

Mongolia: Selected Issues and Statistical Appendix

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MONGOLIA

Selected Issues and Statistical Appendix

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Approved by Asia and Pacific Department

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I. DETERMINANTS OF INFLATION IN MONGOLIA¹

A. Introduction

1. **Despite robust demand growth, inflation in Mongolia has been generally moderate in recent years.** Inflation, as measured by the end-of-period consumer price index (CPI)² averaged 7.4 percent during 2000–05 and is estimated at 7.0 percent in 2006. The moderate inflation in the 2000s³ is in a sharp contrast with the 1990s. In the early 1990s, when Mongolia recorded triple digit inflation in 1993–94 and an average inflation rate of nearly 20 percent during 1995–2000. The moderation of inflation in recent years has taken place despite rapid monetary expansion. During 2000–05, broad money expanded by 32.4 percent and reserve money increased by 16.8 percent, rates much higher than inflation.
2. **These somewhat surprising developments reflect the variety of factors—both real and monetary—that are found to influence inflation in Mongolia.** It is widely agreed that the relative inelasticity of food supply, especially meat products in Mongolia, is a key contributor to the inflationary process, regardless of money supply developments.³ Import prices, especially for petroleum products, are also potential sources of inflationary pressures, given the large share of imported goods and raw materials in Mongolia’s consumer basket take. Changes in world commodity prices (e.g., copper and gold) can also indirectly lead to inflation changes in both directions. That is, a surge in foreign exchange inflows from commodity price hikes brings about liquidity expansion, thereby inflationary pressures, while it could partly offset inflationary pressures, given that exchange rate appreciation arises due to the capital inflows. Loose government spending (e.g., wages, pensions, and social transfers) may cause potential inflationary impacts as well, although those factors are not the main focus in this chapter.
3. **The extent to which low inflation can be sustained under rapid monetary expansion and high mineral prices remains uncertain.** This chapter analyzes the main determinants of inflation in Mongolia using empirical tests based on a structural model approach and VAR (Vector Autoregression Model), with a view to assessing whether inflation is predominantly affected by commodity prices or by money supply developments. To that end, simulation and impulse response analyses are used to estimate the components of the inflation dynamics under various exogenous shocks. Although inflation is strongly

¹ Prepared by SeungHo Lee.

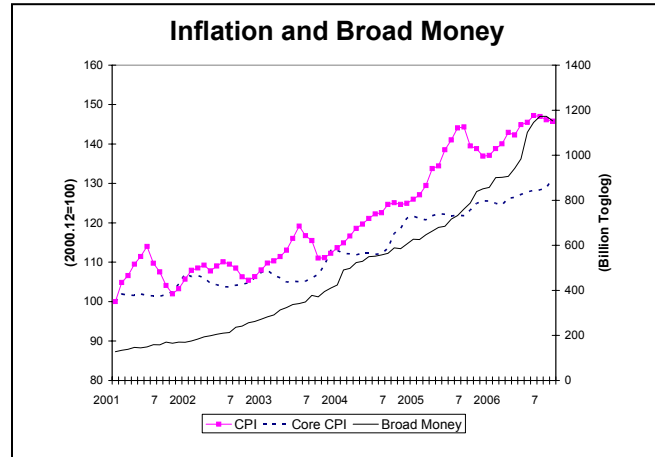
² Since April 2006, Mongolia’s NSO (National Statistical Office) has expanded the number of items in the CPI basket from 239 to 287 and changed the base year to December 2005=100.

³ Mongolia’s consumer basket includes meat and meat products (12.5 percent), dairy products (5.2 percent), and fruits and vegetables (9.0 percent), which are excluded in Fund staff’s estimation of core inflation. Even though core inflation is a proper alternative to assess the monetary impact on inflation, in this chapter the overall CPI was used as an inflation proxy because of data limitations and its importance as a key monetary policy target.

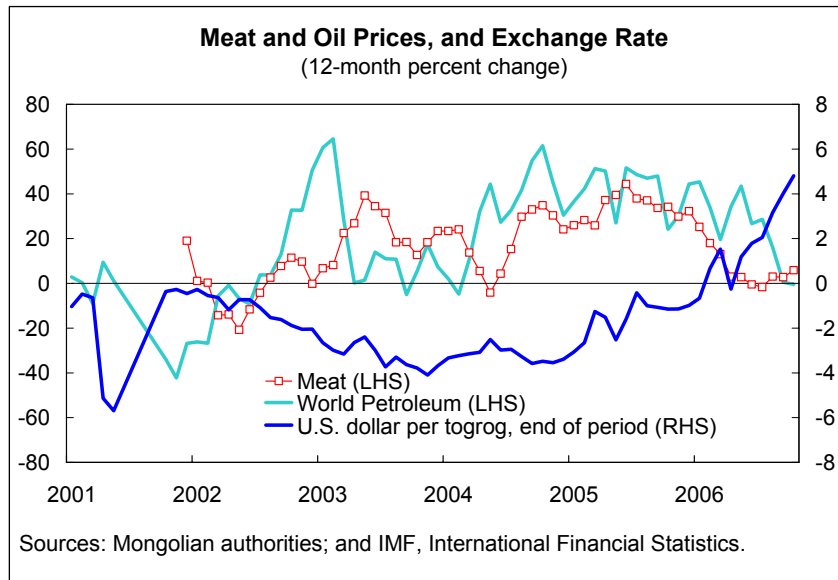
influenced by exogenous shocks to meat, copper, and oil import prices, we find that monetary expansion and changes in exchange rate are also critical determinants of inflation.

B. Recent CPI and Monetary Aggregates Developments

4. **Inflation was relatively volatile in 2005 due to a severe shortage of meat supply, reaching its recent peak of 17.6 percent (y/y) in June 2005.** As the supply shock was reversed from the third quarter of 2005, inflationary pressures abated quickly, with the CPI increasing by only 1.8 percent (y/y) in July 2006, the lowest in four years. However, with the waning influence of the supply shock, inflation picked up to 6.8 percent (y/y) at end-November 2006. The exchange rate appreciation due to the strengthening of the external position, has also contributed to suppress inflationary pressures. However, core inflation as of November was 6.7 percent (y/y), a relatively high increase in comparison to the overall CPI. This may imply that inflationary pressures driven by the demand side of the economy is significant this year.



Inflation and Broad Money (In percent)							
	2000	2001	2002	2003	2004	2005	2006
CPI ^{1/}	8.1	7.9	1.7	4.7	10.6	9.2	6.8 ^{2/}
Core Inflation ^{1/}	-	4.3	1.3	5.2	8.0	3.5	6.7 ^{2/}
Broad Money	17.5	28.0	41.9	49.7	20.3	37.3	38.3 ^{4/}
Togrog/U.S.\$ ^{3/}	-2.2	-0.5	-2.0	-3.8	-3.2	-1.0	+4.9 ^{2/5/}
1/ Year on year. 2/ End-November. 3/ End of period, (+)/(-) indicates an appreciation/depreciation. 4/ End-October. 5/ Since end-2005.							

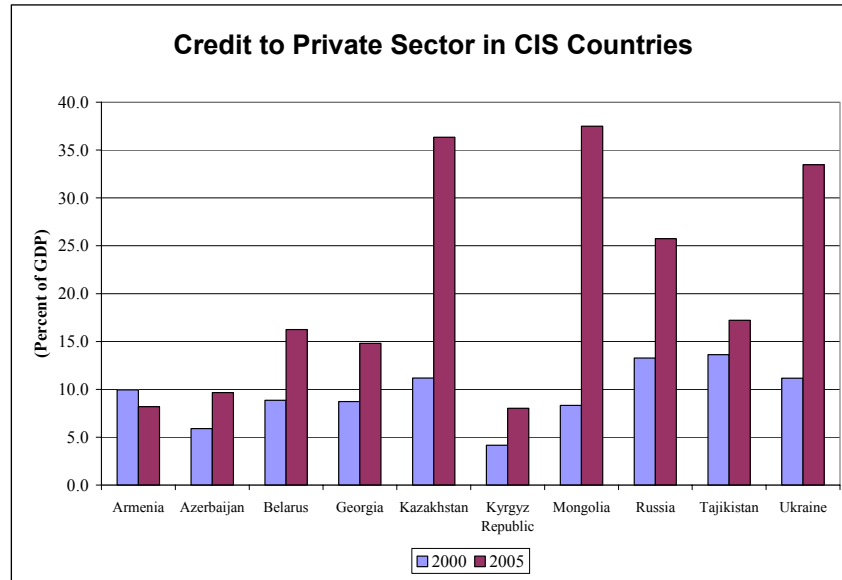


5. **The limited inflationary response to rapidly increasing money supply largely reflects a still strong monetization process, which is still underway.** In other words, as income rises, the private sector expands with large increase in deposit into and borrowing from banking system. Total deposit in the banking system in relation to nominal GDP almost doubled during 2000 and 2006, while the money multiplier steadily increased from 1.9 in 2000 to 4.8 in 2006. Since 2000, the pace of credit expansion to private sector seems to outpace that of deposit increases in the banking system.

Indicators of Remonetization (In percent)							
	2000	2001	2002	2003	2004	2005	2006 ^{1/}
Broad Money/GDP	25.4	29.6	37.8	47.7	43.9	46.7	47.1
Money multiplier ^{2/}	1.9	2.3	2.7	3.5	3.6	4.1	4.8
Deposit/GDP	15.5	19.9	28.1	38.8	36.5	40.6	40.9
Loan/GDP	6.8	12.4	19.0	30.5	33.5	36.4	37.3

1/ End-September.
2/ Broad money/Reserve money.

6. **The degree of remonetization seems more pronounced in Mongolia than in other Commonwealth of Independent States (CIS) countries.** At end-2005, credit to the private sector in Mongolia as share of GDP reached its highest level of 37.5 percent, compared with 36.3 percent in Kazakhstan, 33.5 percent in Ukraine, and much lower levels in other countries. Furthermore, the pace of the credit expansion to the private sector is the fastest in Mongolia during the period 2000–05, increasing by almost fivefold in five years.



C. Empirical Results

Structural Model

7. **To identify the dominant factors affecting inflation, six endogenous variables (CPI, broad money, reserve money, exchange rate, export and import) are estimated by simple OLS regressions in a structural model.** Quarterly data are used during the sample period of 1993 Q1-2006 Q1. To consider a strong seasonality in the Mongolian economy, seasonal dummy variables are included (Box I.1).

8. **The coefficients of the explanatory variables in the six estimation equations show expected signs in most cases** (see Annex). Inflation is positively related to increases in broad money, increases in copper and oil prices and the depreciation of togrog. The statistical significance of the coefficients, however, is not robust except for the exchange rate. Broad money is positively affected by an increase in reserve money and the second quarter seasonal dummy variable. However, broad money is negatively affected by the depreciation of the exchange rate. Reserve money supply is positively related to the increase in lending interest rates, reflecting high money demand in the money market.⁴ The exchange rate is influenced by the supply and demand of foreign exchange, which is mostly envisaged in exports and imports, respectively.⁵ The exports are positively affected by increase in copper price and exchange rate depreciation, while the imports are insignificantly influenced by world oil prices.

⁴ Central Bank Bill rates instead of lending rates could be a good alternative as an explanatory variable for reserve money. However, because of the lack of interest rate signaling channel of CBBs as a policy instrument, lending rates are used to capture the magnitude of money demand in the economy.

⁵ Because of the inaccessibility of quarterly data in the sample period, foreign remittances were not included in the estimation.

Box I.1. Empirical Method Using the Structural Model

Data

- Estimation Period: 1993 Q1 - 2006 Q1
- Frequency: Quarterly
- Number of observations: 53
- All variables are log-transformed.
- Seasonal dummy variables are included to reflect high seasonality.

Structure of the Model

- Six endogenous variables, including CPI, broad money(BM), reserve money(RM), nominal exchange rate(ER), export(EX) and import(IM) are estimated using OLS. The composition of the structural model is as follows:

$$CPI = f(\text{Constant}, BM, ER, OIL(-1), COPP, CPI\{-1\})$$

$$BM = f(\text{Constant}, RM, ER, DUM2, BM\{-1\})$$

$$RM = f(\text{Constant}, LR, D2, RM\{-1\})$$

$$ER = f(\text{Constant}, EX, IM, ER\{-1\})$$

$$EX = f(\text{Constant}, COPP, GOLDP, ER, DUM4, EX\{-1\})$$

$$IM = f(\text{Constant}, OIL, EX, CPI, IM\{-1\})$$

Endogenous Variables		Exogenous Variables	
CPI	Consumer Price Index	OIL	Oil price (Brent)
BM	Broad Money	COPP	Copper price
RM	Reserve Money	GOLDP	Gold price
ER	Exchange Rate (period average)	LR	Lending Rates
EX	Export	DUM2	2nd quarter dummy variable
IM	Import	DUM4	4th quarter dummy variable

- After applying the RMSE test for verifying the stability of the structural model, a policy simulation is applied, in which a certain shock is generated to see the dynamic impacts of each variable on inflation within the structural model.
- The simulation period is 2001 Q1 – 2006 Q1.

9. **The simulation results of this structural model sufficiently fit the statistical criteria of RMSE⁶ for each estimation equation.** RMSEs in each endogenous variable are less than 5 percent, which is in general regarded as a benchmark. The results of the RMSE are as follows:

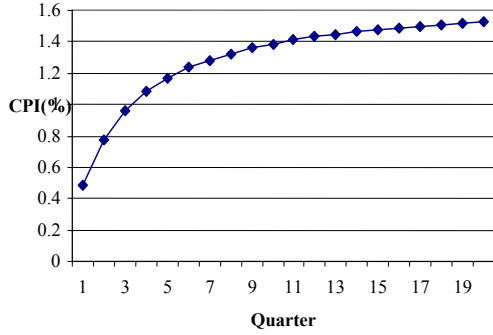
Results of RMSE	
Endogenous variables	RMSE (percent)
CPI	1.4184
Broad Money	0.5426
Reserve Money	0.4823
Exchange Rate	0.9622
Exports	4.3878
Imports	4.2135

10. **The empirical results of the policy simulation indicate that inflation in Mongolia is positively affected by increases in copper and oil prices, money growth, and the depreciation of exchange rate.** Increases in copper prices have a larger impact on inflation than increases in oil prices. It is estimated that a 10 percent increase in copper prices as a permanent shock causes a 1.29 percent increase in price level (annual average), while a 10 percent increase in oil prices results in a 0.36 percent increase in price level. The impact of gold prices on inflation, however, seems negligible. It is confirmed that the money growth also has significant impact on inflation. It is estimated that a 5 percent increase in reserve and broad money increases the price level (annual average) by 0.27 percent and 0.28 percent, respectively.

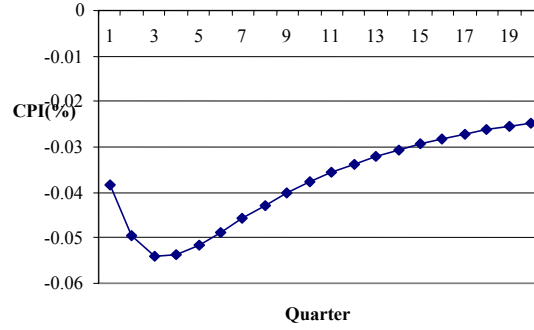
Result of Policy Simulations on Inflation (In percent)						
Permanent Shocks	Impact on CPI					
	1st year	2nd year	3rd year	4 th year	5 th year	Annual average
10 % increase in copper price	0.83	1.25	1.39	1.47	1.51	1.29
10 % increase in gold price	-0.05	-0.04	-0.04	-0.03	-0.03	-0.04
10 % increase in oil price	0.17	0.36	0.41	0.43	0.44	0.36
5 % increase in reserve money	0.06	0.19	0.30	0.38	0.44	0.27
5 % increase in broad money	0.18	0.27	0.30	0.32	0.33	0.28
1 % appreciation of Togrog	-0.70	-0.94	-0.96	-0.95	-0.95	-0.90

⁶ $RMSE = \sqrt{(1/T) * \sum (Y_s - Y_a) / Y_a)^2} * 100$, where T: number of observations in simulation period, Y_s: simulated value, Y_a: actual value.

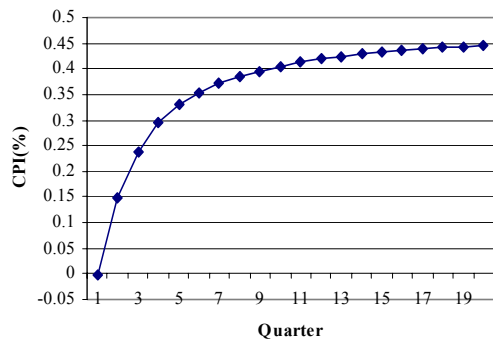
Impacts of Selected Shocks on CPI
(In percent)



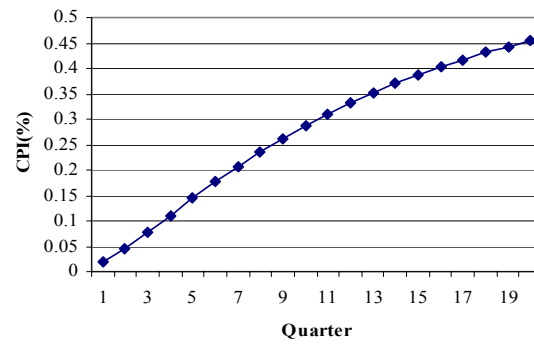
Shock to Copper Prices



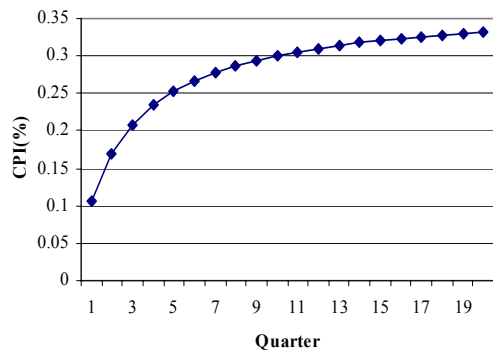
Shock to Gold Prices



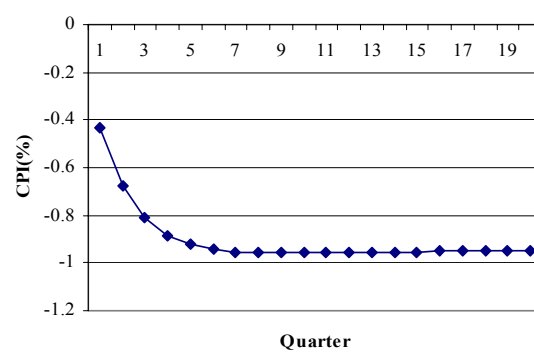
Shock to Oil Prices



Shock to Reserve Money



Shock to Broad Money



Shock to Togrog Appreciation

VAR Model

11. **The togrog exchange rate seems to have the largest influence on inflation, implying that the recent appreciation of the togrog may be the main factor behind low inflation in recent months.** It is estimated that a 1 percent appreciation of the togrog causes a 0.90 percent decrease in inflation (annual average). It is also noticeable that the impact of the exchange rate shock on inflation occurs with a short time lag, while other shocks seem to have a more gradual impact.

12. **The impulse response analyses in the VAR model, which shows a dynamic process of a specific variable to various shocks, confirms broadly the results of the structural model (Box I.2).** A one percent standard deviation shock on variables, such as copper prices, oil prices, money supply and the exchange rate affects inflation significantly. Increases in copper prices affect inflation with about a three-month lag, while increases in oil prices have a more rapid impact on inflation. The length of the response, however, is more lasting for copper price changes than oil price changes. The nominal exchange rate depreciation shock has an instant and persistent impact on inflation, confirming the results of the structural model. The money growth shock also seems crucial in affecting inflation. It appears that reserve money growth affects the inflation with about a two-quarter lag, compared with a three-month lag for the increase in broad money.

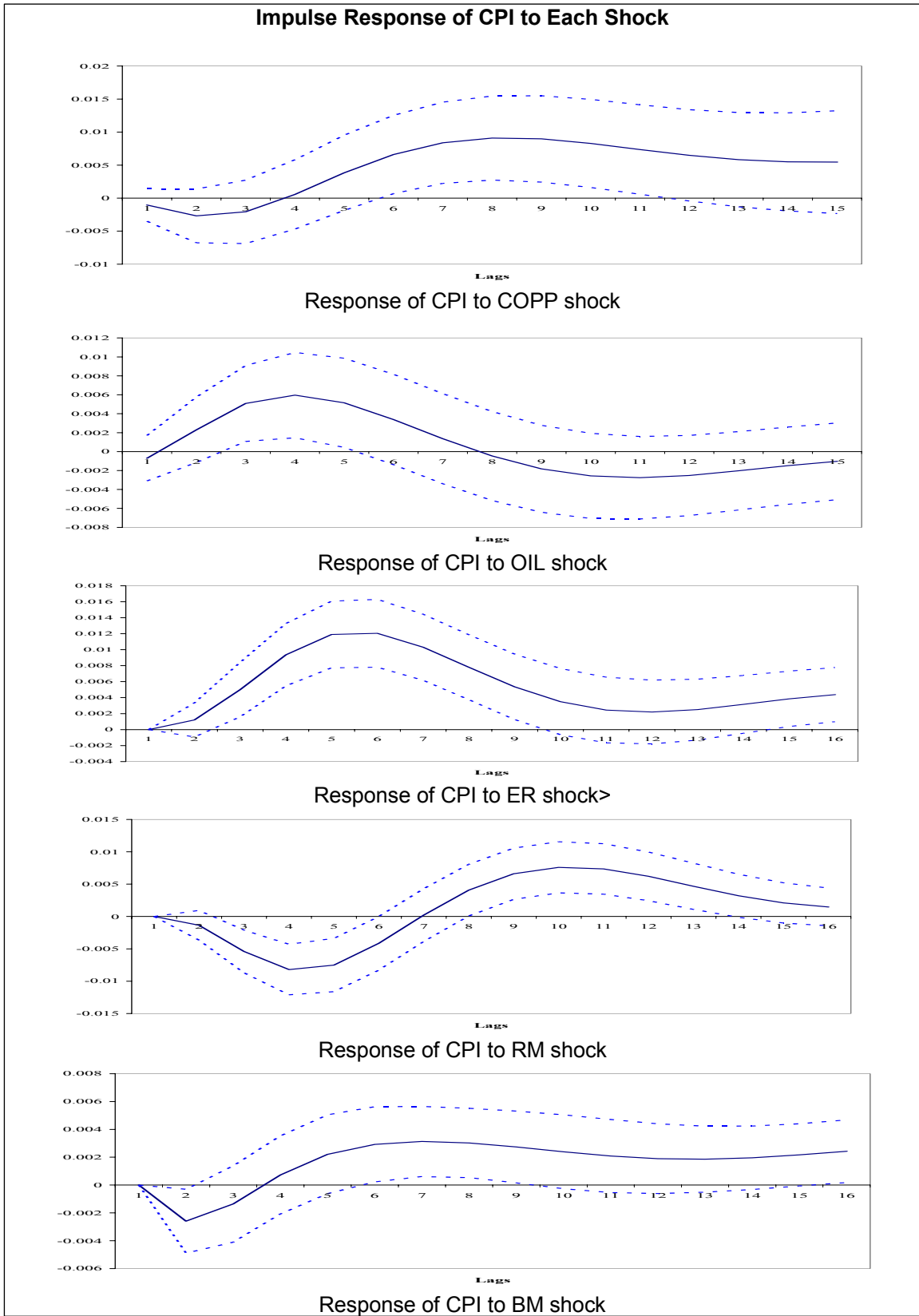
Box I.2. Empirical Method Using VAR Model

Data

- Estimation Period: 1995 Dec.- 2006 May
- Frequency: Monthly
- Number of observations: 126
- All variables are log-transformed.

Model Specification

- It consists of 6 variables, including CPI, exchange rate, copper prices, oil prices, reserve money and broad money, based on the empirical results in the above structural model.
 - The order of the variables (copper prices, oil prices, exchange rate, reserve money, Broad money and CPI) are determined by the exogeneity of the variables.
 - The lags of the VAR model are set as 2 by the AIC.



13. **Variance decomposition analysis, indicates that the exchange rate is the predominant factor in explaining the inflation.** Changes in the exchange rate explain more than 20 percent of inflation and the impact seems to be persistent. Copper price changes show the importance in CPI changes, as is in the simulation results of the structural model. Reserve money growth also provides explanatory power, with more than 14 percent of the change in inflation related to a reserve money shock one year before.

Variance Decomposition						
Lags	CPI	COPP	OIL	ER	RM	BM
1	100.0	0.0	0.0	0.0	0.0	0.0
2	98.2	0.2	0.1	0.2	0.3	1.0
3	92.0	0.8	0.6	2.7	3.1	0.9
4	79.8	1.0	2.4	8.7	7.5	0.7
6	60.6	1.5	5.1	22.1	9.5	1.2
8	51.3	6.6	5.0	26.4	8.8	1.9
10	44.8	12.3	4.5	24.6	11.7	2.2
12	40.8	15.6	4.6	22.7	14.0	2.3
14	39.3	17.3	4.7	22.0	14.3	2.4
16	38.5	18.5	4.5	22.0	13.8	2.6

D. Concluding Remarks

14. **Inflation in Mongolia is largely affected by food supply constraints, especially meat products, and mineral commodity prices, mostly copper and oil import prices.** However, empirical results also indicates that the increase in money supply and changes in the exchange rate have very significant impacts on inflation. In particular, recent low and stable inflation is mostly attributable to the exchange rate appreciation, despite recent commodity price hikes and sharp increases in money supply.

15. **Recent inflation trends, however, might not be sustainable unless monetary policy is implemented in a more prudent way to cushion the effects of high mineral prices and the consequent economic boom.** In the pursuit of lowering inflation in the medium-term to around 5 percent, as called for under 2007 Monetary Policy Guidelines, the monetary authorities may need to lower reserve money growth further, thereby that of broad money. Inflationary pressures from excessive money supply generally materialize with some time lags and become more difficult to control when the exchange rate starts depreciating, coupled with the impacts of loose fiscal policy, or adverse weather conditions. Accordingly, monetary policy should be pre-emptive to prevent renewed inflation, in line with central bank's ultimate goal.

Annex: Estimation Results of the Structural Model

$$\begin{aligned} \text{Log(CPI)} = & -1.591 + 0.011 \text{ log(BM)} + 0.017 \text{ log(OIL(-1))} + 0.051 \text{ log(COPP)} \\ & (-2.27) \quad (0.26) \quad (0.31) \quad (0.93) \\ & + 0.437 \text{ log(ER)} + 0.561 \text{ log(CPI(-1))} \\ & (3.59) \quad (6.37) \end{aligned}$$

adjusted $R^2 = 0.983$, D.W.= 1.98

$$\begin{aligned} \text{Log(BM)} = & 0.902 + 0.175 \text{ log(RM)} - 0.232 \text{ log(ER)} + 0.895 \text{ log (BM(-1))} \\ & (3.83) \quad (1.92) \quad (-2.30) \quad (15.14) \\ & + 0.065 \text{ DUM2} \\ & (2.39) \end{aligned}$$

adjusted $R^2 = 0.993$, D.W.= 1.20

$$\begin{aligned} \text{Log(RM)} = & 0.004 + 0.001 \text{ log(1+LR/100)} + 0.998 \text{ log(RM(-1))} + 0.151 \text{ DUM2} \\ & (0.01) \quad (1.85) \quad (30.62) \quad (3.86) \end{aligned}$$

adjusted $R^2 = 0.984$, D.W.= 2.27

$$\begin{aligned} \text{Log(ER)} = & 1.049 - 0.101 \text{ log(EX)} + 0.143 \text{ log(IM)} + 0.814 \text{ log(ER(-1))} \\ & (7.31) \quad (-2.92) \quad (4.06) \quad (32.76) \end{aligned}$$

adjusted $R^2 = 0.977$, D.W.= 1.34

$$\begin{aligned} \text{Log(EX)} = & -9.840 + 0.383 \text{ log(COPP)} + 0.447 \text{ log(GOLDP)} + 0.644 \text{ log(ER)} \\ & (-5.26) \quad (1.74) \quad (3.43) \quad (5.68) \\ & -0.243 \text{ log(EX(-1))} + 0.301 \text{ DUM4} \\ & (-1.75) \quad (3.81) \end{aligned}$$

adjusted $R^2 = 0.674$, D.W.= 1.60

$$\begin{aligned} \text{Log(IM)} = & -0.142 - 0.003 \text{ log(OIL)} + 0.658 \text{ log(EX)} + 0.378 \text{ log(CPI)} + 0.059 \text{ log(IM(-1))} \\ & (-0.30) \quad (-0.02) \quad (5.01) \quad (3.54) \quad (0.53) \end{aligned}$$

adjusted $R^2 = 0.732$, D.W.= 1.56

* Figures in parenthesis indicate t-values.

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II. LONG-TERM FISCAL SUSTAINABILITY IN MONGOLIA⁷

A. Introduction

16. **Mongolia's public finances are heavily dependent on revenues from the non-oil mineral sector.** Overall, revenues from copper, gold and coal mining made up 13¼ percent of total budget revenue in 2005. With further increases in copper prices since 2005 and recent mineral tax increases this ratio is expected to exceed 33 percent in 2006. However, the longer-term outlook is uncertain, as copper prices are expected to decline substantially over the medium term.⁸ Also, prospects for major foreign investment in the mining sector could be affected by recent tax increases and changes in the mining regime. Under these circumstances, revenues from mining sector may remain volatile.

17. **The design of a sustainable fiscal policy in view of these developments is challenging and crucial for safeguarding growth prospects and reducing poverty.** The authorities need to plan public expenditure taking into consideration revenue shocks arising from the volatility and unpredictability of mineral resource prices. They also need to adopt policies aimed at ensuring the sound management of the country's mineral wealth for future generations. Mongolia faces similar problems as other countries that rely on their nonrenewable resources to finance government spending under the constraint of an uncertain and volatile revenue stream and an exhaustible supply of mineral resources.

18. **The mineral resource boom, if effectively managed, could provide Mongolia with an opportunity to address a wide range of the country's economic problems.** Mineral revenues can potentially provide large resources to finance essential economic reforms to diversify the economy, strengthen its efficiency and alleviate widespread poverty, while cushioning the most vulnerable against the adverse impacts of future shocks.

19. **International experience shows that resource booms can result in inefficient ad hoc spending decisions, particularly in countries that lack a clearly formulated medium-term policy framework.** Thus, rather than using natural resource revenue to stabilize revenue flows or finance growth-enhancing capital expenditure, some countries have embarked on unsustainable policies based on short-lived natural resource booms.⁹ In some cases, countries borrowed heavily against their anticipated future income (e.g., Venezuela), while in other cases, governments granted large permanent wage increases

⁷ Prepared by Selim Cakir and Alexander Klemm.

⁸ According to the WEO, copper prices are expected to fall steadily from their current (mid-November 2006) level of US\$6,760 per ton to US\$2,400 by 2011.

⁹ See for example the analysis in Boccara (1994) covering CFA Franc countries. Some further cases of both good and bad policy responses are discussed in Cuddington (1998).

(e.g., Nigeria) or launched ambitious investment projects with low economic rates of return (e.g., Algeria, Iran, Trinidad and Tobago).¹⁰

20. **In addition to possible policy mismanagement, the volatility of the real effective exchange rate could have negative effects on the economy's competitiveness.** Dutch disease—which refers to the loss of competitiveness or deindustrialization of a country's economy—could occur when the natural resource inspired boom raises the value of the domestic currency, making manufactured goods less competitive, increasing imports, and decreasing nonmineral exports. While some real effective exchange rate appreciation is inevitable during a boom, saving some of the income from the booming sector abroad in safe foreign assets or using it to pay off external debt ahead of schedule can help contain the growth in domestic demand and limit the real exchange rate appreciation and its adverse consequences.

21. **This paper addresses the mineral wealth management issues faced by Mongolia.** Section B describes Mongolia's mining sector and its envisaged development over the medium term. Section C provides an analysis of Mongolia's mineral wealth and discusses criteria on which the government could rely for deciding on the allocation of the country's mineral wealth between saving and consumption. Section D assesses Mongolia's medium-term fiscal sustainability. Section E discusses possible institutional responses to fiscal sustainability challenges, including a brief overview of country experiences. Section F concludes.

B. The Mining Sector in Mongolia

22. **Mongolia's mineral output stems mainly from copper, gold and coal mining.** This paper illustrates fiscal sustainability challenges mainly in relation to these main natural resources. There are other important minerals, zinc for instance, but for lack of information these were not included in the analysis. This section first reviews the framework for mining taxation and mineral revenues derived, and then assesses expected mining sector developments.

Mining Sector Revenues

23. **In addition to general taxes, firms in the mining sector are liable for royalties and a recently introduced "windfall tax".** The royalty is charged at a rate of 5 percent (increased from 2.5 percent in September 2006) on the value of sales of gold and copper. It does not allow for any deduction of costs. The "windfall tax" is levied at a rate of 68 percent on the difference between the actual world copper price (US\$6,936 per ton at end-November 2006) less both smelting costs (estimated at US\$1,580 per ton in 2006) and a fixed amount of US\$2,600 per ton. For gold it is levied on the difference between actual gold prices (US\$638 per ounce at end-November 2006) and a fixed level of US\$500 per ounce.

¹⁰ See Wakeman-Linn et al. (2004)

24. **The current structure of mining taxes could have undesirable effects on investment incentives.** Since royalties do not allow any cost deductibility and the “windfall tax” only allows the deduction of smelting costs, these taxes could apply not only to rents and profits, but also to costs, which will create inefficiencies.¹¹ As a result, some deposits may not be developed, even though they could be exploited profitably, yielding a positive rent. The current tax structure could be also harmful to the mines nearing the end of their lifespan, because in such mines, incremental investment will only take place as long as the return less royalty and “windfall tax” exceeds the marginal cost. Mines may therefore be abandoned prematurely, and since the cost of reopening abandoned mines is prohibitive, some portion of the country’s natural resource will remain unexploited. Moreover, the windfall tax on gold has so far proved difficult to enforce, with many gold traders either smuggling their gold out of the country or delaying sales with the expectation that the windfall tax may be repealed.

25. **The corporate income tax (CIT) regime for mining sector is the same as in other sectors.** It is a split rate system, and from January 1, 2007 its rates are 10 percent on profits up to to 3 billion and 25 percent on any additional profits. Losses can be carried forward for up to two years and reduce profits by no more than 50 percent.¹² While the law is the same as in other sectors, its impact on the mining sector may still be different, because of the sector’s special characteristics. Specifically, the long delay between the first investment expenditure and the first profit means that the limited loss carry-forward is potentially a greater concern for mining than other firms.¹³ Economies of scale imply that mining firms tend to be larger, which in turn means that they are more likely to fall under the higher of the two tax rates.

26. **In addition, mineral revenues are received for licensing fees, but these are relatively small.** Even though the new Minerals Law adopted in mid-2006 has increased such fees, their contribution to the budget remains negligible. However, licensing fees do have an important role in limiting speculation on licenses. Moreover, the law allows, but does not demand, auctioning of mining sites, which has not occurred yet.

27. **Significant revenues are also received in the form of dividends from Erdenet,** a copper mining company, which is 51 percent owned by the Mongolian state, with the remainder owned by the Russian government. The Mongolian share of the dividend goes into

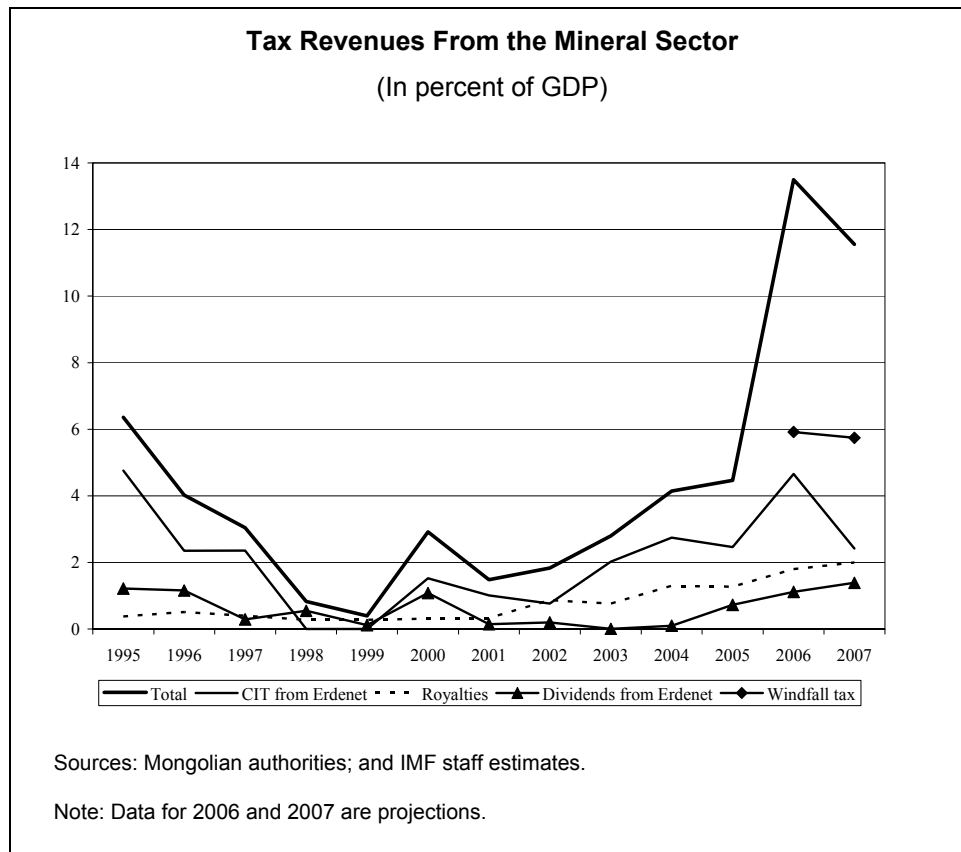
¹¹ The current basic deduction is high enough to recover all other costs. However, given that it is fixed at \$2,600 per ton of copper, the unindexed basic deduction could fall short of recovering other operating costs in an inflationary situation.

¹² The tax system that will apply until the end of 2006 has rates that are higher by 5 percentage points, and a much lower threshold for the higher rate. It does not allow any loss-carry forward and disallows deductions of many expenses (e.g., advertising). It does, however, provide for tax holidays for foreign firms undertaking major investment projects. These tax holidays exempt them from CIT for five years and provide an exemption for half of the CIT liabilities for a further five years. These are particularly inefficient in the mining sector, where positive economic rents as a result of the scarcity value of resources are to be earned.

¹³ This is slightly mitigated by allowing exploration costs to be amortized over five years.

the budget, usually with a delay of two years after the completion of the accounting year in which they are earned.

28. **Total mineral revenues have been very volatile over time.** Over the last decade, they have ranged from less than 1 percent to more than 6 percent of nonmineral GDP. CIT revenues from Erdenet have historically accounted for the largest share and most volatility. However, since its introduction in mid 2006, the windfall tax has become the most important source of revenue, and total mineral revenues have reached unprecedented levels.



Current and prospective mining operations

29. **The copper sector has long been dominated by the public company Erdenet.** Erdenet has been exploiting a major copper mine since the 1970s, and it expects to be able to continue extraction at the current rate for a further 50 years. Historically, Erdenet has tended to pay out two-thirds of profits as dividends, and this is expected to continue, although it is far from clear whether this is an optimal ratio. Moreover, as stated earlier, Erdenet has tended to pay its dividends with a significant lags, typically reaching the budget two years after the tax year in which they were earned. While a speedier distribution would be useful, it is assumed that this delay continues as it is, although it clearly reduces the value of dividends in present value terms.

30. **Another major firm, Ivanhoe, is expected to start extracting copper and gold from 2009 and to surpass Erdenet as the largest copper producer from around 2011.** Making predictions about future mineral revenues is difficult, because (i) the government's equity participation is under consideration, which will affect the government's revenue structure; and (ii) it remains unclear to what extent Ivanhoe will be liable for the windfall tax, as Ivanhoe is considering the construction of an on-site smelter, which apparently would exempt the company from being liable for the windfall tax, as it applies only to raw copper ores.

31. **The gold sector is more diverse with over 100 companies of different sizes.** So far gold companies have not paid CIT as they have been covered by tax holidays or other exemptions. Although Boroogold, the largest, is exempt from the windfall tax, it recently agreed to pay the government an additional US\$10 million this year and to begin paying CIT at the full income tax rate from 2007. Boroogold is also currently negotiating a new investment contract for the development of another deposit. Given the imminent abolition of tax holidays, it is likely to have to pay taxes on profits from the new deposit from the beginning, although details of the contract are not known yet.

Mineral reserves

32. **Mongolia has considerable mineral resources, although estimates of proven and potential resources are subject to large uncertainties.** Overall, only 15 percent of the total area has been geographically mapped (USGS 2004), and therefore, estimates are very approximate. The table below provides an overview of operating and prospective mines in Mongolia. The Baganuur site is particularly noteworthy, as its estimated reserves include 6 billion tons of coal and 2.4 billion tons of coke.

Largest Operating and Prospective Mines in Mongolia			
Name of Deposit	Type of Mineral Resource	Location	Operational
Erdenet	Copper, molybdenum	Erdenet city	yes
Oyu Tolgoi	Copper, gold	Umnu-Govi aimag	No
Tavan Tolgoi	Coking coal	Umnu-Govi aimag	Partially
Burenkhaan	Phosphate	Huvsgul aimag	No
Tumurtei	Iron	Selenge aimag	No
Tumurtiin Ovoo	Zinc	Suchbaatar aimag	Yes
Asgat	Silver	Bayan-Ulgii aimag	No
Tsagaan Suvraga	Copper	Dorno-Govi aimag	No
Bor Undur	Fluorspar	Khentii aimag	Yes
Boroo	Gold	Selenge aimag	Yes
Gatsuurt	Gold	Selenge aimag	No
Hailaast	Gold	Tuv aimag	Yes
Baganuur	Coal	Baganuur city	Yes

Sources: Mongolian authorities; company reports, and websites.

C. Mongolia's Mineral Wealth

33. **When a significant share of government revenue is derived from the exploitation of nonrenewable resources, the finite nature of the resource needs to be considered.** This is important to ensure fiscal sustainability as well as intergenerational equity. Considerations of long-run fiscal sustainability would generally imply saving a portion of today's nonrenewable resource revenue and setting normative limits on the nonresource fiscal deficit. This approach would both stabilize usable revenue and provide for the accumulation of financial resources that make up for the depletion of the natural resource, thereby helping to implement fiscal policies that are set within a longer-term framework.

34. **Estimating Mongolia's mineral wealth is the first step in assessing long-term fiscal sustainability.** The value of wealth is derived, among other things, from the amount of total proven mineral reserves, the production profile, extraction costs, the tax system, the assumptions on the long-term world mineral prices, the discount rate, and the real rate of return on financial assets.¹⁴ The estimates of the net present value (NPV) of Mongolia's mineral revenues for 2006–50 provided in this paper are based on the assumptions detailed in Box II.1.¹⁵

Box II.1. Mongolia: Assumptions Underlying Mineral Wealth Calculations

Total Production:

Copper

Erdenet: 23 747 000 tons.

Ivanhoe : 41 549 000 tons.¹

Gold

Ivanhoe: 10 336 000 oz.

Others: 28 215 000 oz.

Prices: Copper and gold price estimates are based on World Economic Outlook (WEO) projections. Beyond the seven year-period of forecasts provided by the WEO, it is assumed that copper and gold prices increase in line with world inflation (i.e., 2 percent).

Tax regime: It is assumed that tax regime remains unchanged as described above, except that the windfall tax is assumed to be abolished after 2011. Note that stability agreements/investment contracts mean that even if a tax change takes place, it may have limited effects, as existing operations would not be affected until their arrangements run out.

Discount rate: Nominal rate of return (5 percent); real rate of return on financial investment (3 percent).

¹Ivanhoe also considers an expanded production plan, which would increase this figure to 50,363,000 tons, see Ivanhoe (2005). We assume that the smaller production plan is followed, and, based on information from Ivanhoe, that it is delayed by one year.

¹⁴ See Gvenetadze (2006) for a full discussion of calculation of mineral wealth.

¹⁵ Coal is excluded from the calculation of Mongolia's mineral wealth since current revenues from coal mining are very small. However, it should be noted that Mongolia has very large, but as yet unexploited, coal deposits.

35. **Estimates of mineral wealth depend on a number of assumptions, but are particularly sensitive to mineral price assumptions.** This note therefore considers three different scenarios. The central scenario is based on the best available estimate of copper prices (Box II.1). Two further cases are considered: one in which copper prices stay at the high level of 2006, and one in which they fall back immediately to their long run average of \$2,000 per ton. Even in the latter case, Mongolia's mineral wealth (the NPV of mineral revenues) would be sizeable at almost twice the nonmineral GDP.

Net Present Value of Mongolia's Mineral Revenues (Mineral Wealth)			
	Copper prices return to long-run level	Central case	Copper prices remain at current level
In millions of U.S. dollars	2,010.3	3,703.2	11,179.3
Percent of nonmineral GDP	193.6	238.2	719.0
Source: Authors' calculations.			
Notes: The low price case assumes copper prices of \$2,000 per ton until 2011, which is the average price of the last ten years. The high price case assumes copper prices of \$6,300 until 2011, which is the WEO copper price assumption for 2006. Beyond 2011 copper prices grow by 2 percent per year in all scenarios.			

D. Assessing Long-Term Fiscal Sustainability

36. **The fiscal stance in Mongolia is better assessed in terms of the nonmineral primary balance.** This is a useful indicator for fiscal analysis in mineral rich countries, because it removes most of the cyclicalities that is caused by volatile commodity prices and instead reveals the part of the budget that is financed from sustainable sources.¹⁶ Given the mineral wealth, it is not necessary for the nonmineral primary balance to remain in surplus. The next section will address the question of how large a deficit in the nonmineral primary balance can be sustained permanently by the mineral wealth of the country.

37. **The concept of a sustainable nonmineral primary deficit ceiling would introduce an upper bound restriction for the permissible government deficit consistent with the savings objective.** It defines what the government can afford to spend over the long term without exhausting its assets, and corresponds to a path of expenditures that can be financed from the use of mineral revenue.

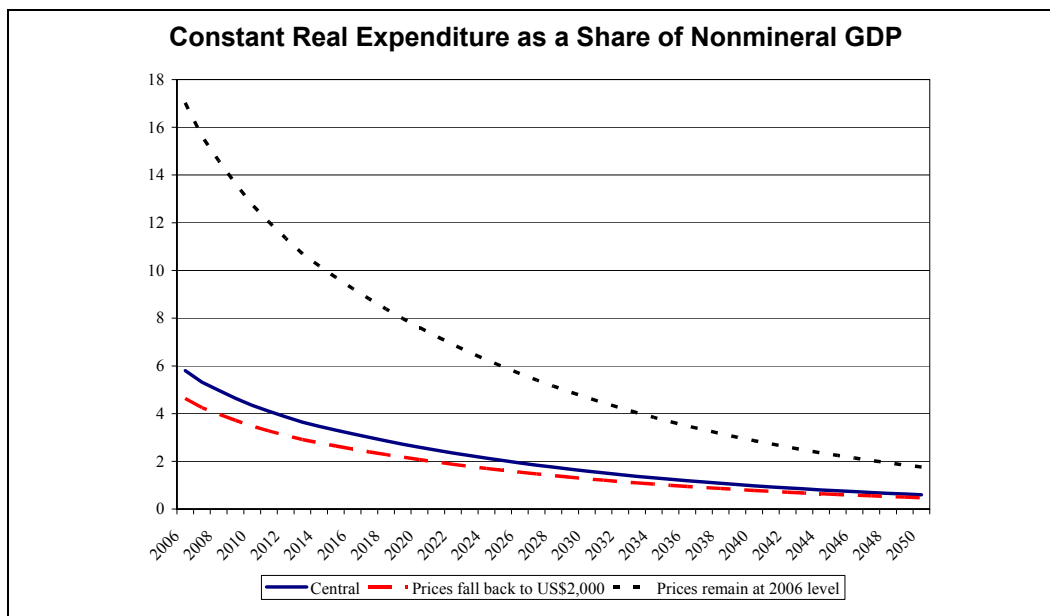
Constant Real Expenditure Approach

38. **A sustainable nonmineral primary deficit ceiling shows how much the government can afford to spend over the long term without exhausting its assets.** It corresponds to a constant real expenditure amount that can be financed out of mineral wealth. In order to determine a sustainable constant real expenditure level, the discounted

¹⁶ See also Chalk (1998) which argues for the use of a "core" deficit, which also excludes net transfers.

government's net worth should be multiplied by the assumed real rate of return. This represents a fixed annual amount in constant U.S. dollar terms that can be spent indefinitely without ever running out of mineral wealth. Over time the composition of this amount will change from being mainly tax revenues and dividends to interest on the accumulated wealth.

39. **The level of constant real expenditure per year during 2006–50 is estimated at \$113.3 million (5.9 percent of projected nonmineral GDP in 2006).** This amount will decline gradually relative to nonmineral GDP, as nonmineral sectors expand over time while the fixed annual dollar amount from mineral wealth stays constant indefinitely. By 2050 it declines to 0.6 percent of nonmineral GDP. This is shown in the figure below, which also shows the development of the constant fixed expenditure under a higher and lower copper price scenarios.



The Current Budgetary Position

40. **The 2007 budget proposal is budgeted to achieve a nonmineral primary deficit as a share of nonmineral GDP of 16.3 percent.**¹⁷ Based on the calculations above, this would be sustainable under the most optimistic copper price assumption only. If copper prices drop back as expected under the WEO, however, this would imply that in 2007 more than twice as much of the mineral wealth will be spent as will be possible in the long run. And if prices return to their long-term average, three times the sustainable expenditure would be spent.

¹⁷ The staff report and other documents often present the nonmineral primary or overall balance as a share of total rather than nonmineral GDP. This is mainly for convenience, as it allows a direct comparison to the fiscal balances including the mineral sector. However, as total GDP is also strongly affected by mineral prices, the measures defined in terms of the nonmineral GDP are theoretically preferable and should be used if comparing scenarios with different mineral prices.

E. Possible Institutional Arrangements¹⁸

41. **The analysis above has suggested that mineral revenues in any given year may be different from the share of the mineral wealth that can be sustainably spent.** In years of exceptionally high commodity prices or production levels, governments should thus prudently save some of the mineral revenues. In years of low prices, or when production begins to decline, governments may spend more than current revenues. In principle, this is feasible within the normal budgetary framework. There may, however, be some political difficulties in justifying budget surpluses, particularly in low-income countries such as Mongolia. Some countries have, therefore, set up special commodity funds for managing their mineral revenues. The main types of funds are described in the following subsection.

Nonrenewable Resource Funds¹⁹

Stabilization funds

42. **The main aim of a stabilization fund is to deal with the volatility of commodity prices.** Payments to and withdrawals from the fund can, for example, be triggered by the position of the market price compared to a reference price. By doing so, the fund can help avoid stop-and-go changes in government expenditure, which are likely to hamper efficient government spending. Clearly the process cannot be completely automated, as the long-term reference price is unknown and subject to change. It is thus necessary to adapt the reference price as new information becomes available, particularly, following long periods of deviation between market and reference prices.

Savings funds

43. **The main aim of a savings fund is to save a share of the revenues stemming from exhaustible resources for future generations.** This could be either a fixed proportion, or a varying proportion, in which case the fund would combine elements of a savings and stabilization fund. Typically, withdrawals from such a fund are restricted by tight rules that prevent the fund from being used up. Withdrawals could, for example, be limited to the real return achieved on assets in which the fund invests.

Financing funds

44. **A financing fund is the most comprehensive of the three funds, receiving all revenues from mineral resources.** Withdrawals are made to finance budget deficits and any remaining funds are invested. A financing fund thus achieves transparency about mineral wealth without restricting fiscal policy by any rigid rules. It also prevents some financially

¹⁸ For a more general overview of the operational aspects of fiscal policy in mineral resource-rich countries, see Barnett and Ossowski (2003).

¹⁹ For a fuller discussion of such funds, including international experience, see Fasano (2000) and Davis et al. (2001).

costly behavior that may occur under the previous two funds, such as simultaneous saving and debt issuing.²⁰

Fiscal Rules

45. **In addition or instead of savings funds, fiscal rules may be used to limit spending choices of governments.** The fiscal rules could, for example, specify that the overall balance may not exceed the real return on mineral wealth, or restrict the nonmineral primary balance to a fixed share of nonmineral GDP.²¹ However, just as there are ways to circumvent restrictions implied by funds, fiscal rules can also be avoided.

Suggestions on a Nonrenewable Resource Fund for Mongolia

46. **Other countries' examples show that success did not lie in the creation of such funds, but rather in fiscal discipline and sound macroeconomic management.** In other words, funds are no guarantee that nonrenewable resources will be sustainably managed. This requires prudent fiscal policy, which cannot be guaranteed by a fund. For example, the government could simultaneously accumulate debt to finance deficits and build up large assets inside the fund. However, a well-designed fund could help the government achieve its sound fiscal policy objectives. Some best-practice design principles are given in the following paragraphs.

47. **The fund should be coherently integrated into the budget process.** This is best achieved by ensuring that the fund operates only as a government account rather than a separate institution. Budget formulation and reporting should focus on the consolidated presentation and expenditure should be executed by the Treasury. The fund should ideally be a “financing” fund, where the fund’s balance reflects government saving of its mineral wealth and is presented in the context of all the government’s financial assets and liabilities. Because of Mongolia’s access to highly concessional debt though, the fund should not finance the part of the overall deficit that can be financed by concessional debt. Instead the fund should invest equivalent amounts in the currency of the debt to reduce risks.

48. **Fund assets should be prudently managed, coordinated with other government financing operations and largely invested offshore.** Funds can accumulate large amounts of resources and excessive risk-taking would not be appropriate. Holding the assets offshore reduces the impact on the domestic economy, such as through the exchange rate. Funds should also not lend or otherwise encumber their assets.

²⁰ For a description of the Norwegian financing fund, which is considered international best practice, see Skancke (2003).

²¹ Recent examples of such rules are Sao Tome and Principe (see Segura 2006) and, with an adjustment, Timor-Leste (see Box II.2).

Box II.2. The Financing Fund of Timor-Leste¹

Timor-Leste recently introduced a non-renewable resource fund to manage its revenues from oil production. The fund is based on the Norwegian fund, which is considered international best practice, with some differences to address the particular situation of the country.

The fund is a financial fund, in that it receives all petroleum revenues and finances the budget deficit. This set-up appears particularly appropriate to a new country, with high and immediate investment needs. However, in order to deal with political economy concerns, the concept of “sustainable income” was introduced. Up to that amount, which is defined in law, the fund automatically finances budget deficits. Budget deficits in excess of the sustainable income can still be financed by the fund, but require an additional process of parliamentary consideration and approval.

The fund thus tries to combine two conflicting goals:

1. Avoiding a systematic overspending of sustainable income from petroleum, and
2. Allowing sufficient flexibility to deal with revenue needs, without the need to circumvent the fund by costly borrowing.

¹ See Daniel et al. (2003).

49. **The rules and operations of the fund should be transparent with stringent mechanisms to ensure accountability and prevent misuse.** This requires regular and frequent disclosure and reporting on the principles governing the fund, its inflows and outflows, and the allocation and return on assets. The fund’s activities should be audited by an independent agency, and investment performance should be periodically evaluated.

50. **The current development fund is unlikely to play a useful role in shaping a sustainable fiscal policy.** The fund receives just the windfall tax rather than all mineral revenues. If copper prices fall as expected, it will receive only negligible funds from 2008, when the copper price is expected to fall below the threshold for windfall tax liability, and only the smaller windfall tax revenue from gold would continue. Given the arbitrary thresholds for the windfall tax, it is unlikely that these revenues represent the entire windfall from temporarily high copper prices. Even if they did though, the low savings rate of one third would not achieve much stabilization or intergenerational equity. Finally, the provisions of the fund can easily be circumvented, by using its components to replace other spending or saving, so that its main impact may be on administrative costs.

F. Conclusion

51. **Mongolia will receive substantial revenue from its mineral resources in the coming years.** The authorities would benefit from undertaking regular estimates of the country’s mineral wealth, which is essential for formulating a medium-term fiscal strategy. The estimates given in this paper provide a first approximation, which will need to be refined as more accurate and complete information becomes available and as new deposits are discovered and developed.

52. **Fiscal policy should take the mineral wealth into account when setting targets for the fiscal balances.** A rule limiting the nonmineral primary balance to the real return on

the mineral wealth would ensure both stabilization and intergenerational equity. However, even if the government does not wish to follow this approach fully, either because it doubts the accuracy of the estimates or because it may wish to save less in order to invest in growth-enhancing capital, the calculation can still serve as an important input into the fiscal policy considerations.²² For practical reasons, the government could initially work with a shorter term horizon and target a nonmineral primary balance that would yield stable debt ratios over the medium term.

53. **This paper finds that the authorities' current fiscal strategy envisaged in the 2007 budget would be sustainable only under very optimistic copper price assumptions.** Any fall in copper prices would put the government on an unsustainable path, with enormous adjustments necessary, if copper prices follow instead the WEO assumptions.

54. **Nevertheless, even if mineral prices fall, mineral revenues will remain important and should be managed in a sustainable way.** This would imply limiting the nonmineral primary deficit to about 6 percent of nonmineral GDP in addition to what would have been sustainable in a country without any mineral wealth. Any additional funds received from temporary mineral price swings or concessional loans should be saved.

55. **While not indispensable, a special fund could help achieve a sustainable fiscal policy.** Based on international experience, a fund of the financing variety would be ideal, though with the particular feature for Mongolia, the fund should not crowd out concessional loans. The detailed design of the fund is important for its success; however, some features of the existing development fund raise doubts that it can play a useful role.

²² For a theoretical argument that countries whose initial capital stock is small should spend a larger share of the mineral revenues upfront, see Takizawa et al. (2004).

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III. THE BANK OF MONGOLIA'S GOLD OPERATIONS²³

A. Introduction

56. **The Bank of Mongolia (BOM) has been engaged in gold operations since the early 1990s.** The main purpose of its engagement is to provide liquidity to market participants and economies of scale. Until 2001, the BOM acted as a monopolistic buyer of gold from local miners, but since 2002, designated commercial banks have also been allowed to purchase gold from local miners. Gold production has leapt fivefold from 1995 to 2005, contributing to a large increase in Mongolia's international reserves.

57. **As the volume of gold production has increased, various questions have been raised regarding the appropriateness of the BOM role in gold operations, which is more extensive than in most other gold-producing low-income countries.**²⁴ One of the main concerns is whether the BOM's gold operations could interfere with the conduct of monetary policy because, without adequate sterilization, gold purchases lead to an increase in reserve money. A second concern relates to governance issues such as the quality and transparency of the BOM's risk management practices. A third concern is that adverse gold price movements could erode the BOM's capital base.

58. **This chapter describes the BOM's current involvement in gold operations, assesses their contribution to the economy, and raises some concerns.** Despite its beneficial roles, including supporting the gold mining sector, boosting up the economy by promoting gold exports and contributing to accumulate foreign reserves, there have been growing concerns as well. Those primarily relate to the ineffectiveness of monetary policy, inefficiency of foreign reserves management, and weakening of central bank governance. The chapter concludes with policy recommendations to address the concerns.

B. The BOM's Involvement in the Domestic Gold Market

59. **The BOM started its gold market operations under the first "Gold Program" in 1991.** At that time, Mongolia's economy was at a relatively early stage of transition from a planned to a market economy. While the exploitation of natural resources (e.g., copper and gold) was seen as an important engine to growth, the domestic gold market was underdeveloped, with few participants on both the supply and demand sides. Local gold mining companies did not have sufficient capital to expand gold exploration, and commercial banks did not have the capacity to provide adequate intermediation in the gold market. As a result, the BOM was instructed by the government to step in to support the gold mining industry.

²³ Prepared by SeungHo Lee and Yinqiu Lu.

²⁴ For example, since 1997, South African gold miners have been allowed to sell their output independently of the South African Reserve Bank (SARB), provided that the SARB has granted the necessary exemption from relevant Exchange Control Regulations. This led to a gradual but dramatic decline in the central bank's involvement in the gold market.

60. **The BOM further stepped up its involvement in gold operations under the so-called “Gold 2000 Program.”** Under the program, the BOM’s role in gold trading was upgraded, granting the BOM a buyer’s monopoly of gold from miners. Furthermore, the BOM started providing gold mining companies with financial support (e.g., credit guarantees) to facilitate their access to working capital. As a result, the number of gold mining companies doubled from the mid-1990s, to reach 133 at end-2005, while gold output increased sharply.

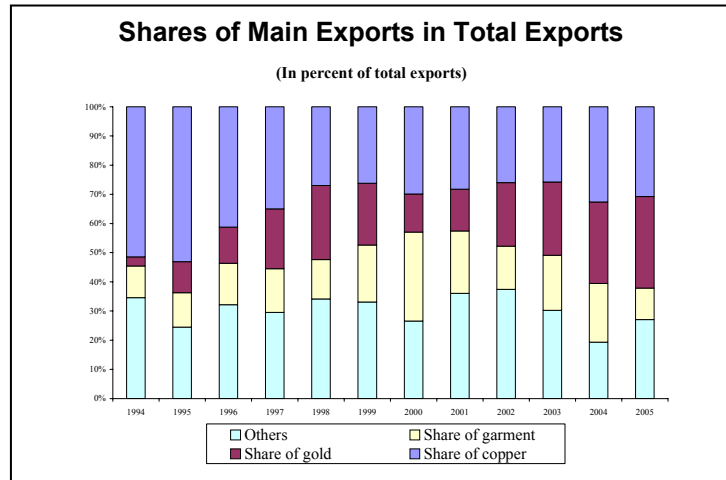
61. **The BOM’s monopoly ended on January 1, 2002, when the gold market was deregulated under the amended Central Bank Law.** The main purpose of the deregulation was to reduce the BOM’s involvement in quasi-commercial activities and to promote competition in the gold market. Thereafter, commercial banks began purchasing gold and building their institutional capacity. As a result, their share in gold trading has increased gradually. It reached more than half of total gold purchases in 2005, for the first time ever, although it declined again in 2006 after the implementation of the new windfall tax in mid-2006, which has also affected the BOM’s gold purchases, but to a lesser extent. Despite the liberalization of the market, however, commercial banks continue to resell most of their gold purchases to the BOM due to their liquidity constraints, small scale of operations, and lack of risk management capacity.²⁵

Gold purchased by the BOM and Commercial Banks					
	BOM		Commercial Banks		Total
	(In kg)	(In percent)	(In kg)	(In percent)	(In kg)
2000	12,271	100.0	0	0.0	12,271
2001	13,660	99.3	100	0.7	13,760
2002	6,297	52.1	5,800	47.9	12,097
2003	7,868	70.8	3,250	29.2	11,118
2004	6,420	55.4	5,175	44.6	11,595
2005	6,907	45.3	8,323	54.6	15,232
2006 (Aug.)	3,300	55.9	2,600	44.1	5,900

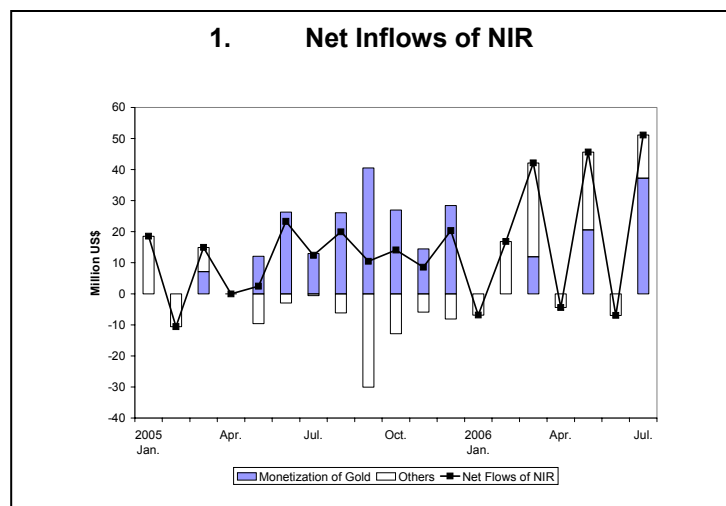
Sources: “Mongolian gold market and Mongol Bank” BOM, April, 2006.

²⁵ Of 16 commercial banks operating in Mongolia as of end-September 2006, TDB, Golomt, Anod, Zoos, Shuudan, and the Savings Bank are most actively involving in the gold trading.

62. **The BOM's involvement in the domestic gold market has supported the gold mining sector and changed the composition of Mongolia's exports.** Gold exports rose at an average annual growth rate of 40 percent during 1995-2005, reaching 23.8 tons in 2005 compared with merely 4.2 tons in 1995. Out of 15.2 tons of gold purchased by the BOM in 2005, 13.8 tons were exported, accounting for 58.0 percent of Mongolia's total gold exports.²⁶ Also buoyed by rising gold prices, the value of total gold exports increased to US\$331.0 million (31.4 percent of total export) in 2005 from US\$51.9 million (10.7 percent of total export) in 1995.



63. **Gold monetization also acts as a main contributor for the increase in Mongolia's international reserves.** It explains about two thirds of the international reserve inflows in 2005, and about half in 2006 up to July. The other sources, such as the loan transfer from abroad and foreign exchange purchases by the BOM are relatively small. As a result, net international reserves (NIR) reached US\$576.6 million at end-October 2006 from US\$105.4 million at end-1999.



64. **The rise in world gold prices since 2001 has ballooned the value of the international reserves,²⁷ because Mongolia's Central Bank Law requires that monetary gold be valued at market prices.²⁸** In the London market, gold prices jumped to US\$627 per

²⁶ An additional 10 tons was exported by the Boroo Gold Mine Company, 95 percent equity of which is owned by Centerra Gold, a Canadian listed company.

²⁷ Except in December 2003, when Mongolia made an US\$ 250 million payment to settle pre-1991 debt to Russia.

²⁸ The Central Bank Law (Article 37) requires that unrealized gains or losses arising from the revaluation of the BOM's international reserve assets and liabilities be reallocated in a revaluation reserve account. In contrast, under the IMF's IAS 21 ("The Effects of Changes in Foreign Exchange Rates") revaluation gains and losses should be recorded in the income statement, rather than in a reserve account.

troy ounce at the end of the second quarter of 2006 compared with US\$269 at the end of 2000. As a result, gold valuation has contributed to the increase in the BOM's international reserve holdings. For the same reason, however, a drop in gold prices could deflate the international reserves.

65. **To reduce the risks from its gold operations, the BOM has taken a number of steps.**

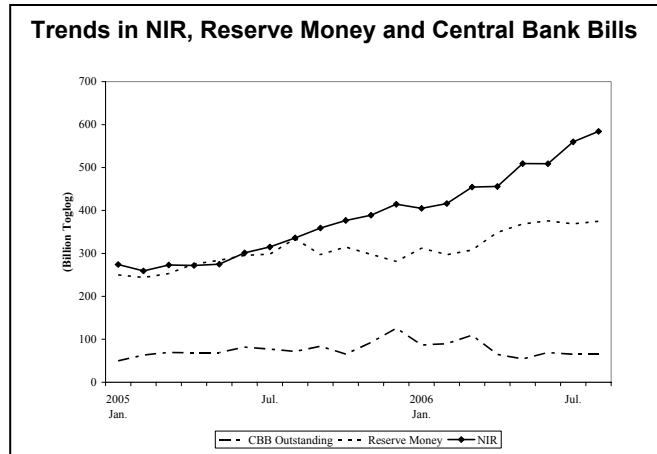
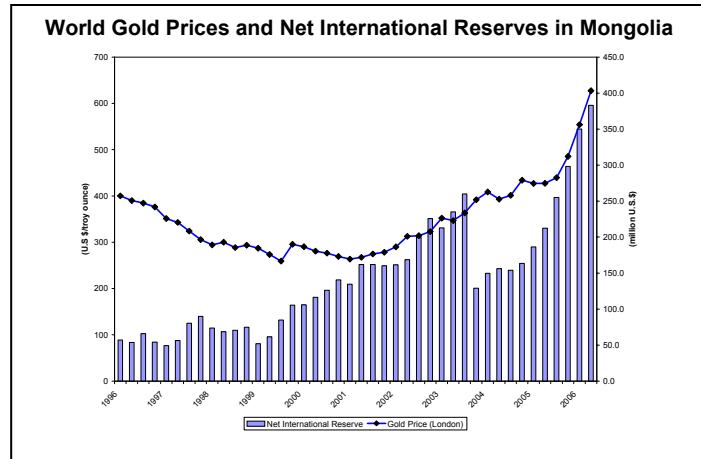
It has amended its internal rules to improve the internal reporting system and strengthened risk management of gold operations. It also introduced detailed operating manuals which include the limits on individual traders' daily open position taking and stop-loss. The internal rules also require that a long-term open position be closed before the end of each year.

C. Main Concerns on BOM's Gold Operations

66. **Despite these measures, the BOM's gold trading activities have given rise to concerns about their potential adverse macroeconomic impacts.** The BOM's gold operations may pose significant challenges to the conduct of monetary policy, international reserves management, and central bank governance.

Impact on the Conduct of Monetary Policy

67. **Without sterilization, the BOM's gold purchases lead to reserve money injection into the economy.** In fact, the increase in the reserve money in Mongolia has been largely driven by an increase in NIR. Thus, despite a marked drop in net credit to government, reserve money grew by 19.7 percent in 2005, stemming from a sharp increase in net foreign assets (82.3 percent from end-2004). As of end-August 2006, reserve money increased by 33.3 percent from end-December 2005, mostly driven by the increase in NIR (70.9 percent). In contrast, during the same period, outstanding CBBs issued declined from tog 125.7 billion to tog 65.3 billion. These developments are clear evidence that sterilization through CBB issuance was not sufficient to mop up the excess liquidity generated through the BOM's gold purchases.



68. **A regression was used to estimate the degree of sterilization in Mongolia (Box III.1).** The *sterilization coefficient*²⁹ is defined as the ratio of the change in CBBs to the change in NIR. The short-term elasticities are estimated at around 60-70 percent and even long-run elasticities are less than 80 percent. This result may indicate that the BOM's gold operations are not sufficiently sterilized. As a result, the effectiveness of monetary policy may be dampened, thereby preventing the BOM from meeting its inflation objective. Notwithstanding some benefits from the BOM's gold operations, the BOM should address more forcefully their negative impact on the monetary policy framework.

69. **The BOM's gold operations have a seasonal pattern.** Since 2003, most of the BOM's gold purchases were made between the second and the third quarter of the year, while the BOM sold most of the gold it held in the fourth quarter, as required by the internal rule. This pattern partly reflects the strong seasonality of both the mining sector, including gold production, and agriculture. As a result, money supply may expand further in response to the BOM's increasing gold purchases given that it is not closely coordinated with monetary policy operations.

²⁹ It is more generally estimated by analyzing the relationship between changes in net domestic assets and changes in net foreign assets in most countries that rely primarily on open market operations for liquidity control.

Box III.1. Estimation of Sterilization Coefficient

In order to gauge the degree of sterilization in Mongolia, net issuance of CBBs is estimated through several exogenous variables, including net international reserves, consumer price index, lending interest rates, and currency in circulation. The coefficient of NIR is a proxy of the sterilization coefficient.

The regression results show that the net issuance of CBBs is positively related, with high statistical significance, to the increase in NIR and the rise of CPI. The elasticity of changes in CBBs with respect to changes in NIR is about 59-67 percent and less than 80 percent in the long-run ($0.78 = 0.324/(1-0.584)$ in equation 2 and $0.70 = 0.294/(1-0.579)$ in equation 4).

Frequency : monthly data

Sample period : Dec. 1995 - Dec. 2005

Number of observation : 121

Estimation method : OLS

Dependent Variable: Log (CBB)				
Exogenous variables	Equation 1	Equation 2	Equation 3	Equation 4
Constant	4.556 ^{***} (2.900)	1.044 (0.844)	0.165 (0.152)	0.903 (1.119)
Log(NIR)	0.670^{***} (5.546)	0.324^{***} (3.194)	0.592^{***} (3.768)	0.294^{**} (2.438)
Log(CPI)	2.120 ^{***} (5.900)	0.993 ^{***} (3.263)	2.349 ^{***} (5.112)	0.855 ^{**} (2.248)
LR	-0.009 ^{**} (-2.480)	0.0003 ^{***} (0.107)	-	-
Log(CIC)	-	-	0.296 (1.108)	0.089 (0.445)
Log(CBB) ₋₁	-	0.584 ^{***} (8.637)	-	0.579 ^{***} (8.835)
Adjusted R-squared	0.880	0.924	0.875	0.925
D.W.	0.78	2.30	0.80	2.28

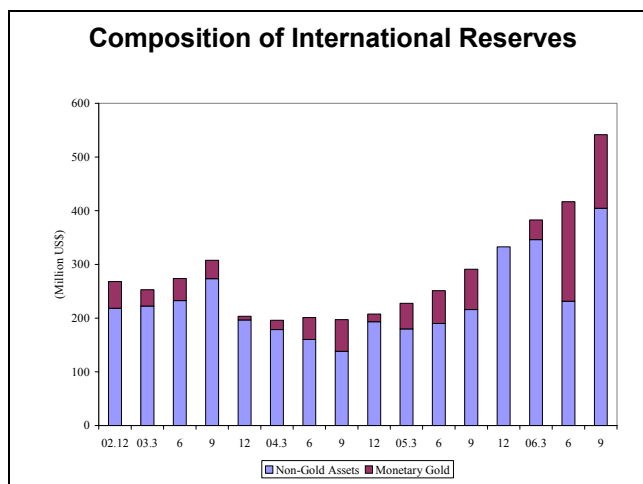
1/ ***and ** indicate 1 percent and 5 percent significance levels.
2/ Numbers in parentheses indicate t-values.
3/ CBB: outstanding of Central Bank Bills issued; NIR: net international reserves;
CPI: consumer price index; LR: lending interest rates; CIC: currency in circulation

International Reserve Management

70. The share of gold in Mongolia's total international reserves has been large but volatile.

The share peaked at 57.4 percent at end-November 2004 before declining to zero in December 2005.

Subsequently, it rose to 44.5 percent at the end-June 2006 but fell again to 25.3 percent at the end-September. Mongolia's share of total international reserves held in the form of gold is large compared with other gold



producing countries. In the case of South Africa, for example, the share of gold in total international reserves stood at around 10 percent at end-September 2006.

71. **The BOM's gold operations may hamper the management of international reserves.** The BOM has relied on derivative instruments (e.g., forwards and options) to hedge the gold price risk. However, the BOM has used derivatives to take positions in the market for the purpose of maximizing returns on foreign reserve assets. Such activities can expose the BOM to significant risks that could damage the BOM's reputation and credibility.³⁰ Therefore, it is crucial that the BOM's risk exposure in connection with its gold operations be monitored continuously through reliable information, efficient reporting system, and an independent audit function.

72. **Holding international reserves has both costs and benefits.** Because the BOM has to pay interests on CBBs used to sterilize international reserves, domestic interest rates or GDP growth rates could serve as proxies for assessing the cost of holding international reserves. Conversely, adjustment costs from external imbalances could be viewed as a gain from holding international reserves, because any international reserve shortage may require strong and costly policy adjustment to phase out the imbalances. Propensity to import could be a proxy for estimating the benefits from holding international reserves, since the higher the propensity to import, the more likely is the emergence of external imbalances. International interest rates are also considered as a benchmark of the return from holding international reserves because most foreign reserves in central banks are invested in safe assets abroad with interest income. For this reason, the interest rate differential, instead of domestic interest rate, is regarded as a net cost of holding international reserves.

³⁰ The main issues of transparency in the context central bank governance and accountability in reserve management are addressed in the IMF's 'Code of Good Practices on Transparency in Monetary and Financial Policies: Declaration of Principles in September, 1999 (MFP transparency Code).

73. **Given the sizeable gold holdings, there is a need to assess the cost of holding international reserves in Mongolia.** Although not as large as it was in the past, the spread between domestic and international interest rates spread remains very high. In contrast, the propensity to import, a proxy for the benefits from holding international reserves has been decreasing rapidly. This may imply that there is diminishing needs for the BOM to build up excessive international reserves at high costs.

Interest Rate Spread and Average Propensity to Import							
	2000	2001	2002	2003	2004	2005	2006
Lending Rate (A) ^{1/} (in percent)	34.70	41.40	33.40	31.48	30.00	28.30	28.10 ^{3/}
LIBOR (B) ^{1/,2/}	6.48	1.87	1.38	1.13	2.47	4.47	5.38 ^{3/}
Spread (A-B)	28.22	39.53	32.02	30.35	27.53	23.83	22.72
Import (C) (in millions of US\$)	676.0	693.1	752.8	826.6	1,021.2	1,223.6	1,532.1 ^{4/}
Nominal GDP (D) (in millions of US\$)	947.5	1,018.1	1,121.1	1,285.3	1,625.2	2,065.3	2,787.9 ^{4/}
Propensity to Import (C/D)	71.3	68.1	69.1	64.3	62.8	59.2	55.0
1/ End-year. 2/ 3-months on U.S. dollar deposits. 3/ End-August. 4/ IMF Staff estimates.							

BOM's Income Statements

74. **The BOM's gold operations affect its income statement in three ways.** These include: (i) the profit or loss from the spot trading of monetary and nonmonetary gold; (ii) revaluation and (iii) profit or loss from derivative transactions. The income from gold spot trading itself has two parts. The first part is the fees that the BOM charges on domestic gold sellers for gold insurance, shipping, and refining cost. The second component on spot transactions arises when the BOM sells or buys gold from the over-the-counter (OTC) market, thereby generating income and expenses.

75. **The bulk of income and expenses from gold operations comes from revaluation reflecting changes in both gold prices and the exchange rate.** Whenever the BOM has a long position on nonmonetary gold or monetary gold, the increase in gold prices yields profits. Likewise, when the togrog depreciates against US\$, the gold value denominated in togrog increases and profits arise. Gold revaluation was the main contributor to the BOM's income surplus in 2005 .

Income Statement of BOM in 2005 (In Millions of togrogs)			
	Revenue	Expenses	Net profit
Total	142,385	133,055	9,330
Gold revenue	94,820	74,194	20,626
Trade from gold & silver	15,865	19,172	-3,307
Revaluation	76,366	52,839	23,527
Derivative dealing	2,589	2,183	406
Others	47,565	58,861	-11,296

76. **Gold derivative transactions also contribute to the BOM's income.** The BOM usually sells forward and calls options in the OTC market to hedge its gold position. In 2005, the BOM realized a profit of about US\$2 million from the option premiums. The BOM also books to market the price movements of forward and options positions. For example, if the price of the option that the BOM wrote increases before maturity, the BOM will record a loss under the item "unrealized derivatives". Upon the expiration of the options, the income or losses recorded under the "unrealized derivatives" item will be moved under the "realized income or losses" item.

77. **The BOM has also at times conducted gold derivative transactions on behalf of gold mining companies.** The BOM levies a fee³¹ for conducting derivatives transactions for mining companies.³² The BOM's internal guidelines describe the instruments (spot, forward, and options) used for managing gold operations, the procedures for gold mining companies to submit requests, the BOM's responsibilities, and the penalties imposed on mining companies for late payments. These operations, which are recorded in the BOM's balance sheet as a receivables or payables from the mining companies, could impair the BOM's reputation and may result in a breach of the Central Bank Law.

78. **The BOM's gold operations have been the predominant source of the BOM's profits and losses.** In 2005, total BOM's revenue from gold operations was tog 94.8 billion, accounting for 67 percent of the BOM's total income. Meanwhile, expenses related to gold transactions were tog 74.2 billion, or about 56 percent of the BOM's expense. The net profit from gold transactions was tog 20.6 billion, largely explaining the BOM's net profit of tog 11.4 billion in 2005.

³¹ 5 percent of the premium for a call option and forward gain, respectively.

³² Only gold mines with an annual gold production of more than 500 Kg within the last 2 years are eligible for these transactions.

79. **The BOM's heavy reliance on gold operations for its income could contain greater cost than the benefit it bears.** The benefits could arise from the fact that the gains from gold operations could be used to finance potential fiscal deficits. Nevertheless, a possible dramatic reversal of past gains in the wake of a sharp decline in world gold prices would erode the BOM's capital base. This would damage the BOM's credibility, even threatening financial system stability. In other words, BOM's recapitalization would put further strain on the budget, which could fuel further inflation expectations and would weaken confidence in the togrog. As a result, debt sustainability could deteriorate.

D. Conclusion

80. **Despite the benefits of the BOM's gold operations, there have also been growing policy concerns.** Gold operations injects high powered money into the economy. The sterilization process through issuing CBBs has been insufficient to mop up the liquidity caused by gold purchases, which may mitigate the effectiveness of monetary policy and jeopardize the inflation target aimed at maintaining price stability. It may also give rise to uncertainty and risks regarding the management of international reserves. Moreover, the BOM should consider the high level of domestic interest rates as a cost of holding international reserves. The significant reliance of BOM's income statement on gold trading could also bear more concerns regarding central bank governance. Even though of BOM's profits through gold operations could finance part of the fiscal deficit, the Mongolian authorities should consider the risks in the event of world gold price declines.

81. **A key task ahead for the BOM is how to reduce these risks without adversely affecting the gold mining sector, particularly small producers who do not have the financial expertise or scale of operation necessary to export directly.** In view of the still-limited capacity of domestic banks and other market participants, an immediate withdrawal of the BOM from domestic gold market purchases could be counterproductive. However, the BOM should adopt more prudent guidelines for its gold risk exposures, refrain from entering into risky speculative positions in gold and other speculative financial derivatives, and begin preparing a timely exit strategy from the gold market.

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IV. FOREIGN EXCHANGE MARKET IN MONGOLIA³³

82. **Mongolia's foreign exchange market is still at an early stage of development.** Its main component is the interbank market, where commercial banks trade foreign exchange with each other, as well as with the Bank of Mongolia (BOM), their business clients, and private individuals. The market share of foreign exchange bureaus is fairly small.³⁴ Compared with mature interbank markets in developed countries, the bulk of commercial banks' transactions is with their business clients instead of with other commercial banks³⁵. Interbank trading, which accounts for most of the activity in mature foreign exchange markets, accounts for less than 20 percent of total transactions in Mongolia. In addition, foreign exchange is only traded at spot prices. Although there are a few forward transactions among commercial banks as part of their own reserve management, there is no real forward market, and commercial banks' ability to hedge foreign exchange risks is limited.

Foreign Exchange Trade of Commercial Banks						
	Individuals	Business units	Other banks	BOM	Total transactions	Total transactions
	(In percent of total foreign exchange transactions)				(In US\$ millions)	(In percent of GDP)
Purchases from						
2002 1/	14	56	7	22	437	39
2003	25	49	16	11	702	55
2004	34	41	16	11	890	55
2005	29	43	20	8	1049	51
2006 2/	17	62	14	7	554	-
Sales to						
2002 1/	17	69	7	7	425	38
2003	27	52	16	4	692	54
2004	40	42	16	4	901	56
2005	34	45	19	2	1114	54
2006 2/	21	50	22	7	499	-

Sources: Data provided by the Bank of Mongolia; and Fund staff calculations.

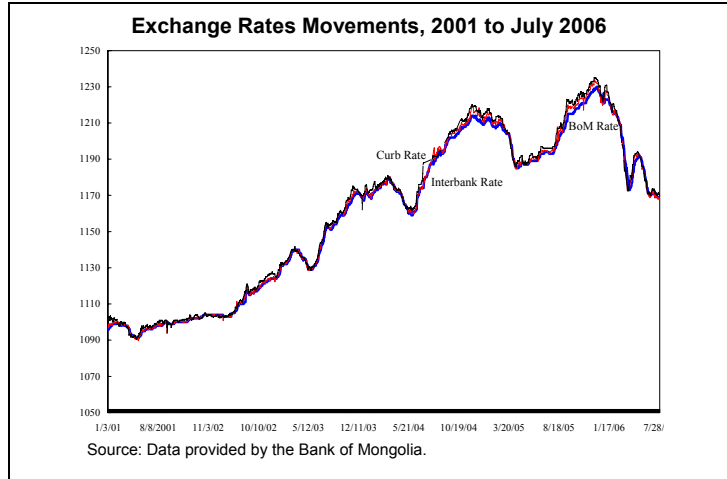
1/ In 2002, trade with other banks were separated from trade with business units only from June.
2/ Through July 2006.

³³ Prepared by Yi Wu.

³⁴ A study conducted a few years ago found that foreign exchange bureaus accounted for 5 percent of total foreign exchange market transactions.

³⁵ Partly reflecting Mongolia's high degree of trade openness (import and export to GDP ratios were 59 percent and 52 percent in 2005), the shares of foreign currency deposits and loans to total deposits and loans were 43 percent and 44 percent at end-2005.

83. **The BOM sets its daily midpoint exchange rate based on lagged exchange rates at the interbank market.** The midpoint exchange rate of the togrog against the U.S. dollar is set and announced daily in late afternoon, usually calculated as the simple average of the buying and selling rates from the previous day's transactions reported by commercial banks. This rate is then used as the next day's BOM



policy rate. Sometimes the midpoint rate is set differently from this rule, especially whenever the BOM decides to keep the BOM rate unchanged, e.g., when the BOM concludes that market fluctuations are temporary. Today's exchange rates from the largest foreign exchange bureaus are also collected (dubbed "curb rates") as a reference for setting the midpoint rate. The BOM rate broadly follows the interbank rate with a lag.

84. **The midpoint rate is only used in government transactions and customs valuation, for accounting and taxation purposes.** All other transactions, including sales of retained foreign exchange by public sector enterprises, take place through the interbank market. Exchange rates for other convertible currencies are calculated on the basis of the cross rates against the dollar in international markets.

85. **Interventions are officially limited to smoothing high-frequency fluctuations in the foreign exchange market, using the U.S. dollar as the principal intervention currency.** Because the BOM can accumulate foreign reserve through its gold operations, there is usually no need for the BOM to purchase foreign exchange from the market for that purpose. Indeed, the BOM has been a net seller of foreign exchange in the interbank market.

BOM's Gold Purchases and Reserve Accumulation (In millions USS\$)				
	2002	2003	2004	2005
BOM gold purchase	118	158	137	210
Increase in net international reserves	66	-97	37	131

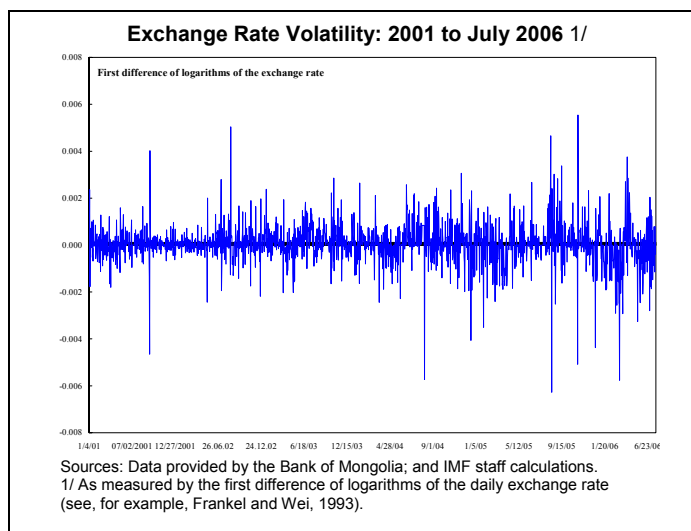
Source: Data provided by the Bank of Mongolia.

86. **The BOM has deliberately avoided intervening in the interbank market in recent years.** Although there were episodes of deliberate intervention in the past, in recent years the BOM's interventions, which are not sterilized, have been limited to fulfilling

requests from commercial banks. The BOM also claims that no interventions for smoothing purposes were made, probably reflecting broad stability of the exchange rate, with the togrog only depreciating by 6 percent against the U.S. dollar during 2001–end-July 2006 and the real effective exchange rate appreciating by 7 percent over the same period.

87. **The BOM’s buying and selling rates are set at five togrogs below and above the midpoint rate.** This trading margin of ten togrogs is high compared with those of the commercial banks, which are usually four togrogs or less for transactions with business clients. The BOM has deliberately set a large margin to reduce commercial banks’ incentives to trade foreign exchange with the BOM. Occasionally, a different margin (e.g., eight togrogs) was applied.

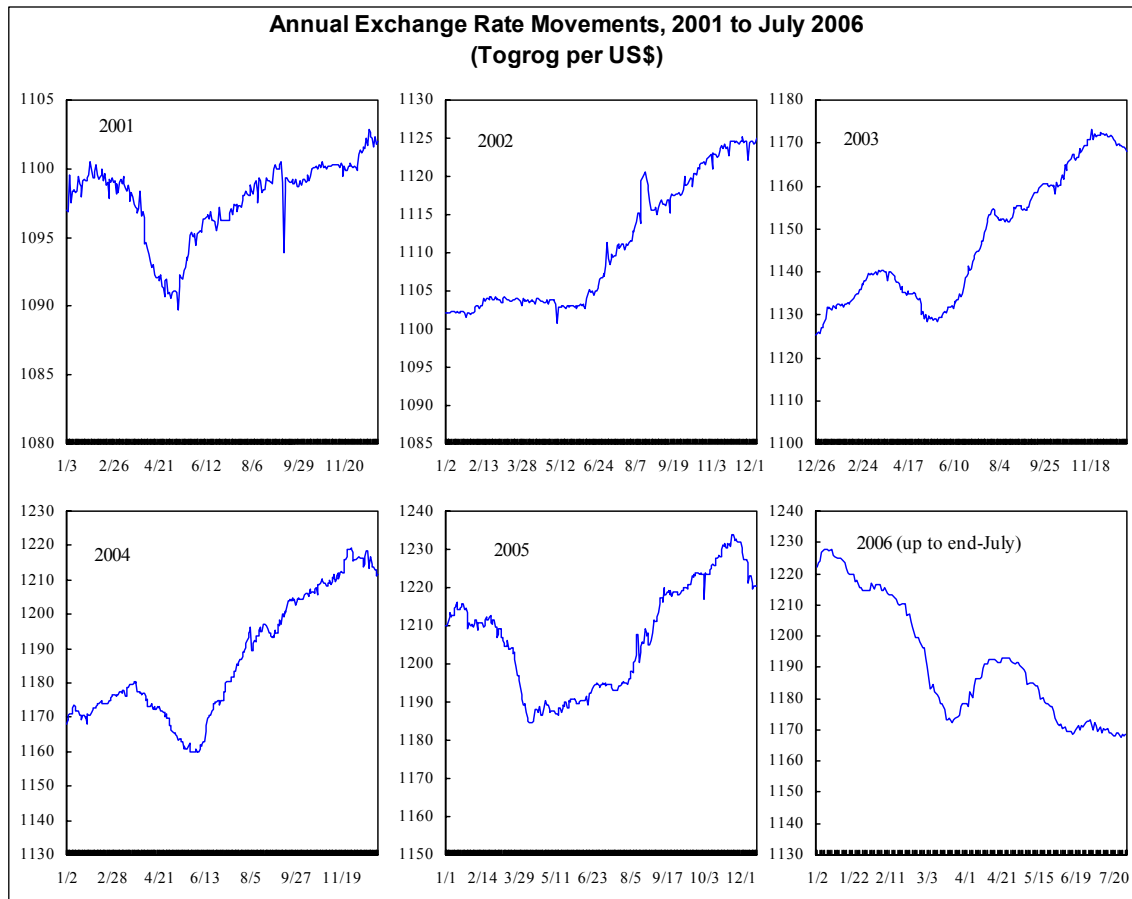
88. **The BOM’s market share in Mongolia’s foreign exchange market has declined significantly in recent years.** The BOM’s high margins reduced arbitrage opportunities arising from the difference between the BOM’s rates and market rates. Commercial banks generally only approach the BOM when they are under liquidity constraints, which has led to a decline in the BOM’s market share in recent years. While in 2002 commercial banks purchased 22 percent of their foreign exchange needs from the BOM, this share declined to 8 percent in 2005. Increased foreign exchange inflows in recent years have eased commercial banks’ liquidity constraints, as a result banks rely on the BOM to a lesser extent to meet their liquidity requirements. Exchange rate volatility has increased slightly since 2004.



Exchange Rate Volatility, 2001 to July 2006						
	2001	2002	2003	2004	2005	2006 1/
Exchange rate volatility 2/	0.00064	0.00066	0.00068	0.00088	0.00103	0.00120
1/ Based on data through end-July.						
2/ As measured by the standard deviation of the first difference of logarithms of daily exchange rate.						

89. **The seasonality of the togrog exchange rate against the U.S. dollar appears to have dampened somewhat recently.** The togrog usually appreciates in the first half of the year, in response to sales of raw materials (e.g., cashmere, skin and hides) in the spring and

inflows of financing for mining operations (usually in the second quarter), and depreciates in the second half of the year, as mining companies pay off loans toward the end of the year.³⁶ With the increase in foreign exchange inflows in recent years, in particular FDI and tourism receipts (which peaks after June), this pattern seems to have dampened somewhat recently, as the depreciation of togrog did not pick up until August in 2005, and the togrog's appreciation during 2006 has lasted longer.



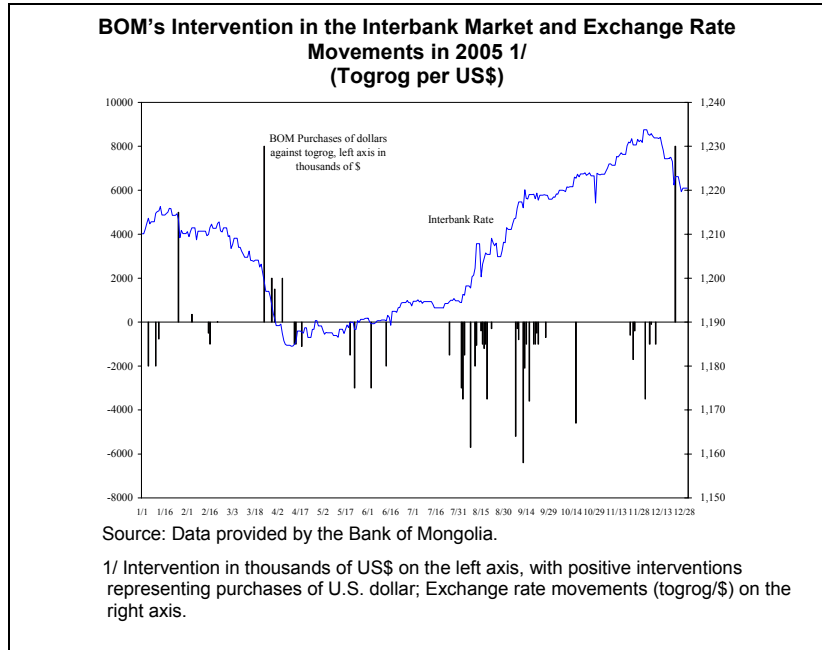
90. The BOM may reject foreign exchange requests from commercial banks.

Occasionally, the BOM declines banks' requests, if it considers they are for arbitrage profits.³⁷ The BOM may also refuse to sell foreign exchange to banks if the BOM considers the level of its international reserves to be low. No explanations are given to commercial banks, however, when their requests for foreign exchange are declined.

³⁶ Nevertheless, during 2001–05 the togrog consistently depreciated against the dollar toward the end of the year.

³⁷ From September 2005 to July 2006, this allegedly happened in three days.

91. **The impact of the BOM's intervention on the market rate is limited.** The BOM's interventions are atypical of central banks' interventions, whereby the central banks buy or sell foreign exchange in order to affect the exchange rate level. Nevertheless, the impact could still be significant, given that these interventions are relatively large. The BOM intervened in the foreign exchange market in 2005 with eight purchases of U.S. dollars totaling \$27 million and 74 sales totaling \$81 million. However, in general the exchange rate did not move in the anticipated direction (in the near future). This reflects the passive nature



of the BOM's interventions, with U.S. dollar purchases generally made during periods of U.S. dollar depreciation (i.e., when there is an oversupply of U.S. dollars in the market) while U.S. dollar sales generally occurring during periods of U.S. dollar appreciation. The interventions may have reduced the magnitude of the appreciation/depreciation (in other words, the volatility), but have not fundamentally changed the trend of exchange rate movements.

92. **The BOM's midpoint rate seems to affect the market rate.** At this rate adjusted by trading margins, the BOM provides the market with an additional source of liquidity and arbitrage opportunities, conceptually it should therefore also affect the market rate. In addition, because the midpoint rate is essentially the lagged market rate, it should help reduce the market volatility. On the other hand, because the BOM has the option to decline foreign exchange requests from commercial banks, the impact of the midpoint rate on the market rate, if any, could be rather limited. Granger Causality tests suggest that the midpoint rate seems to affect the market rate.

Box IV.1. Does BOM's Midpoint Rate Affect the Market Rate?

The following Granger Causality test was used:

$$y_t = \alpha_0 + \alpha_1 y_{t-1} + \dots + \alpha_4 y_{t-4} + \beta_1 x_{t-1} + \dots + \beta_4 x_{t-4} + \varepsilon_t$$

- Two versions of y_t are used: (i) the level; and (ii) the first difference of the interbank rate. For the former, the level of BOM rate is used as x_t . For the latter, two versions of x_t are used: (i) the first difference of the BOM rate; and (ii) the difference of the BOM rate and the lagged interbank rate.
- Daily data from January 2001 to July 2006 with 4 lags are used, although the results are robust to different lag lengths. The purpose is to test if the current and/or lagged BOM rates can help explain current interbank rates, after controlling for lagged interbank rates.
- The null hypothesis of no Granger Causality can be rejected in all three cases, with p-values close to zero. This evidence is consistent with the hypothesis that the BOM rate affects the interbank rate. Nevertheless, because the Granger Causality tests are best described as tests of whether x helps forecast y rather than tests of whether x causes y , one needs to be cautious in concluding causation.

Table 1. Mongolia: Basic Data, 2001–06

	2001	2002	2003	2004	2005	2006 Est.
Population						
Total population (million; mid-year)	2.4	2.5	2.5	2.5	2.6	2.6
Population growth rate (annual percentage change)	1.4	1.4	1.4	1.4	1.4	1.4
Income						
Gross domestic product (at current market prices)						
(In billions of togrog)	1,118	1,245	1,474	1,926	2,489	3,306
(In millions of U.S. dollars)	1,018	1,121	1,285	1,625	2,065	2,788
(In U.S. dollars; per capita)	417	453	513	642	806	1,075
(Annual percentage change)						
Real GDP						
Real gross domestic product (at constant 2000 prices)	1.1	4.2	6.1	10.8	7.0	7.0
Mineral real GDP	9.0	-8.2	-2.3	34.3	10.9	5.2
Nonmineral real GDP	0.1	5.9	7.1	8.1	6.5	7.3
Agriculture	-18.3	-12.5	4.9	17.7	11.0	...
Other	9.1	12.6	7.8	5.5	5.1	...
(In percent of GDP)						
Savings-investment balance						
Gross national savings	36.0	29.7	38.0	45.0	43.5	...
Government	4.8	4.4	7.5	8.6	9.3	...
Private	31.2	25.4	30.5	36.4	34.2	...
Gross investment	43.6	39.3	45.7	43.4	42.1	...
Savings-investment balance	-7.6	-9.6	-7.7	1.6	1.4	5.2
(Annual percentage change)						
Inflation						
Period average	8.0	1.0	5.1	8.3	12.1	5.6
End of period	7.9	1.6	4.7	11.0	9.5	7.0
GDP deflator	8.4	7.0	11.6	18.0	20.7	24.1
(In percent of GDP)						
General government budget						
Total revenue and grants	38.4	38.3	37.6	37.0	33.7	40.6
Mineral revenue	1.5	1.8	2.8	4.1	4.5	10.1
Nonmineral revenue and grants	36.9	36.5	34.8	32.9	29.2	30.6
Total expenditure and net lending	43.8	44.2	41.8	39.1	30.7	31.7
Overall balance	-5.4	-5.9	-4.2	-2.1	2.9	9.0
Nonmineral overall balance	-6.9	-7.7	-7.0	-6.3	-1.5	-4.5
(Annual percentage change; unless otherwise indicated)						
Money and credit						
Broad money	28.0	41.9	49.7	20.3	37.3	34.9
Reserve money	8.4	21.7	14.7	16.8	19.7	16.5
Claims on nonbanks	101.5	70.4	90.3	43.7	40.1	39.2
Interest rates (Central bank bills; in percent)	8.8	8.0	15.0	15.8	3.7	5.8
(In percent of GDP)						
Balance of payments						
Current account balance (Excluding official transfers)	-14.6	-14.3	-11.5	-3.7	-2.8	2.0
Current account balance (Including official transfers)	-7.6	-9.6	-7.7	1.6	1.4	5.2
Exports	51.4	46.7	48.8	53.7	51.7	55.5
Of which: mineral exports	24.3	25.4	27.3	34.2	36.6	...
Imports	68.1	67.1	64.3	62.8	59.2	55.0
Of which: petroleum products	12.2	10.2	10.8	12.9	13.2	...
(In millions U.S. dollars; unless otherwise indicated)						
Foreign exchange reserves						
Gross official reserves	207	271	178	208	333	626
(In months of next year's imports of goods and services)	2.6	3.0	1.5	1.6	2.1	3.4
Public and publicly guaranteed debt						
Total public debt (In percent of GDP)	89.0	91.4	112.8	93.0	68.3	53.6
Domestic debt (In percent of GDP)	4.8	3.0	14.8	7.6	4.2	2.6
External debt	854	978	1,237	1,361	1,308	1,405
(In percent of GDP)	84.2	88.4	98.2	85.4	64.1	51.0
Debt service	34	32	284	91	43	42
(In percent of exports of goods and services)	5.3	4.5	34.0	7.5	2.9	2.1
(In millions of SDRs)						
Fund quota						
	51.1	51.1	51.1	51.1	51.1	51.1
(In togrog per U.S. dollar)						
Exchange rate						
Period average	1,098	1,110	1,147	1,185	1,205	1,186
End of period	1,102	1,125	1,168	1,209	1,221	1,164

Sources: Data provided by the Mongolian authorities; and Fund staff estimates.

Table 2. Mongolia: GDP by Sector at Current Market Prices, 2001–05

	2001	2002	2003	2004	2005
	(In billions of togrogs)				
Nominal GDP	1,118	1,245	1,474	1,926	2,489
Mineral	101	126	186	366	616
Non-mineral	1,017	1,119	1,288	1,561	1,873
<i>Of which:</i> Excluding agriculture, hunting, forestry, and fishery	739	862	994	1,162	1,383
Formal sector	968	1,075	1,267	1,728	2,273
Informal sector	150	170	206	198	216
Nominal GDP by Sector					
Agriculture, hunting, forestry and fishery	278	257	293	399	491
Secondary sector	247	282	376	577	883
Mining, quarrying, and petroleum	101	126	186	366	616
Manufacturing	90	78	90	98	131
Electricity, gas and water	33	47	49	61	76
Construction	23	31	51	52	60
Services	593	707	804	950	1,116
Wholesale and retail trade	298	344	387	465	540
Hotel and restaurants	14	15	16	20	25
Transport, storage and communication	145	183	203	241	301
Financial intermediation	36	42	62	81	100
Real estate and other services	12	15	22	28	29
Public administration	48	56	62	71	80
Education	50	57	66	66	74
Health and social services	21	23	25	33	35
Other community, social and personal services	5	7	8	10	13
Less: Indirect services of financial organizations	-35	-35	-48	-65	-80
	(In percent of GDP)				
Memoranda items:					
Nominal GDP	100.0	100.0	100.0	100.0	100.0
Mineral	9.0	10.1	12.6	19.0	24.7
Nonmineral	91.0	89.9	87.4	81.0	75.3
<i>Of which:</i> Excluding agriculture, hunting, forestry, and fishery	66.1	69.3	67.5	60.3	55.5
Formal sector	86.6	86.3	86.0	89.7	91.3
Informal sector	13.4	13.7	14.0	10.3	8.7
Agriculture, hunting, forestry and fishery	24.8	20.6	19.9	20.7	19.7
Secondary sector	22.1	22.6	25.5	30.0	35.5
Mining, quarrying, and petroleum	9.0	10.1	12.6	19.0	24.7
Manufacturing	8.1	6.3	6.1	5.1	5.2
Electricity, gas and water	2.9	3.8	3.3	3.2	3.1
Construction	2.0	2.5	3.4	2.7	2.4
Services	53.1	56.8	54.6	49.3	44.8
Wholesale and retail trade	26.6	27.6	26.3	24.1	21.7
Hotel and restaurants	1.3	1.2	1.1	1.0	1.0
Transport, storage and communication	13.0	14.7	13.8	12.5	12.1
Financial intermediation	3.2	3.3	4.2	4.2	4.0
Real estate and other services	1.1	1.2	1.5	1.5	1.2
Public administration	4.3	4.5	4.2	3.7	3.2
Education	4.5	4.6	4.5	3.4	3.0
Health and social services	1.8	1.8	1.7	1.7	1.4
Other community, social and personal services	0.4	0.6	0.5	0.5	0.5
Less: Indirect services of financial organizations	-3.1	-2.9	-3.2	-3.4	-3.2

Source: Data Provided by the National Statistical Office.

Table 3. Mongolia: GDP by Sector at 2000 Constant Prices, 2001–05

	2001	2002	2003	2004	2005
	(In billions of togrog)				
Real GDP	1,031	1,074	1,140	1,262	1,351
Mineral	127	116	114	152	169
Non-mineral	905	958	1,026	1,110	1,182
<i>Of which</i> : Excluding agriculture, hunting, forestry, and fishery	663	746	804	848	892
Real GDP by Sector					
Agriculture, hunting, forestry and fishery	242	212	222	262	290
Secondary sector	259	270	286	327	331
Mining, quarrying, and petroleum	127	116	114	152	169
Manufacturing	85	101	105	106	87
Electricity, gas and water	25	26	26	28	28
Construction	23	27	41	40	46
Services	530	593	632	673	730
Wholesale and retail trade	258	299	312	330	351
Hotel and restaurants	13	13	13	15	17
Transport, storage and communication	127	147	163	180	216
Financial intermediation	31	35	46	56	64
Real estate and other services	12	14	17	20	21
Public administration	44	44	43	45	46
Education	47	50	48	44	43
Health and social services	20	20	20	21	21
Other community, social and personal services	4	5	6	6	7
Less: Indirect services of financial organizations	-25	-34	-36	-44	-56
	(Annual percentage change)				
Memoranda items:					
Real GDP	1.1	4.2	6.1	10.8	7.0
Mineral	9.0	-8.2	-2.3	34.3	10.9
Nonmineral	0.1	5.9	7.1	8.1	6.5
<i>Of which</i> : Excluding agriculture, hunting, forestry, and fishery	9.1	12.6	7.8	5.5	5.1
Agriculture, forestry and fishing	-18.3	-12.5	4.9	17.7	11.0
Secondary sector	15.4	4.1	5.9	14.5	1.2
Mining, quarrying, and petroleum	9.0	-8.2	-2.3	34.3	10.9
Manufacturing	33.2	19.0	4.3	1.3	-17.9
Electricity, gas and water	2.7	3.2	1.1	6.3	0.8
Construction	11.9	18.0	52.6	-1.6	15.4
Services	4.7	11.8	6.6	6.6	8.4
Wholesale and retail trade	5.3	16.3	4.1	5.8	6.3
Hotel and restaurants	-6.9	3.7	0.5	17.3	12.1
Transport, storage and communication	12.9	15.9	11.1	10.6	19.7
Financial intermediation	22.0	10.7	32.5	21.7	14.3
Real estate and other services	4.1	23.4	19.3	16.6	3.8
Public administration	-5.7	-0.8	-2.5	4.0	3.4
Education	1.1	4.7	-4.3	-6.6	-3.0
Health and social services	3.8	1.2	-2.1	5.3	0.4
Other community, social and personal services	-0.9	27.9	36.9	-4.2	21.6
Less: Indirect services of financial organizations	43.6	36.1	5.4	23.9	26.5

Source: Data Provided by the National Statistical Office.

Table 4. Mongolia: GDP Deflator by Sector, 2001–05

	2001	2002	2003	2004	2005
	(Annual percentage change)				
GDP deflator	8.4	7.0	11.6	18.0	20.7
Mineral GDP	-20.4	36.1	51.1	46.5	51.8
Nonmineral GDP	12.4	3.9	7.4	12.1	12.7
<i>Of which</i> : Excluding agriculture, hunting, forestry, and fishery	11.5	3.6	7.0	10.7	13.2
GDP deflator by Sector					
Agriculture, hunting, forestry, and fishery	14.7	5.6	9.0	15.6	10.8
Secondary sector					
Mining, quarrying, and petroleum	-20.4	36.1	51.1	46.5	51.8
Manufacturing	6.6	-27.3	11.2	7.5	61.4
Electricity, gas and water	30.3	37.6	4.0	17.0	23.2
Construction	1.1	15.1	7.0	3.8	1.0
Services					
Wholesale and retail trade	12.2	2.4	5.0	13.0	10.6
Hotel and restaurants	12.7	4.3	5.8	3.4	10.8
Transport, storage and communication	14.4	8.8	-0.2	7.4	4.6
Financial intermediation	14.0	5.7	12.7	7.7	6.9
Real estate and other services	4.0	4.3	21.2	9.1	-2.2
Public administration	8.6	17.1	13.0	10.4	8.7
Education	5.5	9.4	20.5	6.2	16.3
Health and social services	3.4	8.0	15.4	22.7	6.8
Other community, social and personal services	6.0	5.0	17.9	6.9	6.6
Less: Indirect services of financial organizations	3.9	-4.2	8.3	7.8	6.9

Source: Data Provided by the National Statistical Office.

Table 5. Mongolia: Gross National Disposable Income and Savings at Current Market Prices, 2001–05

	2001	2002	2003	2004	2005
	(In billions of togrog)				
Final consumption	1,052	1,194	1,278	1,509	1,753
Private	842	967	1,032	1,196	1,408
Government	211	227	246	313	344
Gross investment	487	490	673	835	1,048
Gross fixed capital formation	436	451	615	754	987
Change in inventories 1/	51	39	57	81	61
Domestic demand	1,539	1,684	1,951	2,345	2,801
Foreign balance (net)	-211	-267	-285	-231	-109
Exports of goods and services 2/	699	787	958	1,434	1,787
Imports of goods and services 2/	-910	-1,054	-1,243	-1,665	-1,896
Statistical discrepancy 3/	-211	-172	-193	-188	-203
Gross domestic product 4/	1,118	1,245	1,474	1,926	2,489
Income from abroad (net) 2/	3	-5	-13	-56	-127
Gross national income (GNI) 5/	1,121	1,240	1,460	1,870	2,362
Current transfers (net) 2/	123	153	185	318	271
Gross national disposable income (GNDI) 6/	1,244	1,393	1,646	2,188	2,633
	(In percent of GDP)				
Memoranda items:					
Gross domestic product	100.0	100.0	100.0	100.0	100.0
Domestic demand 7/	118.9	121.5	119.3	112.0	104.4
Final Consumption 7/	75.3	82.1	73.7	68.6	62.2
Private 7/	56.5	63.9	57.0	52.4	48.4
Government	18.8	18.3	16.7	16.2	13.8
Gross investment	43.6	39.3	45.7	43.4	42.1
Foreign balance (net) 2/	-18.9	-21.5	-19.3	-12.0	-4.4
Exports of goods and services 2/	62.5	63.2	65.0	74.5	71.8
Imports of goods and services 2/	-81.4	-84.7	-84.3	-86.4	-76.2
Statistical discrepancy 3/	-18.8	-13.8	-13.1	-9.7	-8.2
Gross domestic savings 8/	24.7	17.9	26.3	31.4	37.8
Gross national savings 9/	36.0	29.7	38.0	45.0	43.5
Government savings 10/	4.8	4.4	7.5	8.6	9.3
Private savings	31.2	25.4	30.5	36.4	34.2
Savings-investment balance	-7.6	-9.6	-7.7	1.6	1.4

Sources: Data Provided by the National Statistical Office; and IMF staff estimates.

1/ Including acquisitions less disposal of valuables.

2/ Forced to be consistent with the latest balance of payments data.

3/ Difference between output-based and expenditure-based GDP estimates.

4/ Output-based GDP.

5/ GNI is defined as the sum of GDP and net income from abroad.

6/ GNDI is defined as the sum of GNI and net transfers.

7/ Including statistical discrepancy.

8/ Defined as the difference between GDP and final consumption including the statistical discrepancy.

9/ Defined as the difference between GNDI and final consumption including the statistical discrepancy.

10/ Defined as the difference between current revenue and current expenditure.

Table 6. Mongolia: Output of Major Agricultural Products, 2001–05

	2001	2002	2003	2004	2005
(In thousands of metric tons; unless otherwise indicated)					
Meat	468.1	413.1	318.1	424.5	403.0
Milk (million tons)	290.3	276.6	292.4	328.6	335.1
Eggs (millions)	7.7	4.2	7.1	16.0	21.3
Wool	19.8	17.0	15.2	15.3	22.6
Wheat	138.7	123.1	160.4	135.6	73.5
Cereals	142.2	125.9	165.0	138.5	75.5
Potatoes	58.3	51.9	78.7	80.2	82.8
Other vegetables	44.5	39.7	59.6	49.2	64.1
(In millions of head)					
Livestock	26.1	23.9	25.5	28.0	30.4
Sheep	11.9	10.6	10.8	11.7	12.9
Goats	9.6	9.1	10.7	12.2	13.3
Cattle	2.1	1.9	1.8	1.8	1.9
Horses	2.2	2.0	1.9	2.0	2.0
Camels	0.3	0.3	0.3	0.3	0.3
(Percent change)					
Meat	-26.8	-11.8	-23.0	33.5	-5.0
Milk	-22.7	-4.7	5.7	12.4	2.0
Eggs	14.9	-45.5	69.1	125.3	33.0
Wool	-8.8	-14.1	-10.6	0.6	48.0
Cereals	0.1	-11.5	31.0	-16.1	-46.0
Potatoes	-0.9	-10.9	51.6	1.9	-45.0
Other vegetables	14.4	-10.8	50.1	-17.5	30.0
(In percent of total head)					
Memorandum item:					
Privately owned livestock	97.2	97.4	97.9	98.2	98.4

Source: Data provided by the National Statistical Office.

Table 7. Mongolia: Output of Basic Industrial and Mining Products, 2001–05

(In thousands of metric tons; unless otherwise indicated)

	2001	2002	2003	2004	2005
Electricity (million kilowatt hours)	3,017.0	3,111.7	3,137.7	3,303.4	3,418.9
Coal	5,141.0	5,544.4	5,666.1	6,865.0	7,517.1
Fluor spar	584.7	513.9	488.2	468.2	507.9
Copper concentrate	381.4	376.3	372.2	371.4	361.6
Gold concentrate (kilograms)	13,674.6	12,097.1	11,118.6	19,417.6	24,121.9
Bricks (millions)	21.0	13.2	22.9	12.5	14.6
Cement	67.7	147.6	162.3	61.9	111.9
Lime	30.1	42.5	42.1	30.0	81.2
Sawn timber (thousand of cubic meters)	21.0	10.2	16.6	17.8	13.2
Scoured wool	2.1	1.2	0.5	1.8	0.9
Felt (thousand meters)	110.5	112.9	303.0	67.8	69.1
Woolen fabrics (thousand meters)	43.1	38.3	27.4	36.8	33.5
Coats (thousands)	0.0	0.0	0.2	0.1	0.2
Suits (thousands)	16.0	60.7	73.5	98.5	59.8
Leather footwear (thousand pairs)	16.7	9.5	4.6	3.0	3.0
Sheepskin coats (thousands)	2.4	2.1	3.5	3.5	5.5
Meat (excluding pork)	12.0	6.8	11.1	4.3	3.6
Sausages	727.5	950.6	1,170.6	1,272.2	1,299.7
Flour	37.7	49.6	54.1	57.8	58.3
Bakery products	30.2	28.5	29.1	31.2	31.4
Confectionery	0.3	0.2	0.1	0.1	0.1
Milk and dairy products (million liters)	1.2	3.2	5.2	5.9	7.1
Carpets (thousands of square meters)	614.8	533.9	663.1	690.4	586.9
Processed metal	28.2	26.3	60.0	84.4	101.7

Source: Data provided by the National Statistical Office.

Table 8. Mongolia: Gross Industrial Output at 2000 prices, 2001–05

(In billions of togrogs)

	2001	2002	2003	2004	2005
Food	29.6	85.4	92.5	91.8	93.2
Leather and shoes	0.7	0.7	0.7	0.3	0.2
Textiles	28.8	106.4	91.5	98.6	63.8
Clothing	4.2	84.2	121.1	98.6	33.4
Energy 1/	43.8	97.4	98.4	102.6	107.7
Coal	13.5	13.9	14.6	17.8	...
Mining of metal ores	109.4	273.6	260.2	368.1	409.4
Other mining and quarrying	18.7	24.3	28.6	22.6	21.6
Non-metallic products	4.8	7.2	9.1	5.8	10.3
Wood processing	1.0	4.6	7.2	5.9	5.6
Chemicals	1.6	3.6	3.0	3.7	2.6
Printing	1.6	9.0	15.7	7.8	6.8
Furniture	0.5	0.9	1	1.1	1.1
Other	3.6	72.9	85.1	95.3	108.6

Source: Data provided by the National Statistical Office.

1/ Includes electric and thermal energy.

Table 9. Mongolia: Coal Mining Sector, 2001–05

(In thousands of metric tons)

	2001	2002	2003	2004	2005
Production	5,141	5,544	5,666	6,865	7,517
Imports	10	0	0	0	0
Consumption	5,189	5,535	5,162	5,189	5,473
Intermediate 1/	4,324	4,723	4,380	4,479	4,620
Final consumption	865	812	782	710	853
Industry and construction	152	152	154	91	107
Agriculture	4	8	9	5	18
Communal housing and public services	334	436	465	451	514
Other	375	217	155	163	214
Exports	...	...	435	1,560	2,116
Memorandum item:					
Stock; end of year	148	157	227	343	272

Source: Data provided by the National Statistical Office.

1/ Consumption by thermal power stations.

Table 10. Mongolia: Petroleum Imports, 2001–05

	2001	2002	2003	2004	2005
(In thousands of metric tons)					
Total petroleum imports	487.5	470.6	512.9	563.9	551.3
Petro	247.2	243.7	259.1	270.1	254.8
Diesel	197.1	190.6	214.8	258.2	270.9
Jet fuel	22.8	20.5	23.9	22.8	18.9
Mazut	17.5	9.5	12.4	11.1	4.9
Lubricants	2.9	6.3	2.7	1.7	1.8
(In millions of U.S. dollars)					
Total petroleum imports	124.0	110.0	142.5	210.2	291.0

Source: Data provided by the National Statistical Office.

Table 11. Mongolia: Electricity Sector, 2001–05

	2001	2002	2003	2004	2005
(In millions of kilowatt hours)					
Supply	3,213	3,279	3,309	3,474	3,586
Domestic	3,017	3,112	3,138	3,304	3,419
Imports	196	167	171	171	168
Uses	3,213	3,279	3,309	3,474	3,586
Consumption	1,948	2,032	2,195	2,357	2,534
Industry and construction	1,204	1,260	1,361	1,459	1,569
Transport and communications	87	85	92	99	106
Agriculture	17	22	24	26	28
Commercial housing and public services	476	487	526	568	609
Other sectors	164	178	192	207	222
Loss in transmission and distribution	603	583	489	480	420
Power stations' own use	644	649	618	629	621
Exports	18	16	7	8	12
(Togrogs per kilowatt hour, annual average)					
Tariff					
Industry	45	47	47	51	51
Agriculture	45	47	47	51	51
Households	45	47	47	49	51
(Percent change)					
Supply and uses	2.8	2.1	0.9	5.0	3.2
Supply					
Domestic	2.4	3.1	0.8	5.3	3.5
Imports	8.3	-14.6	2.4	-0.3	-1.9
Uses					
Consumption	2.0	4.3	8.0	7.4	7.5
Industry and construction	1.9	4.7	8.0	7.2	7.6
Transport and communications	10.1	-2.6	8.0	7.7	7.4
Agriculture	-19.0	29.4	8.2	7.6	7.4
Commercial housing and public services	2.8	2.3	8.0	7.9	7.3
Other sectors	-0.6	8.4	8.0	7.5	7.7
Loss in transmission and power stations' own use in total supply (in percent)	38.8	37.6	33.5	31.9	31.9

Source: Data provided by the Ministry of Fuel and Energy.

Table 12. Mongolia: Employment by Sector, 2001–05

(Number of employees; in thousands at end of year)

	2001	2002	2003	2004	2005
Total employment 1/	832.3	870.8	926.5	950.5	968.3
Agriculture and forestry	402.4	391.4	387.5	381.8	386.2
Industry	93.3	99.2	109.5	114.2	113.9
Transport and communications	35.1	38.8	39.5	42.2	42.4
Construction	20.4	25.5	35.1	39.2	48.9
Education	55.2	59.3	55.3	57.8	58.8
Health	33.0	34.5	36.8	39.4	39.5
Other	192.9	222.1	262.8	275.9	278.6
Memoranda items:					
Labor force	872.6	901.7	959.8	986.1	1001.2
Unemployed	40.3	30.9	33.3	35.6	32.9

Source: Data provided by the National Statistical Office.

1/ Excludes foreign employees.

Table 13. Mongolia: Ulaanbaatar Consumer Prices, 2001–06 1/

(December 2000 = 100)

	2001	2002	2003	2004	2005	<u>2006</u> Jan-Nov
(Period average)						
Overall index	109.0	110.1	113.8	123.2	138.1	145.7
Flour and flour goods	101.9	98.4	98.1	121.5	123.4	124.5
Meat and meat products	137.5	137.9	159.2	187.2	251.4	265.8
Milk and dairy products	100.2	91.5	92.7	91.8	96.3	107.7
Sugar, candy, tea, fruits	100.3	100.8	96.2	103.6	108.9	128.8
Potato and vegetables	113.0	123.7	116.8	104.4	133.5	142.2
Other foodstuffs	102.4	102.2	104.1	110.6	125.7	129.9
Alcohol and tobaccos	112.4	115.9	112.5	117.3	115.4	129.8
Men's clothing	103.6	108.4	110.2	112.8	115.8	125.4
Women's clothing	102.0	100.5	100.5	99.2	101.2	110.1
Children's clothing	99.5	101.8	117.4	118.3	128.2	133.4
Footwear	99.8	98.7	106.9	108.8	108.3	109.7
Cloth	98.4	100.4	118.8	124.6	139.8	145.8
Housing, heating, and electricity	110.0	119.2	121.6	123.7	134.4	135.3
Household goods	100.9	101.4	101.1	102.9	108.4	113.1
Medical care	100.2	102.1	111.7	116.1	122.7	132.9
Transport and communication	100.5	102.8	105.5	115.8	133.2	145.2
Education and recreation	99.3	97.9	108.7	117.9	124.9	134.1
Other goods and services	102.1	103.9	117.8	128.0	134.3	142.1
(End of period)						
Overall index	108.0	109.7	114.9	127.5	139.6	147.2
Flour and flour goods	103.0	94.5	110.1	124.9	122.3	126.4
Meat and meat products	119.5	119.1	146.5	181.9	240.5	237.1
Milk and dairy products	106.4	107.0	102.0	101.4	111.9	114.1
Sugar, candy, tea, fruits	99.8	95.4	97.2	103.8	113.5	125.6
Potato and vegetables	106.1	121.0	85.5	107.1	129.3	130.4
Other foodstuffs	104.8	102.7	105.0	116.5	129.2	133.6
Alcohol and tobaccos	116.3	115.5	112.3	119.7	128.1	131.1
Men's clothing	111.1	112.3	114.3	121.3	117.6	129.5
Women's clothing	103.6	106.0	101.9	100.9	104.2	116.0
Children's clothing	104.4	117.2	132.4	132.7	132.0	141.3
Footwear	100.9	113.3	112.2	111.3	109.4	113.6
Cloth	97.4	103.3	122.8	136.2	141.8	153.7
Housing, heating, and electricity	122.2	126.8	125.3	130.2	135.8	147.6
Household goods	101.4	103.8	100.8	105.9	111.4	119.5
Medical care	99.4	108.5	113.9	118.0	126.5	154.9
Transport and communication	101.0	105.1	107.2	130.7	138.5	147.7
Education and recreation	98.4	102.7	114.3	122.9	129.6	140.8
Other goods and services	103.4	107.6	122.6	132.6	136.2	146.4
(Percent change)						
Memoranda items:						
Annual average	8.0	1.1	3.3	8.3	12.1	5.5
End of period	8.0	1.6	4.7	11.0	9.5	5.5

Source: Data provided by the National Statistical Office.

1/ The number of commodities comprising the consumer basket increased from 239 to 287 from December 2005.

Table 14. Mongolia: Ulaanbaatar Consumer Price Inflation, 2001-06
(12-month percentage change)

Weight	2001		2002		2003		2004		2005		2006												
	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Jul.	Aug.	Sep.	Oct.	Nov.										
Overall index	1.00	8.0	1.6	11.0	4.7	11.0	15.8	11.5	11.4	9.6	8.8	9.5	8.9	6.3	5.5	3.9	3.2	2.2	1.9	4.7	5.0	6.5	6.8
Foodstuffs	0.51	9.7	-1.2	15.2	7.7	15.2	21.6	16.5	16.4	16.0	15.4	15.6	12.3	8.1	7.1	5.3	2.2	0.9	0.3	5.2	4.2	5.5	5.5
Flour and flour goods	0.13	3.0	-8.2	13.5	16.4	13.5	-1.4	-3.5	-2.4	-2.4	-1.9	-2.1	-1.4	-2.2	-1.9	-0.2	0.2	2.0	2.9	2.1	1.3	2.3	2.9
Meat and meat products	0.16	19.5	-0.3	23.4	23.4	24.1	37.9	37.1	33.7	34.2	29.9	32.2	23.2	15.7	11.7	3.1	2.8	-0.5	-1.7	3.1	2.8	5.9	4.4
Milk and dairy products	0.05	6.4	0.5	-0.7	6.8	6.8	11.3	10.5	10.1	5.1	11.3	10.4	9.2	1.3	6.4	12.6	14.2	31.3	27.7	22.9	16.5	13.6	5.2
Sugar, candy, tea, and fruits	0.05	-0.2	-4.4	2.3	2.3	2.3	7.1	6.9	6.6	9.0	13.2	9.3	11.5	14.5	17.4	22.8	26.5	27.8	26.4	19.5	17.3	12.6	9.0
Potatoes and vegetables	0.05	6.1	14.0	-28.7	25.3	25.3	49.5	6.4	19.9	25.3	26.3	20.7	19.2	14.1	12.9	11.5	9.4	-6.0	-18.0	14.4	7.4	11.2	8.1
Other foodstuffs	0.04	4.8	-2.0	11.0	2.2	11.0	10.0	12.2	15.8	15.0	13.0	10.9	8.3	3.2	0.2	-0.5	6.2	6.5	6.5	4.1	1.0	1.8	3.3
Alcohol and tobacco	0.04	16.3	-0.7	6.6	-2.9	6.6	7.2	7.2	7.2	6.7	6.6	7.0	1.8	2.5	0.6	0.6	0.6	1.2	1.3	1.3	1.7	2.0	2.3
Clothes and shoes	0.13	4.5	5.8	1.3	-0.1	1.3	2.1	2.0	2.3	1.3	-0.2	-0.4	-0.3	1.8	4.5	7.3	7.7	6.7	6.8	7.4	5.6	5.6	7.6
Men's clothing	0.03	11.1	1.1	6.1	2.1	6.1	4.6	4.3	0.3	-2.8	-2.3	-3.0	-2.3	1.4	8.1	13.0	13.2	10.2	9.2	10.4	9.3	11.1	10.1
Women's clothing	0.04	3.6	2.3	-1.0	-1.0	-1.0	1.8	2.6	2.9	3.0	2.9	3.3	2.8	4.1	9.2	10.3	10.7	11.0	10.7	10.8	10.2	8.9	11.3
Children's clothing	0.01	4.4	12.3	12.9	0.2	12.3	13.2	10.8	14.1	10.9	-0.3	-0.5	0.1	2.3	4.3	6.3	4.3	4.6	5.5	7.0	2.3	4.2	7.2
Footwear	0.05	0.9	12.3	-0.8	-0.8	-0.8	-1.8	-2.4	1.2	1.3	-1.6	-1.7	-1.8	0.1	-1.3	1.9	2.6	1.9	3.2	3.8	0.8	-0.1	3.8
Cloth	0.00	-2.6	6.0	19.0	19.0	10.9	15.7	15.9	14.1	11.8	7.0	4.1	1.8	1.9	2.6	4.4	4.6	4.4	3.6	3.6	3.5	8.5	9.3
Housing, heating, and electricity	0.11	22.2	3.8	-1.7	3.9	3.9	13.0	8.4	11.5	4.6	3.1	4.3	4.3	-0.5	-2.4	-2.8	-1.2	-1.2	-1.9	-2.0	4.4	4.4	6.8
Household goods	0.03	1.4	2.4	-2.8	5.1	-2.8	5.1	5.9	4.6	4.7	4.3	4.4	5.4	3.9	4.3	6.3	4.5	4.2	4.2	2.7	3.8	4.7	7.4
Medical care	0.01	-0.6	9.2	4.9	3.6	3.6	7.5	5.4	6.2	6.0	7.1	1.0	7.2	7.7	8.0	5.1	5.1	3.3	3.3	4.1	5.4	22.9	22.6
Transport and communication	0.10	1.0	4.0	2.1	21.9	21.9	21.9	11.9	7.2	4.1	3.0	5.2	11.7	11.5	8.7	6.8	5.4	4.1	4.4	4.4	5.6	5.3	6.8
Education and recreation	0.07	-1.6	4.4	11.4	11.4	7.5	4.2	5.7	5.7	5.5	5.5	2.7	6.4	6.5	7.0	8.3	7.9	7.9	8.4	7.5	8.4	8.4	8.6
Other goods and services	0.04	3.4	4.1	13.6	8.2	8.2	3.0	2.6	2.3	2.9	3.3	5.9	3.6	3.9	3.5	2.7	6.4	7.6	7.5	7.5	7.6	8.2	7.5

Source: Data provided by the National Statistical Office.

Table 15. Mongolia: Retail Prices, 2001–06

(End of period; in togrogs per kilogram; unless otherwise indicated)

	2001	2002	2003	2004	2005	<u>2006</u> July
Mutton	959	950	1,227	1,500	2,003	2,590
Beef	1,088	1,081	1,327	1,733	2,265	2,767
Flour	362	297	409	442	397	408
Bread	266	266	288	312	320	320
Sugar	677	589	557	580	730	1,100
Rice	476	459	456	685	728	695 1/
Vegetable oil (liter)	1,250	1,240	1,408	1,550	1,600	1,510
Tea bricks (2 kilograms)	2,397	2,267	1,947	2,400	2,720	2,614
Tobacco	1,520	1,600	1,650	1,650	1,775	1,850
Gasoline A-93 (liter)	410	435	520	673	800	850
Gasoline A-76 (liter)	375	400	470	600	736	780
Diesel (liter)	420	420	462	546	860	950

Sources: Data provided by the National Statistical Office; and Neft Import Concern.

1/ Change in rice quality.

Table 16. Mongolia: Privatization of State-Owned Enterprises, 2001–05 1/

	No. of Enterprises Privatized	Privatization Revenue (million togrogs)
2001		
Total privatization	11	4,903
Large enterprises	1	4,446
Construction sector	0	0
Mineral sector	0	0
Agriculture sector	0	0
Other	1	4,446
Small enterprises and assets	10	457
2002		
Total privatization	25	15,912
Large enterprises	10	14,681
Construction sector	3	456
Mineral sector	0	0
Agriculture sector	1	145
Other	6	14,080
Small enterprises and assets	15	1,231
2003		
Total privatization	15	11,174
Large enterprises	7	10,928
Construction sector	2	106
Mineral sector	0	0
Agriculture sector	0	0
Other	5	10,823
Small enterprises and assets	8	245
2004		
Total privatization	20	18,429
Large enterprises	4	17,818
Construction sector	0	0
Mineral sector	0	0
Agriculture sector	0	0
Other	4	17,818
Small enterprises and assets	16	611
2005		
Total privatization	22	3,291
Large enterprises	5	1,671
Construction sector	0	0
Mineral sector	2	95
Agriculture sector	0	0
Other	3	1,576
Small enterprises and assets	17	1620.6

Source: Data provided by the State Property Commission.

1/ Excludes privatization receipts of local governments.

Table 17: Mongolia: Government Average Wages, 2001–05

	2001	2002	2003	2004	2005
Employment (thousands)	133.7	135.6	132.2	120.5	115.9
Wage bill (billions of togrogs)	92.1	105.0	116.9	128.8	132.4
Per capita wage (thousands of togrogs)	688.6	774.3	884.3	1,068.9	1,142.4
Nominal wage index (2000=100)	109.1	122.7	140.1	169.3	181.0
Percent change	9.1	63.4	40.1	55.2	47.5
CPI index (period average, 2000=100)	109.0	110.1	113.8	123.2	138.1
Percent change	8.0	1.1	3.3	8.3	12.1
Real wage index (2000=100)	100.1	111.4	123.1	137.4	131.0
Percent change	1.0	11.3	10.5	11.6	-4.7
Exchange rate (period average; togrogs/US\$)	1,097.7	1,110.3	1,147.0	1,185.2	1,205
Monthly per capita wage (US\$)	52.3	58.1	64.2	75.2	79.0

Sources: Data provided by the National Statistical Office; and the Ministry of Finance.

Table 18. Mongolia: Summary Operations of the General Government, 2002–06

	2002	2003	2004	2005	2006	
					Amended Budget	Est.
(In billions of togrogs)						
Total revenue and grants	477.0	553.9	713.1	837.9	1,097.6	1,343.4
Total expenditure and net lending	550.5	615.8	753.7	764.6	1,209.2	1,046.5
Overall balance (incl. grants)	-73.4	-61.9	-40.6	73.3	-111.6	296.8
Nonmineral overall balance	-96.2	-103.1	-120.4	-37.9	-367.9	-149.3
Financing	70.9	51.1	33.8	3.5	111.6	-296.8
Foreign (net)	81.8	-115.8	81.0	89.8	148.8	87.1
Domestic (net)	-10.9	166.9	-47.1	-86.2	-37.2	-384.0
(In percent of GDP)						
Total revenue and grants	38.3	37.6	37.0	33.7	33.2	40.6
Current revenue	37.7	37.0	36.7	33.4	33.0	40.5
Mineral revenue	1.8	2.8	4.1	4.5	7.8	13.5
Nonmineral revenue	35.9	34.2	32.5	29.0	25.3	27.0
Tax revenue and social security contributions	28.9	28.6	30.3	27.8	26.6	33.8
Income taxes	5.8	6.6	7.5	7.2	9.6	15.1
Enterprise income tax	3.7	4.7	5.1	4.8	4.8	7.0
Personal income tax	2.1	2.0	2.4	2.3	2.1	2.1
"Windfall" tax	0.0	0.0	0.0	0.0	2.6	5.9
Social security contributions	4.4	4.4	4.3	3.8	3.2	3.2
Sales tax and VAT	9.5	8.3	8.5	7.3	6.3	6.8
Excise taxes	4.1	4.0	3.6	3.2	2.7	2.8
Customs duties and export taxes	2.0	2.2	2.3	2.3	1.7	2.1
Other taxes	3.0	3.1	4.1	4.1	3.2	3.9
Nontax revenue	8.9	8.4	6.4	5.6	6.4	6.6
Capital revenue and grants	0.6	0.6	0.4	0.2	0.2	0.2
Total expenditure and net lending	44.2	41.8	39.1	30.7	36.6	31.7
Current expenditure	33.4	29.5	28.0	24.1	26.5	24.1
Wages and salaries	8.4	7.9	7.2	6.2	6.0	5.9
Purchase of goods and services	14.5	11.9	11.3	9.3	11.7	9.4
Subsidies to public enterprises	0.7	0.6	0.6	0.3	0.4	0.4
Transfers	8.1	7.9	7.7	7.4	7.7	7.8
Interest payments	1.6	1.2	1.2	0.8	0.8	0.6
Contingency allocation	...	...	...	0.0	0.0	0.0
Capital expenditure and net lending	10.9	12.3	11.1	6.6	10.0	7.6
Capital expenditure	5.5	6.1	5.4	3.6	6.3	5.4
Domestically-financed	4.2	4.6	4.3	3.2	5.0	5.1
Foreign-financed	1.3	1.6	1.2	0.4	1.3	0.3
Net lending	5.4	6.1	5.7	3.0	3.7	2.2
On-lent foreign project loans	5.3	5.7	5.5	3.6	4.2	2.7
Domestic lending minus repayments	0.1	0.4	0.1	-0.6	-0.5	-0.5
Current balance (excl. privatization receipts)	4.4	7.5	8.6	9.3	6.5	16.4
Primary Balance	-4.3	-3.0	-0.9	3.8	-2.6	9.6
Overall balance (incl. grants)	-5.9	-4.2	-2.1	2.9	-3.4	9.0
Nonmineral overall balance	-7.7	-7.0	-6.3	-1.5	-11.1	-4.5
Discrepancy between deficit from above and below the line	-0.2	-0.7	-0.3	0.8	0.0	0.0
Financing	5.7	3.5	1.8	-2.1	3.4	-9.0
Foreign (net)	6.6	-7.9	4.2	3.6	4.5	2.6
External borrowing (net)	6.6	-7.9	3.5	3.4	4.5	2.6
Disbursements	7.8	13.1	4.9	4.4	5.8	3.3
Amortization	1.2	20.9	1.4	1.0	1.3	0.7
External arrears	0.0	0.0	0.7	0.2	0.0	0.0
Domestic (net)	-0.9	11.3	-2.4	-5.7	-1.1	-11.6
Banking system (net)	-2.2	9.4	-3.2	-5.8	-1.6	-12.1
Nonbank	1.4	1.9	0.8	0.0	0.5	0.5
Privatization receipts	1.4	1.5	0.8	0.2	0.5	0.5
Other nonbank (net)	0.0	0.5	-0.1	-0.2	0.0	0.0
(In percent of GDP; unless otherwise indicated)						
Memoranda items:						
Mineral revenue/total revenue and grants (in percent)	4.8	7.4	11.2	13.3	23.4	33.2
Nonmineral overall balance 1/	-8.6	-8.0	-7.7	-2.0	-16.3	-6.6
Nonmineral primary balance 1/	-6.8	-6.6	-6.2	-0.9	-15.1	-5.7
Total public debt (incl. IMF)/GDP	91.4	113.0	93.0	68.3	55.4	53.6
Foreign debt (incl. IMF)/GDP	88.4	98.2	85.4	64.1	52.8	51.0
Domestic debt/GDP	3.0	14.8	7.6	4.2	2.6	2.6
Governments deposits	5.1	7.8	5.0	5.9	5.3	16.0
Net public debt	86.3	105.2	88.0	62.4	50.1	37.6
NPV of total public debt	62.5	79.5	59.9	44.7	35.7	34.6
Nominal GDP	1,244.9	1,474	1,926	2,489	3,306	3,306

Sources: Data provided by the Ministry of Finance; and Fund staff estimates.

1/ In percent of nonmineral GDP.

Table 19. Mongolia: General Government Revenue, 2001–05

	2001	2002	2003	2004	2005
	(In billions of togrogs)				
Total revenue and grants	429.5	477.0	553.9	713.1	837.9
Current revenue	420.1	469.7	545.2	706.3	832.6
Tax revenue and social security contributions	328.2	359.2	421.0	583.1	692.2
Income taxes	64.5	72.4	97.6	144.1	178.5
Enterprise income tax	43.8	46.3	68.8	98.6	120.6
<i>of which</i> Erdenet	11.3	9.5	29.8	52.9	61.3
Personal income tax	20.7	26.2	28.8	45.5	58.0
Social security contributions	54.0	54.4	65.2	82.1	95.6
Sales tax and VAT	104.2	118.7	121.9	163.1	181.0
Domestic VAT (Sales tax prior to 1998)	43.8	40.7	47.9	57.4	70.6
VAT on imports (Sales tax prior to 1998)	60.4	78.0	94.3	136.9	157.5
Excise taxes	53.3	51.3	58.6	70.3	79.0
Excise on alcohol	23.2	20.6	19.8	23.3	26.1
Excise on vodka and tobacco	3.1	3.5	3.7	4.2	6.3
Excise on imported beer	3.1	2.9	3.3	3.3	2.0
Excise on vehicles	7.3	6.0	10.5	14.7	16.7
Excise on petroleum	16.6	18.3	21.3	24.8	25.2
Customs duties and export taxes	27.0	24.6	32.6	44.7	57.0
Customs duties	26.0	23.8	31.1	40.8	53.2
Export taxes	1.0	0.8	1.6	3.9	3.8
Other taxes	25.2	37.7	45.1	78.8	101.1
Petrol and diesel tax	5.5	4.9	5.7	6.1	5.9
Vehicle license fee	3.4	3.7	4.0	4.8	5.1
Tax on private property	1.7	3.4	4.6	5.7	6.3
Other	14.6	25.8	30.8	62.1	83.8
Nontax revenue	91.9	110.6	124.3	123.2	140.4
Interest and fines	9.1	9.1	17.6	20.5	14.5
Own budget revenues	47.2	48.0	65.0	65.2	68.8
Dividends	11.6	6.4	1.3	4.1	22.8
<i>of which:</i> Erdenet	1.6	2.5	0.1	1.9	18.1
Other nontax revenue	24.2	47.2	40.4	33.4	34.3
Capital revenue and grants	9.3	7.3	8.7	6.8	5.3
Capital revenue	0.2	0.5	0.0	0.8	1.0
Grants 1/	9.2	6.8	8.7	6.1	4.3
	(In percent of total revenue)				
Current revenue	97.8	98.5	98.4	99.0	99.4
Tax revenue and social security contributions	76.4	75.3	76.0	81.8	82.6
Enterprise income tax	10.2	9.7	12.4	13.8	14.4
Personal income tax	4.8	5.5	5.2	6.4	6.9
Social security contributions	12.6	11.4	11.8	11.5	11.4
Taxes on goods and services	36.7	35.6	32.6	32.7	31.0
Customs duties and import surcharges	6.3	5.2	5.9	6.3	6.8
Other taxes	5.9	7.9	8.1	11.1	12.1
Nontax revenue	21.4	23.2	22.4	17.3	16.8
Capital revenue	0.0	0.1	0.0	0.1	0.1
Grants	2.1	1.4	1.6	0.8	0.5
	(In percent of GDP)				
Total revenue	38.4	38.3	37.6	37.0	33.7
Current revenue	37.6	37.7	37.0	36.7	33.4
Tax revenue and social security contributions	29.4	28.9	28.6	30.3	27.8
Enterprise income tax	3.9	3.7	4.7	5.1	4.8
Personal income tax	1.9	2.1	2.0	2.4	2.3
Social security contributions	4.8	4.4	4.4	4.3	3.8
Taxes on goods and services	14.1	13.7	12.2	12.1	10.4
Customs duties and import surcharges	2.4	2.0	2.2	2.3	2.3
Other taxes	2.3	3.0	3.1	4.1	4.1
Nontax revenue	8.2	8.9	8.4	6.4	5.6
Capital revenue	0.0	0.0	0.0	0.0	0.0
Grants	0.8	0.5	0.6	0.3	0.2

Sources: Data provided by the Ministry of Finance; and Fund staff estimates.

1/ Grants relate to receipt of the budget of counterpart funds from recipient of the grants. This differs from the balance of payments definition which records grants when they are received from abroad.

Table 20. Mongolia: General Government Expenditure, 2001–05

	2001	2002	2003	2004	2005
(In billions of togrogs)					
Total expenditure and net lending	489.7	550.5	615.8	753.7	764.6
Current expenditure	366.7	415.3	434.8	539.9	600.3
Wages and salaries	92.1	105.0	116.9	138.7	155.4
Goods and services	162.6	180.8	174.9	217.5	231.3
Subsidies and current transfers	95.5	109.9	125.4	160.5	192.9
Subsidies 1/	6.1	8.8	9.4	11.4	8.1
Transfers	89.4	101.1	116.0	149.1	184.8
Social Security Fund	64.3	73.3	87.5	116.2	132.0
Social Assistance Fund	13.7	17.4	19.8	23.0	41.7
Other transfers	11.4	10.5	8.7	9.8	11.0
Interest payment	16.5	19.6	17.6	23.2	20.7
Capital expenditure and net lending	123.0	135.2	180.9	213.8	164.3
Domestically financed capital expenditure	49.0	52.3	67.2	82.7	79.4
Domestic lending minus repayment	5.3	0.7	6.1	2.8	-14.2
Foreign financed projects	68.8	82.2	107.6	128.3	99.1
(In percent of total expenditure)					
Current expenditure	74.9	75.4	70.6	71.6	78.5
Wages and salaries	18.8	19.1	19.0	18.4	20.3
Goods and services	33.2	32.8	28.4	28.9	30.2
Subsidies and transfers	19.5	20.0	20.4	21.3	25.2
Subsidies	1.2	1.6	1.5	1.5	1.1
Transfers and other	18.3	18.4	18.8	19.8	24.2
Social Security Fund	13.1	13.3	14.2	15.4	17.3
Other	5.1	5.1	4.6	3.1	6.9
Interest payments	3.4	3.6	2.9	3.1	2.7
Capital expenditure and net lending	25.1	24.6	29.4	28.4	21.5
Domestically financed capital expenditure	10.0	9.5	10.9	11.0	10.4
Domestic lending minus repayment	1.1	0.1	1.0	0.4	-1.9
Foreign financed projects	14.0	14.9	17.5	17.0	13.0
Total expenditure and net lending	43.8	44.2	41.8	39.1	30.7
Current expenditure	32.8	33.4	29.5	28.0	24.1
Wages and salaries	8.2	8.4	7.9	7.2	6.2
Goods and services	14.6	14.5	11.9	11.3	9.3
Subsidies and current transfers	8.5	8.8	8.5	8.3	7.7
Subsidies	0.5	0.7	0.6	0.6	0.3
Transfers	8.0	8.1	7.9	7.7	7.4
Social Security Fund	5.8	5.9	5.9	6.0	5.3
Social Assistance Fund	1.2	1.4	1.3	1.2	1.7
Other transfers	1.0	0.8	0.6	0.0	0.4
Interest payment	1.5	1.6	1.2	1.2	0.8
Capital expenditure and net lending	11.0	10.9	12.3	11.1	6.6
Domestically financed capital expenditure	4.4	4.2	4.6	4.3	3.2
Domestic lending minus repayment	0.5	0.1	0.4	0.1	-0.6
Foreign financed projects	6.2	6.6	7.3	6.7	4.0

Sources: Data provided by the Ministry of Finance; and Fund staff estimates.

1/ Beginning in 2001, this item includes subsidies to state-owned enterprises for quasi-fiscal activities which, previously, had been recorded under purchases of goods and services.

Table 21. Mongolia: General Government Expenditure by Function, 2001–06

	2001	2002	2003	2004	2005	2006 Budget
(In billions of togrogs)						
Total expenditure	489.7	550.5	615.8	753.6	764.6	1,209.1
General public services	50.4	54.0	53.7	63.7	69.2	112.9
Defense	25.4	28.1	27.9	32.9	35.9	44.8
Public order and safety	28.7	30.5	33.4	44.2	49.8	60.1
Education	98.7	103.7	115.4	141.0	147.8	192.3
Health	54.3	58.0	58.1	73.2	80.2	99.9
Social security and welfare	84.5	96.9	117.6	150.6	185.7	251.5
Housing and community services	7.1	7.6	6.3	9.6	7.9	5.5
Recreation and culture	15.1	17.5	18.2	21.5	20.8	23.4
Economic affairs	45.1	58.9	73.5	84.9	85.1	257.3
Other 1/	80.4	95.3	111.7	132.0	82.2	161.4
(In percent of total expenditure)						
General public services	10.3	9.8	8.7	8.5	9.1	9.3
Defense	5.2	5.1	4.5	4.4	4.7	3.7
Public order and safety	5.9	5.5	5.4	5.9	6.5	5.0
Education	20.2	18.8	18.7	18.7	19.3	15.9
Health	11.1	10.5	9.4	9.7	10.5	8.3
Social security and welfare	17.3	17.6	19.1	20.0	24.3	20.8
Housing and community services	1.4	1.4	1.0	1.3	1.0	0.5
Recreation and culture	3.1	3.2	3.0	2.9	2.7	1.9
Economic affairs	9.2	10.7	11.9	11.3	11.1	21.3
Other 1/	16.4	17.3	18.1	17.5	10.8	13.3
(In percent of GDP)						
Total expenditure	43.8	44.2	41.8	39.1	30.7	36.6
General public services	4.5	4.3	3.6	3.3	2.8	3.4
Defense	2.3	2.3	1.9	1.7	1.4	1.4
Public order and safety	2.6	2.4	2.3	2.3	2.0	1.8
Education	8.8	8.3	7.8	7.3	5.9	5.8
Health	4.9	4.7	3.9	3.8	3.2	3.0
Social security and welfare	7.6	7.8	8.0	7.8	7.5	7.6
Housing and community services	0.6	0.6	0.4	0.5	0.3	0.2
Recreation and culture	1.4	1.4	1.2	1.1	0.8	0.7
Economic affairs	4.0	4.7	5.0	4.4	3.4	7.8
Other 1/	7.2	7.7	7.6	6.9	3.3	4.9

Sources: Data provided by the Ministry of Finance; and Fund staff estimates.

1/ Includes capital expenditure and net lending (foreign-financed projects).

Table 22. Mongolia: General Government Social Expenditure, 2001–06

	2001	2002	2003	2004	2005	<u>2006</u> Budget
	(In billions of togrogs)					
Total expenditure	489.7	550.5	615.8	753.6	764.6	1,209.1
Social expenditure	259.7	283.7	315.6	395.9	442.2	572.6
Social security and social assistance	84.5	96.9	117.6	150.6	185.6	251.5
Education	98.7	103.7	115.4	141.0	147.8	192.3
Health	54.3	58.0	58.1	73.2	80.1	99.9
Housing and community services	7.1	7.6	6.3	9.6	7.9	5.5
Recreational, cultural affairs and services	15.1	17.5	18.2	21.5	20.8	23.4
	(In percent of total expenditure)					
Social expenditure	53.0	51.5	51.3	52.5	57.8	47.4
Social security and social assistance	17.3	17.6	19.1	20.0	24.3	20.8
Education	20.2	18.8	18.7	18.7	19.3	15.9
Health	11.1	10.5	9.4	9.7	10.5	8.3
Housing and community	1.4	1.4	1.0	1.3	1.0	0.5
Recreational, cultural affairs and services	3.1	3.2	3.0	2.9	2.7	1.9

Sources: Data provided by the Ministry of Finance; and Fund staff estimates.

Table 23. Mongolia: Subsidies and Transfers, 2001–06

	2001	2002	2003	2004	2005	2006 Budget
	(In billions of togrogs)					
Total subsidies and transfers	95.5	109.9	125.4	160.4	195.7	267.1
Total subsidies	6.0	8.8	9.4	11.3	11.0	12.9
Energy	5.4	8.6	7.9	8.1	4.4	7.4
Urban transport	0.5	0.0	1.5	3.2	3.7	5.5
Other	0.1	0.1	0.0	0.0	2.9	4.8
Total transfers	89.4	101.1	116.0	149.1	184.7	254.2
Social Security Fund	64.3	73.3	87.5	116.2	132.0	170.2
Social Assistance Fund	13.7	17.4	19.8	23.0	41.7	73.1
Other	11.4	10.5	8.7	9.8	11.0	10.9
	(In percent of GDP)					
Total subsidies and transfers	8.5	8.8	8.5	8.3	7.9	8.1
Total subsidies	0.5	0.7	0.6	0.6	0.4	0.4
Total transfers	8.0	8.1	7.9	7.7	7.4	7.7

Sources: Data provided by the Ministry of Finance; and Fund staff estimates.

Table 24. Mongolia: Social Security and Social Assistance Funds, 2001–06

	2001	2002	2003	2004	2005	2006 Budget
(In billions of togrogs)						
Social Security Fund						
Total revenue	73.9	83.6	94.6	115.3	132.1	160.1
Budget transfers	21.0	24.4	24.4	42.0	44.2	61.0
Social security contributions 1/	67.0	76.5	84.9	107.2	123.7	148.4
Civil servants	21.4	23.4	25.5	28.2	31.5	50.7
Business entities	28.1	27.8	36.0	43.5	51.7	61.4
Employees	23.8	25.4	24.4	35.5	40.5	36.3
Other	2.0	2.2	4.8	3.1	3.4	6.6
Total expenditure	64.3	73.3	87.5	116.2	132.0	171.0
Old age pension	41.9	47.0	55.3	73.6	83.5	116.0
Handicapped persons	6.2	7.5	9.5	14.3	16.6	17.8
Survivors' benefits	6.7	7.8	9.0	12.1	12.9	15.8
Disability benefits	0.9	1.1	1.3	1.5	1.6	1.4
Death benefits	1.2	1.6	1.8	1.9	1.9	2.0
Allowance for accidents	2.2	2.4	3.0	4.0	4.5	5.3
Serviceman's pension	3.8	4.2	5.3	6.6	7.8	8.6
Unemployment benefits	0.5	0.6	1.1	1.0	1.1	1.0
Other	0.9	1.0	1.2	1.3	2.0	3.1
Overall balance	8.0	9.2	8.8	12.0	13.0	19.0
Social Assistance Fund						
Total expenditure	13.7	17.3	19.8	23.2	41.7	73.0
Pregnancy	3.6	4.3	4.2	4.3	4.1	4.3
Mothers with large families	0.5	0.7	0.8	0.8	0.0	0.0
Child care	0.1	0.1	0.1	0.2	0.1	0.1
Twins	0.0	0.0	0.0	0.0	0.1	0.1
Infant nursing	3.3	4.3	4.8	5.7	5.7	7.4
Social pension	3.8	4.4	5.7	7.1	7.6	10.4
War veterans	1.6	2.2	2.4	3.0	3.5	2.1
Other	0.8	1.4	1.7	2.1	20.6	48.6
(In percent of total government expenditure)						
Memoranda items:						
Social Security Fund expenditure	13.4	13.3	14.2	15.4	17.6	16.1
Budget transfers to the Social Security Fund	4.3	4.4	4.0	5.6	5.9	5.7
Social Assistance Fund expenditure	2.8	3.2	3.2	3.1	5.5	6.9
(In percent of GDP)						
Social Security Fund expenditure	5.8	5.9	5.9	6.0	5.3	5.2
Budget transfers to the Social Security Fund	1.9	2.0	1.7	2.2	1.8	1.8
Social Assistance Fund expenditure	1.2	1.4	1.3	1.2	1.7	2.2

Sources: Data provided by the Ministry of Finance; and Fund staff estimates.

1/ A part of social security contributions constitutes intergovernmental transfers.

Table 25. Mongolia: Number of Social Security Beneficiaries, 2001–06

(In thousands)

	2001	2002	2003	2004	2005	<u>2006</u> Budget
Social security	316.5	344.1	364.0	365.5	379.7	391.5
Old age	173.2	173.0	175.9	176.3	190.9	193.8
Handicapped persons	35.2	42.7	41.6	52.7	49.8	53.2
Survivors' benefits	35.6	36.7	37.7	37.8	36.0	36.3
Disability benefits	62.9	54.8	64.3	58.1	61.3	60.0
Other benefits	9.6	37.0	44.6	40.5	41.7	48.2
Social assistance	242.2	285.1	354.1	378.7	341.6	237.7
Pregnancy	50.5	49.3	51.5	54.5	45.5	43.8
Mothers with large families	53.8	17.5	35.7	33.5	56.7	33.7
Child care	20.6	4.6	5.9	7.5	6.7	5.8
Twins	0.3	0.3	0.3	0.3	0.3	0.3
Infant nursing	3.3	57.1	58.4	59.1	56.7	50.0
War veterans	56.2	86.5	107.1	125.2	111.5	51.4
Social pension	33.8	37.3	39.7	43.6	41.8	43.8
Disabled Nursing homes for elderly	10.1	15.5	19.3	27.9	22.4	8.9
Other	13.6	16.8	36.2	27.1		

Source: Data provided by the Ministry of Finance.

Table 26. Mongolia: Government Employment and Wage Bill, 2001–06

	2001	2002	2003	2004	2005	<u>2006</u> Budget
	(Number of positions)					
Government employment						
General public services	15,543	16,114	14,744	13,807	5,871	5,681
Public order and safety	12,658	12,186	14,506	9,569	15,055	15,095
Education	48,866	50,928	47,927	48,444	46,070	46,076
Health	25,344	25,770	24,643	23,023	22,323	22,884
Social security and welfare	621	686	643	608	753	763
Recreation and culture	6,210	5,923	5,721	5,174	0	83
Agriculture and forestry	1,392	1,404	1,207	1,037	1,402	1,268
Other services	22,615	22,582	22,774	18,833	24,467	24,297
Total	133,248	135,591	132,164	120,493	115,940	116,146
	(In billions of togrogs)					
Wages and salaries						
General public services	13.0	14.9	16.2	18.5	20.3	27.8
Public order and safety	12.1	13.5	14.9	17.8	20.0	28.2
Education	36.1	41.4	46.4	45.4	50.2	67.6
Health	15.0	16.2	17.8	22.8	24.8	35.1
Social security and welfare	0.3	0.4	0.4	0.5	0.7	1.0
Recreation and culture	3.4	4.1	4.3	4.8	5.3	6.9
Agriculture and forestry	0.5	0.9	0.8	0.8	1.2	1.7
Other services	11.7	13.6	16.1	18.0	24.9	29.3
Total	92.1	105.0	116.9	138.4	160.4	197.6

Source: Data provided by the Ministry of Finance.

Table 27. Mongolia: Expenditure of the Health Sector, 2001–06

(In billions of togrogs)

	2001	2002	2003	2004	2005	<u>2006</u> Budget
Total expenditure	54.3	58.0	58.1	73.1	79.7	99.8
Wages and salaries	15.0	16.2	17.8	22.8	24.8	35.0
Social security	4.3	4.4	4.8	5.9	6.5	9.3
Social security payments	3.5	3.6	4.0	5.0	5.4	7.6
Health insurance	0.8	0.8	0.8	0.9	1.1	1.7
Other goods and services	33.0	34.5	32.2	40.8	44.6	48.3
Electricity	1.6	1.6	1.7	1.8	2.0	2.3
Fuel and heating	5.6	5.3	5.3	5.8	6.6	7.9
Transport (fuel)	2.0	2.0	2.0	2.6	3.4	3.7
Food	2.7	2.7	2.9	3.4	3.5	3.7
Medicines	9.5	9.1	10.0	12.0	12.5	12.7
Other	11.7	13.8	10.3	15.2	16.6	18.0
Investment	1.3	2.0	2.3	2.4	2.3	5.8
Capital repair expenditures	0.7	0.9	1.1	1.1	1.0	0.8

Source: Data provided by the Ministry of Finance.

Table 28. Mongolia: Expenditure of the Education Sector, 2001–06

(In billions of togrogs)

	2001	2002	2003	2004	2005	<u>2006</u> Budget
Total expenditure	98.7	103.7	115.4	140.9	145.2	169.7
Wages and salaries	36.1	41.4	46.4	45.4	50.2	67.6
Social security	9.8	10.5	11.8	11.8	13.1	17.8
Social security payments	8.2	8.7	9.7	9.7	10.9	14.6
Health insurance	1.7	1.8	2.1	2.1	2.2	3.2
Other goods and services	45.8	43.9	47.8	72.0	41.7	68.9
Electricity	2.8	2.6	2.9	3.0	3.1	3.7
Fuel and heating	15.4	14.2	15.5	17.1	19.9	23.0
Transport (fuel)	0.7	0.7	0.7	0.9	0.9	1
Food	5.4	5.9	7.7	9.5	10.6	13.7
Medicines	0.0	0.0	0.0	0.0	7.2	5.6
Other	21.6	20.4	21.0	41.4	30.0	44.9
Investment	3.1	3.1	4.9	4.5	6.8	9.1
Capital repair expenditures	0.8	1.8	1.2	1.6	1.2	0.1
Lending minus repayment	3.1	3.1	3.2	5.7	2.2	6.2

Source: Data provided by the Ministry of Finance.

Table 29. Mongolia: Monetary Survey, 2001–06

	2001	2002	2003	2004	2005				2006		
	Dec.	Dec.	Dec.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.
	(In billions of togrogs)										
Broad money	331	470	704	846	892	1,009	1,112	1,162	1,205	1,463	1,528
Currency	109	121	131	144	133	177	174	152	145	198	189
Deposits	222	349	572	703	760	832	937	1,009	1,061	1,265	1,339
Demand deposits	47	67	81	78	81	101	99	117	130	130	142
Tugrik time deposits	88	147	240	301	347	371	403	448	492	543	576
Forex deposits	87	135	250	324	332	360	436	445	439	592	621
Net foreign assets	220	308	232	283	330	376	480	544	555	791	945
Net international reserves	227	322	278	294	342	388	488	551	564	782	942
Bank of Mongolia	176	254	151	198	222	252	310	364	411	449	595
Commercial banks	51	68	128	96	120	136	178	187	153	333	347
Other NFA	-7	-13	-47	-11	-12	-12	-8	-7	-9	10	3
Bank of Mongolia	0	0	0	1	1	1	5	8	4	20	14
Commercial banks	-7	-13	-47	-13	-13	-13	-12	-15	-13	-10	-11
Net domestic assets	111	162	472	564	562	633	632	618	650	672	583
Domestic credit	170	243	601	740	747	804	828	904	946	983	910
Net credit to government	31	7	152	94	65	48	7	-1	-50	-121	-267
Credit	84	71	266	190	180	162	159	146	135	134	114
Minus: Deposits	53	63	114	96	115	114	152	146	185	255	381
Claims on nonbanks	139	236	449	646	682	756	821	905	996	1,103	1,177
Claims on public enterprises	10	12	16	13	14	22	21	34	29	30	33
Claims on the private sector	115	204	390	552	581	646	701	776	858	966	1,011
Nonperforming loans	11	17	37	71	76	76	82	79	90	89	110
Accrued interest receivable on loan	2	4	7	11	11	12	17	16	19	19	23
Other items, net	-59	-82	-129	-176	-185	-171	-197	-286	-296	-311	-326
Memoranda items:	(12-month percentage changes)										
Broad money 1/	28.0	41.9	49.7	20.3	20.6	24.3	34.4	37.3	35.1	45.0	37.4
Net foreign assets	8.9	40.1	-24.9	22.0	36.6	55.6	80.5	92.4	68.1	110.4	96.8
Domestic credit	41.6	43.2	147.0	23.0	16.8	18.1	17.0	22.3	26.6	22.1	9.8
Claims on public enterprises	65.8	17.1	32.8	-22.5	-12.8	55.9	62.7	171.6	114.8	33.6	54.1
Claims on the private sector	152.4	77.4	91.3	41.6	31.7	30.4	37.3	40.6	47.6	49.6	44.1
	(Key ratios)										
Currency/total deposits	49.1	34.6	23.0	20.4	17.5	21.2	18.6	15.1	13.7	15.7	14.1
Demand deposits/total deposits	21.1	19.2	14.2	11.1	10.6	12.1	10.6	11.6	12.2	10.3	10.6
Tugrik time deposit/total deposits	39.6	42.1	42.0	42.8	45.7	44.6	42.9	44.4	46.4	42.9	43.0
Forex time deposits/total deposits	39.3	38.7	43.7	46.1	43.6	43.3	46.5	44.0	41.4	46.8	46.4
Currency/broad money	32.9	25.7	18.7	17.0	14.9	17.5	15.7	13.1	12.0	13.5	12.4
Demand deposits/broad money	14.2	14.2	11.6	9.2	9.0	10.0	8.9	10.0	10.7	8.9	9.3
Time deposits/broad money	52.9	60.1	69.7	73.9	76.1	72.5	75.4	76.8	77.2	77.5	78.3
Ratio (percent): Forex deposits/BM	26.4	28.8	35.6	38.3	37.2	35.7	39.2	38.3	36.4	40.4	40.7

Sources: Data provided by the Bank of Mongolia; and Fund staff estimates.

Table 30. Mongolia: Balance Sheet of the Bank of Mongolia, 2001–06

	2001	2002	2003	2004	2005				2006		
	Dec.	Dec.	Dec.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.
	(In billions of togrogs)										
Reserve money	144	175	201	235	253	296	297	281	308	376	377
Currency outside Banks	109	121	131	144	133	177	174	152	145	198	189
DMB reserves	35	55	69	91	120	119	123	129	163	178	187
Cash in vaults	10	14	21	25	27	27	32	39	42	43	50
Demand deposits of DMBs	25	41	48	66	93	92	90	90	121	135	137
Deposits of business units	0	0	0	0	0	0	0	0	0	0	0
Net Foreign Assets	177	254	151	199	224	253	315	372	415	469	609
Net international reserves	176	254	151	198	222	252	310	364	411	449	595
Assets	228	302	238	251	272	300	354	407	449	489	633
Minus: Liabilities	52	48	87	54	49	47	44	43	39	39	38
Other assets, net	0	0	0	1	1	1	5	8	4	20	14
Assets	0	0	0	1	1	1	5	8	4	20	14
Minus: Liabilities	0	0	0	0	0	0	0	0	0	0	0
Net Domestic Assets	-32	-79	50	36	30	42	-18	-91	-107	-93	-233
Net Credit to Government	35	6	128	106	84	87	45	52	-2	-72	-190
Credit	52	40	219	159	153	151	150	143	130	129	107
Government bonds	52	40	59	53	49	47	44	43	39	39	82
Treasury IMF account	38	40	55	53	49	47	44	43	38	38	36
Reconstruction bonds	14	0	4	0	0	0	0	0	1	0	0
Treasury bills	0	0	0	0	0	0	0	0	0	0	45
Other	0	0	160	105	104	104	106	99	91	91	26
Minus: Deposits	17	34	92	53	69	63	105	90	132	201	297
Domestic currency	13	30	73	43	28	36	55	48	88	97	112
Foreign currency	4	4	19	10	40	27	50	42	45	104	185
Claims on deposit money banks	7	8	13	22	22	19	18	18	18	18	18
Claims on nonbanks	1	1	1	0	0	0	0	0	0	0	0
Minus: Central bank bills (net)	50	61	76	69	70	82	84	126	110	69	84
Other items, net	-26	-33	-15	-23	-7	18	3	-35	-13	30	23
<i>Of which: precious metals</i>	13	7	8	6	12	34	0	0	0	0	0
Memoranda items:											
Reserve money growth (12 month percent change)	8.4	21.7	14.7	16.8	10.5	20.4	16.3	19.7	21.7	27.2	26.8
Broad money/reserve money (ratio)	2.30	2.68	3.50	3.60	3.53	3.41	3.74	4.13	3.92	3.89	4.06

Sources: Data provided by the Bank of Mongolia; and Fund staff estimates.

Table 31. Mongolia: Consolidated Balance Sheet of Commercial Banks, 2001–06

	2001	2002	2003	2004	2005				2006		
	Dec.	Dec.	Dec.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.
	(In billions of togrogs)										
Assets	226	354	585	727	781	852	956	1,028	1,079	1,284	1,357
Net foreign assets	44	54	81	84	107	123	166	172	140	322	336
Net international reserves	51	68	128	96	120	136	178	187	153	333	347
Assets	52	71	132	138	160	170	217	227	194	379	402
Minus: Liabilities	2	3	5	41	40	34	39	40	41	47	54
Other foreign assets, net	-7	-13	-47	-13	-13	-13	-12	-15	-13	-10	-11
Assets	0	0	0	0	0	0	0	0	0	0	0
Minus: Liabilities	7	13	47	13	13	13	12	15	13	10	11
Net domestic assets	182	299	504	643	675	729	790	855	939	962	1,022
Reserves	35	55	69	88	116	116	118	126	155	159	169
Cash	10	14	21	25	27	27	32	39	42	43	50
Deposits with BOM	25	41	48	64	89	89	86	87	114	116	119
Central bank bills	50	61	76	69	70	81	83	126	109	69	84
Domestic credit	134	236	473	634	663	717	783	852	949	1,054	1,099
Net credit to government	-3	1	24	-12	-19	-39	-38	-53	-47	-49	-77
Claims on Government	32	31	47	31	27	12	9	3	5	5	7
Less: Government deposits	36	30	23	43	46	51	46	56	52	54	84
Loans to nonbanks	138	235	449	646	682	756	821	905	996	1,103	1,177
Public enterprises	10	11	16	13	14	22	21	34	29	30	33
Private sector	115	204	390	552	581	646	701	776	858	966	1,011
Nonperforming loans	11	17	37	71	76	76	82	79	90	89	110
Accrued interest receivable on loan	2	4	7	11	11	12	17	16	19	19	23
Other assets, net	-36	-52	-114	-149	-174	-185	-194	-248	-275	-321	-331
Liabilities	226	354	585	727	781	852	956	1,028	1,079	1,284	1,357
Deposits	222	349	572	703	760	832	937	1,009	1,061	1,265	1,339
Demand deposits	47	67	81	78	81	101	99	117	130	130	142
Time and savings deposits	88	147	240	301	347	371	403	448	492	543	576
Foreign currency deposits	87	135	250	324	332	360	436	445	439	592	621
Deposits of NBFIs	0	0	0	1	0	0	0	0	0	5	3
Borrowing from BoM	4	4	13	24	22	19	18	18	18	19	19
	(In millions of U.S. dollars)										
Memoranda items:											
Net foreign assets	39.5	48.2	69.2	69.4	89.6	103.0	136.3	141.0	119.4	274.9	287.6
Foreign currency deposits	79.2	120.2	214.2	268.2	278.2	302.1	358.6	364.1	374.2	504.9	531.9

Sources: Data provided by the Bank of Mongolia; and Fund staff estimates.

Table 32. Mongolia: Distribution of Bank Credit to the Nongovernment Sector, 2001–06

(In percent of total loans; end of period)

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	
	Dec.	Dec.	Dec.	Dec.	Dec.	Mar.	Jun.
By maturity 1/	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Short-term	91.4	91.0	76.2	78.5	73.0	72.1	63.8
Medium-term	5.1	5.8	20.9	16.8	22.9	23.4	31.7
Long-term	3.5	3.2	2.9	4.7	4.2	4.5	4.5
By economic sectors	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Industrial	57.6	50.0	41.8	41.3	41.7	40.8	38.3
Agriculture, hunting and forestry	5.4	4.1	5.1	4.6	6.2	6.9	6.9
Mining and quarrying	15.5	16.0	8.3	8.3	9.3	9.4	7.6
Manufacturing	27.7	22.1	18.5	17.6	14.9	14.3	13.8
Electricity, gas and water supply	3.3	1.6	2.1	2.6	2.4	2.0	1.6
Construction	5.7	6.3	7.8	8.2	9.0	8.2	8.4
Non-industrial	42.4	50.0	58.2	58.7	58.3	59.2	61.7
Real estate	0.8	1.1	2.3	2.8	2.6	2.8	2.5
Transport and communications	1.7	3.1	3.1	2.8	4.5	5.2	5.4
Education and health	1.0	0.6	0.5	1.1	0.8	0.9	1.0
Financial intermediary	0.4	0.5	1.1	0.9	1.1	0.9	1.1
Wholesale and retail trade	28.6	31.7	35.1	35.7	33.2	32.1	33.8
Others	9.9	13.0	16.3	15.5	16.1	17.3	18.0
By institutional sector	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Public enterprises 2/	7.7	5.3	3.9	2.3	4.3	3.3	3.1
Private sector 2/	68.5	62.7	52.8	58.7	55.5	55.9	55.1
Individuals	19.0	27.9	30.1	35.9	38.6	39.6	40.5
Others	4.8	4.2	13.3	3.1	1.6	1.1	1.3
By currency	100.0	100.0	100.0	100.0	100.0	100.0	100.0
In togrogs	62.1	62.5	57.7	56.1	55.9	56.3	55.0
In foreign currency	37.9	37.5	42.3	43.9	44.1	43.7	45.0
Memorandum item:							
Total credit (In billions of togrog) 3/	124.2	214.9	409.9	547.7	789.2	872.0	966.2

Source: Data provided by the Bank of Mongolia.

1/ Short-term: up to and including one year; medium-term: more than one and up to and including four years; long-term: over four years.

2/ Including cooperatives.

3/ Including foreign currency-denominated credits.

Table 33. Mongolia: Net Credit to Government, 2001–06

	2001	2002	2003	2004	2005				2006		
	Dec.	Dec.	Dec.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.
	(In billions of togrogs)										
Net claims on government	31.5	7.4	151.9	94.0	65.1	48.2	7.0	-0.6	-49.9	-120.9	-267.1
Claims	84.3	70.5	266.4	190.0	179.8	162.1	158.7	145.8	135.0	134.1	114.0
Minus: Deposits	52.9	63.2	114.4	96.0	114.7	113.9	151.7	146.4	184.8	254.9	381.0
Bank of Mongolia (net)	35.0	6.3	127.8	105.8	84.4	87.5	44.9	52.3	-2.5	-71.6	-189.9
Claims on Government	51.9	39.8	219.5	158.8	153.0	150.6	150.1	142.6	129.9	129.1	107.4
Loans to the MoF	0.0	0.0	0.0	0.0	103.6	103.7	105.6	94.4	90.7	90.6	22.4
FX financing without tugrik funds	0.0	0.0	160.2	105.3	0.0	0.0	0.0	5.0	0.0	0.0	3.2
Government bonds	13.6	0.0	4.4	0.1	0.2	0.1	0.2	0.4	0.7	0.3	45.4
Reconstruction bonds	13.6	0.0	4.4	0.1	0.2	0.1	0.2	0.4	0.7	0.3	0.5
Treasury IMF account	38.3	39.8	54.8	53.4	49.2	46.8	44.2	42.9	38.5	38.2	36.4
Less: Deposits	16.9	33.5	91.7	53.0	68.6	63.1	105.2	90.3	132.4	200.7	297.3
Budget deposits	7.7	19.0	91.7	52.3	68.4	62.2	104.4	90.3	132.2	200.4	297.3
In domestic currency	3.9	15.2	73.0	42.0	28.0	34.8	54.1	48.1	87.7	96.4	111.9
In foreign currency	3.9	3.7	18.7	10.2	40.5	27.4	50.2	42.2	44.5	104.0	185.4
Budget reserves	3.5	0.0	0.0	0.8	0.1	0.9	0.8	0.0	0.2	0.3	0.0
Commercial banks (net)	-3.5	1.1	24.2	-11.8	-19.3	-39.3	-37.8	-52.9	-47.4	-49.3	-77.1
Claims on Government	32.5	30.7	46.9	31.2	26.8	11.5	8.6	3.2	5.0	4.9	6.6
Advance financing of MoF	1.8	0.1	0.0	0.2	0.8	1.6	2.1	0.6	0.8	0.8	2.4
Government securities	30.6	30.6	46.8	31.0	25.7	9.8	6.4	2.4	4.0	4.0	4.0
Inherited and directed credits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accrued interest receivable	0.0	0.1	0.1	0.0	0.3	0.2	0.1	0.2	0.2	0.2	0.2
Less: Government deposits	35.9	29.7	22.7	43.0	46.1	50.8	46.5	56.1	52.4	54.2	83.8

Sources: Data provided by the Bank of Mongolia; and Fund staff estimates.

Table 34. Mongolia: Interest Rates, 2001–06
(In percent per annum)

	2001		2002		2003		2004		2005			2006				
	Dec.		Dec.		Dec.		Dec.		Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	
Deposit rates																
Current account																
Domestic currency	0.0-5.1	0.0-6.0	0.0-6.0	0.0-6.0	0.0-6.0	0.0-4.8	0.0-4.8	0.0-4.8	0.0-4.8	0.0-4.8	0.0-4.8	0.0-4.8	0.0-4.8	0.0-4.8	0.0-4.8	0.0-5.0
Foreign currency	0.3-4.2	0.3-3.0	0.3-3.0	0.3-3.0	0.3-3.0	0.3-3.0	0.3-3.0	0.3-3.0	0.3-3.0	0.0-3.0	0.0-3.0	0.0-7.2	0.0-7.2	0.0-7.2	0.0-3.6	0.0-4.0
Demand Deposit	1.2-9.6	2.4-10.2	1.8-10.0	6.0-9.6	6.0-9.6	6.0-9.9	6.0-9.9	6.0-9.9	6.0-9.9	6.0-9.9	6.0-10.0	6.0-9.96	6.0-9.96	6.0-10.0	6.0-10.0	6.0-10.2
Time deposit																
Domestic currency 1/	2.4-24.0	2.4-10.2	6.0-22.0	6.0-20.4	6.0-20.4	6.0-20.4	6.0-20.4	6.0-20.4	6.0-20.4	6.0-19.2	6.0-19.2	6.0-19.2	6.0-19.2	6.0-19.2	6.0-19.2	7.56-19.2
Foreign currency 2/	1.0-13.2	1.2-12.0	2.4-12.0	1.4-9.6	1.4-9.6	1.4-9.8	1.4-9.8	1.4-9.8	1.4-9.8	1.4-9.8	1.4-9.8	1.4-10.8	1.4-10.8	1.4-10.8	1.4-11.4	1.2-11.4
Loan rates																
Bank of Mongolia 3/	8.6	9.9	11.5	15.8	15.8	9.5	9.5	9.5	9.5	7.0	7.0	4.8	3.7	7.4	7.4	7.43
Commercial banks 4/																
Domestic currency	41.4	33.4	31.5	30.0	30.0	32.7	32.7	32.7	30.0	30.5	30.5	28.3	28.3	24.2	24.2	26.1
Foreign currency	22.2	19.8	19.6	17.9	17.9	16.3	16.3	16.3	17.3	16.2	16.2	14.8	15.8	15.9	15.9	15.3

Source: Data provided by the Bank of Mongolia.

1/ Up to 1 year.

2/ 1-3 year.

3/ Discount rates on central bank bills with maturity of 14 days.

4/ Loan rates for short-term loans with maturity less than 1 year.

Table 35. Mongolia: Financial Soundness Indicators for Banking Sector, 2001–06

(In percent; unless otherwise indicated)

	2001	2002	2003	2004	2005	2006 June
Capital Adequacy						
Tier I capital ratio	21.6	17.7	18.5	17.4	15.8	15.3
Total regulatory capital/risk-weighted assets	24.6	20.0	20.4	20.0	18.2	17.2
Total regulatory capital/total assets	14.2	12.4	13.4	15.6	13.6	12.9
Asset Quality						
Distribution of risk weight category in (billion togrog)						
0 percent	0.0	0.0	0.0	0.0	0.0	0.0
20 percent	9.7	13.5	26.8	31.1	52.0	70.9
50 percent	0.2	2.1	2.6	13.0	22.2	35.0
100 percent	174.4	283.5	499.2	739.8	994.7	1,218.3
Large exposures/total assets	n/a	19.2	22.4	23.3	22.5	20.5
Large exposure/total capital	n/a	154.6	167.7	149.8	165.8	159.2
Connected lending/total capital						
Directed lending/total capital						
Foreign exchange loans/total loans	35.2	32.5	42.8	45.6	47.0	47.9
NPLs/total gross loans (or exposures)	6.7	5.0	4.7	6.0	5.6	5.5
NPLs net of provisions/total capital	-0.5	-1.0	0.0	0.7	0.2	2.1
Provisions to NPLs	102.8	105.2	99.9	97.2	99.2	91.8
Asset Sectoral Concentration						
Agriculture, hunting, forestry and fishing	4.8	4.1	5.7	4.7	6.7	...
Electricity, steam and water supply	2.8	1.5	1.9	2.5	2.2	...
Construction	4.3	6.2	7.5	8.6	8.9	...
Mining and quarrying	17.5	15.4	8.4	8.6	9.0	...
Manufacturing	26.5	24.2	20.1	18.7	16.2	...
Wholesale & retail trade, repair of goods	27.4	30.8	34.0	34.6	33.2	...
Tourism and hotels, restaurants	3.5	1.7	1.8	2.0	2.1	...
Transport, storage and communication	2.3	2.9	3.0	2.8	4.3	...
Immovable asset renting business	0.6	1.1	2.2	2.6	2.4	...
Health and education	0.8	0.6	0.5	1.0	0.7	...
Financial intermediaries	0.6	0.5	1.0	0.9	1.0	...
Others	8.8	11.0	13.8	13.1	13.2	...
Profitability						
Return on (average) assets	5.9	4.3	3.1	2.5	2.2	2.0
Return on (average) equity	23.2	20.8	14.7	12.3	12.1	13.6
Interest margin/gross income	41.3	39.8	35.9	31.5	30.9	27.7
Expenses/income	69.2	78.9	84.7	85.5	86.0	86.6
Non-interest expenses/gross income	55.4	50.3	49.1	58.8	54.3	59.7
Personnel expenses to noninterest expenses	26.0	22.4	22.3	26.7	28.5	27.2
Trading and fee income to total income	19.8	23.1	10.8	13.7	16.2	16.0
Liquidity						
Loans to deposits	92.8	100.0	113.1	116.6	121.8	111.9
Liquid assets/total assets	41.3	39.9	35.3	31.6	36.0	36.2
Liquid assets/short-term liabilities	80.6	90.9	83.5	28.8	37.7	35.7
Demand deposits/total liabilities	11.4	12.0	10.9	11.9	14.0	13.9
Deposits to total non-interbank loans	89.9	83.8	85.4	82.5	72.6	69.6
Memorandum item:						
Net forex open position to total capital	12.4	8.9	36.5	33.6	27.4	30.6

Source: Data provided by the Bank of Mongolia.

Table 36. Mongolia: Balance of Payments, 2001–06

(In millions of U.S. dollars; unless indicated otherwise)

	2001	2002	2003	2004	2005	2006 Est.
Trade balance	-169.9	-228.9	-199.3	-149.0	-155.1	15.6
Exports, f.o.b.	523.2	523.9	627.3	872.1	1,068.6	1,547.7
Mineral	247.5	285.0	351.0	555.6	755.6	...
Of which : Copper	147.9	140.2	163.7	284.3	326.2	...
Of which : Gold	74.7	117.6	157.3	239.9	331.4	...
Nonmineral	275.7	239.0	249.1	297.7	309.3	...
Imports, c.i.f.	-693.1	-752.8	-826.6	-1,021.1	-1,223.6	-1,532.1
Of which: Petroleum products	-124.0	-110.0	-142.5	-210.2	-302.1	...
Services, net	-22.2	-11.8	-49.3	-45.6	64.8	66.3
Receipts	113.5	184.6	207.9	337.9	414.4	446.6
Payments	-135.7	-196.4	-257.2	-383.5	-349.6	-380.3
Income, net	2.8	-4.5	-11.5	-47.5	-105.5	-191.5
Official medium and long-term interest payments	-9.0	-10.8	-11.9	-14.6	-15.3	-15.8
Private transfers (net)	25.0	64.4	74.3	146.3	133.8	139.8
Official transfers	72.1	53.0	49.4	86.9	88.0	90.2
Other transfers	15.3	20.2	37.8	35.5	3.4	25.0
Current account balance (including official transfers)	-77.0	-107.6	-98.6	26.6	29.4	145.4
Financial and capital account	78.9	145.4	-29.6	10.1	87.9	152.8
Direct investment	43.0	77.8	131.5	128.9	257.6	329.4
Portfolio investment	0.0	0.0	50.0	-52.5	0.0	0.0
Medium- and long-term (net)	68.7	99.0	-170.1	75.5	60.8	89.8
Disbursements	167.1	182.0	175.6	157.2	91.4	130.0
Amortization	-98.4	-83.0	-345.7	-81.7	-30.5	-40.2
Currency and deposits, net	3.6	-8.7	-21.0	-119.5	-162.5	-266.4
Other private, net (including short-term capital flows)	-36.3	-22.7	-20.0	-22.3	-68.0	0.0
Errors and omissions	12.7	28.5	30.6	-4.6	9.0	0.0
Overall balance	14.7	66.4	-97.6	32.1	126.4	298.2
Financing	-14.7	-66.4	97.6	-32.1	-126.4	-298.2
Increase in net official reserves (-)	-19.5	-65.6	96.8	-37.4	-131.3	-298.2
Use of IMF credit (+)	-1.7	-4.3	3.0	-7.3	-5.9	-5.8
Increase in gross official reserves (-)	-17.8	-61.4	93.8	-30.1	-125.4	-292.4
Arrears accumulation (+) / payments (-) (net)	4.8	-0.7	0.8	5.4	4.9	0.0
Exceptional financing / rescheduling	0.0	0.0	0.0	0.0	0.0	0.0
Memoranda items:						
Current account balance (including official transfers; in percent of GDP)	-7.6	-9.6	-7.7	1.6	1.4	5.2
Net official reserves (end-period)	160.1	225.8	128.9	163.6	298.0	596.2
Gross official reserves (end-period)	206.8	271.5	177.7	207.8	333.2	625.6
(In months of next year's imports of goods and services)	2.6	3.0	1.5	1.6	2.1	3.4
Debt service (in percent of exports of goods and services)	5.3	4.5	34.0	7.5	2.9	2.1
Outstanding arrears (end-period) 1/	4.8	4.1	5.4	10.8	0.0	0.0

Sources: Data provided by the Bank of Mongolia; and Fund staff estimates.

1/ Arrears on post-1991 Russian debt. Excluding disputed amounts with Finland.

Table 37. Mongolia: Commodity Composition of Exports, 2001–05
(In millions of U.S. dollars, unless otherwise indicated; unit values are denominated in U.S. dollars)

	2001	2002	2003	2004	2005
Copper concentrate (value)	147.9	140.2	163.7	284.3	326.2
Volume (concentrate in '000 tons)	540.9	548.6	568.9	562.6	587.1
Refined copper equivalent	146.0	153.6	159.3	157.5	164.4
Unit value--refined (per ton)	1,012.8	912.9	1,027.7	1,804.8	1,984.5
Molybdenum concentrate	5.1	10.1	15.0	20.0	46.7
Volume (tons)	3,081.8	3,469.0	3,967.3	2,250.2	2,395.1
Unit value (per ton)	1,647.9	2,916.5	3,790.7	8,888.1	19,488.5
Fluorite concentrate	19.8	17.0	15.0	11.4	24.7
Volume ('000 tons)	215.6	192.5	187.5	140.5	311.4
Unit value (per ton)	92.0	88.1	80.0	81.1	79.3
Coal					26.6
Volume (concentrate in '000 tons)					2,217.6
Unit value (per ton)					12.0
Gold	74.7	117.6	157.3	239.9	331.4
Volume (kg)	11,045.6	12,388.3	14,220.6	19,043.6	23,811.5
Unit value (per kg)	6,761.3	9,496.5	11,061.1	12,597.4	13,918.1
Sawn wood	0.1	0.0	0.0	0.0	0.1
Volume ('000 cubic meters)	1.0	0.0	0.0	0.2	0.5
Unit value (per cubic meter)	148.7	0.0	0.0	134.0	137.0
Cashmere tops	0.3	0.9	1.8	1.1	1.1
Volume (tons)	2.8	15.4	28.1	12.7	13.9
Unit value (per kg)	103.0	59.1	63.1	82.7	81.7
Cashmere, dehaired	55.0	30.5	25.7	44.1	52.8
Volume (tons)	1,006.6	632.3	563.1	831.7	919.2
Unit value (per kg)	54.7	48.3	45.6	53.0	57.4
Cashmere garments	11.6	12.8	15.6	33.1	17.5
Volume ('000 pieces)	325.2	483.6	645.5	1,500.1	476.5
Unit value (per piece)	35.7	26.4	24.1	22.1	36.8
Cashmere, greasy/raw	0.9	0.9	1.1	0.6	0.3
Volume (tons)	50.2	53.7	67.1	43.4	11.3
Unit value (per kg)	17.3	16.8	17.0	13.8	26.8
Textiles	44.2	18.8	37.4	96.5	42.3
Volume ('000 pieces)	10,066.8	6,371.0	4,329.6	26,900.6	13,234.3
Unit price	4.4	2.9	8.6	3.6	3.2
Camel wool, raw	2.2	0.7	0.7	0.7	1.9
Volume (tons)	964.0	345.0	354.8	281.8	609.2
Unit value (per kg)	2.3	2.1	1.9	2.4	3.1
Skin and hides	16.2	11.3	6.1	5.9	3.0
Volume ('000 pieces)	1,761.4	1,332.2	409.5	406.4	437.8
Unit price	9.2	8.5	14.8	14.4	6.8
Sheepskin coats	0.3	0.1	0.2	0.2	0.5
Volume ('000 pieces)	1.4	1.2	1.0	0.8	5.2
Unit value (per piece)	222.2	111.6	233.1	205.1	104.5
Carpets	0.9	0.9	0.0	0.0	0.0
Volume ('000 square meters)	84.8	101.0	0.0	0.0	0.0
Unit value (per square meter)	10.1	9.4	0.0	0.0	0.0
Meat	18.5	20.5	15.7	13.2	10.1
Volume ('000 tons)	16.9	17.2	11.0	52.2	34.9
Unit value (per ton)	1,092.9	1,187.5	1,434.2	252.2	289.8
Scrap Metal	4.0	3.5	3.7	8.7	8.3
Volume ('000 tons)	10.7	8.6	8.0	8.7	3.8
Unit value (per ton)	372.0	411.7	467.6	1,002.2	2,178.7
Other	121.6	137.9	168.3	112.6	175.0
Total Exports	523.2	523.9	627.3	872.1	1,068.6
Mineral exports	247.5	285.0	351.0	555.6	755.6
Nonmineral exports	275.7	238.9	276.3	316.5	313.0
Memoranda items					
		(In percent of total exports)			
Mineral exports	47.3	54.4	56.0	63.7	70.7
Nonmineral exports	52.7	45.6	44.0	36.3	29.3
		(In percent of GDP)			
Total exports	51.4	46.7	46.7	52.5	51.6
Mineral exports	24.3	25.4	27.3	34.2	36.6
Nonmineral exports	27.1	21.3	19.4	18.3	15.0

Sources: Data provided by the Bank of Mongolia; and Fund staff estimates.

Table 38. Mongolia: Commodity Composition of Imports, 2001–05

(In millions of U.S. dollars; unless otherwise indicated)

	2001	2002	2003	2004	2005
Food	113.1	129.5	112.4	157.3	153.3
Live animals and animal products	4.9	5.3	5.7	5.7	5.9
Vegetable products	51.0	58.3	36.4	69.3	55.9
Animal and vegetable oil	6.8	9.4	10.2	9.6	13.1
Prepared food	50.4	56.6	60.0	72.7	78.4
Energy	143.8	132.7	161.3	231.3	326.5
<i>Of which</i> : Petroleum products	124.0	110.0	142.5	210.2	302.1
Equipment Goods	180.4	209.9	250.4	305.4	372.0
Machinery and equipment	112.5	134.4	165.0	201.5	256.0
Vehicles and transportation equipment	67.9	75.5	85.4	103.9	116.0
Raw Materials and Spare Parts	73.2	77.3	106.6	135.3	159.4
Chemical products	33.0	34.5	42.1	46.6	54.5
Raw hides and skins	0.7	0.5	0.4	0.6	0.7
Building materials	9.8	10.9	21.0	17.1	18.7
Metals	29.8	31.4	43.0	71.0	85.5
Consumer Goods	119.5	141.3	156.7	181.7	171.7
Rubber products	15.1	19.1	21.6	25.7	30.0
Wood and wood products	2.2	3.2	4.3	4.3	5.3
Cellulosic materials	10.3	14.9	25.3	19.1	29.9
Textile	63.3	84.2	82.0	100.9	76.3
Footwear and clothes	2.2	1.9	1.6	1.6	1.4
Measuring instruments	17.5	9.0	9.7	16.5	14.5
Manufactured articles	8.9	9.0	12.1	13.5	14.3
Other imports	63.0	62.0	39.2	10.1	40.7
Total (c.i.f)	693.1	752.8	826.6	1,021.1	1,223.6
Memoranda items:					
Nonfood imports	580.0	623.3	714.2	863.8	1,070.3
Nonenergy imports	549.3	620.1	665.3	789.8	897.1
			(In percent of GDP)		
Total imports	62.0	60.5	56.1	53.0	49.2
Food imports	10.1	10.4	7.6	8.2	6.2
Petroleum product imports	11.1	8.8	9.7	10.9	12.1
Nonfood imports (excluding energy)	39.0	39.4	37.5	32.8	29.9

Sources: Data provided by the Bank of Mongolia; and Fund staff estimates.

Table 39. Mongolia: Direction of Trade, 2001–05

(In percent of total exports or imports)

	2001	2002	2003	2004	2005
Exports 1/	100.0	100.0	100.0	100.0	100.0
Countries of the former CMEA	10.6	9.2	7.2	3.2	4.7
Former U.S.S.R.	10.6	9.1	7.2	3.2	4.7
Russia	10.3	8.6	6.3	2.4	2.6
Kazakhstan	0.2	0.1	0.5	0.0	0.1
Other	0.0	0.4	0.5	0.8	2.1
Korea, Democratic People's Republic of	0.0	0.0	0.0	0.0	0.0
EU countries	6.5	6.5	7.4	21.4	12.3
Belgium	0.3	0.0	0.1	0.1	0.1
France	0.0	0.0	0.3	1.8	0.1
Germany	0.6	0.5	0.8	1.3	1.2
Italy	3.0	1.7	1.5	2.0	2.3
Netherlands	0.7	0.5	0.4	0.4	0.4
United Kingdom	1.7	3.5	4.4	15.8	8.2
Other	0.0	0.2	0.0	0.0	0.1
Other	83.0	84.4	85.3	75.3	82.9
China	53.7	41.7	46.1	46.8	48.1
Hong Kong, China	1.5	0.6	0.5	0.8	0.2
Japan	3.3	1.3	1.4	3.8	0.5
Korea	0.9	4.4	1.2	1.1	6.1
Singapore	0.0	0.0	5.8	2.3	0.1
Switzerland	0.1	0.1	0.1	0.2	0.4
United States	22.0	31.6	23.3	18.0	14.3
Other	1.6	4.5	6.9	2.3	13.2
Imports	100.0	100.0	100.0	100.0	100.0
Countries of the former CMEA	40.9	38.5	37.6	41.0	43.0
Former U.S.S.R.	38.7	36.7	35.2	38.8	41.2
Russia	36.4	34.1	32.6	33.5	35.3
Kazakhstan	0.6	1.1	0.6	2.6	3.4
Other	1.7	1.6	1.9	2.7	2.5
Bulgaria	0.2	0.1	0.2	0.2	0.1
Former Czechoslovakia 2/	1.0	0.5	0.7	0.5	0.4
Hungary	0.2	0.2	0.5	0.7	0.3
Poland	0.7	0.8	1.0	0.9	0.8
EU countries	10.6	8.3	11.0	8.3	8.3
Denmark	1.3	0.4	0.5	0.5	0.3
France	0.9	0.7	1.4	1.5	2.5
Germany	5.1	4.5	4.8	3.3	3.2
United Kingdom	0.7	0.4	0.5	0.4	0.7
Austria	0.1	0.1	0.7	0.5	0.1
Finland	0.6	0.5	0.3	0.2	0.2
Other	1.2	1.6	2.8	1.9	1.3
Other	48.5	53.2	51.4	50.7	48.8
China	19.3	20.2	21.8	22.0	24.9
Hong Kong, China	2.5	4.3	3.0	3.2	1.0
India	0.2	0.2	0.1	0.1	0.1
Japan	9.5	6.2	8.0	7.3	6.4
Korea	9.7	12.2	8.5	6.0	5.4
Singapore	1.5	1.7	1.3	1.5	1.4
Switzerland	0.8	0.5	0.6	0.4	0.1
United States	2.5	3.5	2.9	4.6	3.4
Other	3.2	4.7	5.3	5.7	6.1

Sources: Data provided by the Bank of Mongolia; and Fund staff estimates.

1/ Data for exports of copper refer to country of initial purchaser rather than country of destination of final product.

2/ Data after 1993 refer to Czech Republic and Slovak Republic.

Table 40. Mongolia: Services and Income Accounts, 2001–05

(In millions of U.S. dollars)

	2001		2002		2003		2004		2005	
	Receipts	Payments	Receipts	Payments	Receipts	Payments	Receipts	Payments	Receipts	Payments
Services										
Passenger fares	10.1	4.4	13.0	6.0	11.0	5.9	19.6	13.6	26.4	16.3
Railway	3.7	1.1	6.0	1.9	4.1	1.5	14.3	9.9	20.6	11.0
Airline	6.4	3.3	7.0	4.1	6.9	4.4	5.3	3.7	5.8	5.3
Port services	3.1	23.6	1.9	18.2	5.4	35.3	28.7	31.1	33.0	33.7
Transit fees	22.6	2.4	23.9	2.7	24.1	3.0	29.0	2.2	32.8	3.8
Travel	39.3	55.3	130.1	119.2	143.0	107.5	184.7	147.8	176.8	125.7
Embassy expenses abroad	3.9	5.3	4.8	5.6	4.8	5.9	9.2	5.4	5.3	8.0
Embassies/international organization	0.4	2.4	0.4	2.4	0.4	2.7	0.4	2.7	0.4	2.7
Commissions	0.0	1.0	0.0	0.8	0.0	0.8	2.0	0.0	0.0	0.8
Communications	7.7	4.4	6.0	8.6	4.8	7.4	4.8	9.1	14.4	23.4
Technical Assistance	0.0	15.3	0.0	21.0	0.0	38.4	0.0	19.9	0.0	29.1
Other	26.4	21.6	4.5	11.9	14.4	50.3	14.1	151.7	125.3	106.1
Total	113.5	135.7	184.6	196.4	207.9	257.2	337.9	383.5	414.4	349.6
Income										
Direct investment income	0.0	3.4	0.0	5.2	0.0	6.8	0.0	45.5	0.0	96.4
Interest on bank deposits	10.8	0.1	5.7	0.8	5.1	1.9	8.5	0.0	5.7	0.0
Interest on debt	0.0	13.6	0.0	10.8	0.0	11.9	0.0	14.6	0.0	15.3
Official Medium- and long-term	0.0	9.0	0.0	10.8	0.0	11.9	0.0	14.6	0.0	15.3
Short-term	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private Sector	0.0	4.5	0.0	2.5	0.0	3.8	0.0	1.3	0.0	3.5
Interest on trade credit	0.0	0.4	0.0	0.5	0.0	0.9	0.0	2.6	0.0	1.5
Other interest	9.9	0.3	8.4	1.3	8.8	3.9	8.1	0.0	5.0	0.0
Total	20.7	17.8	14.1	18.6	13.9	25.4	16.5	64.0	10.7	116.7

Sources: Data provided by the Bank of Mongolia; and Fund staff estimates.

Table 41. Mongolia: Medium- and Long-Term Loan Disbursements, 2001–05

(In millions of U.S. dollars)

	2001	2002	2003	2004	2005
Official loans	84.2	83.8	101.2	128.7	90.4
Japan	16.3	14.0	17.7	25.1	20.9
Germany	9.9	8.1	6.9	5.8	4.7
Korea	0.5	16.2	4.6	0.0	0.0
Norway	0.0	0.0	0.0	3.6	1.8
Abu Dhabi fund	0.0	0.0	0.0	0.0	6.9
Spain	0.0	0.0	0.0	2.8	0.0
Kuwait	3.8	3.9	3.2	1.8	9.8
World Bank	23.0	14.4	27.7	48.9	13.6
Program	11.1	0.0	5.8	5.8	0.0
Project	11.3	14.2	21.4	39.2	13.6
Technical assistance	0.6	0.2	0.5	3.9	0.0
Asian Development Bank	30.0	26.5	39.5	39.4	30.0
Balance of payments support	10.0	0.0	20.1	5.0	8.8
Project	20.0	26.5	19.4	34.4	21.2
Technical assistance	0.0	0.0	0.0	0.0	0.0
IFAD	0.7	0.7	1.6	1.1	2.8
Commercial loans	82.9	98.2	74.4	28.5	1.0
Total	167.2	182.0	175.6	157.2	91.4

Sources: Data provided by the Ministry of Finance; and Fund staff estimates.

Table 42. Mongolia: Short-Term Capital Flows, 2001–05

(In millions of U.S. dollars)

	2001	2002	2003	2004	2005
Import credits	-11.5	-8.5	-20.3	4.8	-4.5
Inflows	5.0	1.8	2.7	4.8	11.4
Erdenet	4.3	1.5	1.8	4.0	10.2
Others	0.7	0.3	0.9	0.8	1.2
Outflows	16.5	10.3	23.0	...	15.9
Erdenet	16.5	10.3	23.0	...	15.9
Trade credit extended on exports	3.3	6.6	-8.7	-0.6	-1.5
Inflows	4.5	7.7	0.0	0.0	0.0
Erdenet	4.5	7.7	...	...	...
Outflows	1.2	1.1	8.7	0.6	1.5
Others	1.2	1.1	8.7	0.6	1.5
Others	-7.1	...	...	...	...
Inflows	11.8	...	...	...	...
Erdenet	3.7	...	...	...	...
Others	8.1	...	...	...	...
Outflows	18.9	...	...	...	...
Erdenet	7.9	...	...	...	...
Others	11.0	...	...	...	...
Total 1/	-15.3	-1.9	-29.0	4.2	-6.0

Sources: Data provided by the Bank of Mongolia; and Fund staff estimates.

1/ As data for others are not available from 2002, total is calculated without others after 2002.

Table 43. Mongolia: External Debt and Debt Service, 2001–05

	2001	2002	2003	2004	2005
	(In millions of US dollars)				
External debt	853.5	978.1	1,237.0	1,361.3	1,307.8
Medium- and long-term	806.7	936.1	1,138.1	1,317.0	1,271.4
IMF	46.8	42.0	48.9	44.3	36.4
Short-term 1/	0.0	0.0	50.0	0.0	0.0
Debt service	33.9	32.0	284.0	91.1	42.8
Amortization	24.8	20.9	272.3	75.2	27.5
Interest	9.0	11.1	11.6	15.9	15.3
Medium- and long-term	26.8	24.2	275.2	32.3	36.7
Amortization	18.0	13.2	263.8	17.9	21.6
Interest	8.8	11.0	11.4	14.4	15.1
IMF	7.1	7.8	8.7	7.5	6.1
Repurchase/Repayments	6.8	7.7	8.5	7.3	5.9
Charges	0.2	0.1	0.2	0.2	0.2
Short-term 1/	0.0	0.0	0.0	51.3	0.0
	(In percent)				
External debt/GDP	83.8	87.2	96.2	83.8	63.3
Medium- and long-term	79.2	83.5	88.5	81.0	61.6
IMF	4.6	3.7	3.8	2.7	1.8
Short-term 1/	0.0	0.0	3.9	0.0	0.0
External debt/exports of goods and services	134.1	138.1	148.1	112.5	88.2
Medium- and long-term	126.7	132.1	136.3	108.8	85.7
IMF	7.4	5.9	5.9	3.7	2.5
Short-term 1/	0.0	0.0	6.0	0.0	0.0
Debt-service ratio 2/	5.3	4.5	34.0	7.5	2.9
Amortization	3.9	2.9	32.6	6.2	1.9
Interest	1.4	1.6	1.4	1.3	1.0
Medium- and long-term	4.2	3.4	33.0	2.7	2.5
Amortization	2.8	1.9	31.6	1.5	1.5
Interest	1.4	1.6	1.4	1.2	1.0
IMF	1.1	1.1	1.0	0.6	0.4
Repurchase/repayments	1.1	1.1	1.0	0.6	0.4
Charges	0.0	0.0	0.0	0.0	0.0
Short-term 1/	0.0	0.0	0.0	4.2	0.0

Sources: Data provided by the Ministry of Finance; and Fund staff estimates.

1/ Includes treasury bill in US\$ to nonresident issued in relation to pre-1991 Russian debt settlement.

2/ In percent of exports of goods and services.

Table 44. Mongolia: External Debt Stock by Creditor, 2001–05

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

	2001	2002	2003	2004	2005
External Debt	853.5	978.1	1,237.0	1,361.3	1,307.8
Medium and long-term official (excluding IMF)	806.6	936.1	1,138.1	1,317.0	1,271.4
Multilateral (excluding IMF)	476.5	548.0	668.8	797.2	770.4
Asian Development Bank	319.3	366.1	439.1	503.3	485.7
World Bank	155.1	179.0	225.0	287.7	276.3
IFAD	2.1	2.9	4.7	6.2	8.4
Bilateral official	317.1	375.1	456.3	506.9	488.1
Paris Club	283.5	322.2	395.7	444.1	409.3
Japan	193.6	219.3	261.8	293.4	270.52
Russia	26.4	24.5	22.1	16.7	16.74
Germany	46.5	59.9	77.9	90.3	81.78
Finland	6.0	5.9	7.9	8.8	7.60
Norway	11.1	12.5	17.1	21.9	21.46
Spain	0.0	0.0	8.8	12.9	11.17
Non-Paris Club	33.5	52.9	60.6	62.8	78.82
China	15.5	15.0	15.0	15.0	15.38
Korea	7.9	24.5	30.2	31.7	31.89
Abu Dhabi					6.89
India	0.9	0.7	0.6	0.4	0.30
Kuwait	9.2	12.7	14.8	15.6	24.36
Treasury bill in US\$ to nonresidents	0.0	0.0	50.0	0.0	0.0
IMF	46.8	42.0	48.9	44.3	36.4
Commercial	13.0	13.0	13.0	13.0	13.0
Short-term	0.0	0.0	0.0	0.0	0.0

Sources: Data provided by the Ministry of Finance; and Fund staff estimates.

Table 45. Mongolia: Official Reserves of the Bank of Mongolia, 2001–06

(In millions of U.S. dollars)

	2001		2002		2003		2004		2005			2006			
	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.
Net international reserves	160.0	225.7	129.0	163.5	186.4	212.3	255.0	298.1	350.0	383.2	509.5				
Assets															
Foreign exchange	206.8	268.3	203.5	207.8	227.8	251.3	291.4	333.1	382.9	416.9	541.6				
Cash	155.6	218.5	196.9	193.7	180.0	190.4	216.2	333.1	346.1	231.3	404.6				
SDR holdings	7.3	12.2	11.3	10.1	6.9	9.9	9.7	9.9	11.2	11.7	16.0				
Demand deposits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1				
Foreign government bills	2.0	1.7	6.3	1.7	23.7	45.1	71.0	2.8	41.7	39.5	116.2				
Time deposits	21.6	45.4	66.1	50.7	10.0	21.9	0.0	72.3	0.0	0.0	0.0				
Reserve position in the IMF	124.6	159.0	113.0	131.1	139.3	113.2	135.3	248.0	293.0	179.9	272.1				
Monetary gold	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2				
	51.1	49.8	6.7	14.1	47.7	61.0	75.1	0.0	36.8	185.6	137.0				
Liabilities (official short-term)															
Use of Fund Credit and Loans from the IMF	46.8	42.6	74.6	44.3	41.4	39.0	36.4	35.0	32.8	33.7	32.1				
Borrowing from banks abroad	46.8	42.6	49.6	44.3	41.4	39.0	36.4	35.0	32.8	33.7	32.1				
Nonresident deposits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Other	0.0	0.0	25.0	0.0	0.0	2.6	2.6	2.6	2.7	2.8	2.8				
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Sources: Data provided by the Bank of Mongolia, and the IMF's Finance Department.

Table 46. Mongolia: Selected Indicators of Commercial Bank Foreign Exchange Operations, 2001–06

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
	Dec.	Dec.	Dec.	Dec.	Dec.	Sep.
Foreign assets (US\$ million)	47.5	62.9	113.3	113.8	185.9	158.5
Cash	6.6	11.2	15.2	23.2	24.5	30.3
Demand deposits	13.2	17.3	33.0	27.2	49.4	41.0
Time deposits	27.6	34.4	65.0	57.0	94.0	68.8
Other assets	0.0	0.0	0.1	6.3	18.0	18.4
Foreign liabilities (US\$ million)	8.0	14.6	44.0	44.4	44.9	43.0
Deposits of foreign banks and nonresidents	1.5	2.7	3.9	34.0	32.9	34.4
Loans from foreign banks	0.5	1.5	2.4	3.0	3.0	4.1
Other foreign liabilities	6.0	10.4	37.8	7.3	9.1	4.5
Foreign currency denominated loans (US\$ million)	45.4	77.4	163.0	239.2	334.9	364.3
Summary indicators (in percent)						
FC loans/total loans	36.4	37.0	42.4	44.8	45.2	44.6
Nonperforming loans/total loans (Forex)	5.9	7.5	9.9	10.9	9.8	10.0
Nonperforming loans/total loans (tugrik)	9.3	6.9	7.1	11.3	8.1	8.5
Foreign currency deposits (US\$ million)	79.2	120.2	214.2	268.2	364.1	361.9
Summary indicators (in percent)						
FC deposits/total deposits	39.3	38.7	43.8	46.1	44.0	41.1
Forex current accounts/total current accounts	46.2	48.9	61.0	58.2	63.1	57.2
FC demand deposits/total demand deposits	51.6	48.6	49.3	56.9	48.9	46.3
FC time and savings deposits/total time and savings deposits	29.6	27.6	29.7	37.8	30.5	29.9

Source: Data provided by the Bank of Mongolia; and Fund staff estimates.

Table 47. Mongolia: Nominal Exchange Rates, 2001–06

(In togrogs per U.S. dollar, period average)

	Official rate 1/	Interbank rate 2/	Street rate
2001	1,097.6	1,097.8	1,098.7
2001	1,110.3	1,110.7	1,111.0
2003	1,146.5	1,147.3	1,147.7
2004	1,185.2	1,186.7	1,187.4
2005			
2004 1Q	1,173.6	1,174.2	1,174.3
2Q	1,167.6	1,168.0	1,168.7
3Q	1,190.8	1,193.0	1,193.5
4Q	1,208.8	1,211.6	1,212.9
2005 1Q	1,207.4	1,208.8	1,209.9
2Q	1,188.5	1,189.3	1,190.6
3Q	1,202.0	1,204.5	1,206.8
4Q	1,223.3	1,225.5	1,214.1
2006 1Q	1,204.7	1,203.6	1,204.8
2Q	1,180.1	1,180.9	1,181.5
3Q	1,168.8	1,168.4	1,169.8
2004			
January	1,170.2	1,170.9	1,171.0
February	1,173.2	1,173.9	1,174.0
March	1,177.5	1,177.9	1,178.0
April	1,173.0	1,173.2	1,174.0
May	1,163.2	1,163.5	1,164.0
June	1,166.6	1,167.3	1,168.0
July	1,181.8	1,184.3	1,185.0
August	1,191.6	1,194.3	1,195.0
September	1,198.9	1,200.4	1,200.5
October	1,204.4	1,206.7	1,207.2
November	1,210.2	1,212.4	1,215.0
December	1,211.8	1,215.5	1,216.6
2005			
January	1,210.9	1,213.2	1,215.4
February	1,208.5	1,210.9	1,212.7
March	1,202.7	1,202.2	1,201.7
April	1,186.9	1,187.4	1,189.1
May	1,188.0	1,188.6	1,189.6
June	1,190.5	1,191.8	1,193.1
July	1,193.5	1,194.3	1,196.0
August	1,200.2	1,202.8	1,204.8
September	1,212.4	1,216.5	1,219.6
October	1,218.8	1,221.3	1,224.2
November	1,224.4	1,227.5	1,188.3
December	1,226.6	1,227.7	1,229.8
2006			
January	1,220.5	1,221.6	1,224.3
February	1,210.2	1,209.6	1,210.0
March	1,183.2	1,179.6	1,180.2
April	1,186.3	1,188.9	1,189.7
May	1,182.5	1,182.9	1,182.9
June	1,171.5	1,171.0	1,171.9
July	1,170.3	1,169.4	1,171.2
August	1,168.4	1,168.3	1,169.9
September	1,167.7	1,167.5	1,168.5
October	1,166.6	1,166.2	1,167.3
November	1,164.1	1,164.1	1,165.2

Source: Data provided by the Bank of Mongolia.

1/ Midpoint rate announced by the Bank of Mongolia.

2/ Midpoint rate established in the interbank foreign exchange market.