interest Rate 3/
January 1998	8.78	8.33	1.13	-13.21	-1.02
February	0.66	2.93	0.00	-2.17	8.15
March	1.85	3.30	0.13	-0.82	12.91
April	-4.22	-4.06	0.00	5.47	-4.68
May	4.22	1.80	0.13	-7.62	-12.48
June	-1.30	3.28	0.46	2.26	19.50
July	-0.20	1.53	0.45	-0.70	3.23
August	6.46	10.25	1.68	-10.09	13.87
September	9.50	13.05	2.04	-15.68	10.54
October	-0.47	3.62	1.56	-1.86	4.86
November	-0.95	0.51	1.78	7.04	12.82
December 1998	-7.48	-2.06	1.09	8.09	6.66
January 1999	5.54	5.11	1.31	-5.80	2.58
February	2.07	-2.64	0.59	5.57	-0.46
March	11.42	10.36	2.46	-14.09	-0.05
April	**32.32**	**31.83**	**30.86**	**-1.48**	**0.69**
May	14.26	12.51	11.79	-1.66	-1.01
June	4.07	3.62	2.34	-2.39	-0.32
July	-3.37	-3.95	0.92	4.56	-10.99
August	-5.76	-8.89	-0.15	10.78	-12.82
September	8.81	9.41	6.06	-5.88	0.24
October	-5.97	-6.16	0.43	11.32	-1.13
November	-7.30	-14.56	-1.85	10.97	-31.25
December 1999	-4.14	-5.05	0.14	8.72	-1.40

Source: The Kazakhstan authorities, and Fund staff estimates.

1/ Nominal exchange rate tenge per U.S. dollar.
2/ Kazakhstan's International reserves minus gold scaled by the U.S. international reserves minus gold.
3/ The spread of Kazakhstan's 3-month treasury bill against the U.S. 3-month treasury bill.

Text Table 9. Annual REER Change, 1997-2000 1/

	1997	Rank	1998	Rank	1999	Rank	2000	Rank
AZERBAIJAN	4.5	5	3.6	6	-1.4	7	-10.0	2
BULGARIA	19.6	16	13.4	13	2.1	11	1.6	9
CZECH REPUBLIC	0.8	1	8.2	9	-1.4	8	0.1	7
ESTONIA	1.7	3	12.4	12	11.2	14	-5.0	5
HUNGARY	5.2	7	-0.8	5	1.6	9	0.6	8
KAZAKHSTAN	**5.2**	**8**	**13.6**	**14**	**-9.7**	**3**	**-6.1**	**3**
LATVIA	6.7	12	9.4	11	21.4	15	2.7	11
LITHUANIA	11.7	13	14.7	15	26.7	16	2.0	10
POLAND	2.4	4	5.0	8	-4.0	4	8.3	12
ROMANIA	16.5	15	30.1	16	-14.9	2	9.5	14
RUSSIA	5.6	9	-11.4	1	-29.3	1	12.2	16
SLOVAK REPUBLIC	4.9	6	-2.2	4	-2.4	6	9.3	13
SLOVENIA	0.9	2	4.6	7	2.0	10	-1.8	6
TURKEY	6.4	11	8.5	10	4.1	12	11.1	15
UKRAINE	13.3	14	-2.4	3	-4.0	5	-5.4	4
UZBEKISTAN	6.2	10	-4.3	2	8.3	13	-26.2	1
Mean	**7.0**		**6.4**		**0.7**		**0.2**	
Median	**5.4**		**6.6**		**0.1**		**1.1**	

Source: INS
1/ An increase in the index indicates an real appreciation.

Text Table 10. Growth of exports of goods and services, 1997-2000

	1997	Rank	1998	Rank	1999	Rank	2000	Rank
AZERBAIJAN	22.7	5	-11.9	11	26.4	1	61.9	1
BULGARIA	6.1	10	-14.7	14	-3.1	8	20.6	6
CZECH REPUBLIC	0.2	13	13.0	2	-1.9	6	9.3	12
ESTONIA	23.7	4	15.1	1	-3.5	9	19.6	8
HUNGARY	32.2	2	5.1	7	3.1	5	14.1	10
KAZAKHSTAN	**11.0**	**8**	**-13.0**	**13**	**8.0**	**3**	**53.2**	**2**
LATVIA	32.3	1	5.6	6	13.2	2	-5.0	16
LITHUANIA	24.1	3	-2.9	9	-16.4	16	21.1	5
POLAND	11.2	7	9.2	4	-12.3	14	7.1	13
ROMANIA	3.4	11	-4.4	10	3.7	4	22.8	4
RUSSIA	0.3	12	-15.4	15	-2.9	7	36.0	3
SLOVAK REPUBLIC	8.4	9	10.7	3	-6.1	11	15.8	9
SLOVENIA	-0.3	14	6.3	5	-5.4	10	1.6	15
TURKEY	13.9	6	5.0	8	-14.4	15	11.5	11
UKRAINE	-0.8	15	-12.7	12	-7.9	12	20.3	7
UZBEKISTAN	-2.6	16	-16.7	16	-8.3	13	5.7	14
Mean	**11.6**		**-1.4**		**-1.7**		**19.7**	
Median	**9.7**		**1.0**		**-3.3**		**17.7**	

Source: WEO

Text Table 11. Current Account Balance, 1997-2000
(In percent of GDP)

	1997		1998		1999		2000	
		Rank		Rank		Rank		Rank
AZERBAIJAN	-24.5	16	-30.5	16	-13.2	16	-2.7	5
BULGARIA	4.4	1	-0.5	2	-5.3	11	-5.8	12
CZECH REPUBLIC	-6.1	11	-2.3	6	-2.9	6	-4.6	10
ESTONIA	-12.2	15	-9.2	12	-4.7	10	-6.4	15
HUNGARY	-2.1	5	-4.9	9	-4.3	9	-3.6	7
KAZAKHSTAN	**-3.7**	**8**	**-5.5**	**10**	**1.0**	**3**	**8.0**	**2**
LATVIA	-5.1	10	-9.8	13	-9.7	14	-6.8	16
LITHUANIA	-10.2	14	-12.1	15	-11.2	15	-6.0	13
POLAND	-3.0	6	-4.3	8	-7.5	13	-6.3	14
ROMANIA	-6.1	12	-7.1	11	-4.1	8	-3.9	9
RUSSIA	-0.1	3	-0.6	3	11.7	1	18.0	1
SLOVAK REPUBLIC	-10.1	13	-10.0	14	-5.7	12	-3.7	8
SLOVENIA	0.1	2	-0.8	4	-3.9	7	-3.2	6
TURKEY	-1.4	4	1.0	1	-0.7	4	-4.9	11
UKRAINE	-3.5	7	-3.1	7	2.6	2	4.7	3
UZBEKISTAN	-4.0	9	-0.8	5	-1.0	5	1.4	4
Mean	**-5.5**		**-6.3**		**-3.7**		**-1.6**	
Median	**-3.8**		**-4.6**		**-4.2**		**-3.8**	

Source: WEO

Text Table 12. Terms of Trade, 1997-2000
(Annual change)

	1997		1998		1999		2000	
		Rank		Rank		Rank		Rank
AZERBAIJAN	16.0	2	-50.8	16	50.1	1	50.9	1
BULGARIA	-1.6	14	4.0	4	-2.5	15	-9.2	15
CZECH REPUBLIC	2.6	8	4.3	3	-1.0	10	-2.7	11
ESTONIA	-0.7	13	0.3	11	2.2	6	-0.6	10
HUNGARY	4.8	5	2.7	6	-1.5	14	2.1	7
KAZAKHSTAN	**3.0**	**6**	**-11.5**	**14**	**8.5**	**3**	**8.3**	**4**
LATVIA	-6.8	16	0.9	8	3.5	5	3.8	5
LITHUANIA	2.6	9	-1.0	12	4.6	4	0.0	8
POLAND	1.8	11	1.3	7	-0.2	9	-4.4	12
ROMANIA	7.7	4	-5.6	13	0.2	7	3.7	6
RUSSIA	13.7	3	-14.5	15	-1.4	13	27.0	2
SLOVAK REPUBLIC	1.9	10	6.9	2	-1.0	11	-0.5	9
SLOVENIA	-2.0	15	0.7	9	-1.0	12	-6.1	13
TURKEY	-0.2	12	3.3	5	-4.2	16	-6.4	14
UKRAINE	16.7	1	15.3	1	23.7	2	-18.2	16
UZBEKISTAN	2.8	7	0.3	10	-0.1	8	9.5	3
Mean	**3.9**		**-2.7**		**5.0**		**3.6**	
Median	**2.6**		**0.8**		**-0.1**		**-0.3**	

Source: WEO

Text Table 13. External Debt, 1997-2000 1/
(In percent of GDP, end of period)

	1997	Rank	1998	Rank	1999	Rank	2000	Rank
AZERBAIJAN	10.3	2	11.6	1	18.8	4	21.0	9
BULGARIA	85.4	16	70.2	16	69.3	16	71.7	16
CZECH REPUBLIC	19.6	8	20.4	9	19.0	5	18.9	7
ESTONIA	24.8	12	29.1	11	20.6	7	19.8	8
HUNGARY	45.1	15	46.2	15	43.4	14	38.7	14
KAZAKHSTAN	**14.8**	**7**	**18.3**	**8**	**25.9**	**11**	**17.7**	**5**
LATVIA	8.5	1	13.1	3	15.2	1	12.3	1
LITHUANIA	12.5	6	16.1	5	21.0	8	21.0	10
POLAND	21.7	10	22.1	10	22.3	9	17.1	3
ROMANIA	20.0	9	16.8	7	17.6	3	16.4	2
RUSSIA	23.3	11	44.6	14	55.5	15	36.5	13
SLOVAK REPUBLIC	26.5	13	34.3	13	32.8	12	27.7	12
SLOVENIA	12.4	4	15.9	4	20.1	6	24.7	11
TURKEY	29.6	14	29.8	12	36.3	13	39.1	15
UKRAINE	12.4	5	16.6	6	22.4	10	18.0	6
UZBEKISTAN	10.8	3	12.6	2	17.1	2	17.1	4
Mean	**23.6**		**26.1**		**28.6**		**26.1**	
Median	**19.8**		**19.3**		**21.7**		**20.4**	

Source: WEO and the joint BIS-IMF-OECD-WB database

Text Table 14. External Debt, 1997-2000 1/
(In percent of exports of goods and services)

	1997	Rank	1998	Rank	1999	Rank	2000	Rank
AZERBAIJAN	35.6	7	51.0	7	67.4	10	53.3	10
BULGARIA	123.6	16	143.8	15	148.3	15	123.0	15
CZECH REPUBLIC	34.6	6	34.3	4	31.3	2	26.7	2
ESTONIA	31.6	5	36.6	5	26.7	1	20.8	1
HUNGARY	81.3	12	81.5	12	76.5	11	59.8	11
KAZAKHSTAN	**42.2**	**9**	**59.9**	**10**	**60.5**	**8**	**29.1**	**3**
LATVIA	19.1	1	29.1	2	31.8	3	30.3	5
LITHUANIA	22.9	3	34.1	3	52.9	6	46.0	8
POLAND	101.1	14	103.4	13	116.6	13	85.0	14
ROMANIA	70.7	11	74.0	11	62.9	9	49.8	9
RUSSIA	96.9	13	144.3	16	126.5	14	79.6	13
SLOVAK REPUBLIC	46.0	10	56.1	9	52.9	7	37.6	6
SLOVENIA	21.6	2	27.9	1	38.3	4	42.2	7
TURKEY	113.7	15	114.9	14	150.9	16	157.7	16
UKRAINE	26.7	4	39.5	6	43.5	5	29.2	4
UZBEKISTAN	39.4	8	55.8	8	94.4	12	71.2	12
Mean	**56.7**		**67.9**		**73.8**		**58.8**	
Median	**40.8**		**55.9**		**61.7**		**47.9**	

Source: WEO and the joint BIS-IMF-OECD-WB database

Text Table 15. Short-term External Debt, 1997-2000 2/
(In percent of total external debt)

	1997	Rank	1998	Rank	1999	Rank	2000	Rank
AZERBAIJAN	1.5	1	2.3	1	3.7	1	19.7	4
BULGARIA	9.0	2	5.8	2	5.3	2	5.8	1
CZECH REPUBLIC	56.0	16	70.3	16	58.8	15	63.0	15
ESTONIA	40.6	14	36.4	12	122.4	16	108.9	16
HUNGARY	28.8	9	38.4	14	35.5	12	34.7	12
KAZAKHSTAN	**11.9**	**3**	**17.4**	**6**	**14.1**	**5**	**15.8**	**3**
LATVIA	16.1	6	28.1	10	35.0	11	48.0	14
LITHUANIA	15.8	5	25.9	9	32.7	10	34.7	11
POLAND	13.7	4	20.4	7	23.0	7	30.9	9
ROMANIA	20.2	7	32.7	11	24.9	9	28.6	7
RUSSIA	33.3	11	14.5	5	11.6	3	13.8	2
SLOVAK REPUBLIC	43.4	15	36.8	13	38.5	14	32.5	10
SLOVENIA	33.0	10	24.8	8	20.6	6	30.6	8
TURKEY	37.2	12	39.6	15	37.9	13	41.9	13
UKRAINE	27.6	8	10.4	4	13.9	4	21.2	5
UZBEKISTAN	37.6	13	9.4	3	23.3	8	25.2	6
Mean	**26.6**		**25.8**		**31.3**		**34.7**	
Median	**28.2**		**25.3**		**24.1**		**30.8**	

Source: WEO and the joint BIS-IMF-OECD-WB database

1/ External debt covers official loans, bank loans, non-bank trade credits and debt securities issued abroad of all maturities.
2/ Short-term debt is calculated on a remaining maturity basis.

Text Table 16. Reserves, 1997-2000
(In percent of M2)

	1997		1998		1999		2000	
		Rank		Rank		Rank		Rank
AZERBAIJAN	90.0	2	101.0	2	132.4	1	111.3	1
CZECH REPUBLIC	26.0	13	31.2	9	31.4	12	32.8	12
ESTONIA	53.9	4	54.9	4	48.4	6	54.3	6
HUNGARY	39.2	9	43.3	7	48.3	7	48.9	8
KAZAKHSTAN	**97.0**	**1**	**102.9**	**1**	**86.9**	**2**	**74.5**	**3**
LATVIA	34.7	11	31.0	10	50.4	5	51.9	7
LITHUANIA	64.8	3	68.1	3	53.7	3	54.4	5
POLAND	38.0	10	43.5	6	39.9	8	35.7	11
ROMANIA	45.7	5	29.0	11	32.4	9	47.8	9
RUSSIA	21.1	15	18.5	14	31.8	11	61.0	4
SLOVAK REPUBLIC	24.4	14	21.9	13	27.0	13	31.0	13
SLOVENIA	42.3	7	39.2	8	31.8	10	35.8	10
TURKEY	27.7	12	25.3	12	24.8	14	25.7	14
UKRAINE	40.1	8	12.0	15	19.7	15	23.4	15
UZBEKISTAN	45.4	6	50.6	5	53.7	4	80.9	2
Mean	**46.0**		**44.8**		**47.5**		**51.3**	
Median	**40.1**		**39.2**		**39.9**		**48.9**	

Source: WEO

Text Table 17. Reserves, 1997-2000
(In months of imports of goods and services)

	1997		1998		1999		2000	
		Rank		Rank		Rank		Rank
AZERBAIJAN	2.7	10	2.2	11	4.2	6	4.1	7
CZECH REPUBLIC	3.6	6	4.4	2	4.5	5	4.1	6
ESTONIA	2.2	11	2.1	12	2.4	13	2.2	14
HUNGARY	4.0	3	4.1	4	4.6	4	4.3	5
KAZAKHSTAN	**3.3**	**7**	**3.0**	**7**	**3.6**	**7**	**2.8**	**12**
LATVIA	2.1	12	1.7	13	2.6	12	3.6	8
LITHUANIA	2.0	13	2.7	9	2.7	11	2.8	13
POLAND	5.8	1	6.9	1	7.0	1	6.6	1
ROMANIA	3.8	4	2.8	8	3.0	10	3.5	10
RUSSIA	1.8	14	1.4	14	2.1	14	4.8	3
SLOVAK REPUBLIC	2.8	9	2.3	10	3.1	9	3.3	11
SLOVENIA	3.8	5	3.8	6	3.3	8	3.5	9
TURKEY	4.0	2	4.2	3	5.8	2	4.4	4
UKRAINE	1.3	15	0.5	15	0.8	15	0.9	15
UZBEKISTAN	3.2	8	4.1	5	4.7	3	5.7	2
Mean	**3.1**		**3.1**		**3.6**		**3.8**	
Median	**3.2**		**2.8**		**3.3**		**3.6**	

Source: WEO

Text Table 18. Reserves, 1997-2000
(In percent of short-term external debt 1/)

	1997		1998		1999		2000	
		Rank		Rank		Rank		Rank
AZERBAIJAN	7768.2	1	3727.7	1	2101.8	1	311.7	2
CZECH REPUBLIC	168.6	9	154.0	8	210.4	6	213.8	9
ESTONIA	163.4	10	146.1	9	65.0	15	84.8	14
HUNGARY	141.6	12	111.7	11	147.0	10	172.0	11
KAZAKHSTAN	**572.4**	**3**	**279.5**	**6**	**321.9**	**4**	**410.1**	**1**
LATVIA	677.7	2	215.8	7	242.8	5	245.5	4
LITHUANIA	539.0	4	316.6	5	164.3	9	161.2	12
POLAND	478.1	5	384.7	4	333.2	3	308.9	3
ROMANIA	277.3	7	131.2	10	184.2	7	236.0	6
RUSSIA	41.0	15	46.8	15	73.0	14	196.5	10
SLOVAK REPUBLIC	140.3	13	109.0	12	137.7	11	235.6	7
SLOVENIA	445.5	6	472.5	3	381.2	2	242.0	5
TURKEY	89.9	14	83.2	14	92.2	13	69.0	15
UKRAINE	157.3	11	105.6	13	107.6	12	113.6	13
UZBEKISTAN	194.8	8	659.9	2	182.9	8	232.5	8
Mean	**790.4**		**463.0**		**316.4**		**215.6**	
Median	**194.8**		**154.0**		**182.9**		**232.5**	

Source: WEO and the joint BIS-IMF-OECD-WB database

Text Table 19. Reserves, 1997-2000
(In percent of total external debt 2/)

	1997		1998		1999		2000	
		Rank		Rank		Rank		Rank
AZERBAIJAN	114.0	2	86.5	3	77.9	5	61.5	9
CZECH REPUBLIC	94.3	4	108.2	2	123.6	1	134.7	1
ESTONIA	66.3	8	53.3	8	79.6	3	92.4	4
HUNGARY	40.8	13	42.9	11	52.1	9	59.7	10
KAZAKHSTAN	**68.0**	**7**	**48.8**	**9**	**45.5**	**11**	**64.8**	**8**
LATVIA	109.1	3	60.7	7	85.0	2	117.9	2
LITHUANIA	85.2	5	82.0	4	53.7	7	55.9	12
POLAND	65.3	9	78.6	5	76.7	6	95.5	3
ROMANIA	56.0	11	43.0	10	45.9	10	67.5	7
RUSSIA	13.7	15	6.8	15	8.5	15	27.1	14
SLOVAK REPUBLIC	60.8	10	40.1	12	53.0	8	76.6	5
SLOVENIA	147.0	1	117.1	1	78.7	4	74.1	6
TURKEY	33.4	14	32.9	13	35.0	13	28.9	13
UKRAINE	43.4	12	11.0	14	14.9	14	24.1	15
UZBEKISTAN	73.3	6	62.3	6	42.6	12	58.5	11
Mean	**71.4**		**58.3**		**58.2**		**69.3**	
Median	**66.3**		**53.3**		**53.0**		**64.8**	

Source: WEO and the joint BIS-IMF-OECD-WB database

1/ Short-term debt is calculated on a remaining maturity basis.
2/ External debt covers official loans, bank loans, non-bank trade credits and debt securities issued abroad of all maturities.

declining track from 1996. Exports in nominal terms decreased by 15 percent in 1998. Nominal imports fell as well in 1998 due to depressed domestic demand, though to a less extent than exports, indicating a dominant income effect.

96. **Competitiveness-related indicators:** Three common competitiveness indicators are examined: annual change of real effective exchange rate (REER), annual export growth and the current account deficit (Text Tables 9, 10, and 11). Those indicators show considerable deterioration of Kazakhstan's competitiveness before the crisis. The REER of the tenge appreciated by more than 30 percent from 1996 to 1998. Though the tenge was appreciating in real terms in 1997, its position in the sixteen selected countries was about the median level. In 1998, Kazakhstan quickly found itself in the lower half of the sample. Kazakhstan's annual REER appreciation reached 13.6 percent in 1998, only surpassed by Romania and Lithuania. Its annual growth rate of nominal exports of goods and services was a negative 13 percent and ranked number 13 among all sixteen countries.

97. To generate a more complete picture, annual changes of terms of trade are provided in Text Table 12. Kazakhstan's terms of trade deteriorated significantly in 1998 as a result of low world oil and raw material prices. Not surprisingly, Kazakhstan's current account deficit peaked at 5.6 percent in 1998 after hovering around at 3.6 percent in 1996 and 1997.

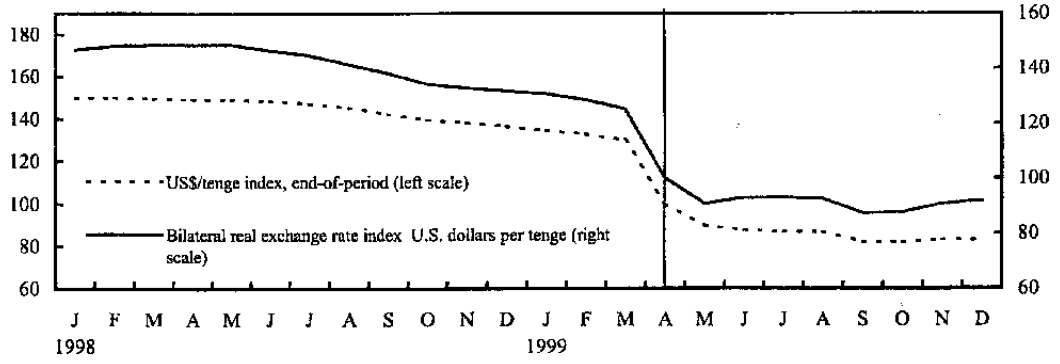
98. The sharp appreciation of the tenge in 1998 was a direct result of the crisis in Russia, the most important trade partner of Kazakhstan (Figure 9). The tenge appreciated gradually in real terms from 1996 to mid-1998. Following the sharp nominal depreciation of the ruble during the Russian crisis, the REER of the tenge increased significantly in August-September 1998, indicating a significant loss of competitiveness. The loosening of fiscal policy increased the concerns over the sustainability of the current account deficit. The cross-country comparison of fiscal indicators (Text Tables 20–22) shows Kazakhstan to be well in the lower half among the sample in both 1997 and 1998. Eventually, concerns of the tenge's overvaluation and the sustainability of the current account deficit led to the weakening of market confidence and the balance of payments crisis manifested itself in April 1999.

99. **Debt-related indicators:** Based on both a cross-country database and a Kazakhstan-specific database, debt-related indicators generally show that Kazakhstan was in a comfortable position to service its external debt before the crisis, although its debt level was increasing quickly.

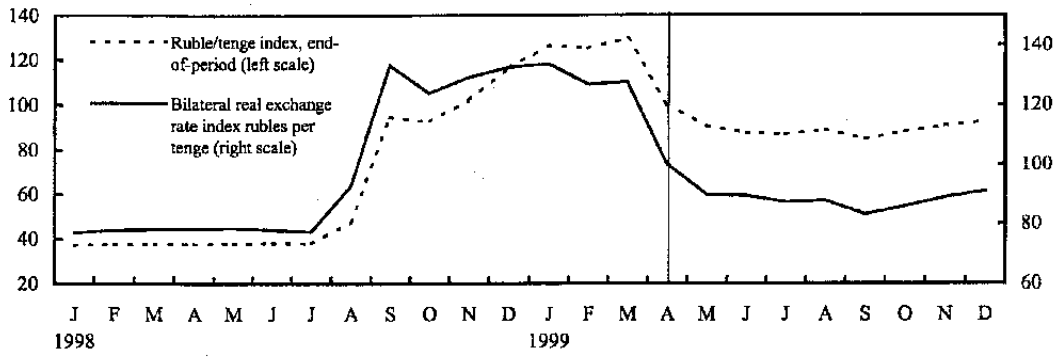
100. To minimize problems with comparability of external debt data, a cross-country database, the joint BIS/IMF/OECD/WB database, is used to calculate debt-related indicators. Total outstanding external debt at the end of a 12-month period is scaled against GDP and exports of goods and services (Text Tables 13–14). In the cross-country comparison, almost all indicators of Kazakhstan's indebtedness are below the median level in the sample. However, although Kazakhstan's position among the 16 selected countries remained almost unchanged, its external debt level scaled against GDP and exports all increased from 1997 to 1998.

Figure 9. Kazakhstan: Exchange Rate Indicators, 1998-1999
(Indexes, April 1999=100)

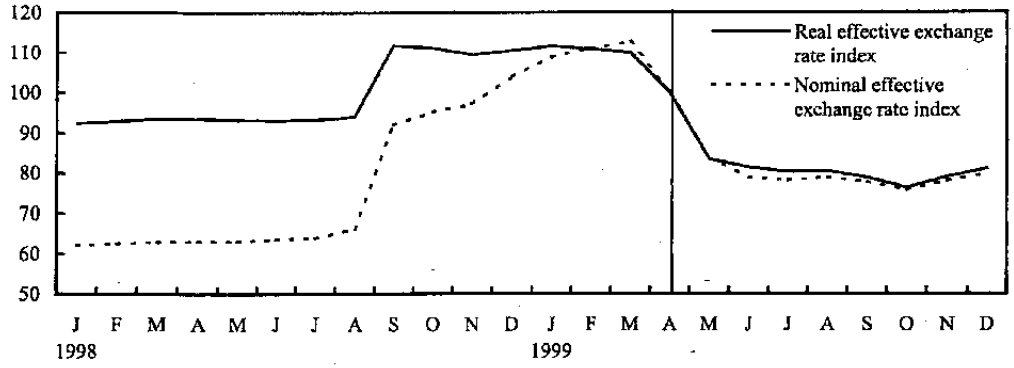
U.S. Dollar



Russian Ruble



Nominal and Real Effective Exchange Rates 1/



Source: The Kazakhstan authorities; and Fund staff estimates.

1/ An increase in the index indicates an appreciation.

Text Table 20. Central Government Balance, 1997-2000
(In percent of GDP)

	1997	Rank	1998	Rank	1999	Rank	2000	Rank
BULGARIA	-2.5	7	1.0	1	-1.0	3	-1.1	6
CZECH REPUBLIC	-0.9	3	-1.6	5	-1.6	5	-2.3	10
ESTONIA	2.4	1	-0.1	2	-2.4	8	-0.6	3
HUNGARY	-1.7	5	-1.8	6	-0.8	2	-0.6	2
KAZAKHSTAN	**-6.9**	**13**	**-7.6**	**14**	**-5.4**	**11**	**-1.2**	**7**
LATVIA	0.3	2	-0.8	3	-3.9	10	-3.3	12
LITHUANIA	-1.8	6	-5.8	12	-8.1	13	-2.7	11
POLAND	-2.6	9	-2.8	9	-5.5	12	-4.9	13
ROMANIA	-3.6	10	-3.1	10	-3.5	9	-2.0	9
RUSSIA	-6.8	12	-4.8	11	-1.3	4	1.9	1
SLOVAK REPUBLIC	-2.6	8	-2.2	7	-1.7	6	-1.7	8
SLOVENIA	-1.0	4	-1.0	4	-0.5	1	-0.7	4
TURKEY	-7.8	14	-7.6	13	-11.7	14	-11.2	14
UKRAINE	-5.4	11	-2.8	8	-2.3	7	-1.0	5
Mean	**-2.9**		**-2.9**		**-3.5**		**-2.2**	
Median	**-2.6**		**-2.5**		**-2.3**		**-1.4**	

Source: WEO

Text Table 21. General Government Balance, 1997-2000
(In percent of GDP)

	1997	Rank	1998	Rank	1999	Rank	2000	Rank
AZERBAIJAN	-1.6	3	-3.9	9	-4.8	14	0.4	2
BULGARIA	-2.5	8	1.0	1	-1.0	3	-1.1	4
CZECH REPUBLIC	-2.0	6	-2.4	5	-3.1	6	-4.4	15
ESTONIA	2.2	1	-0.3	2	-4.6	12	-0.3	3
HUNGARY	-4.8	10	-4.8	10	-3.7	10	-3.5	12
KAZAKHSTAN	**-6.9**	**14**	**-7.7**	**15**	**-4.7**	**13**	**-1.2**	**5**
LATVIA	0.3	2	-0.8	3	-3.9	11	-3.3	11
LITHUANIA	-1.8	5	-5.9	13	-8.5	15	-2.8	9
POLAND	-3.2	9	-3.3	7	-3.6	8	-3.0	10
ROMANIA	-5.2	11	-5.4	12	-3.7	9	-3.7	14
RUSSIA	-7.6	15	-6.9	14	-0.2	1	3.8	1
SLOVAK REPUBLIC	-5.3	12	-4.8	11	-3.4	7	-3.5	13
SLOVENIA	-1.7	4	-0.9	4	-0.9	2	-1.2	6
TURKEY	-9.3	16	-8.7	16	-13.0	16	-12.5	16
UKRAINE	-5.6	13	-2.8	6	-2.4	4	-1.3	7
UZBEKISTAN	-2.4	7	-3.3	8	-2.6	5	-2.3	8
Mean	**-3.6**		**-3.8**		**-4.0**		**-2.5**	
Median	**-2.8**		**-3.6**		**-3.6**		**-2.5**	

Source: WEO

Text Table 22. General Government Primary Balance, 1997-2000
(In percent of GDP)

	1997	Rank	1998	Rank	1999	Rank	2000	Rank
AZERBAIJAN	-1.5	12	-3.8	14	-4.4	15	0.9	7
BULGARIA	6.7	1	5.8	2	3.0	4	3.2	3
CZECH REPUBLIC	-0.8	8	-1.2	10	-2.1	11	-3.4	16
ESTONIA	2.7	3	0.2	6	-4.2	14	0.0	10
HUNGARY	5.4	2	3.1	3	3.8	2	2.7	4
KAZAKHSTAN	**-6.3**	**16**	**-6.9**	**16**	**-3.4**	**13**	**0.2**	**9**
LATVIA	1.2	5	0.2	5	-3.1	12	-2.5	15
LITHUANIA	-1.0	9	-4.7	15	-7.0	16	-1.0	13
POLAND	0.3	6	-0.1	7	-0.5	8	-0.4	11
ROMANIA	-1.4	11	-0.7	9	1.7	5	1.3	6
RUSSIA	-2.8	13	-3.0	13	3.2	3	6.4	2
SLOVAK REPUBLIC	-3.5	14	-2.5	11	-0.6	9	-0.8	12
SLOVENIA	-0.5	7	0.3	4	0.5	6	0.3	8
TURKEY	1.9	4	7.9	1	9.4	1	8.3	1
UKRAINE	-3.7	15	-0.4	8	0.2	7	1.7	5
UZBEKISTAN	-1.1	10	-2.6	12	-2.0	10	-1.6	14
Mean	**-0.3**		**-0.5**		**-0.3**		**1.0**	
Median	**-0.9**		**-0.6**		**-0.5**		**0.2**	

Source: WEO

101. As the joint BIS/IMF/OECD/WB database does not provide a comprehensive coverage of external debt for individual debtor country, the Kazakhstan-specific database is used to examine the movement of external debt indicators from 1996 to 1998.[57] Even though the level of Kazakhstan's outstanding debt was manageable, it had been growing quickly from 1996 to 1998 (Text Table 23). In U.S. dollar terms, the stock of external debt increased by 32 percent and 9 percent in 1997 and 1998 respectively. Kazakhstan's external debt in percent of GDP increased from 34 percent in 1996 to 41 percent in 1997 and then to 45 percent in 1998. The external debt (excluding intra-company loans) in percent of exports also increased continuously from 73 percent in 1996 to 84 percent in 1997 and then to 96 percent in 1998. In this sense, the quick increase of Kazakhstan's external debt till end-1998, though manageable, may have contributed to the negative market sentiment in early 1999.

102. **Reserves-related indicators:** Recent financial crises have highlighted serious problems associated with sudden liquidity shortages. As a primary measure of liquidity, reserves are usually examined against broad money (M2), imports of goods and services, and short-term external debt. This section will look at those indicators of reserves adequacy for Kazakhstan to see if they have reinforced the signals from competitiveness-related and debt-related vulnerability indicators. Kazakhstan's reserves-related indicators show that by 1998 Kazakhstan's reserve level was neither very high nor very vulnerable. From 1997 to 1998, Kazakhstan ranked the first place in terms of reserves to broad money ratio and the seventh place in terms of import coverage of reserves among the 14 selected countries (Text Tables 16–17). The ratio of reserves to short-term external debt is regarded "the single most important indicator of reserve adequacy in countries with significant but uncertain access to capital markets". [58] In terms of its ratio of reserves to short-term debt, Kazakhstan remained well in the upper half of the sample for both 1997 and 1998 (Text Table 18).

103. However, Kazakhstan's quick decline of liquidity from 1997 to 1998 is reflected in almost all indicators calculated from either the Joint BIS/IMF/OECD/WB database or the Kazakhstan-specific database. Based on the joint BIS/IMF/OECD/WB database, Kazakhstan's ratio of reserves to short-term external debt declined from 572 percent in 1997 to 280 percent in 1998 (Text Table 18). Based on the Kazakhstan-specific database, Kazakhstan's ratio of reserves to short-term debt decreased continuously from 1996 to 1998 (Text Table 23). By end-1998, Kazakhstan's reserves covered only about 85 percent of short-term external debt. Therefore, the quick decline of liquidity, in particular the low reserves to short-term external debt ratio, might have signaled Kazakhstan's vulnerability before the crisis.

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[57] The joint BIS/IMF/OECD/WB database does not cover non-guaranteed external debt owed to nonbank private creditors, such as foreign direct investment debt, which makes up an significant amount of Kazakhstan's total external debt and short-term debt. Therefore, Kazakhstan's external debt level reflected in the joint BIS/IMF/OECD/WB database would be considerably lower than the level in the Kazakhstan-specific database.

[58] Debt and Reserve-Related Indicators of External Vulnerability, SM/00/65.

Text Table 23. Kazakhstan: Indicators of Vulnerability, 1996-2001
(In percent of GDP unless otherwise indicated)

	1996	1997	1998	1999	2000	2001 Proj.
Financial Indicators						
Broad money (12-month percent change)	13.8	29.2	-13.3	82.7	45.9	38.9
Private sector credit (12-month percent change)	-11.5	23.4	29.9	62.5	81.8	53.6
Refinance rate (period average, in percent)	39.2	25.9	20.1	22.3	15.2	11.9 1/
Average yield on 3-month T-bill (in percent)	38.0	17.6	19.6	23.3	11.7	5.3 2/
External Indicators						
Competitiveness-related						
Exports (nominal percent change, 12-month basis in US$)	15.7	9.7	-14.9	4.3	60.0	-1.8
o/w Non-oil exports (percent change, 12-month basis)	11.1	3.8	-19.3	-6.4	29.5	1.0
Imports (nominal percent change, 12-month basis in US$)	24.4	8.3	-7.0	-15.4	21.3	23.0
Terms of trade (12-month percent change)	3.1	2.7	-11.4	9.3	18.8	-5.3
Current account balance	-3.6	-3.6	-5.6	-0.2	5.1	-3.6
Capital and financial account balance	5.5	7.1	8.6	5.5	5.8	4.8
o/w Foreign direct investment (in millions of US$)	1137	1320	1143	1583	1245	2351
Exchange rate (per US$, period average)	67.8	75.5	78.5	118.9	142.1	146.3 1/
Annual REER appreciation (+) (CPI-based, e.o.p.)	5.1	8.4	21.1	-26.6	3.7	-3.3 3/
Reserves-related						
Gross official reserves						
- in millions of US$	1961	2252	1964	2003	2096	2520
- in months of imports	3.1	3.3	3.0	3.6	2.8	2.9
- in percent of short-term external debt 4/	141.0	115.6	84.6	111.0	139.2	122.1
- in percent of total external debt	27.6	24.9	19.9	16.6	16.7	17.8
- excluding intra-company loans	38.3	34.5	30.2	34.1	36.2	40.4
Gross official reserves/Broad money (M2)	1.1	1.0	1.1	1.0	0.8	0.7
Gross official reserves/Narrow money (M0)	1.9	1.6	2.0	2.2	2.3	2.3
Debt-related						
Central bank short-term foreign liabilities (in millions of US$)	589.6	513.8	651.6	462.5	2.1	1.3 2/
Short-term foreign liabilities of commercial banks (in millions of US$)	33.1	44.8	260.2	96.8	164.4	434.6 2/
Short-term external debt 4/						
- in millions of US$	1390.3	1947.5	2320.9	1804.6	1505.8	2064.6
- in percent of GDP	6.7	8.8	10.5	10.6	8.2	10.1
- in percent of total external debt	19.6	21.6	23.5	15.0	12.0	14.6
Total external debt						
- in millions of US$	7096	9027	9878	12034	12572	14133
- excluding intra-company loans	5113	6523	6506	5872	5787	6234
- in percent of GDP	34.1	40.8	44.8	71.0	68.8	69.2
- excluding intra-company loans	24.6	29.5	29.5	34.6	31.7	30.5
- in percent of exports of goods and services	101.9	116.6	145.8	170.6	115.0	130.4
- excluding intra-company loans	73.4	84.3	96.0	83.2	53.0	57.5
Public external interest payments (in percent of exports of gnfs)	1.8	2.5	3.0	2.9	2.3	2.3
Public external amortization payments (in percent of exports of gnfs)	3.4	3.7	4.7	9.0	6.0	2.3
Net public external debt (in millions of US$) 5/	1934.2	2319.6	1994.5	2040.5	1883.5	172.8
National Fund (NFRK) assets (in millions of US$)	...	...	...	...	...	1373.5
Financial Market Indicators						
Foreign currency debt rating						
Moody's	Ba3	Ba3	Ba3	B1	B1	Ba2
Standard and Poor's	BB-	BB	B+	B+	BB-	BB
Spread over benchmark bonds (basis points, period average)	...	438	903	567	326	235 1/

Source: The Kazakhstan authorities, and Fund staff estimates.

1/ as of Nov. 2001
2/ as of Oct. 2001
3/ as of Sept. 2001
4/ The National Bank of Kazakhstan does not compile short-term debt statistics on a remaining maturity basis. Before 2000, the short-term debt data are on an "original maturity" basis. From 2000 onwards, the short-term debt is estimated by Fund staff on a remaining maturity basis.
5/ Total external public debt minus gross official reserves, and minus the NFRK assets.

104. In view of the external vulnerability indicators before early 1999, a few conclusions can be drawn. First, the indicators above did signal Kazakhstan's intense balance of payments pressure and vulnerability to a crisis in early 1999. Second, the contagion effect of the Russian crisis, the loss of competitiveness and the negative terms of trade shocks all contributed to the intense balance of payments pressure in April 1999. Third, although Kazakhstan's indebtedness was not high, it witnessed a rapid increase by end-1998. Last, the quick decline of Kazakhstan's liquidity, exemplified by the result that Kazakhstan's reserves to short-term debt ratio was less than 100 percent by end-1998 (calculated from the Kazakhstan-specific database), could have served as a leading indicator of Kazakhstan's vulnerability.

C. Kazakhstan's External Position After the 1999 Crisis

105. Kazakhstan's external vulnerability has lessened considerably since late 1999, both in absolute terms and in cross-section comparison among the 16 selected countries. By end-2000, Kazakhstan's ranking among the selected economies increased to be well in the upper half (the top four) in terms of most external vulnerability indicators (Text Tables 9–19). With the rebound of world oil price and the sharp correction of the REER, Kazakhstan's GDP growth, exports and current account surplus recovered strongly in 2000. At end-2000, indicators of Kazakhstan's indebtedness were either close to or lower than the pre-crisis levels. Although Kazakhstan's level of official reserves at end-2000 was not as high as that at end-1997, it covered about 139 percent of short-term external debt, indicating the strengthening of liquidity position (Text Table 23).

106. Strong GDP growth continued in 2001, thanks in part to strong development in the oil sector and favorable developments in Russia. But the recent decline of the world oil price and sluggishness in the world economy has adversely impacted Kazakhstan's exports. The current account is expected to reverse sharply to a deficit of about 4 percent of GDP in 2001. Nevertheless, indicators of Kazakhstan's external vulnerability have shown that overall Kazakhstan is in a much stronger position now to confront downturns in the world oil market than in 1998 (Text Table 23).

107. The improvement of Kazakhstan's external position since late 1999 reflects the combination of a significantly more favorable external environment and prudent macroeconomic policy. The world oil price had risen sharply from $13/barrel in 1998. Economies of neighboring countries have strengthened considerably and resulted in stronger regional demand. Foreign direct investment (FDI) to Kazakhstan has rebounded from the low level in 1998. Net FDI to Kazakhstan is expected to reach $2.3 billion in 2001. On the domestic side, faced with larger oil revenues, the Kazakhstan government has been prudent to keep expenditure contained. The Kazahstan government recently established the National Fund for the Republic of Kazakhstan (NFRK) which has accumulated receipts about $1.3 billion (6.2 percent of GDP) as of end-November 2001. Kazakhstan's stock of external debt has been stable and manageable. Kazakhstan's net public external debt at end-2001 is expected to be close to zero, its lowest level ever. Official reserves in 2001 already exceed the pre-crisis level and provide about 3 months of import coverage.

D. External Vulnerability Outlook

108. While Kazakhstan's external position looks robust at present, it remains potentially subject to various external shocks. With the rapid development of Kazakhstan's oil sector, one major factor underlying Kazakhstan's external vulnerability is the volatility of the world oil price. Empirical evidence has suggested that oil prices do not have well-defined time-invariant averages and consequently shocks are persistent. How to cope with terms of trade shocks and reduce Kazakhstan's external vulnerability should be an essential part of its macroeconomic policy design.

109. The movement of the world oil price could affect Kazakhstan's external position through the following channels. First, negative terms of trade shocks would directly affect the performance of Kazakhstan's exports, current account and fiscal balance. The impact could get compounded given the fact that Russia, the largest trading partner of Kazakhstan, is also an oil-rich country. In the event of falling oil prices, market concerns over current account sustainability and liquidity (reserves) might give rise to exchange market pressures, as indicated by Kazakhstan's experience in late 1998 to early 1999. A sensitivity study found that every $1/bbl decline in the world oil price (from $19/bbl to $18/bbl) would lead to an export revenue loss of $260 million (1.1 percent of GDP) in 2002 and $477 million (1.6 percent of GDP) in 2006. Second, negative terms of trade shocks might trigger a sharp contraction of Kazakhstan's access to international capital markets.[59] Third, positive terms of trade shock might place upward pressure on the price of the tenge, with effects on the nonoil tradable sector. This is the so-called "Dutch disease".

110. Kazakhstan's exposure to international capital market is currently limited. Loans from bilateral and multilateral official creditors are still a significant source of external financing. There have been 4 issues of public sector Eurobonds and 2 issues of private sector Eurobonds from 1995–2001. Most of the Eurobonds are actually held by the domestic pension funds. However, Kazakhstan has become more open to foreign capital/investment over the recent years and this trend is likely to continue in the future. The most important form of capital inflows to Kazakhstan has been foreign direct investment, in particular flows to oil sector. The annual average FDI inflows to Kazakhstan amounted to $1.3 billion from 1996 to 2000. At end-2000, foreign direct investors in Kazakhstan had accumulated about $6.8 billion of intra-company liabilities.[60] Although all major international oil companies operating in Kazakhstan have announced continued high levels of capital investment, it is important to note that cash flows will be available for repatriation in the future. The allocation of cash flows between capital reinvestment within Kazakhstan on the one hand, and repatriation for redistribution within the international companies on the other hand, will in principle depend

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[59] Studies in this area have found that international lending/investment to developing countries and primary commodity producers tends to be procyclical. Some countries might find it difficult to ensure foreign financing when commodity prices fall sharply.

[60] A new survey undertaken by the National Bank of Kazakhstan has resulted in a significant upward revision of the figures for non-guaranteed private external debt, almost entirely due to the inclusion of intra-company loans.

on the continued availability of attractive investment opportunities and on a stable regulatory environment.

111. The recent set-up of the National Fund for the Republic of Kazakhstan is a positive step towards coping with the volatility of oil prices. However, as the experiences of other commodity-producing countries show, stabilization funds cannot substitute for sound macroeconomic management. In the near future, some key policy measures, such as prudent fiscal policy and exchange rate flexibility should continue to be undertaken to minimize Kazakhstan's vulnerability to external shocks.

E. Conclusions

Several major findings emerge from the assessment of Kazakhstan's external vulnerability.

- The balance of payments pressure in early 1999 highlighted Kazakhstan's vulnerability to crises.
- Various external vulnerability indicators, in particular the loss of competitiveness and quick decline of liquidity, had pointed to Kazakhstan's intensified exchange market pressure before the crisis in early 1999.
- Although Kazakhstan's external position has recovered strongly from the 1998/99 crisis and looks robust at present, it remains subject to unforeseen factors, in particular the swing of world oil price. Accordingly, macroeconomic policy needs to adjust quickly in response to such shocks.

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Table 1. Kazakhstan: Value Added in the Main Production Sectors, 1996-2000

	1996	1997	1998	1999	2000
	(In millions of tenge)				
Nominal GDP	1,415,750	1,672,143	1,733,264	2,016,456	2,599,901
Industry	299,958	357,452	422,521	569,087	864,727
Agriculture	172,044	190,738	148,468	199,354	210,872
Construction	62,301	70,723	85,579	95,671	134,575
Transport and communication	159,704	195,625	239,386	243,196	298,515
Trade and catering	244,417	261,643	262,654	273,896	323,467
Others 1/	477,326	595,962	574,656	635,252	767,745
	(In percent)				
Real GDP growth	0.5	1.7	-1.9	2.7	9.8
Industry	0.3	4.1	-2.4	2.7	15.5
Agriculture	-5.0	-0.8	-18.9	21.6	-3.2
Construction	-21.8	8.0	15.0	8.0	14.0
Transport and communication	1.5	3.3	-0.9	4.8	18.8
Trade and catering	10.7	3.0	-3.2	2.1	5.0
Others 1/	-0.6	2.8	2.7	-1.7	6.8
	(In percent of GDP)				
Share of GDP					
Industry	21.2	21.4	24.4	28.2	33.3
Agriculture	12.2	11.4	8.6	9.9	8.1
Construction	4.4	4.2	4.9	4.7	5.2
Transport and communication	11.3	11.7	13.8	12.1	11.5
Trade and catering	17.3	15.6	15.2	13.6	12.4
Others 1/	33.7	35.6	33.2	31.5	29.5
Total	100.0	100.0	100.0	100.0	100.0

Sources: National Statistical Agency; and Fund staff estimates.

1/ Mainly services.

Table 2. Kazakhstan: Industrial Production, 1996-2001 1/

	1996	1997	1998	1999	2000	2001 H I
			(In millions of Tenge)			
Gross output	748,428	891,028	1,082,505	1,485,719	2,311,531	1,093,397
Mining	...	...	342,067	571,958	963,612	510,912
Output for electricity sector	...	...	213,682	417,426	813,345	475,104
Others	...	...	128,385	154,532	150,267	35,808
Manufacturing	...	...	537,369	717,092	1,171,139	491,188
Agricultural products	...	...	170,751	216,063	250,207	128,934
Textiles	...	...	19,708	34,122	39,550	14,239
Leather products and shoes	...	...	1,632	2,160	3,902	1,331
Wood products	...	...	3,357	5,255	7,238	2,160
Paper products	...	...	8,725	8,064	18,308	6,880
Processing of coke, oil, and nuclear products	...	...	95,454	106,561	153,973	58,270
Chemical products	...	...	13,406	15,617	20,078	13,258
Plastic and rubber products	...	...	2,834	5,250	5,861	2,503
Other non-metallic products	...	...	13,804	15,141	18,757	8,790
Metallurgy	...	...	167,181	261,774	573,497	215,862
Cars and machine-building	...	...	21,223	23,381	35,973	13,458
Electrical and electronic equipment	...	...	7,375	9,392	17,489	10,584
Transportation equipment	...	...	7,630	10,262	14,289	9,444
Other	...	...	4,289	4,050	12,017	5,475
Production and distribution of electrical power, gas, and water	...	...	203,069	196,669	176,780	91,297
			(In percent of total)			
Total						
Mining	...	...	31.6	38.5	41.7	46.7
Output for electricity sector	...	...	19.7	28.1	35.2	43.5
Others	...	...	11.9	10.4	6.5	3.3
Manufacturing	...	...	49.6	48.3	50.7	44.9
Agricultural products	...	...	15.8	14.5	10.8	11.8
Textiles	...	...	1.8	2.3	1.7	1.3
Leather products and shoes	...	...	0.2	0.1	0.2	0.1
Wood products	...	...	0.3	0.4	0.3	0.2
Paper products	...	...	0.8	0.5	0.8	0.6
Processing of coke, oil, and nuclear products	...	...	8.8	7.2	6.7	5.3
Chemical products	...	...	1.2	1.1	0.9	1.2
Plastic and rubber products	...	...	0.3	0.4	0.3	0.2
Other non-metallic products	...	...	1.3	1.0	0.8	0.8
Metallurgy	...	...	15.4	17.6	24.8	19.7
Cars and machine-building	...	...	2.0	1.6	1.6	1.2
Electrical and electronic equipment	...	...	0.7	0.6	0.8	1
Transportation equipment	...	...	0.7	0.7	0.6	0.9
Other	...	...	0.4	0.3	0.5	0.5
Production and distribution of electrical power, gas, and water	...	...	18.8	13.2	7.6	8.3

Sources: National statistical agency; and Fund staff estimates.

1/ Starting in 1998 a new classification was introduced, comparable categories are not available for data prior to 1998.

Table 3. Kazakhstan: Production of Selected Industrial Goods, 1996-2001

	1996	1997	1998	1999	2000	2001 H I
Production						
Crude oil (in thousands of metric tons) 1/	22,960	25,778	25,945	30,130	35,317	29,376
Coal (in thousands of metric tons)	76,831	72,647	69,773	58,378	74,872	56,617
Natural gas (in millions of cubic meters) 2/	6,524	8,114	7,948	9,946	11,542	8,674
Iron ore (in thousands of metric tons)	12,975	13,133	9,336	9,617	16,157	11,492
Electricity (in millions of kwh)	59,038	52,000	49,145	47,497	51,635	39,445
Mineral fertilizers (in thousands of tons)	191	151	24	35	7	21
Textiles						
Cotton yarn (in thousands of tons)	3	2	2	2	1	1
Woven cotton fabrics (in millions of square meters)	21	14	10	9	5	4
Paper (in metric tons)	67	154	0	0	1	...
Tires (in thousands)	107	1	167	302	116	0
Building materials (in thousands of tons) 3/	1,115	657	622	838	1,175	1,569
Cast iron (in thousands of tons)	2,536	3,089	2,594	3,438	4,010	2,954
Processed meat (in thousands of tons)	173	157	104	90	77	10
Milk products (in thousands of tons)	250	203	111	90	110	36
	(Percent changes compared to previous year)					
Production Growth						
Crude oil (in thousands of metric tons) 1/	11.2	12.3	0.6	16.1	17.2	16.0
Coal (in thousands of metric tons)	-7.8	-5.4	-4.0	-16.3	28.3	11.1
Natural gas (in millions of cubic meters) 2/	10.3	24.4	-2.0	25.1	16.0	5.3
Iron ore (in thousands of metric tons)	-12.9	1.2	-28.9	3.0	68.0	-4.5
Electricity (in millions of kwh)	-11.4	-11.9	-5.5	-3.4	8.7	7.6
Mineral fertilizers (in thousands of tons)	-3.2	-20.8	-84.1	45.8	-80.0	320.0
Textiles						
Cotton yarn (in thousands of tons)	-25.0	-33.3	0.0	0.0	-50.0	0.0
Woven cotton fabrics (in millions of square meters)	0.0	-33.3	-28.6	-10.0	-44.4	-20.0
Paper (in metric tons)	-61.5	129.9	0.0	0.0	0.0	...
Tires (in thousands)	28.9	-99.5	16,600.0	80.8	-61.6	-100.0
Building materials (in thousands of tons) 3/	-37.1	-41.1	-5.3	34.7	40.2	79.3
Cast iron (in thousands of tons)	0.2	21.8	-16.0	32.5	16.6	-1.5
Processed meat (in thousands of tons)	-36.6	-9.2	-33.8	-13.5	-14.4	0.0
Milk products (in thousands of tons)	-10.4	-18.8	-45.3	-18.9	22.2	24.1

Source: National Statistical Agency.

1/ Includes gas condensates.
2/ Consists of both gas from oil wells (gas-oil) and gas from gas wells.
3/ Including cement.

Table 4. Kazakhstan: Production of Selected Agricultural Goods, 1996-2000

	1996	1997	1998	1999	2000
	(In thousands of metric tons; unless otherwise indicated)				
Production					
Meat	1,541	1,346	1,213	1,182	1,140
Milk	3,627	3,220	3,394	3,535	3,730
Eggs (in millions)	1,263	1,242	1,388	1,512	1,692
Wool	42	32	25	22	23
Cereals	11,237	12,238	6,396	14,264	11,565
Of which:					
Wheat	7,678	8,955	4,746	11,242	9,073
Rice	226	255	236	199	214
Barley	2,696	2,583	1,093	2,265	1,664
Oats	359	286	73	194	182
Soybean	3	3	4	4	4
Potatoes	1,657	1,472	1,263	1,695	1,692
Tobacco	2	2	9	8	16
Vegetables	778	880	1,079	1,287	1,544
	(Percent change from previous year)				
Growth of production					
Meat	-13.1	-12.7	-9.9	-2.5	-3.6
Milk	-21.5	-11.2	5.4	5.1	5.5
Eggs	-31.4	-1.6	11.8	8.4	11.9
Wool	-27.6	-23.2	-22.8	-10.8	4.5
Cereals	18.2	8.9	-47.7	123.0	-19.0
Of which:					
Wheat	18.3	16.6	-47.0	136.9	-19.3
Rice	23.3	12.7	-7.5	-15.6	7.5
Barley	22.1	-4.2	-57.7	107.2	-26.6
Oats	43.6	-20.3	-74.5	166.0	-6.2
Soybean	-18.9	0.0	33.3	0.0	0.0
Potatoes	-3.7	-11.1	-14.2	34.2	0.2
Tobacco	0.0	17.6	350.0	-11.1	102.0
Vegetables	-0.2	13.1	22.6	19.3	19.9
	(In percent of total production)				
Share produced by private farms					
Meat	69.8	76.0	86.4	91.4	93.7
Milk	78.1	87.1	92.2	94.8	95.0
Eggs	45.8	47.2	45.5	47.6	49.8
Wool	58.4	73.7	82.2	87.5	89.1
Potatoes	87.5	88.8	91.5	94.9	95.8
Vegetables	75.9	80.4	88.7	88.6	94.0

Source: National Statistical Agency.

Table 5. Kazakhstan: Consumer Prices, 1998-2001

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
						(In monthly percent change)						
1998												
Total	1.8	1.1	0.7	0.5	0.3	-0.8	-0.2	-1.0	-0.1	-0.7	0.0	0.3
Food	2.7	1.3	1.2	0.1	0.6	-1.4	-1.8	-1.9	-0.5	-1.1	-0.2	0.6
Bread and cereals	-0.1	-0.3	-0.5	-0.6	-1.0	-0.8	-0.8	-0.6	0.0	-0.2	-1.1	-0.7
Meat and poultry	5.4	3.1	4.7	1.2	2.6	1.1	-0.2	-1.0	-0.8	-3.2	-3.2	-2.3
Fish	1.5	1.4	0.2	-0.3	-1.4	-1.3	-0.6	-0.6	0.2	0.1	0.1	1.1
Dairy products	2.8	1.1	-1.7	-2.9	-3.3	-3.6	-2.1	-0.4	2.4	1.4	3.6	2.9
Eggs	4.1	-1.7	-2.9	0.2	-4.5	-5.7	-4.7	-0.6	1.7	-0.6	-1.4	5.6
Oils and fats	0.0	0.2	-0.2	-0.7	-1.1	-1.6	-1.2	0.1	7.5	-2.7	-0.8	-0.1
Fruits and Vegetables	13.6	5.6	5.4	2.6	7.0	-7.1	-10.4	-14.2	-14.1	-1.6	7.7	11.1
Sugar, coffee, tea and condiments	0.6	0.5	0.1	-0.4	-0.8	-0.6	-1.1	-0.5	1.4	-0.6	-0.3	0.3
Beverages at home	0.4	0.3	0.2	0.1	0.2	0.0	0.1	-0.2	0.4	0.0	0.8	0.1
Food and beverages away from home	0.5	0.2	0.9	1.3	0.2	0.5	0.2	-0.1	1.7	0.0	0.8	0.1
Tobacco	1.0	1.7	0.6	0.6	1.8	0.7	0.5	0.2	0.3	0.7	0.2	0.1
Clothing and footwear	0.2	0.2	0.3	0.2	0.2	0.0	0.0	0.1	0.3	0.3	0.3	0.2
Rent, water, and power	1.4	1.8	0.0	1.0	0.0	0.0	4.5	0.3	0.3	-0.9	0.3	0.2
Household goods	0.1	0.0	0.0	0.4	-0.1	-0.2	-0.2	-0.1	0.6	-0.1	0.0	-0.1
Medical care	0.1	-0.2	-0.2	-0.5	-0.3	-0.5	0.0	0.0	-0.7	-0.8	-0.7	-0.5
Transportation and communication	1.4	0.8	-0.1	1.4	-0.1	-0.3	0.3	-0.4	0.0	-0.2	0.0	-0.4
Recreation, education and culture	0.3	0.3	0.2	0.5	0.3	0.0	0.7	0.2	1.0	0.4	0.0	0.0
Personal care	0.9	0.6	0.4	9.7	0.2	-0.2	0.2	-0.1	0.2	-0.2	0.2	0.0
1999												
Total	0.9	-0.2	-0.2	4.6	1.4	4.8	1.1	-0.3	0.7	0.7	1.7	1.7
Food	1.0	-0.3	-0.3	5.7	1.7	6.6	0.6	-1.2	0.3	0.6	2.1	2.7
Bread and cereals	-0.3	-0.4	1.2	3.1	1.1	16.7	9.2	0.7	0.4	-3.1	-2.5	-1.2
Meat and poultry	-0.7	-1.9	-1.1	1.6	2.6	2.1	1.6	1.0	1.6	2.3	1.4	5.3
Fish	0.0	-0.8	-0.9	-1.0	-0.2	1.3	1.4	0.8	1.2	2.6	3.8	3.0
Dairy products	1.4	-0.4	-1.7	-1.6	-3.0	-1.6	-0.9	0.4	3.0	4.5	6.6	4.7
Eggs	5.9	-1.1	-5.8	1.3	-9.4	-3.1	4.0	9.6	2.4	2.4	4.7	12.0
Oils and fats	0.2	-0.8	-0.7	8.0	0.3	2.7	1.9	1.8	2.5	4.1	1.3	-0.1
Fruits and Vegetables	9.5	2.8	4.1	10.9	10.7	10.2	-19.0	-16.9	-5.9	3.4	14.0	13.0
Sugar, coffee, tea and condiments	0.4	-0.2	-0.3	11.7	0.4	4.8	0.6	-1.2	-0.8	0.5	-0.3	-0.1
Beverages at home	0.1	-0.1	-0.1	4.6	0.0	0.6	0.3	0.0	0.2	0.8	7.8	1.3
Food and beverages away from home	0.1	0.3	0.2	7.5	2.0	3.4	2.1	0.7	0.8	0.5	0.8	0.4
Tobacco	0.7	0.9	4.1	29.0	1.2	2.7	0.0	-0.8	0.2	-0.2	0.1	1.2
Clothing and footwear	0.2	0.1	0.0	3.5	0.6	2.0	0.6	0.6	1.5	1.5	1.3	0.9
Rent, water, and power	2.1	-0.1	-0.1	0.3	1.2	0.7	1.6	0.4	-0.2	0.0	1.0	0.3
Household goods	0.0	-0.1	-0.3	9.9	1.7	3.7	0.9	0.5	0.6	1.8	0.7	0.6
Medical care	-0.5	-1.2	-0.9	6.4	-0.2	0.9	0.4	0.2	0.6	1.1	0.7	0.5
Transportation and communication	0.0	-0.8	-0.5	3.5	2.4	8.6	4.3	1.8	3.0	0.0	2.0	0.3
Recreation, education and culture	0.3	1.2	0.4	6.6	0.7	2.8	1.1	0.9	1.8	1.2	0.7	0.7
Personal care	0.1	0.3	0.4	11.7	2.5	3.1	1.7	0.6	0.6	1.4	1.0	0.7
2000												
Total	2.6	0.1	0.0	0.4	0.7	0.7	0.4	0.2	0.5	1.2	1.5	1.3
Food	3.5	0.2	-0.1	0.3	1.1	1.0	0.1	0.0	0.2	1.6	2.1	2.0
Bread and cereals	-0.5	-0.8	-0.6	0.4	1.6	2.4	0.7	0.0	-0.3	-0.7	0.9	0.3
Meat and poultry	8.9	0.9	1.0	2.3	2.6	0.7	1.0	0.6	0.7	0.4	0.3	0.7
Fish	2.3	1.6	-0.7	-1.3	0.8	-0.1	0.1	0.7	1.2	1.8	2.1	2.7
Dairy products	3.4	0.3	-3.0	-3.4	-3.0	-3.6	-1.0	0.7	2.4	5.8	5.6	5.8
Eggs	8.8	-9.5	-7.0	-4.5	-1.3	-3.2	-1.3	1.7	1.8	5.9	17.6	15.5
Oils and fats	0.6	-0.6	-0.8	-2.2	-1.3	-1.4	-1.0	-0.2	0.5	1.5	1.3	1.0
Fruits and Vegetables	13.5	5.1	3.4	2.4	3.0	-0.3	-2.8	-4.7	-2.8	4.4	5.9	7.7
Sugar, coffee, tea and condiments	0.7	-0.8	-0.7	-0.6	0.8	5.2	1.4	2.1	0.9	4.4	2.6	0.8
Beverages at home	0.5	0.4	0.3	0.2	0.0	0.1	0.0	0.0	-0.1	0.0	0.0	0.2
Food and beverages away from home	2.1	0.7	0.7	1.2	0.9	0.4	0.3	0.2	0.4	0.5	1.3	0.7
Tobacco	0.3	0.5	0.8	2.5	0.2	0.3	0.8	2.5	2.5	1.8	1.4	0.6
Clothing and footwear	0.6	0.4	0.3	0.4	0.5	0.4	0.6	0.4	0.5	1.0	1.0	0.7
Rent, water, and power	3.8	-0.6	0.1	0.1	0.1	0.1	0.2	0.2	1.7	1.1	0.7	0.2
Household goods	0.4	0.1	-0.3	-0.1	0.5	0.3	0.2	0.2	0.2	0.2	0.5	0.6
Medical care	0.7	0.5	0.9	0.7	0.2	0.4	0.3	0.1	0.2	0.1	0.4	0.2
Transportation and communication	-0.1	-0.1	-0.9	1.4	0.6	0.7	2.5	1.1	0.2	0.7	0.9	0.3
Recreation, education and culture	0.7	0.3	0.4	0.2	0.1	0.1	0.4	0.2	0.3	0.4	0.4	0.7
Personal care	0.7	0.4	0.1	0.2	0.4	0.7	0.3	0.3	0.2	0.8	0.4	0.2
2001												
Total	1.1	0.7	0.7	0.7	0.4	0.1	-0.1	0.0	0.2	...	...	...
Food	1.2	1.4	1.3	1.2	0.7	0.0	-0.4	-0.6	0.1	...	...	...
Bread and cereals	0.0	0.5	3.2	0.9	0.1	0.4	0.2	-0.2	-0.1	...	...	...
Meat and poultry	1.0	1.6	1.5	3.7	3.4	1.8	1.2	0.5	0.7	...	...	...
Fish	1.7	1.6	1.2	1.1	-0.7	0.8	1.1	1.5	1.5	...	...	...
Dairy products	3.0	1.3	-1.4	-3.0	-3.6	-3.3	-1.0	0.9	2.7	...	...	...
Eggs	-1.8	-10.2	-5.5	0.2	-3.9	-2.6	-0.2	0.2	4.6	...	...	...
Oils and fats	0.1	0.0	-0.6	-0.5	-1.1	-0.7	1.0	1.2	2.0	...	...	...
Fruits and Vegetables	7.8	10.4	3.6	4.5	2.3	-2.8	-6.7	-7.4	-4.4	...	...	...
Sugar, coffee, tea and condiments	0.5	0.1	0.4	-0.3	0.8	0.9	0.6	0.0	0.1	...	...	...
Beverages at home	0.0	0.4	0.1	-0.1	0.0	0.0	-0.1	-0.1	-0.1	...	...	...
Food and beverages away from home	0.9	1.1	0.8	1.0	0.5	0.8	0.3	0.5	0.3	...	...	...
Tobacco	0.3	0.1	0.2	0.1	0.1	-0.1	0.1	-0.2	0.1	...	...	...
Clothing and footwear	0.4	0.4	0.6	0.5	0.5	0.4	0.3	0.3	0.6	...	...	...
Rent, water, and power	2.0	-0.6	0.1	0.1	0.1	0.0	-0.4	0.8	0.1	...	...	...
Household goods	0.4	0.6	0.3	0.3	0.4	0.2	0.4	0.2	0.3	...	...	...
Medical care	0.6	0.3	0.1	-0.1	-0.1	0.2	0.2	0.3	-0.2	...	...	...
Transportation and communication	0.0	-0.6	-0.6	-0.3	-0.3	0.3	1.0	1.0	0.5	...	...	...
Recreation, education and culture	0.3	0.5	0.4	0.3	0.1	0.1	0.3	0.2	0.3	...	...	...
Personal care	0.4	0.3	0.3	0.5	0.2	0.4	0.4	0.3	0.4	...	...	...
						(Percentage change over previous year)						
Memorandum items:												
Total 1998	10.8	10.1	10.0	9.7	9.6	7.9	6.9	6.1	6.2	4.3	2.8	1.9
Total 1999	1.0	-0.3	-1.2	2.8	3.9	9.8	11.2	11.9	12.8	14.3	16.3	17.8
Total 2000	19.8	20.2	20.4	15.6	14.7	10.2	9.5	10.0	9.8	10.4	10.2	9.8
Total 2001	8.2	8.8	9.6	10.0	9.7	9.0	8.5	8.3	8.0			

Sources: National Statistical Agency; and Fund staff estimates.

Table 6. Kazakhstan: Wholesale Prices, 1999-2001

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	(In monthly percent change)											
1999												
Total	-1.0	-1.3	-0.1	7.3	7.9	7.6	3.1	4.0	3.9	8.3	3.3	3.9
Mining and extraction industry	-1.7	-2.9	1.2	9.7	10.9	13.0	2.2	8.1	6.9	13.5	4.1	5.4
Extraction of energy resources	-2.0	-2.9	1.6	11.8	11.5	14.9	2.1	9.4	8.6	15.8	4.9	6.9
Extraction of coal and lignite	0.8	5.4	-1.3	0.1	11.4	-0.1	0.0	2.3	-0.9	2.1	0.0	0.1
Extraction of crude oil and natural gas	-3.2	-8.7	3.1	17.6	11.6	21.2	2.9	11.8	11.5	19.5	6.1	8.4
Extraction of crude oil	-3.4	-7.1	3.2	20.1	12.0	22.0	2.9	12.1	11.8	20.0	6.1	8.5
Extraction of natural gas	0.7	0.5	1.0	-25.8	2.2	1.2	4.7	-0.4	1.8	2.2	5.4	5.3
Mining and extraction industry, other than the extraction of energy resources	-0.6	-3.0	0.1	2.2	8.6	5.4	2.6	2.5	-0.7	2.0	-0.5	-3.7
Mining of metallic ores	-0.7	-3.6	-0.3	0.7	10.0	5.1	3.0	2.8	0.0	0.9	-0.6	-1.8
Other sectors of mining and extraction industry	0.0	0.6	2.4	11.8	0.7	7.1	0.2	0.2	-5.1	9.4	0.7	-15.5
Processing industry	-0.9	-1.1	-1.2	9.4	9.2	7.1	4.3	2.6	3.2	7.5	3.7	4.1
Processing of agricultural products	-0.3	-1.0	0.2	3.9	3.1	3.7	4.5	-0.1	2.6	1.0	1.0	0.3
Food production	-0.3	-1.1	-0.2	3.5	1.1	3.1	5.3	0.7	3.1	1.2	1.2	0.3
Textile and sewing industry	-0.1	-0.3	-2.3	1.4	0.6	0.5	0.3	0.6	2.3	0.0	2.9	0.0
Shoe manufacturing	0.0	0.0	0.0	0.0	0.0	0.0	-2.5	3.1	0.6	0.7	0.7	0.5
Production of wood and wood production	0.0	0.0	-0.5	-0.1	0.0	1.5	0.4	0.3	0.1	-0.2	0.2	0.2
Production of paper and cardboard, printing industry	-0.2	-1.2	1.3	0.1	4.6	3.5	3.8	0.1	1.3	-0.5	0.1	0.0
Coal production, oil refinery	-0.7	0.1	-9.5	9.4	3.3	0.9	7.1	10.3	12.9	29.0	12.7	10.5
Chemical industry	0.2	0.3	-1.0	6.4	3.4	0.3	4.3	0.2	-2.4	-1.6	-1.5	-0.1
Manufacturing of rubber and plastic products	0.0	0.0	0.0	0.5	0.1	0.2	0.0	0.0	0.1	0.1	0.0	0.0
Production of other nonmetallic mineral-based materials	0.1	0.3	-0.4	0.0	0.4	1.3	5.4	-0.1	0.6	1.1	1.5	0.0
Metallurgical industry and metal working	-1.9	-2.3	1.3	16.0	18.1	13.0	4.1	2.3	1.3	5.2	1.8	3.7
Manufacturing of machinery and equipment	0.3	0.9	0.6	4.3	-0.1	1.4	0.0	-0.2	0.1	0.2	0.5	0.4
Manufacturing of electrical and electronic equipment	0.2	-0.1	-1.4	2.5	-3.6	0.4	1.0	0.4	-0.6	0.2	3.1	-0.9
Production of transportation equipment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Furniture production; other sectors of industry	0.2	0.0	2.1	3.3	0.0	0.0	0.1	4.7	0.1	0.0	0.0	0.0
Production and distribution of electricity, gas, and water	-0.1	0.2	0.3	0.0	0.9	0.6	1.3	8.3	-0.1	0.1	0.1	0.0
2000												
Total	0.9	2.0	2.2	-1.2	-2.2	3.1	1.7	1.8	3.9	2.2	0.9	2.7
Mining and extraction industry	1.7	5.5	5.8	-2.8	-9.0	11.2	3.8	1.1	10.0	4.8	2.3	5.1
Extraction of energy resources	1.5	5.5	6.8	-3.1	-10.1	13.0	4.2	1.0	11.6	5.2	2.4	5.3
Extraction of coal and lignite	0.4	-0.3	-1.2	-0.9	-0.6	0.9	1.4	-1.0	-2.1	1.3	0.0	0.9
Extraction of crude oil and natural gas	1.7	6.2	7.8	-3.4	-11.1	14.8	4.8	1.2	12.9	5.6	2.6	5.7
Extraction of crude oil	1.7	6.3	7.5	-3.5	-11.8	15.6	4.8	0.9	13.5	5.5	2.4	5.8
Extraction of natural gas	0.4	5.0	23.9	-16.4	3.5	4.9	0.4	10.6	0.2	8.3	9.4	5.1
Mining and extraction industry, other than the extraction of energy resources	2.6	5.5	-0.1	-1.0	-1.7	0.6	0.8	2.0	-0.6	2.0	1.6	3.6
Mining of metallic ores	3.0	5.3	-0.1	-1.2	-1.9	0.5	0.9	2.4	-0.8	2.5	2.1	4.6
Other sectors of mining and extraction industry	1.1	6.1	-0.1	0.0	-1.0	1.2	0.6	0.8	-0.1	0.1	-0.1	-0.3
Processing industry	1.0	0.4	0.5	-0.6	1.7	-0.8	0.8	3.0	1.1	0.7	0.0	1.6
Processing of agricultural products	0.1	0.0	-0.1	-0.1	3.6	1.4	1.0	-0.5	0.8	1.0	0.7	1.1
Food production	-0.3	-0.1	-0.2	0.4	1.4	1.4	0.8	0.1	0.2	0.6	0.3	0.6
Textile and sewing industry	0.5	0.2	0.2	0.2	0.8	0.3	0.1	0.7	0.4	0.0	0.5	1.0
Shoe manufacturing	1.5	3.1	0.1	0.0	3.6	1.1	2.7	-1.7	4.6	1.2	-0.7	0.0
Production of wood and wood production	1.2	0.0	-0.1	0.2	0.9	0.0	0.0	0.0	-0.4	0.7	0.0	0.1
Production of paper and cardboard, printing industry	0.3	-1.2	-0.1	-0.6	-0.1	-0.1	0.7	0.4	0.4	0.6	0.2	-0.2
Coal production, oil refinery	-1.8	-5.2	-2.9	0.0	2.5	0.1	1.7	20.8	3.0	5.1	5.6	4.6
Chemical industry	3.1	1.4	-0.9	1.9	3.7	0.4	-0.7	-2.4	0.2	0.0	0.7	-0.7
Manufacturing of rubber and plastic products	0.0	4.9	6.1	0.0	-4.6	0.0	0.3	0.1	0.0	0.0	0.1	0.2
Production of other nonmetallic mineral-based materials	-0.5	0.6	0.9	0.7	0.8	0.6	1.0	-0.2	0.6	0.7	0.4	0.1
Metallurgical industry and metal working	2.3	2.4	1.8	-1.4	0.9	-2.5	0.7	1.7	0.9	-0.6	-2.4	1.5
Manufacturing of machinery and equipment	0.8	0.2	-0.8	1.0	-0.2	-0.4	0.0	-0.3	0.5	-0.2	1.9	0.1
Manufacturing of electrical and electronic equipment	-1.6	0.1	1.3	1.7	0.2	0.4	-0.1	0.1	0.1	-0.1	0.2	-0.5
Production of transportation equipment	0.1	0.0	0.1	-1.8	0.0	1.2	0.0	0.0	0.0	0.0	0.1	0.0
Furniture production; other sectors of industry	1.0	0.9	1.1	0.6	0.3	0.0	-0.3	0.2	0.2	0.2	0.1	-0.1
Production and distribution of electricity, gas, and water	-0.5	0.2	0.0	0.4	0.0	0.0	0.3	0.1	0.0	1.0	0.1	0.0
2001												
Total	-8.5	2.0	1.3	-3.7	0.0	1.1	-0.3	-2.0	0.5	...	...	...
Mining and extraction industry	-18.0	5.4	3.0	-7.8	2.4	3.5	-1.9	-2.8	1.9	...	...	...
Extraction of energy resources	-19.4	5.9	3.4	-8.5	2.5	3.9	-2.1	-3.1	2.0	...	...	...
Extraction of coal and lignite	1.1	3.7	4.2	0.1	3.9	0.2	-3.9	1.7	6.1	...	...	...
Extraction of crude oil and natural gas	-20.2	6.0	3.4	-8.9	2.5	4.1	-2.1	-3.3	1.8	...	...	...
Extraction of crude oil	-20.7	6.8	3.4	-9.3	2.9	4.0	-2.4	-3.6	1.7	...	...	...
Extraction of natural gas	-0.1	5.1	4.4	1.4	-0.6	-0.1	0.1	0.5	-0.1	...	...	...
Mining and extraction industry, other than the extraction of energy resources	-2.3	1.2	-0.9	-0.5	0.5	0.2	0.5	0.3	0.1	...	...	...
Mining of metallic ores	-3.1	1.9	-1.2	-0.8	0.0	-0.1	0.7	0.3	-0.1	...	...	...
Other sectors of mining and extraction industry	0.8	-1.2	0.3	0.8	2.5	1.2	0.1	0.1	0.8	...	...	...
Processing industry	-1.2	-0.3	0.0	-2.0	-2.0	-0.7	0.4	-1.9	-0.6	...	...	...
Processing of agricultural products	0.4	0.8	1.1	0.3	0.5	1.0	0.5	-0.1	-1.2	...	...	...
Food production	0.4	0.8	1.1	0.3	0.4	1.1	0.5	-0.1	-0.2	...	...	...
Textile and sewing industry	0.3	0.2	0.2	0.2	0.0	0.4	0.3	0.0	0.2	...	...	...
Shoe manufacturing	-0.1	1.2	2.0	0.3	0.3	0.0	1.9	0.6	0.0	...	...	...
Production of wood and wood production	1.1	1.1	-0.1	1.9	3.6	0.4	0.4	1.5	0.2	...	...	...
Production of paper and cardboard, printing industry	0.5	-0.8	0.5	0.5	0.6	0.7	-0.2	0.1	-0.3	...	...	...
Coal production, oil refinery	-1.8	-3.6	-4.3	-4.5	-2.5	-0.2	8.1	0.2	1.1	...	...	...
Chemical industry	0.6	-0.8	1.2	2.0	-0.8	-1.2	1.3	1.5	1.2	...	...	...
Manufacturing of rubber and plastic products	0.1	0.3	0.1	0.1	0.1	1.3	0.4	0.1	0.2	...	...	...
Production of other nonmetallic mineral-based materials	0.9	1.5	0.4	0.2	-0.5	1.5	0.5	1.3	1.6	...	...	...
Metallurgical industry and metal working	-1.9	0.1	0.6	-0.9	-3.2	-1.7	-1.7	-4.0	-1.6	...	...	...
Manufacturing of machinery and equipment	-0.1	0.6	0.7	-0.8	0.9	0.4	1.3	0.1	-0.3	...	...	...
Manufacturing of electrical and electronic equipment	0.5	1.0	0.6	0.9	1.1	-2.0	-0.6	2.0	-1.4	...	...	...
Production of transportation equipment	0.4	0.0	4.5	2.8	0.3	0.0	1.6	1.0	-0.1	...	...	...
Furniture production; other sectors of industry	1.1	0.7	0.5	0.0	-0.3	0.7	0.8	0.0	0.2	...	...	...
Production and distribution of electricity, gas, and water	1.0	-0.1	0.0	0.6	0.0	0.0	2.7	0.0	0.1	...	...	...
Memorandum items:												
Total 1998	6.3	6.0	4.9	4.6	3.7	2.3	-0.1	-1.0	-2.2	-3.6	-4.6	-5.5
Total 1999	-6.5	-8.5	-8.4	-1.3	7.2	16.4	20.9	26.9	32.8	44.5	51.2	57.2
Total 2000	60.2	65.5	69.3	56.0	41.4	35.5	33.7	31.0	31.1	23.7	19.9	19.4
Total 2001	8.3	8.3	7.3	4.6	6.9	4.9	2.8	-1.1	-4.3	...	...	...

Sources: National Statistical Agency; and Fund staff estimates.

Table 7. Kazakhstan: Energy Prices, 1996-2001 1/
(Monthly price, in tenge)

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1996												
Crude oil (mt)	3,330	3,542	3,595	3,661	3,665	3,649	3,650	3,651	3,655	3,659	3,665	3,676
Natural gas (1000m3)	547	551	551	551	551	551	551	549	549	549	529	546
Electricity (1000kwh)	1,511	1,559	1,567	1,587	1,624	1,840	1,929	2,046	2,046	2,175	2,180	2,180
Coal (mt)	798	771	771	759	762	765	775	775	777	776	781	781
Gasoline (mt)	9,530	9,530	9,530	10,312	10,312	10,312	10,161	9,929	9,929	9,943	9,943	9,943
Diesel (mt)	7,056	7,056	7,056	7,425	7,425	7,425	7,264	7,264	7,264	7,298	7,298	7,298
Mazuth (mt)	3,506	3,438	3,438	3,128	3,128	3,128	3,128	3,128	3,128	3,325	3,325	3,390
Heating (Gcal)	744	748	754	765	838	843	837	842	843	968	1,008	1,010
Liquid petroleum gas (ton)	3,129	3,129	3,129	3,345	3,345	3,345	3,345	3,345	3,345	3,345	3,345	3,345
1997												
Crude oil	3,911	4,016	4,099	4,127	4,127	4,128	4,128	4,128	4,128	4,156	4,156	4,242
Natural gas	547	547	548	548	563	563	563	563	563	563	594	594
Electricity	2,589	2,664	2,726	2,726	2,738	2,740	2,988	2,999	3,021	2,999	2,970	3,093
Coal	559	575	577	582	579	581	580	580	580	576	577	577
Gasoline	11,598	11,814	11,848	11,849	11,948	13,162	13,166	13,189	13,177	13,259	13,254	13,263
Diesel	8,707	8,729	8,725	8,855	8,986	9,448	9,580	9,584	9,582	9,581	9,580	9,581
Mazuth	4,292	4,315	4,295	3,639	3,393	3,417	3,281	3,282	3,418	3,709	3,704	3,823
Heating (Gcal)	1,117	1,097	1,097	1,131	1,094	1,094	1,092	1,080	1,082	1,235	1,235	1,252
Liquid petroleum gas (ton)	3,864	3,871	3,869	4,249	4,251	4,267	4,268	4,270	4,270	4,270	4,270	4,270
1998												
Crude oil	4,479	4,498	4,481	4,459	4,296	4,211	4,314	4,045	3,688	3,627	3,368	3,370
Natural gas	778	778	778	778	782	782	784	787	793	799	803	807
Electricity	2,640	2,640	2,640	2,580	2,580	2,580	2,590	2,590	2,580	2,540	2,550	2,550
Coal	735	836	724	725	725	725	721	723	737	737	748	752
Gasoline	14,750	14,767	14,769	14,867	14,904	14,541	13,097	12,951	13,137	13,162	13,424	12,887
Diesel	10,000	9,997	9,998	10,424	10,308	9,935	9,368	9,384	9,532	9,555	9,149	9,561
Mazuth	4,964	4,964	4,964	3,950	3,954	3,747	3,358	3,468	3,510	3,714	3,835	3,949
Heating (Gcal)	1,185	1,186	1,186	1,170	1,168	1,168	1,128	1,128	1,120	1,108	1,095	1,095
Liquid petroleum gas (ton)	4,865	4,865	4,867	4,872	4,875	5,159	5,396	5,461	5,580	5,629	5,742	5,522
1999												
Crude oil	3,756	3,538	3,697	4,770	5,629	7,020	7,691	8,845	10,163	12,409	13,290	14,553
Natural gas	818	821	828	649	656	660	677	676	683	691	726	751
Electricity	2,380	2,380	2,390	2,390	2,400	2,410	2,430	2,430	2,430	2,440	2,440	2,440
Coal	468	489	484	485	518	517	516	530	518	512	512	514
Gasoline	12,584	12,648	10,000	12,221	12,840	12,840	16,602	19,098	22,949	27,385	29,583	31,186
Diesel	9,398	9,492	8,932	10,049	10,310	10,516	9,948	11,089	12,921	14,639	16,293	20,497
Mazuth	3,086	3,095	3,080	3,182	3,235	3,235	2,984	3,293	4,102	6,254	7,512	7,579
Heating (Gcal)	1,138	1,138	1,139	1,134	1,138	1,142	1,160	1,163	1,163	1,161	1,159	1,159
Liquid petroleum gas (ton)	4,117	3,592	3,494	3,891	3,945	4,502	3,928	3,134	3,335	3,409	4,688	4,796
2000												
Crude oil	14,862	15,268	16,327	15,729	13,642	15,941	16,763	16,552	18,778	19,715	20,289	20,401
Natural gas	620	653	799	646	667	698	701	777	779	835	909	957
Electricity	2,460	2,400	2,400	2,410	2,410	2,410	2,410	2,410	2,400	2,410	2,410	2,410
Coal	579	576	563	552	550	542	537	535	526	525	525	516
Gasoline	30,643	26,900	24,451	24,429	26,305	26,322	26,403	32,214	31,427	31,790	33,790	34,505
Diesel	19,716	18,473	18,583	18,621	19,590	19,601	20,344	24,671	26,846	28,276	30,057	31,767
Mazuth	7,978	7,843	7,914	7,913	7,067	7,071	7,075	9,399	9,790	10,841	10,597	11,109
Heating (Gcal)	1,234	1,235	1,234	1,236	1,236	1,236	1,238	1,238	1,238	1,272	1,271	1,271
Liquid petroleum gas (ton)	7,199	7,769	7,404	7,294	7,224	7,230	7,236	9,075	10,919	10,918	12,163	12,515
2001												
Crude oil	15,179	16,150	16,727	15,171	15,603	16,221	15,795	15,229	15,501	...	...	...
Natural gas	1,111	1,157	1,209	1,214	1,208	1,207	1,207	1,213	1,212	...	...	...
Electricity	2,630	2,630	2,630	2,640	2,640	2,640	2,640	2,640	2,640	...	...	...
Coal	425	440	460	458	475	477	456	464	496	...	...	...
Gasoline	35,400	33,782	31,419	27,755	29,515	30,508	33,742	33,837	34,915	...	...	...
Diesel	32,057	31,080	30,313	29,124	24,946	23,363	26,276	26,333	26,494	...	...	...
Mazuth	9,890	8,634	7,674	7,671	7,146	7,186	8,754	8,776	8,882	...	...	...
Heating (Gcal)	1,423	1,423	1,423	1,421	1,421	1,421	1,427	1,427	1,427	...	...	...
Liquid petroleum gas (ton)	13,301	13,319	12,121	12,129	12,175	13,425	15,176	15,222	15,279	...	...	...

Sources: National Statistical Agency; and Fund staff estimates.

1/ Producers' ex-factory prices. Average prices for all customers.

Table 8. Kazakhstan: Employment, 1996-2001 1/

	1996	1997	1998	1999	2000	2001 H I
			(In thousands)			
Total	4,380	3,629	3,071	2,489	2,474	2,521
Agriculture and forestry	...	...	494	270	232	237
Fishing	...	...	5	6	5	5
Total industry	...	...	756	668	654	667
Of which:						
Mining	...	...	120	126	131	136
Manufacturing	...	...	492	406	391	403
Electricity, gas and water: production and distribution	...	...	145	137	132	128
Construction	...	...	133	103	105	113
Trade, car repair, and household goods	...	...	79	49	43	42
Hotels and restaurants	...	...	24	18	18	11
Transports and communication	...	...	333	245	245	227
Financial sector	...	...	36	29	32	32
Real estate	...	...	136	100	109	124
State sector	...	...	177	182	186	201
Education	...	...	510	497	521	540
Health and social services	...	...	313	263	252	257
Other local, social, and personal services	...	...	74	60	71	66
Share of employment						
Total	...	...	100.0	100.0	100.0	100.0
Agriculture and forestry	...	...	16.1	11.8	9.4	9.4
Fishing	...	...	0.2	0.3	0.2	0.2
Total industry			24.6	24.8	26.4	26.5
Of which:						
Mining	...	...	3.9	5.0	5.3	5.4
Manufacturing	...	...	16.0	15.0	15.8	16.0
Electricity, gas and water: production and distribution	...	...	4.7	4.8	5.3	5.1
Construction	...	...	4.3	4.0	4.3	4.5
Trade, car repair, and household goods	...	...	2.6	2.0	1.7	1.7
Hotels and restaurants	...	...	0.8	0.4	0.7	0.4
Transports and communication	...	...	10.8	9.6	9.9	9.0
Financial sector	...	...	1.2	1.4	1.3	1.3
Real estate	...	...	4.4	4.5	4.4	4.9
State sector	...	...	5.8	6.7	7.5	8.0
Education	...	...	16.6	21.8	21.1	21.4
Health and social services	...	...	10.2	10.6	10.2	10.2
Other municipal, social, and personal services	...	...	2.4	2.2	2.9	2.6

Source: National Statistical Agency; and Fund staff estimates.

1/ Starting in 1998 a new classification was introduced, comparable categories are not available for data prior to 1998.

Table 9. Kazakhstan: Labor Market, 1997-2001

	1997				1998				1999				2000				2001			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Operation of Employment Offices																				
Number of job placement inquiries (thousands)	50.5	46.6	44.1	37.3	46.3	44.5	42.8	45.5	35.7	26.1	28.4	30.6	41.2	30.4	25.2	25.9	30.2	30.1	25.7	24.9
Number of people placed in jobs (thousands)	6.4	8.3	8.6	8.6	7.3	9.4	9.3	9.1	6.5	4.6	5.6	7.6	7.3	11.8	12.0	11.4	8.9	14.1	13.4	11.3
Number of vacancies (thousands)	8.6	9.8	12.9	9.6	8.5	11.2	12.5	9.9	6.6	7.0	8.2	7.8	8.7	11.0	12.5	10.7	8.7	12.9	13.6	11.5
Number of registered unemployed (thousands)	293.1	277.7	268.7	263.5	262.0	272.4	264.8	254.5	245.1	237.1	239.5	248.6	286.6	278.5	256.5	238.6	242.3	234.5	222.8	216.1
(percent of economically active population)	4.3	4.1	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.7	3.8	3.9	4.5	4.3	4.0	3.8	3.4	3.3	2.9	2.8
Total unemployment (thousands) 1/	...	...	...	967.8	...	...	...	925.0	...	...	...	950.0	950.0	908.0	890.2	877.5	902.4	746.4	715.1	757.7
(percent of economically active population)	...	...	...	13.0	...	...	...	13.1	...	...	...	13.5	13.7	13.0	12.4	12.2	12.7	9.8	9.2	10.2

Sources: National Statistics Agency and Ministry of Labor.

1/ Includes estimates for the unregistered unemployed. Only annual numbers are available for 1997-1999.

Table 10. Kazakhstan: Nominal and Real Wages, 1996-2001
(In tenge per month, unless otherwise indicated)

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1996												
Minimum wage	1,100	1,100	1,100	1,400	1,400	1,400	1,700	1,700	1,700	2,000	2,000	2,000
Average wage 1/	5,634	5,713	6,218	6,518	6,452	6,768	7,063	7,105	7,349	7,587	7,423	7,674
Minimum real wage 2/	174	170	167	207	203	198	236	234	232	265	258	256
Average real wage 2/	87	86	92	94	91	93	96	96	98	98	94	96
Average wage (in U.S. dollars)	87	87	95	99	97	101	105	105	107	108	104	105
1997												
Minimum wage	2,030	2,030	2,030	2,060	2,060	2,080	2,085	2,085	2,085	2,340	2,340	2,340
Average wage 1/	7,506	7,472	8,201	7,993	8,313	8,742	8,882	8,621	9,054	9,285	9,035	9,205
Minimum real wage 2/	255	251	249	250	249	250	249	249	250	277	273	269
Average real wage 2/	92	90	98	95	98	103	103	101	106	107	103	104
Average wage (in U.S. dollars)	102	99	109	106	110	116	118	114	120	123	120	121
1998												
Minimum wage	2,360	2,360	2,360	2,380	2,380	2,380	2,400	2,400	2,400	2,440	2,440	2,440
Average wage 1/	9,016	9,005	9,722	9,485	9,660	9,919	9,858	9,656	9,934	9,986	9,811	11,192
Minimum real wage 2/	267	264	262	263	262	264	269	269	272	277	279	279
Average real wage 2/	84	99	107	97	102	104	100	99	103	101	98	114
Average wage (in U.S. dollars)	119	118	127	124	126	129	128	124	125	123	119	134
1999 3/												
Minimum wage	2,440	2,440	2,440	2,650	2,650	2,650	2,650	2,650	2,650	2,680	2,680	2,680
Average wage 1/	10,520	10,520	9,513	10,520	9,660	10,453	9,858	9,656	11,308	9,986	9,811	12,607
Minimum real wage 2/	279	276	277	301	288	284	280	267	264	268	266	265
Average real wage 2/	117	116	105	117	103	110	102	95	110	98	95	122
Average wage (in U.S. dollars)	124	123	109	104	80	81	75	73	83	71	71	91
2000												
Minimum wage	2,680	2,680	2,680	2,680	2,680	2,680	2,680	2,680	2,680	2,680	2,680	2,680
Average wage 1/	11,796	12,039	13,223	13,240	13,300	13,987	14,040	14,068	14,199	14,543	14,378	16,886
Minimum real wage 2/	260	256	256	249	249	249	248	246				
Average real wage 2/	84	102	110	100	100	105	100	100	100	101	97	116
Average wage (in U.S. dollars)	85	86	94	94	94	98	98	99	100	102	100	117
2001												
Minimum wage	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	...	...	...	...
Average wage 1/	15,169	15,516	16,170	16,286	16,881	17,288	17,791	17,726	...	...	...	...
Minimum real wage 2/												
Average real wage 2/	88.8	101.6	103.5	100.0	103.2	102.3	103.0	99.6	...	...	...	...
Average wage (in U.S. dollars)	104.6	106.8	111.2	111.9	115.7	118.1	121.3	120.5	...	...	...	...

Sources: National Statistical Agency; Ministry of Labor; and Fund staff estimates.

1/ For December, excludes estimated bonus.
2/ December 1993 = 100.

Table 11. Kazakhstan: Wages by Sector, 1996-2001 1/ 2/
(In tenge)

	1996	1997	1998	1999	2000	2001 H1
Total Average	6,841	8,541	9,683	10,984	14,374	16,621
Agriculture and forestry	...	...	3,896	4,180	5,657	5,927
Fishing	...	...	4,798	5,404	6,812	7,086
Total industry	...	...	13,465	15,908	20,647	23,165
Of which:						
Mining	...	...	20,317	23,569	32,059	35,742
Manufacturing	...	...	11,357	13,434	17,717	19,842
Electricity, gas and water: production and distribution	...	...	14,197	15,065	1,729	1,951
Construction	...	...	12,375	14,462	21,017	2,504
Trade, car repair, and household goods	...	...	8,239	9,801	12,961	14,326
Hotels and restaurants	...	...	8,660	16,309	15,979	20,686
Transports and communications	...	...	11,929	13,687	18,788	23,125
Financial sector	...	...	19,324	26,195	3,614	40,205
Real estate	...	...	10,334	11,117	16,672	20,617
State sector	...	...	10,310	10,629	11,758	14,065
Education	...	...	7,247	7,594	8,512	9,752
Health and social services	...	...	6,454	6,331	7,267	811
Other municipal, social, and personal services	...	...	7,907	9,677	12,857	15,586

Sources: National Statistical Agency; and Fund staff estimates.

1/ Data are not comparable with monthly wages in Table 11.
2/ Starting in 1998 a new classification was introduced, comparable categories are not available for data prior to 1998.

Table 12. Kazakhstan: Investment in Constant Prices 1/, 1996-2000
(1991 = 100)

	1996 2/		1997		1998		1999		2000	
	Total	State	Total	State	Total	State	Total	State	Total	State
Total investment	9.4	4.3	10.6	3.2	15.0	4.2	20	2.8	29.8	4.6
Productive investment	10.6	4.5	11.6	2.6	14.0	15.1	26.6	0.3	43.9	1.5
Industry	17.5	4.9	21.5	2.0	31.4	1.3	48.9	0.5	79.1	0.8
Agriculture	0.9	0.3	0.5	0.2	0.2	0.1	0.6	0.1	1.9	0.1
Transport and communication	26.1	24.2	20.9	18.7	31.5	23.3	34.8	18.3	65.7	11.9
Construction	2.6	1.6	1.8	0.7	13.2	12.0	25.4	1	36.3	6.6
Trade and catering	4.1	1.0	4.9	0.6	21.9	1.6	82.1	2.9	73.6	2.6
Other	35.7	4.6	17.8	2.2	...	...	...	...		
Non-productive investment	6.7	3.9	8.5	4.8	25.8	20.3	20.8	6.7	22.4	9.9
Housing	5.2	2.2	5.9	3.4	6.4	3.7	10.3	1.6	16.9	8.3
Other	9.6	7.0	13.6	7.2	...	...	...	...	...	...
Memorandum item:										
Index of houses constructed	...	...	...	...	...	...	...	...	...	...

Sources: National Statistical Agency; and Fund staff estimates.

1/ Prices deflated by sectoral price indices calculated by the National Statistical Agency.
2/ Adjusted for underreporting.

Table 13. Kazakhstan: Financing of Investment, 1996-2000

	1996	1997	1998	1999	2000
All resources	118,981	139,790	264204	369084	595664
State enterprises	48,997	38,383	65534	60607	67293
Budget resources	8,335	8,895	26968	24068	39253
Own resources	40,662	29,488	13905	22231	25428
Other 1/	69,984	101,407	198670	308477	528371
State enterprises	41.2	27.5	24.8	16.4	11.3
Budget resources	7.0	6.4	10.2	6.5	6.6
Own resources	34.2	21.1	5.3	6	4.3
Other 1/	58.8	72.5	75.2	83.6	88.7

Sources: National Statistical Agency; and Fund staff estimates.

1/ Includes mainly private sector investment.

Table 14. Kazakhstan: Sectoral Composition of Capital Investment in Current Prices, 1998-2000 1/
(In percent of total investment)

	1998	1999	2000
Total	100.0	100.0	100.0
Agriculture, hunting, and forestry	0.4	0.7	1.4
Mining industry	41.7	42.0	49.8
Manufacturing industry	15.5	12.2	12.0
Production and distribution of electric power, gas and water	6.0	5.3	2.9
Construction	3.2	3.7	3.6
Trade, car repair, household goods	2.5	5.8	3.5
Hotels and restaurants	1.5	1.3	0.5
Transports and communication	11.3	7.5	9.5
Financial sector	0.6	1.8	1.6
Real estate	9.3	8.8	9.7
State sector	3.6	7.5	3.2
Education	0.4	0.3	0.7
Health and social sectors	2.0	0.9	0.2
Other municipal, social and personal services	2.0	2.2	1.3

Source: National Statistical Agency.

1/ From 1998 on new OECD data classification.

Table 15. Kazakhstan: Savings Investment Balance, 1997-2000

	1997	1998	1999
	(In percent of GDP)		
Consumption	82.9	82.6	80.9
Net Export	-2.5	-4.8	3.2
Investment:	15.6	17.3	15.9
Public Investment	2.7	2.5	1.9
Private Investment	13.6	14.8	14.0
Change in Stocks	-0.7	0.1	0.0
Total Savings:	15.6	17.3	15.9
Domestic Savings	15.6	11.7	17.0
Public Savings	-3.5	-5.8	-3.0
Private Savings	19.1	17.5	20.0
Foreign Savings	3.6	5.6	-1.1
Statistical Discrepancy	4.0	4.9	0.0

Source: Kazakhstan authorities; and Fund staff estimates.

Table 16. Kazakhstan: Privatization of State Enterprises, 1996-2000
(Units)

	1996	1997	1998	1999	2000
Small-scale privatization	3,393	5,590	2,535	2,187	1642
Mass privatization	497	1,122	516	131	79
Privatization in agriculture	138	18	9	0	0
Case-by-case privatization	28	47	13	0	3
Total	4,056	6,777	3,073	2,318	1724

Sources: Ministry of Finance; and National Statistical Agency.

Table 17. Kazakhstan: Privatized Enterprises by Sectors, 1996-2001

	1996	1997	1998	1999	2000	2001 Sept.
			(Units)			
Industry	437	608	152	26	26	33
Construction	45	162	50	16	5	6
Agriculture	138	18	9	4	0	0
Transport	101	331	73	147	50	33
Trade and catering	1,519	1,279	287	141	69	35
Personal and public services	280	689	169	74	54	34
Other sectors	1,536	3,464	2,267	1,855	1470	1172
Of which						
Incompleted units	31	226	66	55	50	55
Total	4,056	6,777	3,073	2,318	1724	1368
			(In percent of total)			
Industry	10.8	9.0	4.9	1.1	1.5	2.4
Construction	1.1	2.4	1.6	0.7	0.3	0.4
Agriculture	3.4	0.3	0.3	0.2	0.0	0.0
Transport	2.5	4.9	2.4	6.3	2.9	2.4
Trade and catering	37.5	18.9	9.3	6.1	4	2.6
Personal and public services	6.9	10.2	5.5	3.2	3.1	2.5
Other sectors	37.9	51.0	73.9	80.0	85.3	85.7
Of which						
Incompleted units	0.8	3.3	2.1	2.4	2.9	4.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Ministry of Finance; and National Statistical Agency.

Table 18. Kazakhstan: Summary Accounts of National Bank of Kazakhstan, 1998-2001

	1998	1999				2000				2001			
	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Oct.
	(In millions of tenge at current exchange rate; end period stocks)												
Net Foreign Assets	109,961	87,953	122,423	158,659	212,925	207,787	272,264	312,598	302,540	452,900	476,735	537,482	563,214
Net international reserves	109,961	87,953	122,423	158,659	212,925	207,787	272,264	312,598	302,540	356,903	336,594	362,861	385,535
Foreign exchange (net)	67,759	46,194	60,493	87,844	140,677	137,302	197,519	240,603	230,068	287,667	263,697	283,570	309,031
Assets	122,359	98,056	133,878	158,933	204,597	195,060	197,778	240,603	230,377	287,737	263,789	283,682	309,195
Short-term liabilities	54,601	51,862	73,385	71,090	63,919	57,758	259	0	310	70	92	113	164
Gold	42,202	41,759	61,930	70,815	72,248	70,485	74,745	71,995	72,473	69,237	72,897	79,291	76,504
National Fund 1/	...	...	...	...	...	...	...	...	...	95,997	140,141	174,621	177,679
Net Domestic Assets	-28,487	-22,626	-47,530	-71,759	-85,069	-105,620	-151,762	-174,758	-167,874	-321,515	-332,926	-378,441	-405,362
Domestic credit	23,848	38,702	55,055	49,379	24,985	4,016	-37,229	-64,790	-48,424	-219,039	-227,229	-255,585	-285,824
Credit to Government (net)	26,963	27,970	31,661	34,839	14,858	-5,335	-43,144	-59,696	-14,128	-94,092	-73,047	-76,613	-94,518
National Fund 1/	...	...	...	...	...	...	...	...	...	-95,997	-142,692	-174,621	-180,454
Credit to banks (net)	-9,963	3,413	12,198	2,659	-1,572	-2,626	-6,073	-17,052	-46,405	-29,591	-12,104	-4,951	-11,428
Credit	2,084	7,014	12,291	8,395	4,634	2,454	2,468	2,841	2,774	2,983	2,858	2,316	2,322
Special deposits (NBK notes and repos)	12,046	3,601	93	5,735	6,206	5,080	8,541	19,894	49,180	32,574	14,962	7,266	13,751
Credit to nonbank financial institutions	6,625	7,099	11,006	11,699	11,513	11,774	11,791	11,755	11,905	398	388	368	348
Credit to the economy	223	220	190	181	186	203	197	202	204	242	227	231	229
Other items (net)	-52,335	-61,328	-102,585	-121,138	-110,055	-109,636	-114,533	-109,967	-119,450	-102,476	-105,697	-122,856	-119,537
Reserve Money	81,475	65,328	74,894	86,899	127,856	102,167	120,502	137,840	134,666	131,385	143,809	159,040	157,852
Currency outside NBK	72,982	58,612	64,886	75,857	110,407	92,410	102,175	113,587	116,335	110,797	119,287	133,949	133,895
Commercial bank deposits	7,949	6,164	9,232	8,215	14,950	8,168	15,927	20,378	14,035	18,956	22,339	22,746	19,363
Reserves	23	26	125	251	168	141	83	68	47	49	38	10	11
Correspondent accounts	4,552	3,089	6,929	6,820	13,265	5,808	9,123	15,985	11,704	15,485	17,870	16,324	14,712
Other deposits	3,374	3,049	2,179	1,144	1,517	2,220	6,721	4,325	2,283	3,421	4,431	6,411	4,639
Demand, time and enterprise deposits	544	551	776	2,827	2,500	1,589	2,400	3,875	4,297	1,632	2,183	2,346	4,595
	(In millions of U.S. dollars)												
NBK net international reserves	1,312	1,005	935	1,133	1,541	1,465	1,909	2,190	2,094	2,454	2,298	2,457	2,603
NBK gross reserves	1,964	1,598	1,495	1,641	2,003	1,873	1,911	2,190	2,096	2,454	2,298	2,458	2,604
Foreign exchange (excluding CIS currencies)	1,460	1,121	1,022	1,135	1,480	1,376	1,387	1,685	1,594	1,978	1,801	1,921	2,088
Gold	504	477	473	506	523	497	524	504	502	476	498	537	517
Memorandum items:													
Change from end of previous quarter (millions of tenge)													
Net international reserves	12,353	-22,008	34,470	36,236	54,266	-5,138	64,477	40,334	-10,058	54,363	-20,309	26,267	22,675
Credit to government (net)	-3,277	1,007	3,691	3,179	-19,981	-20,193	-37,809	-16,552	45,568	-79,964	21,045	-3,565	-17,906
Credit to banks	-15,946	13,376	8,785	-9,539	-4,231	-1,054	-3,447	-10,979	-29,353	16,815	17,487	7,153	-6,478
Change from end of previous year (millions of tenge)													
Net international reserves	-43,352	-22,008	12,462	48,698	102,964	-5,138	59,339	99,673	89,615	54,363	34,054	60,320	82,995
Reserve money (millions of tenge)													
Percentage change from end of previous quarter	-0.9	-19.8	14.6	16.0	47.1	-20.1	17.9	14.4	-2.3	-2.4	9.5	10.6	-0.7
Percentage change from end of previous year	-23.8	-19.8	-8.1	6.7	56.9	-20.1	-5.8	7.8	5.3	-2.4	6.8	18.1	17.2

Sources: Kazakhstani authorities.

1/ The difference in the National Fund entries under Net Foreign Assets (NFA) and Net Domestic Assets reflects transitory amounts in Tenge, which are not included in the NFA entry.

Table 19. Kazakhstan: Monetary Survey, 1999-2001

	1998	1999				2000				2001			
	December	March	June	September	December	March	June	September	December	March	June	September	October
						(In millions of tenge at current exchange rate: end period stocks)							
Net Foreign Assets	104,181	83,991	151,625	197,024	257,716	242,087	314,634	343,944	328,064	480,989	479,132	559,825	560,348
Net International Reserves	104,181	83,991	151,625	197,024	257,716	242,087	314,634	343,944	328,064	384,992	339,069	385,204	382,669
Foreign exchange	61,979	42,231	89,695	126,208	185,468	171,603	239,889	271,949	255,591	315,755	266,172	305,913	306,165
Assets	138,288	113,651	171,554	206,442	262,765	241,152	252,005	285,873	279,660	335,894	326,944	364,637	370,723
Liabilities, short-term	76,309	71,420	81,859	80,233	77,296	69,550	12,116	13,925	24,068	20,138	60,772	58,724	64,559
Gold	42,202	41,759	61,930	70,815	72,248	70,485	74,745	71,995	72,473	69,237	72,897	79,291	76,504
National Fund										95,997	140,064	174,621	177,679
Net domestic assets	44,368	44,059	9,874	225	14,657	18,252	3,650	15,815	71,404	-62,256	-11,053	-26,002	-36,670
Domestic credit	146,448	142,592	191,828	209,314	204,693	211,339	218,211	236,102	342,128	200,680	250,107	282,208	288,018
Net credit to government	36,511	28,072	44,377	45,306	37,837	32,690	10,456	-5,368	40,560	-32,354	-11,821	-10,367	-21,236
Deposits of National Fund										-95,997	-140,064	-174,621	-177,679
Net credit to the economy	109,937	114,520	147,451	164,008	166,856	178,649	207,755	241,470	301,568	329,031	401,991	467,197	486,932
Other items (net)	-102,080	-98,533	-181,954	-209,089	-190,036	-193,087	-214,561	-220,287	-270,723	-262,936	-261,160	-308,210	-324,688
Broad money	148,549	128,049	161,499	197,249	272,373	260,340	318,284	359,759	399,468	418,733	468,080	533,824	523,677
Currency in circulation	68,728	55,424	61,415	70,804	103,492	86,981	96,126	106,105	106,425	101,993	110,538	124,234	123,057
Deposits	79,822	72,626	100,084	126,445	168,881	173,359	222,158	253,654	293,044	316,740	357,541	409,590	400,621
Nonbank institutions	49,420	42,720	63,188	85,227	115,871	113,907	154,726	178,379	204,771	216,187	224,916	241,268	229,490
Tenge	29,436	23,804	30,955	44,854	60,363	64,933	71,318	96,791	110,811	117,785	135,297	130,074	127,013
Convertible foreign exchange	19,410	18,674	31,631	39,553	53,858	47,903	82,345	80,131	91,934	96,747	87,991	110,054	101,421
Nonconvertible foreign exchange	574	242	602	820	1,651	1,071	1,263	1,457	2,025	1,655	1,628	1,141	1,056
Households	30,401	29,905	36,897	41,218	53,010	59,452	67,432	75,275	88,273	100,553	132,625	168,321	171,130
Tenge	20,920	18,354	19,055	20,567	28,268	24,228	26,202	28,562	32,815	35,899	42,516	44,385	44,622
Convertible foreign exchange	9,476	11,544	17,835	20,647	24,733	35,196	41,201	46,672	55,415	64,608	90,079	123,896	126,444
Nonconvertible foreign exchange	5	7	6	5	9	28	29	41	43	46	30	40	65
						(In millions of U.S. dollars)							
Banking system net foreign assets	1,243.2	959.9	1,157.4	1,407.3	1,864.8	1,707.2	2,206.4	2,409.4	2,270.3	3,306.9	3,460.2	3,790.3	3,887.2
Foreign exchange	739.6	482.6	684.7	901.5	1,342.0	1,210.2	1,682.3	1,905.1	1,768.8	2,170.9	2,006.5	2,071.2	2,170.9
Gold	503.6	477.3	472.7	505.8	522.8	497.1	524.2	504.3	501.5	476.0	497.6	536.8	516.6
National Fund										660.0	956.1	1,182.3	1,199.7
Memorandum items:						(In millions of tenge at current exchange rate)							
Change from end of previous quarter													
Net international reserves	-35,539.1	-20,190.3	67,634.4	45,398.7	60,692.4	-15,628.6	72,546.8	29,309.6	-15,879.9	56,928.1	-45,923.6	46,135.8	-2,535.3
Credit to government (net)	8,280.2	-8,439.3	16,305.5	928.6	-7,468.7	-5,147.0	-22,234.2	-15,824.4	45,927.9	-72,913.6	20,533.4	1,453.4	-10,868.2
Credit to economy	32,483.0	4,583.1	32,930.6	16,557.2	2,847.7	11,793.0	29,106.3	33,715.3	60,097.8	27,462.9	72,960.3	65,205.4	19,735.2
Change from end of previous year													
Net foreign assets of banking system	-35,539.1	-20,190.3	47,444.1	92,842.8	153,535.2	-15,628.6	56,918.2	86,227.8	70,347.9	152,925.1	151,068.2	231,761.3	232,283.6
NBK Net International Reserves	-21,345.0	-22,007.8	12,462.3	48,697.8	102,889.2	-5,063.1	59,413.8	99,672.8	89,615.3	54,362.9	34,053.6	60,312.1	82,969.7
Commercial banks	-14,194.1	1,817.5	34,981.9	44,145.1	50,646.0	-10,565.5	-2,495.6	-13,445.1	-19,267.4	2,565.2	-23,049.0	-3,171.8	-28,364.7
National Fund										95,997	140,064	174,621	177,679
Broad money													
Percentage change from end of previous quarter	0.0	-13.8	26.1	22.1	38.1	-4.4	22.3	13.0	11.0	4.8	11.8	14.0	-1.9
Percentage change from end of previous year	-13.1	-13.8	8.7	32.8	83.4	-4.4	16.9	32.1	46.7	4.8	17.2	33.6	31.1

Sources: Kazakhstan authorities; and Fund staff estimates.

Table 20. Kazakhstan: Interest Rates, 1998-2001
(In percent; end-of-period)

	Inflation Year-on-year	NBK refinance rate	Yield on 3-month Treasury bills	Commercial bank short-term lending rates 1/ 2/	Commercial bank time deposit rates 1/ 2/	
					Households	Legal entities
1998						
January	10.8	18.5	15.8	21.5	9.8	9.2
February	10.1	18.5	16.8	22.2	9.8	10.1
March	10.0	18.5	18.2	22.5	8.8	8.0
April	9.7	18.5	17.5	23.2	13.4	7.7
May	9.6	18.5	15.9	21.2	11.4	5.8
June	7.9	18.5	18.1	21.8	11.7	7.0
July	6.9	18.5	18.5	21.7	11.4	9.8
August	6.1	20.5	20.3	23.5	13.9	10.9
September	6.2	20.5	21.5	19.8	14.3	10.0
October	4.3	20.5	21.8	21.2	15.6	11.6
November	2.8	25.0	24.5	19.7	14.1	18.5
December	1.9	25.0	25.8	18.4	14.5	8.5
1999						
January	1.0	25.0	26.3	18.3	17.2	10.7
February	-0.3	25.0	26.3	19.8	17.4	13.8
March	-1.2	25.0	26.3	22.5	18.8	15.2
April	2.8	25.0	...	24.7	13.3	12.0
May	3.9	25.0	...	24.2	13.1	9.1
June	9.8	25.0	...	25.1	14.1	9.7
July	11.2	22.0	21.6	25.6	16.2	8.1
August	11.9	20.0	21.6	24.9	16.5	5.6
September	12.8	20.0	...	26.7	25.6	8.7
October	14.3	20.0	...	28.1	18.7	9.4
November	16.3	18.0	16.6	23.3	20.2	7.9
December	17.8	18.0	16.6	21.4	13.4	7.9
2000						
January	19.8	18.0	16.7	19.7	16.5	9.4
February	20.2	18.0	16.4	21.9	16.7	10.1
March	20.4	16.0	16.0	22.3	10.5	6.7
April	15.6	16.0	15.6	22.0	17.6	6.4
May	14.7	16.0	14.6	20.7	20.0	7.5
June	10.2	14.0	13.1	20.3	16.5	7.8
July	9.5	14.0	12.6	20.2	18.6	4.1
August	10.0	14.0	9.9	19.4	18.0	4.4
September	9.8	14.0	9.5	20.2	16.2	5.0
October	10.4	14.0	7.6	20.6	15.5	6.2
November	10.2	14.0	7.5	18.2	15.9	6.4
December	9.8	14.0	6.8	19.9	15.6	6.1
2001						
January	8.2	14.0	6.7	18.8	16.4	3.7
February	8.8	12.5	6.6	18.6	14.7	7.6
March	9.6	12.5	5.6	20.2	15.7	7.7
April	9.2	12.5	5.4	19.8	14.6	6.5
May	9.3	12.5	5.2	20.2	14.7	6.2
June	9.2	12.0	5.0	18.1	13.9	6.4
July	9.1	12.0	4.9	17.0	14.4	4.5
August	9.0	12.0	4.8	18.2	14.4	5.8
September	8.9	11.0	5.1	18.8	13.7	5.7

Source: National Bank of Kazakhstan.

1/ Credits and deposits in tenge.

2/ Rates on existing stocks of credits and deposits through December 1996, rates on new credits and deposits thereafter.

Table 21. Kazakhstan: Interbank Currency Exchange (KICEX) Auction Rates, 1997-2001

	Tenge per U.S. dollar		Tenge per deutsche mark		Tenge per 1,000 Russian ruble	
	Period average	End-of-period	Period average	End-of-period	Period average 1/	End-of-period 1/
1997						
January	75.44	75.79	47.19	46.69	...	...
February	75.67	75.62	45.54	45.06	...	...
March	75.19	74.35	44.69	44.48	...	...
April	75.07	75.49	44.22	44.07	...	...
May	75.50	75.48	44.69	44.75	...	...
June	75.49	75.57	43.89	43.61	...	...
July	75.59	75.74	42.60	41.12	...	...
August	75.79	75.80	41.31	42.50	...	...
September	75.77	75.73	42.34	42.86	...	...
October	75.69	75.80	43.17	44.34	...	...
November	75.75	75.80	44.29	43.43	...	...
December	75.82	75.89	42.99	44.20	...	...
1998						
January	76.32	76.40	42.49	43.31	...	...
February	76.40	76.38	42.43	42.40	...	...
March	76.51	76.61	42.08	41.86	...	...
April	76.60	76.67	42.62	42.90	...	...
May	76.82	76.86	43.45	43.20	...	...
June	77.01	77.20	43.18	42.80	...	...
July	77.37	77.60	43.00	43.00	...	...
August	78.43	78.88	43.79	43.90	...	...
September	79.68	80.63	...	...	...	...
October	81.52	81.90	50.22	51.00	...	...
November	82.61	83.00	49.36	49.36	...	...
December	83.68	84.00	50.20	50.20	...	...
1999						
January	84.57	85.12	...	...	...	...
February	85.71	86.45	...	...	...	...
March	87.42	88.10	...	...	...	...
April	113.80	114.80	62.16	62.10	...	...
May	119.14	129.03	67.44	69.31	...	...
June	131.88	132.31	70.08	70.30	...	...
July	132.45	131.91	69.96	72.40	...	...
August	131.81	132.26	71.61	71.08	...	...
September	135.78	140.11	73.16	76.40	...	...
October	141.21	140.22	77.43	75.65	...	...
November	139.16	137.90	73.64	71.41	...	...
December	138.19	138.25	71.77	71.50	...	...
2000						
January	139.06	139.38	72.15	70.78	...	...
February	139.90	140.44	70.77	71.20	...	...
March	141.42	141.95	70.24	70.30	...	...
April	142.21	142.01	69.47	66.78	...	...
May	142.29	142.30	66.63	65.90	...	...
June	142.65	142.86	68.70	68.70	...	...
July	142.79	142.71	69.32	69.50	...	...
August	142.60	142.52	65.92	65.75	...	...
September	142.69	142.58	63.28	62.44	...	...
October	142.57	142.58	63.81	62.50	...	...
November	144.01	144.15	...	...	...	...
December	144.98	145.40	65.40	65.30	...	...
2001						
January	145.38	145.11	...	...	...	...
February	145.33	145.28	...	...	5.07	5.07
March	145.48	145.42	68.25	68.25	5.08	5.06
April	145.54	145.77	...	...	5.04	5.05
May	146.13	146.47	65.86	65.86	5.05	5.03
June	146.59	146.80	...	...	5.04	5.04
July	146.76	147.07	...	...	5.02	5.02
August	147.17	147.30	...	...	5.03	5.03
September	147.70	147.80	...	...	5.01	5.02

Source: National Bank of Kazakhstan.

1/ Auctions for Russian rubles ceased to be held from July 1996.

Table 22. Kazakhstan: Number of Commercial Banks and Branches, 1996-2001
(End-of-period)

	Commercial banks						Branches
	State	Interstate	With Foreign Capital		Other	Total	Total
			Total	*of which* subsidiaries			
1996							
March	5	1	12	5	111	129	1,013
June	4	1	12	6	96	113	1,006
September	4	1	7	6	90	102	990
December	4	1	9	5	87	101	949
1997							
January	5	1	9	5	86	101	944
February	6	1	9	5	84	100	932
March	6	1	9	5	81	97	785
April	6	1	9	5	81	97	779
May	6	1	9	5	80	96	784
June	6	1	19	5	70	96	784
July	6	1	19	5	72	98	734
August	6	1	19	6	72	98	641
September	6	1	19	6	64	90	638
October	6	1	21	7	62	90	599
November	6	1	21	7	62	90	599
December	6	1	22	7	53	82	583
1998							
January	5	1	20	7	50	76	527
February	5	1	20	7	50	76	527
March	5	1	21	7	49	76	527
April	4	1	21	7	50	76	516
May	3	1	21	7	52	77	495
June	1	1	23	8	50	75	473
July	1	1	23	8	50	75	455
August	1	1	23	8	50	75	456
September	1	1	24	9	50	76	455
October	1	1	24	10	49	75	455
November	1	1	23	10	50	75	455
December	1	1	23	11	46	71	459
1999							
January	1	1	23	11	46	71	459
February	1	1	23	11	46	71	462
March	1	1	23	10	46	71	455
April	1	1	23	10	46	71	456
May	1	1	23	10	46	71	456
June	1	1	24	12	45	71	452
July	1	1	24	12	37	63	442
August	1	1	23	12	37	62	446
September	1	1	23	12	35	60	436
October	1	1	23	12	33	58	438
November	1	1	22	12	33	57	439
December	1	1	22	12	31	55	426
2000							
January	1	1	22	12	30	54	426
February	1	1	22	12	29	53	423
March	1	1	21	12	29	52	427
April	1	1	19	12	27	48	418
May	1	1	20	12	26	48	419
June	1	1	20	12	26	48	414
July	1	1	19	11	26	47	418
August	1	1	19	11	26	47	419
September	1	1	18	11	27	47	419
October	1	1	18	11	27	47	419
November	1	1	19	12	27	48	418
December	1	1	16	12	30	48	418
2001							
January	1	1	16	12	29	47	420
February	1	1	16	12	29	47	422
March	1	1	16	12	28	46	422
April	1	1	16	12	29	47	424
May	1	1	16	12	26	44	425
June	1	1	16	12	26	44	425
July	1	1	16	12	26	44	422
August	1	1	15	12	27	44	422
September	1	1	16	12	27	45	423

Source: National Bank of Kazakhstan.

Table 23. Kazakhstan: Government Budgetary Operations, 1998-2001 1/
(In percent of GDP)

	1998 2/	1999				2000				2001		
		Jan.-Mar.	Jan.-Jun.	Jan.-Sep.	Jan.-Dec.	Jan.-Mar.	Jan.-Jun.	Jan.-Sep.	Jan.-Dec.	Jan.-Mar.	Jan.-Jun.	Jan.-Sep
Total revenue and grants	**18.0**	**13.4**	**15.5**	**15.6**	**17.9**	**21.0**	**22.2**	**21.5**	**21.9**	**30.8**	**24.7**	**22.7**
Total revenue	18.0	13.4	15.5	15.6	17.8	20.9	22.1	21.3	21.8	30.8	24.7	22.7
Current revenue	17.9	13.4	15.5	15.5	17.7	20.9	22.0	21.3	21.7	30.6	24.5	22.5
Tax revenue	16.8	12.6	14.6	14.5	16.4	19.8	20.5	19.8	20.2	28.1	22.2	20.5
Tax on income, profits and capital gains	3.9	2.7	3.6	3.7	4.5	6.8	7.7	7.9	8.3	13.1	9.2	7.9
Social tax	-	3.0	3.4	3.2	3.5	4.0	4.0	3.7	3.8	4.5	4.2	4.0
Extrabudgetary funds	4.3	-	-	-	-	-	-	-	-	-	-	-
Domestic taxes on good and services	6.6	5.1	5.5	5.6	6.2	6.9	6.6	6.3	6.2	8.2	6.6	6.6
Taxes on international trade	0.6	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.7	0.9	0.8	0.8
Other taxes	1.3	1.3	1.6	1.5	1.6	1.4	1.5	1.3	1.2	1.4	1.3	1.2
Nontax revenue	1.1	0.8	0.9	1.1	1.3	1.0	1.6	1.4	1.5	2.5	2.3	2.0
Capital revenue	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Total grants	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0
Expenditure and net lending	**26.1**	**15.3**	**18.2**	**18.1**	**23.1**	**19.3**	**21.3**	**19.8**	**22.9**	**19.4**	**22.2**	**21.5**
Expenditure	24.6	15.1	17.6	17.4	22.2	19.0	20.6	19.3	22.2	19.3	21.6	20.8
General Government services	2.3	0.9	1.2	1.2	1.4	1.0	1.1	1.1	1.4	1.5	1.3	1.3
Defense	1.3	0.7	0.7	0.7	0.9	0.8	0.9	0.8	0.8	0.9	0.9	0.9
Public order and security	1.7	0.9	1.2	1.2	1.6	1.1	1.4	1.3	1.8	1.5	1.8	1.8
Education	4.1	3.2	3.7	3.4	3.9	3.1	3.3	3.0	3.3	3.4	3.5	3.3
Health	2.1	1.2	1.6	1.7	2.2	1.6	1.7	1.8	2.1	1.8	1.8	1.9
Social insurance and social security	9.6	6.7	6.7	6.3	7.9	7.8	7.3	6.5	6.6	6.5	6.0	5.8
Housing and public utilities	0.2	0.1	0.1	0.2	0.3	0.3	0.4	0.6	0.9	0.6	0.8	0.9
Recreation and culture	0.7	0.3	0.4	0.5	0.6	0.5	0.6	0.6	0.7	0.5	0.5	0.5
Mining and minerals, processing, construction	-	-	-	-	-	-	-	-	-	-	0.1	0.1
Agriculture, forestry, and nature conservation	0.4	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.7	0.7
Industry and construction	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.1
Transportation and communications	0.6	0.1	0.2	0.4	0.6	0.8	0.9	1.1	1.5	0.7	1.0	1.2
Other expenditure	0.8	0.2	0.3	0.6	1.3	0.8	1.0	0.9	1.2	0.6	1.7	1.5
Debt servicing	0.8	0.6	1.2	0.8	1.0	0.8	1.4	1.1	1.4	0.8	1.3	0.9
Official transfers	-	-	-	-	-	-	-	-	-	-	-	-
Net lending	1.5	0.3	0.7	0.7	0.9	0.3	0.7	0.5	0.7	0.1	0.6	0.7
Lending	1.6	0.4	0.8	0.8	1.0	0.5	1.0	0.8	1.0	0.4	0.9	1.0
Repayments	-0.1	-0.2	-0.1	-0.1	-0.1	-0.3	-0.2	-0.2	-0.3	-0.3	-0.4	-0.3
Regular budget balance	**-8.0**	**-2.0**	**-2.7**	**-2.6**	**-5.2**	**1.7**	**0.9**	**1.6**	**-1.0**	**11.4**	**2.5**	**1.1**
Quasi-fiscal operations (surplus+)	-	-	-	-	-	-	-	-	-	-	-	-
Overall budget balance	**-8.0**	**-2.0**	**-2.7**	**-2.6**	**-5.2**	**1.7**	**0.9**	**1.6**	**-1.0**	**11.4**	**2.5**	**1.1**
Financing	**-8.0**	**2.0**	**2.7**	**2.6**	**5.2**	**-1.7**	**-0.9**	**-1.6**	**1.0**	**-11.4**	**-2.5**	**-1.1**
Domestic, net	1.0	-2.0	-0.1	0.3	1.5	0.9	0.4	-0.2	-0.7	0.1	0.1	0.1
Foreign, net	3.0	-1.0	-0.2	0.1	2.4	0.1	1.7	1.1	1.2	-0.1	0.0	0.1
Revenues from privatization of state property	3.8	5.3	2.9	2.0	1.7	1.2	0.8	0.6	0.8	1.5	0.8	0.5
Cash free flow	0.2	-0.3	0.1	0.2	-0.5	-3.9	-3.8	-3.1	-0.4	-12.9	-3.4	-1.9
Memorandum items:												
GDP	1,733.3	404.7	858.5	1,482.6	2,016.5	524.8	1,143.7	1,927.3	2,596.0	643.8	1,453.0	2,301.1

Sources: Ministry of Finance; and Fund staff calculations.

1/ Includes financial operations of the consolidated state budget (republican and local budgets) and net position of extrabudgetary funds. The data include significant non-cash operations and offsets, especially for 1999 (about 0.5 percent of GDP), and have not been reconciled with total financing.

2/ Taking into account extrabudgetary funds.

Table 24. Kazakhstan: Government Budgetary Operations, 1998-2001 1/
(In billions of tenge)

	1998 2/	1999				2000				2001		
		Jan.-Mar.	Jan.-Jun.	Jan.-Sep.	Jan.-Dec.	Jan.-Mar.	Jan.-Jun.	Jan.-Sep.	Jan.-Dec.	Jan.-Mar.	Jan.-Jun.	Jan.-Sep.
Total revenue and grants	**312.8**	**54.1**	**133.4**	**230.8**	**360.8**	**110.0**	**254.1**	**414.2**	**568.2**	**198.3**	**358.7**	**523.2**
Total revenue	312.6	54.1	133.3	230.6	358.2	109.9	252.7	411.0	565.0	198.3	358.6	523.0
Current revenue	309.8	54.1	133.1	230.2	357.2	109.5	251.9	409.7	562.7	196.8	355.5	519.3
Tax revenue	290.8	51.0	125.1	214.6	330.3	104.1	234.0	382.2	524.1	180.7	322.1	472.6
Tax on income, profits and capital gains	68.4	11.0	31.0	54.8	90.1	35.7	88.1	152.5	214.5	84.6	133.1	181.9
Social tax	-	12.1	29.0	47.0	70.5	21.2	45.7	71.2	99.1	29.1	61.2	91.6
Extrabudgetary funds	75.2	-	-	-	-	-	-	-	-	-	-	-
Domestic taxes on good and services	114.7	20.6	47.3	83.4	124.9	36.0	75.5	121.3	161.6	52.5	96.3	153.2
Taxes on international trade	10.0	1.9	4.4	7.6	11.7	3.9	8.1	13.1	18.5	5.5	12.2	18.8
Other taxes	22.5	5.4	13.5	21.8	33.1	7.3	16.7	24.1	30.4	9.0	19.4	27.1
Nontax revenue	18.9	3.1	8.1	15.6	26.9	5.4	17.9	27.5	38.6	16.1	33.5	46.7
Capital revenue	2.8	0.0	0.1	0.4	1.0	0.4	0.8	1.3	2.3	1.5	3.1	3.7
Total grants	0.2	0.0	0.1	0.2	2.6	0.1	1.4	3.2	3.2	0.0	0.2	0.2
Expenditure and net lending	**451.6**	**62.1**	**156.6**	**268.7**	**465.4**	**101.1**	**243.8**	**382.5**	**593.5**	**124.7**	**322.3**	**497.2**
Expenditure	426.1	61.0	150.8	258.2	447.4	99.7	235.5	372.2	576.2	124.2	314.3	480.9
General Government services	39.3	3.7	10.2	18.2	28.9	5.0	12.9	20.6	35.1	9.9	19.4	30.7
Defense	21.8	2.6	5.6	10.2	17.2	4.0	9.8	15.5	20.4	5.7	13.4	20.1
Public order and security	28.7	3.8	10.3	17.8	32.5	5.6	15.5	25.2	47.7	9.5	26.1	41.1
Education	70.6	13.0	32.0	50.4	78.5	16.4	38.1	57.2	84.7	21.9	50.5	75.6
Health	36.4	5.0	13.5	25.7	44.8	8.5	19.6	33.9	54.3	11.4	26.6	43.4
Social insurance and social security	165.9	27.3	57.2	93.5	159.1	41.0	83.2	125.1	171.1	42.0	87.6	133.6
Housing and public utilities	4.3	0.5	1.2	2.6	6.0	1.5	4.6	11.2	22.1	3.9	12.2	19.7
Recreation and culture	12.5	1.3	3.3	7.0	12.2	2.8	6.6	11.0	17.5	3.1	7.5	12.3
Mining and minerals, processing, construction	-	-	-	-	-	-	-	-	-	-	1.4	3.3
Agriculture, forestry, and nature conservation	6.7	0.3	1.7	4.1	6.9	1.8	5.1	7.7	11.4	2.6	9.9	15.1
Industry and construction	2.4	0.1	0.4	0.9	2.9	0.6	1.9	4.6	7.2	1.1	2.0	2.9
Transportation and communications	10.2	0.3	2.1	6.6	12.9	4.1	10.3	20.7	37.8	4.4	14.9	27.2
Other expenditure	13.5	0.8	2.9	9.1	26.2	4.2	11.4	18.2	31.3	3.9	24.1	34.5
Debt servicing	13.9	2.3	10.2	12.2	19.4	4.5	16.4	21.3	35.5	4.8	18.8	21.6
Official transfers	0.0	-	-	-	-	-	-	-	-	-	-	-
Net lending	25.5	1.0	5.8	10.4	18.0	1.4	8.3	10.3	17.3	0.5	8.0	16.2
Lending	27.2	1.7	7.0	12.0	21.0	2.7	10.9	14.9	25.8	2.6	13.3	23.0
Repayments	-1.7	-0.6	-1.2	-1.6	-3.0	-1.3	-2.6	-4.6	-8.5	-2.1	-5.3	-6.8
Regular budget balance	**-138.8**	**-8.0**	**-23.2**	**-37.9**	**-104.6**	**8.9**	**10.3**	**31.8**	**-25.3**	**73.6**	**36.4**	**26.1**
Quasi-fiscal operations (surplus+)	-	-	-	-	-	-	-	-	-	-	-	-
Overall budget balance	**-138.8**	**-8.0**	**-23.2**	**-37.9**	**-104.6**	**8.9**	**10.3**	**31.8**	**-25.3**	**73.6**	**36.4**	**26.1**
Financing	**138.8**	**8.0**	**23.2**	**37.9**	**104.6**	**-8.9**	**-10.3**	**-31.8**	**25.3**	**-73.6**	**-36.4**	**-26.0**
Domestic, net	17.6	-8.3	-0.7	4.5	30.2	4.8	4.4	-4.4	-18.6	0.7	1.6	2.8
Foreign, net	51.6	-4.1	-1.9	1.1	49.2	0.6	19.8	20.7	31.8	-0.8	0.0	1.7
Revenues from privatization of state property	66.7	21.6	25.0	29.2	34.8	6.3	9.2	10.9	22.0	9.5	11.1	12.3
Cash free flow	2.9	-1.2	0.8	3.0	-9.5	-20.6	-43.7	-59.0	-9.9	-83.0	-49.1	-42.8
Memorandum items:												
GDP	1,733.3	404.7	858.5	1,482.6	2,016.5	524.8	1,143.7	1,927.3	2,596.0	643.8	1,453.0	2307.1

Sources: Ministry of Finance; and Fund staff calculations.

1/ Includes financial operations of the consolidated state budget (republican and local budgets) and net position of extrabudgetary funds. The data include significant non-cash operations and offsets, especially for 1999 (about 0.5 percent of GDP), and have not been reconciled with total financing.
2/ Taking into account extrabudgetary funds.

Table 25. Kazakhstan: Government Budgetary Operations, 1998-2001 1/

(In percent of total)

	1998 2	1999				2000				2001		
		Jan.-Mar.	Jan.-Jun.	Jan.-Sep.	Jan.-Dec.	Jan.-Mar.	Jan.-Jun.	Jan.-Sep.	Jan.-Dec.	Jan.-Mar.	Jan.-Jun.	Jan.-Sep.
Total revenue and grants	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total revenue	99.9	100.0	99.9	99.9	99.3	99.9	99.4	99.2	99.4	100.0	100.0	100.0
Current revenue	99.0	100.0	99.8	99.7	99.0	99.5	99.1	98.9	99.0	99.2	99.1	99.3
Tax revenue	93.0	94.2	93.8	93.0	91.5	94.6	92.1	92.3	92.2	91.1	89.8	90.3
Tax on income, profits and capital gains	21.9	20.4	23.2	23.7	25.0	32.4	34.7	36.8	37.8	42.6	37.1	34.8
Social tax	-	22.4	21.7	20.4	19.5	19.3	18.0	17.2	17.4	14.7	17.0	17.5
Extrabudgetary funds	24.0	-	-	-	-	-	-	-	-	-	-	-
Domestic taxes on good and services	36.7	38.0	35.4	36.1	34.6	32.7	29.7	29.3	28.4	26.5	26.8	29.3
Taxes on international trade	3.2	3.5	3.3	3.3	3.3	3.5	3.2	3.2	3.3	2.8	3.4	3.6
Other taxes	7.2	9.9	10.1	9.4	9.2	6.6	6.6	5.8	5.3	4.6	5.4	5.2
Nontax revenue	6.1	5.8	6.1	6.8	7.5	4.9	7.0	6.6	6.8	8.1	9.3	8.9
Capital revenue	0.9	0.0	0.1	0.2	0.3	0.4	0.3	0.3	0.4	0.8	0.9	0.7
Total grants	0.1	0.0	0.1	0.1	0.7	0.1	0.6	0.8	0.6	0.0	0.0	0.0
Expenditure and net lending	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Expenditure	94.4	98.3	96.3	96.1	96.1	98.6	96.6	97.3	97.1	99.6	97.5	96.7
General Government services	8.7	6.0	6.5	6.8	6.2	4.9	5.3	5.4	5.9	7.9	6.0	6.2
Defense	4.8	4.3	3.6	3.8	3.7	3.9	4.0	4.1	3.4	4.5	4.1	4.0
Public order and security	6.3	6.2	6.6	6.6	7.0	5.5	6.4	6.6	8.0	7.6	8.1	8.3
Education	15.6	20.9	20.4	18.8	16.9	16.2	15.6	15.0	14.3	17.6	15.7	15.2
Health	8.1	8.1	8.6	9.6	9.6	8.4	8.0	8.9	9.2	9.1	8.3	8.7
Social insurance and social security	36.7	43.9	36.5	34.8	34.2	40.5	34.1	32.7	28.8	33.7	27.2	26.9
Housing and public utilities	1.0	0.7	0.8	1.0	1.3	1.5	1.9	2.9	3.7	3.1	3.8	4.0
Recreation and culture	2.8	2.0	2.1	2.6	2.6	2.7	2.7	2.9	2.9	2.5	2.3	2.5
Mining and minerals, processing, construction	-	-	-	-	-	-	-	-	-	-	0.4	0.7
Agriculture, forestry, and nature conservation	1.5	0.5	1.1	1.5	1.5	1.8	2.1	2.0	1.9	2.1	3.1	3.0
Industry and construction	0.5	0.2	0.3	0.3	0.6	0.6	0.8	1.2	1.2	0.9	0.6	0.6
Transportation and communications	2.3	0.5	1.4	2.4	2.8	4.0	4.2	5.4	6.4	3.5	4.6	5.5
Other expenditure	3.0	1.3	1.8	3.4	5.6	4.1	4.7	4.8	5.3	3.2	7.5	6.9
Debt servicing	3.1	3.7	6.5	4.5	4.2	4.4	6.7	5.6	6.0	3.9	5.8	4.4
Official transfers	0.0	-	-	-	-	-	-	-	-	-	-	-
Net lending	5.6	1.7	3.7	3.9	3.9	1.4	3.4	2.7	2.9	0.4	2.5	3.3
Lending	6.0	2.7	4.5	4.5	4.5	2.7	4.5	3.9	4.4	2.1	4.1	4.6
Repayments	-0.4	-1.0	-0.7	-0.6	-0.6	-1.3	-1.1	-1.2	-1.4	-1.7	-1.6	-1.4

Sources: Ministry of Finance; and Fund staff calculations.

1/ Includes financial operations of the consolidated state budget (republican and local budgets) and net position of extrabudgetary funds. The data include significant non-cash operations and offsets, especially for 1999 (about 0.5 percent of GDP), and have not been reconciled with total financing.

2/ Taking into account extrabudgetary funds.

Table 26. Kazakhstan: Balance of Payments, 1996-2001
(In millions of U.S. dollars)

	1996	1997	1998	1999	2000	2001 H1
Current account	-750	-798	-1,225	-36	923	-453
Trade balance	-335	-277	-801	478	2,946	698
Exports (f.o.b.)	6,292	6,899	5,871	6,123	9,795	4,789
Non-oil exports	5,034	5,228	4,220	3,948	5113	2424
Of which: Shuttle exports	381	387	422	387	465	220
Oil-exports	1,257	1,671	1,650	2,174	4,682	2,365
Imports, (f.o.b.)	-6,627	-7,176	-6,672	-5,645	-6,849	-4,091
Non-oil imports	-6,597	-7,009	-6,525	-5,623	-6769	-3,999
Of which: Shuttle imports	-2,171	-3,185	-2,574	-2,106	-2198	-1,075
Oil-imports	-30	-166	-147	-21	-80	-92
Services and income balance	-474	-596	-546	-670	-2223	-1242
Services, net	-254	-282	-250	-171	-1,031	-670
Credit	674	842	904	933	1,134	614
Transportation	432	495	388	421	543	315
Travel	199	289	407	363	356	182
Other services	43	58	109	150	235	117
Debit	-928	-1,124	-1,154	-1,104	-2,164	-1,285
Transportation	-357	-392	-418	-400	-493	-303
Travel	-319	-445	-498	-394	-408	-229
Other services	-252	-287	-238	-310	-1263	-753
Income, net	-220	-314	-296	-500	-1,192	-572
Credit	57	75	95	109	139	82
Compensation of employees	1	1	6	4	4	2
Investment income	56	74	89	105	135	81
Of which: Interest on international reserves	46	52	58	77	32	65
Debit	-277	-389	-392	-608	-1,331	-654
Compensation of employees	-19	-24	-36	-61	-68	-28
Investment income	-258	-365	-356	-548	-1263	-627
Current transfers	58	75	122	157	200	92
Capital and Financial account	1,675	2,467	1,856	925	1,059	475
Medium and long-term loans and credits, net	370	823	696	201	269	117
Government and government guaranteed, net	263	467	512	154	103	-17
Central government, net	338	317	673	290	87	9
Drawings 1/	338	322	681	353	165	60
Repayment 1/	0	-5	-8	-63	-77	-51
Government guaranteed, net	-76	150	-161	-136	16	-26
Drawings	143	317	54	58	166	28
Repayment	-219	-167	-215	-194	-150	-54
Commercial banks, net	4	37	45	13	28	40
Other private sector, net	103	319	139	34	138	94
Net foreign direct investment, net	1,137	1,320	1,143	1,583	1,245	1,582
Portfolio investment, net	224	404	62	-46	-62	-1,030
Short-term and other capital, net	260	360	324	-580	-102	-99
Capital transfers, net	-316	-440	-369	-234	-291	-95
Errors and omissions	-869	-1,179	-1,054	-667	-1,402	181
Overall balance	55	490	-423	222	580	202
Financing	-55	-490	423	-222	-580	-202
Net international reserves of the NBK (increase -)	-55	-490	423	-222	-580	-202
Of which: Fund credit (net)	135	-6	123	-176	-430	0
Purchases	135	0	218	0	0	0
Repurchases	0	-6	-95	-176	-430	0
Memorandum items:						
GDP (in U.S. dollar)	21,036	22,165	22,137	16,956	18,268	20,468
Current account (in percent of GDP)	-3.6	-3.6	-5.5	-0.2	5.1	-2.2
NBK gross international reserves (in million of U.S. dollars)	1,961	2,252	1,964	2,003	2096	2298
In months of imports of goods and non-factor services	3.1	3.3	3.1	3.6	2.9	2.3
In procent of stock of short-term debt 2/	141.9	115.6	84.6	111.0	139.2	137.2
Stock of external debt (in million of U.S. dollar) 1/	7,096	9,027	9,878	12,034	12,572	13,360
In percent of GDP	34.1	40.8	44.8	71.0	68.8	65.3
Excluding intra-company loans	24.6	29.5	29.5	34.6	31.7	28.9
Public external debt service (in millions of U.S. dollars) 1/	...	237	525	836	906	224
In percent of exports of good and non-factor services	...	3.1	7.7	11.8	8.3	4.1

Sources: Kazakhstan authorities; and Fund staff estimates.

1/ Includes impact of the settlement of mutual claims between Russia and Kazakhstan of $1,691.7 million in Octoer 1998.

2/ Short-term debt is on a original maturity basis before 2000. From 2000 onwards, short-term debt is calculated by Fund staff on a remaining maturity basis.

Table 27. Kazakhstan: Composition of Exports, 1997-2001

	units for volume	1997			1998			1999			2000			Jan.-Aug. 2001		
		Volume	Price 1/	Value (In millions of U.S. dollars)	Volume	Price 1/	Value (In millions of U.S. dollars)	Volume	Price 1/	Value (In millions of U.S. dollars)	Volume	Price 1/	Value (In millions of U.S. dollars)	Volume	Price 1/	Value (In millions of U.S. dollars)
Customs exports																
Oil and gas condensate	thousand tons	16,381.8	102.0	1,670.9	20,429.1	80.8	1,650.5	23,673.8	86.2	2,040.2	29348.8	153.4	4502.4	21225.1	138.2	2933.0
Coal	thousand tons	24,857.0	14.7	365.4	23,578.4	13.7	323.2	16,175.2	9.4	152.0	25679.3	6.6	168.5	20458.1	8.3	168.8
Oil refining products	thousand tons	1,423.6	90.2	128.4	1,037.7	50.5	52.5	900.3	62.9	56.6	1008.1	100.9	101.7	1065.8	89.9	95.8
Alumina	thousand tons	1,200.3	123.9	148.7	1,002.4	144.4	144.7	1,359.6	117.6	136.4	1356.4	133.3	180.7	814.8	155.0	126.3
Refined copper	thousand tons	287.9	2,100.0	604.7	323.0	1,572.4	507.9	355.3	1,479.3	525.6	393.5	1,700.2	669.1	255.0	1,603.1	408.8
Unrefined zinc	thousand tons	191.1	1,146.7	219.2	218.0	833.1	181.6	207.0	787.2	163.0	232.2	853.7	198.2	156.2	712.2	111.2
Unrefined lead	thousand tons	77.8	635.6	49.5	85.2	479.4	40.8	110.0	439.9	48.4	155.5	414.2	64.4	84.7	412.6	34.9
Chromium ores and concentrates	thousand tons	579.6	27.0	15.7	388.4	34.8	13.5	528.3	36.3	19.2	557.4	38.5	21.5	383.3	45.4	17.4
Iron ores and concentrates	thousand tons	9,271.0	20.9	193.8	7,354.8	24.2	177.7	3,496.1	10.9	38.2	5341.9	9.6	51.3	5047.4	11.3	57.1
Ferroalloys	thousand tons	609.7	336.2	205.0	575.5	389.3	224.0	722.8	294.5	212.9	845.3	347.1	293.4	540.0	388.0	209.6
Rolled ferrous metal	thousand tons	2,795.6	252.0	704.5	2,374.5	217.2	515.7	2,918.0	205.6	599.9	3261.8	234.2	764.1	2065.9	191.1	394.8
Yellow phosphorus	thousand tons	17.6	1,132.9	20.0	4.7	1,411.1	6.6	9.7	1,056.4	10.2	12.7	911.3	11.6	11.2	819.1	9.2
Grain	thousand tons	3,577.5	143.1	511.6	2,905.2	101.7	295.4	3,816.2	82.2	313.6	5681.8	88.1	500.5	1767.1	109.8	194.1
Cotton fiber	thousand tons	63.9	1,213.6	77.5	48.2	1,077.3	51.9	62.1	796.8	49.5	85.3	936.4	79.9	52.9	1,037.9	54.9
Wool	thousand tons	41.7	1,367.9	57.1	12.0	1,440.0	17.3	15.7	426.2	6.7	9.2	450.3	4.2	4.4	599.6	2.6
Natural gas	million cubic meters	2,431.8	8.5	20.7	2,305.7	9.8	22.6	4,244.7	5.9	24.9	5220.8	7.2	37.57	4210.44	12.8	53.79
Large hides	thousand tons	42.0	1,108.5	46.6	31.2	724.0	22.6	44.8	462.1	20.7	36.5	481.7	17.6	18.4	462.2	8.5
Small hides	thousand pieces	4,456.0	3.4	15.3	3,982.1	1.9	7.3	4,016.6	1.8	7.3	4130.9	1.1	4.7	2503.3	1.1	2.8
Others		...	...	1,442.6	...	...	1,179.9	...	...	1167.0			1468.2			946.6
Total custom exports		...	...	6,497.0			5,435.8			5,592.2			9,139.5			5830.2
Operations not included in customs statistics		...	...	15.2			12.6			8.8			0.0			0.0
Shuttle exports		...	...	387.0			422.3			387.5			464.5		n/a	
Total exports		...	...	6,899.2			5,870.6			5,988.5			9,604.0			

Source: Kazakhstan authorities, and staff estimates.

1/ U.S. dollars per unit (ton or piece) except for natural gas which is in U.S. dollars per thousand cubic meters.

Table 28. Kazakhstan: Composition of Imports, 1997-2001

	Units for volume	1997			1998			1999			2000			Jan.-Aug. 2001		
		Volume	Price 1/	Value (In millions of U.S. dollars)	Volume	Price 1/	Value (In millions of U.S. dollars)	Volume	Price 1/	Value (In millions of U.S. dollars)	Volume	Price 1/	Value (In millions of U.S. dollars)	Volume	Price 1/	Value (In millions of U.S. dollars)
Customs imports																
Oil and gas condensate	thousand ton	1,726.0	96.3	166.2	2,074.2	70.8	146.9	714.6	29.9	21.3	1009.6	79.2	79.9	1350.1	100.5	135.6
Oil refining products	thousand ton	617.9	263.9	163.1	822.5	236.2	194.3	612.8	143.4	87.9	1180.4	214.2	252.9	792.2	248.8	197.1
Electricity	million kilowatt-hours	4,703.9	25.5	119.9	3,373.8	24.2	81.6	3077.5	20.5	63.2	3102.1	14.0	43.3	1841.2	14.3	26.3
Natural gas	million cubic meters	3,003.7	30.7	92.2	3,051.8	36.9	112.6	2783.4	36.1	100.6	4218.2	28.4	119.9	2768.9	32.9	91.1
Coal	thousand ton	975.3	27.4	26.7	1,211.1	24.8	30.0	1121.4	17.3	19.4	688.8	18.1	12.5	123.4	24.5	3.0
Rolled ferrous metals	thousand ton	42.3	583.9	24.7	32.4	506.6	16.4	38.5	333.7	12.9	45.6	458.3	20.9	42.6	424.5	18.1
Electrical equipment and mechanical tools		...	...	1,154.3	...	...	1,199.9	...	...	969.3	...	...	1391.2	...	...	...
Foodstuffs		...	...	370.6	...	...	241.6	...	...	282.2	...	...	235.9	...	...	...
Nonfood consumer goods		...	...	400.7	...	...	356.0	...	...	410.8	...	...	427.6	...	...	...
Vehicles		...	...	367.7	...	...	434.0	...	...	629.9	...	...	564.8	...	...	...
Others		...	...	1,364.3	...	...	1,536.2	...	...	1085.2	...	...	1903.1	...	...	...
Total customs imports		...	...	4,250.5	...	...	4,349.6	...	...	3682.7	...	...	5052.1	...	...	4233.4
Operations not included in customs statistics and coverage adjustments		..	...	50.3	...	...	43.5	...	...	175.1	...	...	68.4			
Shuttle imports		...	...	3,185.5	...	...	2,574.1	...	...	2107.0	...	...	2197.6	...	...	...
Other corrections		...	...	-310.7	...	...	-241.1	...	...	-319.8	...	...	-488.9	...	...	...
Grants		...	...	98.3	...	...	97.7	...	...	...	...	...	...	...	...	...
Non-equivalent barter		...	...	29.9	...	...	114.9	...	...	84.1	...	...	25.4	...	...	...
Freight		...	...	-438.9	...	...	-453.7	...	...	-403.9	...	...	-514.3	...	...	...
Total imports		...	...	7,175.6	...	...	6,726.1	...	...	5645.0	...	...	6849.8	...	...	...

Sources: Kazakhstan authorities, and staff estimates.

1/ U.S. dollars per ton except for natural gas which is in U.S. dollars per thousand cubic meters and electricity which is in U.S. dollars per thousand kilowatt-hours.

Table 29. Kazakhstan: Geographical Distribution of Exports of Energy Sources to the Baltics, Russia and Other States of the Former Soviet Union, 1996-2001

	1996	1997	1998	1999	2000	2001 HI
			(In thousands of tons)			
Oil and gas condensate						
Total	10,567.5	9,226.7	10,267.5	6,873.3	8,069.0	4,778.8
Azerbaijan	0.0	38.6	36.0	0.0	2.9	0.0
Belarus	0.0	20.1	115.2	0.0	0.0	0.0
Kyrgyz Republic	0.4	1.5	0.0	0.0	0.0	0.0
Lithuania	1,763.8	344.0	0.0	671.4	17.6	0.0
Russia	6,737.3	5,497.2	6925.0	4,632.5	6,178.0	3,134.4
Turkmenistan	0.0	0.0	0.0	0.0	0.0	0.0
Ukraine	2,041.9	3,111.0	3160.7	1,536.1	1,863.4	1,644.4
Estonia	24.1	214.3	30.4	33.3	7.1	0.0
			(In million of cubic meters)			
Natural gas						
Total	2,341.8	2,431.8	2,305.7	3,776.2	4,934.3	2,607.5
Georgia	177.0	0.0	30.0	127.4	271.7	10.0
Russia	2,164.8	2,431.8	2,275.7	3,648.8	4662.6	2597.5
			(In thousands of tons)			
Gasoline						
Total	184.4	81.5	25.6	39.8	58.2	56.7
Kyrgyz Republic	91.3	22.3	19.6	36.3	34.0	36.0
Latvia	0.0	0.0	0.0	0.0	0.0	0.0
Moldova	0.0	0.0	0.0	0.0	0.0	0.0
Russia	11.8	6.3	0.7	0.0	19.8	2.0
Tajikistan	53.3	47.1	5.3	2.0	4.4	18.1
Uzbekistan	28.0	3.7	0.0	1.5	0.0	0.6
Ukraine	0.0	2.1	0.0	0.0	0.0	0.0
Diesel fuel						
Total	294.3	206.3	61.0	77.1	28.5	186.8
Belarus	0.0	0.1	0.0	0.0	0.0	0.0
Kyrgyz Republic	65.6	31.3	38.8	41.1	19.7	28.1
Latvia	24.6	6.5	1.1	0.0	0.0	0.0
Lithuania	2.5	3.5	0.1	25.0	0.0	0.0
Moldova	0.0	0.2	0.0	0.0	0.0	0.0
Russia	157.0	142.1	21.0	8.9	0.3	158.7
Tajikistan	11.8	2.1	0.0	1.1	0.0	0.0
Uzbekistan	3.7	0.0	0.0	0.0	0.0	0.0
Ukraine	29.1	17.5	0.0	0.0	8.6	0.0
Estonia	0.0	3.0	0.0	1.0	0.0	0.0
Heavy furnace fuel						
Total	194.1	144.5	138.4	28.5	30.8	129.3
Belarus	0.0	0.0	0.0	0.0	0.0	0.0
Kyrgyz Republic	89.6	32.2	42.2	27.9	4.8	0.6
Lithuania	0.0	2.1	0.0	0.0	0.0	0.0
Moldova	0.5	6.0	0.0	0.0	0.0	0.0
Russia	81.0	101.2	84.9	0.6	25.0	126.5
Tajikistan	0.0	0.0	0.0	0.0	0.0	0.0
Uzbekistan	0.6	0.0	0.0	0.0	0.0	0.0
Ukraine	22.4	3.0	11.3	0.0	1.0	2.2
Coking coal						
Total	1,507.4	1,371.3	262.0	2.5	91.2	643.4
Belarus	0.0	0.0	0.0	0.0	0.0	0.0
Georgia	0.0	0.0	0.0	0.0	0.0	0.0
Kyrgyz Republic	28.6	5.7	0.0	0.0	0.0	0.0
Lithuania	1.3	0.0	0.0	0.0	0.0	0.0
Russia	1,477.5	1,365.6	262.0	2.5	91.2	643.4
Tajikistan	0.0	0.0	0.0	0.0	0.0	0.0
Turkmenistan	0.0	0.0	0.0	0.0	0.0	0.0
Uzbekistan	0.0	0.0	0.0	0.0	0.0	0.0
Ukraine	0.0	0.0	0.0	0.0	0.0	0.0

Source: Kazakhstan authorities.

Table 30. Kazakhstan: Geographical Distribution of Exports 1996-2001
(In percent of total)

	1996	1997	1998	1999	2000	2001 HI
1. BRO Countries	57.14	47.56	42.61	30.66	27.17	31.78
Armenia	0.00	0.00	0.0	0.1	0.0	0.0
Azerbaijan	0.16	0.36	0.5	0.5	0.5	0.9
Belarus	0.78	0.66	0.4	0.2	0.2	0.0
Estonia	0.24	0.66	2.23	1.96	0.12	0.07
Georgia	0.17	0.03	0.1	0.1	0.1	0.0
Kyrgyz Republic	1.89	1.02	1.2	1.1	0.6	0.9
Latvia	0.30	0.31	0.32	0.44	0.75	0.58
Lithuania	2.82	0.70	0.15	1.57	0.14	0.14
Moldova	0.05	0.04	0.0	0.0	0.0	0.0
Russia	42.03	35.21	29.6	20.4	19.5	21.8
Taiikistan	1.03	0.85	0.8	0.8	0.6	0.7
Turkmenistan	0.66	0.77	0.2	0.2	0.1	0.1
Ukraine	3.59	4.67	4.8	2.1	2.9	5.1
Uzbekistan	3.41	2.28	2.2	1.2	1.5	1.5
2. Non-BRO Countries	42.86	52.44	57.39	69.34	72.83	68.22
Austria	0.24	0.07	0.07	0.02	0.01	0.02
Afghanistan	0.10	0.13	0.14	0.20	0.64	0.18
Belgium	0.11	0.39	0.37	0.60	0.08	0.03
China	7.76	6.81	7.03	8.46	7.33	6.77
Czech Republic	0.40	0.29	0.73	0.14	0.08	0.04
Finland	1.89	2.86	1.63	0.69	0.77	0.48
Greece	0.02	0.04	0.02	0.02	0.01	0.07
Germany	3.10	5.43	5.18	5.95	6.20	7.29
Hungary	0.19	0.08	0.06	0.10	0.03	0.07
Italy	3.33	5.50	9.06	7.49	9.76	10.79
Japan	1.48	1.66	0.92	0.42	0.11	0.18
Netherlands	5.13	3.13	5.06	2.88	2.63	1.76
Oman	0.00	0.01	0.00	0.00	0.01	0.01
Poland	0.36	0.43	0.76	1.37	0.78	1.45
South Korea	3.01	2.00	0.74	0.64	0.37	0.53
Switzerland	3.58	4.40	6.15	5.30	5.34	3.89
Sweden	0.33	0.11	0.14	0.36	0.45	0.07
Thailand	0.93	0.98	0.15	0.95	0.17	0.03
Turkey	0.87	1.57	1.74	0.65	0.70	0.67
United Kingdom	3.91	8.45	8.89	3.38	2.53	2.72
United States	1.00	2.14	1.40	1.44	2.31	1.64
Yugoslavia	0.01	0.00	0.00	0.01	0.00	0.05
Other countries	5.11	5.96	7.15	28.26	32.54	29.45
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Kazakhstan authorities.

Table 31. Kazakhstan: Geographical Distribution of Imports 1996-2001
(In percent of total)

	1996	1997	1998	1999	2000	2001 HI
1. BRO Countries	70.57	55.67	48.09	43.74	54.91	56.28
Armenia	0.01	0.04	0.01	0.01	0.02	0.01
Azerbaijan	0.53	0.45	0.23	0.12	0.20	0.10
Belarus	2.84	1.36	1.41	1.06	0.79	0.76
Estonia	0.21	0.19	0.07	0.04	0.03	0.03
Georgia	0.07	0.13	0.09	0.04	0.10	0.06
Kyrgyz Republic	2.15	1.48	1.21	0.84	0.63	0.39
Latvia	0.29	0.74	0.29	0.14	0.12	0.08
Lithuania	0.63	0.51	0.37	0.21	0.18	0.14
Moldova	0.19	0.06	0.07	0.10	0.15	0.10
Russia	54.81	45.79	39.36	36.64	48.69	50.12
Tajikistan	0.41	0.15	0.09	0.06	0.11	0.03
Turkmenistan	4.15	1.07	0.54	0.53	0.87	1.11
Ukraine	2.18	2.17	2.13	1.61	1.58	1.91
Uzbekistan	2.10	1.53	2.21	2.35	1.45	1.45
2. Non-BRO Countries	29.43	44.33	51.91	56.26	45.09	43.72
Austria	0.47	0.85	0.77	0.49	0.35	0.40
Canada	0.15	0.57	0.89	0.47	0.46	0.41
China	0.84	1.08	1.16	2.21	3.05	3.11
Cuba	0.58	0.50	0.57	0.50	0.63	0.15
Czech Republic	0.62	0.73	1.21	0.76	0.67	0.69
Finland	1.32	1.58	1.63	1.26	1.14	1.05
Germany	4.66	8.55	8.42	7.80	6.60	6.17
Hungary	0.82	1.24	1.20	0.99	0.52	0.38
India	0.41	0.46	0.83	0.85	0.76	0.88
Italy	0.99	1.97	2.05	2.90	3.07	3.71
Japan	0.43	0.67	1.59	3.23	2.09	1.42
Poland	0.99	0.95	1.08	1.72	1.16	0.88
Switzerland	1.08	1.15	1.53	1.15	1.08	0.96
Sweden	0.26	0.31	0.36	0.66	0.50	0.58
United Kingdom	1.80	3.29	5.02	6.32	4.34	3.73
United States	1.56	4.69	6.23	9.46	5.48	5.26
Yugoslavia	0.06	0.05	0.04	0.01	0.01	0.01
Other countries	12.38	15.70	17.33	15.48	13.20	13.94
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Kazakhstan authorities.

Table 32. Kazakhstan: Breakdown of Foreign Direct Investment by Country of Origin, 1993-2001
(In percent of total)

Country	1993-96	1997	1998	1999	2000	2001 HI
Canada	4.00	1.08	2.40	0.51	5.28	11.84
China	0.26	14.86	7.03	2.68	3.24	4.51
Germany	1.18	2.50	5.61	0.84	2.50	0.77
Iceland	1.84	3.11	0.26	0.03	0.02	0.00
Indonesia	0.00	5.90	4.46	0.00	2.47	2.20
South Korea	15.55	34.17	2.59	1.55	2.06	1.18
Switzerland	1.06	1.48	3.79	1.28	0.66	0.25
Turkey	6.30	3.09	7.20	1.67	1.11	0.52
United Kingdom	14.43	14.78	7.02	8.64	16.85	10.90
United States	36.97	9.88	32.43	48.91	36.09	46.64
Others	18.42	9.16	27.21	33.90	29.72	21.18
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Kazakhstan authorities.

Table 33. Kazakhstan: Breakdown of Foreign Direct Investment by Industry, 1993-2001
(In percent of total)

Sector	1993-96	1997	1998	1999	2000	2001 HI
Agriculture, Hunting, Foresty and Fishing	0.0	0.0	0.3	0.0	0.1	0.0
Agriculture, hunting and related service activities	0.0	0.0	0.3	0.0	0.1	0.0
Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing	0.0	0.0	0.0	0.0	0.0	0.0
Mining and Quarrying	55.3	62.6	44.2	75.7	71.9	81.1
Mining of coal and lignite; extraction of peat	0.0	0.0	0.5	0.1	0.6	0.2
Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying	38.8	30.4	41.1	74.1	71.0	80.8
Mining of uranum and thorium ores	0.0	0.0	0.0	0.1	0.2	0.1
Mining of metal ores	16.5	32.2	2.6	1.5	0.1	0.1
Manufacturing	19.1	17.6	8.3	9.1	8.7	3.9
Manufacture of farm products	3.6	3.6	3.7	4.2	1.6	1.3
Manufacture of coke, refined petroleum products Mnd nuclear fuel	0.0	1.3	0.0	0.9	0.9	0.5
Manufacture of chemicals and chemical products	1.3	0.0	0.4	0.3	0.2	0.1
Manufacture of rubber and plastics products	0.0	0.0	0.0	0.0	0.1	0.0
Manufacture of other non-metallic mineral products	0.0	0.0	0.0	0.2	0.2	0.0
Manufacture of basic metals; manufacture of fabricated metal products, except machinery and mquipment	13.0	11.9	4.0	1.9	3.7	0.6
Ferrous metallurgy	4.5	3.6	1.1	0.3	2.6	0.5
Non-ferrous metallurgy	8.5	8.3	2.9	1.6	1.1	0.1
Manufacture of machinery and equipment	0.0	0.1	0.1	0.0	0.2	0.1
Manufacture of office, accounting and computing machinery; electrical machinery and apparatus; radio, television and communication equipment and apparatus; medical, precision and optical instruments, watches and clocks	1.0	0.6	0.2	1.5	1.7	1.2
Manufacture of radio, television and communication equipment and apparatus	1.0	0.6	0.2	1.5	1.6	1.2
Electricity, Gas and Water Supply	3.2	6.4	7.0	1.2	1.5	0.6
Construction	0.3	0.2	0.2	0.1	0.5	0.4
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	0.6	1.1	2.3	1.3	1.7	1.1
Hotels and Restaurants	0.2	0.6	1.1	0.3	0.4	0.1
Transport, Storage and Communications	0.8	0.4	0.6	1.1	3.5	2.6
Land transport	0.0	0.0	0.2	0.8	2.7	2.4
Transport via pipelines	0.0	0.0	0.2	0.8	2.7	2.4
Air transport	0.0	0.0	0.0	0.0	0.2	0.1
Post and telecommunications	0.6	0.4	0.3	0.2	0.4	0.0
Telecommunications	0.6	0.4	0.3	0.2	0.4	0.0
Financial Intermediation	0.6	1.0	7.1	2.1	1.1	0.6
Monetary intermediation	0.6	1.0	6.6	2.0	0.9	0.5
Other financial intermediation	0.0	0.0	0.3	0.0	0.0	0.1
Insurance and pension funding, except compulsory social security	0.0	0.0	0.0	0.0	0.1	0.0
Activities auxiliary to financial intermediation	0.0	0.0	0.2	0.1	0.1	-0.1
Real Estate, Renting and Business Activities	12.0	5.0	28.9	8.8	10.2	9.4
Real estate activities	0.0	0.5	0.3	0.1	0.3	0.2
Other business activities	12.0	4.5	28.6	8.7	9.8	9.2
Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy	0.1	0.1	0.7	0.4	0.4	0.1
Architectural,engineering and other technical activities	10.2	3.8	27.0	8.1	9.3	9.1
Public Administration, Education, Health and Social Work	0.1	5.1	0.1	0.1	0.2	0.2
Activities not Mentioned Before	7.8	0.0	0.0	0.0	0.1	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: National Bank of Kazakhstan.

Table 34. Kazakhstan: Stock of External Debt 1996-2001
(In millions of U.S. dollars, end of period)

	1996	1997	1998	1999	2000	2001 end-June
Total external debt	7096	9027	9845	12034	12570	13359
Total public external debt	3895	4572	3926	4044	3979	3895
IMF Credit	557	521	629	454	0	0
Government and government guaranteed debt	3338	4050	3297	3590	3979	3895
Loans to the government	2457	3103	2430	2896	3284	3239
Multilateral Creditors	648	894	1239	1472	1508	1511
World Bank	516	716	927	1106	1122	1130
EBRD	36	10	28	49	45	43
ADB	96	168	284	307	329	326
Islamic Development Bank				10	11	12
Bilateral Creditors	1609	1658	641	774	776	728
Russia I 1/	1250	1250				
Russia II 2/	68	68				
Turkmenistan	8					
Germany (KfW)	4	4	4	5	7	7
Korea (EXIM bank)				5	7	6
Japan (JEXIM)	271	238	262	262		
JBIC					450	405
Austria	4	4	5	4	3	3
Sweden	3	3	3	3	3	3
OECF/JCB		25	94	191		
Foreign commercial banks and companies					294	289
Other 3/		68	274	306	12	15
Eurobonds	200	550	550	650	1000	1000
Loans guaranteed by the government (incl. Medium and long term trade credits)	881	947	866	694	695	656
Non-guaranteed External Debts	3201	4455	5919	7990	8590	9464
Intra-company loans	1983	2504	3372	6162	6783	7438
Liabilities to unaffiliated creditors	1217	1951	2547	1828	1808	2026
o/w short term	1096	1526	1394	1758	984	1136
Memorandum items:						
Government and government guaranteed debt by creditor (in percent)						
Multilateral creditors, excluding IMF	19.4	22.1	37.6	41.0	37.9	38.8
Bilateral creditors	48.2	40.9	19.4	21.6	19.5	18.7
Eurobonds	6.0	13.6	16.7	18.1	25.1	25.7
Loans guaranteed by the government	26.4	23.4	26.3	19.3	17.5	16.9

Sources: Ministry of Finance, NBK and Fund staff estimates.

1/ Intergovernmental debt resulting from conversion of 1992-93 correspondent account balances; it is assumed that deferred interest is capitalized semiannually.
2/ Intergovernment debt resulting from drawings under the RR 150 billion Technical Credit.
3/ Debt guaranteed by the government and assumed as government debt as of the beginning of 1997, plus debt of commercial banks and firms not included elsewhere.