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III. FISCAL POLICY IN A RESOURCE-RICH COUNTRY¹

A. Introduction

1. **Countries rich in mineral resources face short- and long-term challenges in formulating fiscal policy arising from the fact that mineral revenue is volatile in the short-term and exhaustible in the long term.** As a result, fiscal authorities in these countries need to define policies to: (a) avoid the significant macroeconomic and fiscal costs associated with short-term variations in the fiscal stance; and (b) determine the optimal use of mineral revenue over time that maximizes welfare while guaranteeing the long-term sustainability of fiscal policy.

2. **To address these challenges, fiscal authorities should assess their fiscal stance focusing on non-mineral balances.** In the short term, they should avoid unintended fluctuations in the overall non-mineral balance. In the long term, they should identify the level of non-mineral primary balance that maximizes welfare and guarantees fiscal sustainability over time.

3. **This note briefly reviews the main challenges that resource-rich countries face in formulating fiscal policy,** considers policy options available to address these challenges, and investigates appropriate indicators to assess the fiscal stance. Against this framework, it then examines fiscal policy performance in Papua New Guinea in recent years.²

B. Fiscal Policy in Resource-Rich Countries: Challenges, Policy Options, and Indicators

What challenges do resource-rich countries face in formulating fiscal policy?

4. Countries rich in mineral resources face challenges in formulating fiscal policy that arise from the fact that mineral revenue is extremely volatile in the short-term and exhaustible over time.

The challenge with the short-term volatility of mineral revenue

5. **Short-term volatility in mineral revenue may lead to volatility in public expenditure and in the non-mineral fiscal balance,** eventually causing substantial macroeconomic and fiscal costs.³

¹ Prepared by Geremia Palomba.

² For discussion of different aspects of fiscal policy formulation in resource-rich countries, see Davis et al. (2003).

³ The *non-mineral balance* is defined as the government's overall fiscal balance net of mineral-related revenue and expenditure. Based on this definition, volatility in mineral revenue, with corresponding changes in public expenditure, would affect the non-mineral balance, but would have no effect on the overall fiscal balance.

6. Large and unpredictable changes in expenditure, and in the non-mineral deficit, can entail different types of *macroeconomic costs*.

- A rising non-mineral deficit financed with mineral revenue may create pressures toward a real appreciation of the domestic currency if not appropriately sterilized (Dutch disease). This would have negative effects on the competitiveness of the non-mineral sector of the economy, potentially reducing private investment and damaging economic growth.
- A rising non-mineral deficit could also put pressure on domestic demand with undesired consequence on inflation, and the external non-mineral current account, setting the stage for macroeconomic imbalances.

Similar considerations apply in the case of a rapidly expanding mineral sector. In this case, there could be an overshooting of the real exchange rate because of large investment projects (and significant foreign exchange inflows) and broader wealth effects.

7. Short-term fluctuations in government expenditure financed with mineral revenue windfalls also entail *fiscal costs*.

- The sudden creation of spending programs, following a surge in mineral revenue, can exceed the government's planning, implementation, and management capacity, making difficult to prevent wasteful spending.
- Expansions in spending programs during good times may lock in place a powerful hysteresis effect, making it difficult to streamline expenditure in bad times, and setting the stage for serious macroeconomic imbalances. At the same time, sharp expenditure reductions in the face of lowering mineral revenue may lead to social instability, discouraging private investment and reducing growth prospects.
- In the case where public expenditure has increased rapidly for some time, the marginal value of additional expenditure is likely to be in question and this may lead to suboptimal and inefficiently high levels of expenditure.

Indeed, depending on the macro and political economy situation, a country may well benefit instead from using revenue to lower public debt or keeping mineral revenue in the form of financial assets.

The challenge with long-term exhaustibility of mineral revenue

8. Over the long-term, mineral revenue is exhausted, and this poses the problem of how much revenue to consume at each point in time. The risk is that consuming too much at the present results in suboptimal choices from a welfare point of view and either the need for substantial fiscal adjustment or potentially explosive debt dynamics in the post-mineral period.

9. In conclusion, governments in countries rich in mineral resources face a double challenge. They need to define a fiscal policy to: (a) absorb the macroeconomic and fiscal

costs deriving from the short-term volatility of mineral revenue; and (b) determine how to use mineral revenue over time to maximize social welfare while guaranteeing long-term fiscal sustainability.

What are the policy options available to address these challenges?

10. **Different policy options are available to address the short- and the long-term challenges** posed by the dependence on mineral revenue.

11. **In the short term, there are strong arguments for smoothing the public expenditure path and reducing fluctuations in the non-mineral fiscal balance.** This policy would reduce the macroeconomic and fiscal costs associated with mineral revenue volatility. In this respect, a key policy objective should be to pursue fiscal strategies aimed at breaking the pro-cyclical response of expenditure to volatile mineral revenue. This can be achieved by eliminating expansionary fiscal policy biases during mineral booms and targeting prudent non-mineral fiscal balances. By reducing fluctuations in public expenditure and in the non-mineral fiscal balance, the government would contribute to a more stable evolution of aggregate demand, while maintaining the quality and efficiency of its spending programs. A smoothing policy would also satisfy a precautionary motive underlying fiscal policy in resource-rich countries. Specifically, caution in expenditure planning would reduce the country's exposure to unexpected adverse mineral and financing shocks.

12. **In the case of a rapidly expanding mineral sector, there could be a strong justification for a countercyclical non-mineral fiscal policy.** Sudden mineral booms may lead to surges in domestic demand with pressure on the currency and inflation. In these cases, a clearly countercyclical non-mineral fiscal policy would play an important stabilization function.

13. **In the long term, fiscal policy should aim at smoothing consumption over time to maximize intertemporal welfare and guarantee long-term fiscal sustainability by targeting the primary non-mineral balance.** Revenue coming from mineral resources should first be partly saved (e.g., by repaying public debt or acquiring financial wealth) and then used after the depletion of mineral resources. In this respect, fiscal policy should be targeted at accumulating substantial net assets during the period of mineral production to sustain the non-mineral deficit in the post mineral period. Formally, this outcome can be achieved by targeting an appropriate level of primary non-mineral balance.⁴

⁴ For discussion on how to determine the level of non-mineral primary balance that maximizes social welfare and guarantees long-term fiscal sustainability see, for example, Davis et al. (2003), Chapter 3.

Indicators to assess the fiscal stance in resource-rich countries

14. **In assessing the fiscal performance in resource-rich countries, non-mineral fiscal balances play a critical role** to integrate the standard analysis based on overall fiscal balances.⁵

15. **The non-mineral balance is a good indicator of the government demand on the economy.** An increase in government expenditures financed by higher mineral revenue would be reflected in a larger non-mineral fiscal balance, but would not be picked up by the overall balance, as this would be fully financed. The non-mineral balance also provides a clearer picture of the government's fiscal policy stance and its adjustment efforts. Indeed, differently from the overall balance, the non-mineral balance is an aggregate largely under the control of fiscal authorities. In this respect, it reflects better the government's actual adjustment efforts. Many mineral-rich countries use the non-mineral balance as a leading indicator of the fiscal stance. For example, in Norway, budget documents and fiscal policy discussions prominently focus on the concept of non-oil balance. This focus has the additional advantage of making the use of mineral revenue more transparent.

16. **In mineral-rich countries, the overall fiscal balance is still an important measure of the budget financial requirements and vulnerability.** The overall balance underpins the gross financing needs of the government's fiscal operations, and helps to identify possible financing problems and vulnerabilities.

C. How is Papua New Guinea Managing Fiscal Policy and Mineral Revenue?

17. **Over the last four years, the fiscal policy stance in Papua New Guinea has improved substantially.** As a result of the government's effort of reducing fiscal deficits, non-mineral fiscal balances have improved significantly and have been very little correlated to the volatile pattern of mineral revenue. This has reduced the risk of having a pro-cyclical fiscal policy associated with mineral revenue performance, certainly contributing to recent macroeconomic stability.

The fiscal stance in Papua New Guinea

18. **Since 2002, both the non-mineral overall and the primary balances have improved** (Table 1). This is a remarkable result as it occurred against a background of relatively volatile mineral revenue that reached a minimum of about 15 percent of total revenue in 2002 and a maximum of about 29 percent of total revenue in 2005.⁶

⁵ For discussion of different indicators of fiscal stance see, for example, Blejer and Cheasty (1993).

⁶ Table 1 reports non-mineral balances in terms of non-mineral GDP. However, because of the uncertainty about the relative sizes of the mineral and non-mineral sectors, the table also reports the non-mineral balances as a share of total GDP.

	2000	2001	2002	2003	2004	2005
Share of mineral revenue over total revenue	21.8	24.2	14.8	19.6	22.9	26.7
Overall fiscal balance	-1.3	-3.9	-5.3	-1.6	1.1	2.7
Primary fiscal balance	3.0	0.1	-1.5	3.7	3.8	4.8
Non-mineral overall balance	-6.6	-9.6	-8.5	-6.0	-4.7	-4.4
Non-mineral primary balance	-2.5	-5.6	-4.7	-0.7	-2.0	-2.4
Nonmineral overall balance (% of nonmineral GDP)	-8.8	-12.1	-8.9	-7.0	-5.3	-5.9
Nonmineral primary balance (% of nonmineral GDP)	-3.3	-7.3	-5.8	-0.8	-2.5	-3.2
Memo items						
Mineral revenue (Percent of total GDP)	5.5	5.7	3.2	4.4	5.8	7.2
Non-mineral revenue (Percent of GDP)	19.8	18.0	18.6	18.1	19.4	17.6

Source: Authorities data and Staff estimates

19. **The fiscal stance has not been influenced by the volatility of mineral revenue.** The non-mineral overall and primary balances have been little correlated to mineral revenue, over the last few years (Table 2). This result was achieved in the context of the government's medium-term fiscal framework and debt reduction strategy that helped to isolate expenditure patterns from mineral revenue's upward volatility. The mirror image of this achievement is that the overall fiscal balance is significantly correlated to mineral revenue, as the latter was used to improve the overall fiscal balance.

	2000-2004
Mineral revenue	1.0
Overall fiscal balance (% of total GDP)	0.23
Primary fiscal balance (% of total GDP)	0.08
Nonmineral overall balance (% of nonmineral GDP)	-0.04
Nonmineral primary balance (% of nonmineral GDP)	0.03

Source: Authorities data and Staff estimates

How have unexpected mineral revenue windfalls been used?

20. **An interesting issue is to examine how the fiscal authorities have reacted in the past to unexpected mineral revenue windfalls.** To do this, we need to define the concept of unexpected mineral revenue windfalls. Since commodity prices are believed to follow a random walk, the best predictor of mineral revenue in one year is the amount of mineral revenue collected the previous year. Therefore, we can use year-to-year changes in mineral revenue as a proxy for unexpected mineral revenue or windfalls. Once mineral revenue windfalls materialize, the government has three basic options. It may: (a) adjust the non-mineral revenue; (b) modify expenditure plans; and/or (c) allow changes in the overall fiscal balance. What course of action did the fiscal authorities in Papua New Guinea adopt in the face of changes in mineral revenue in past years?

21. **Over the last few years, the fiscal authorities have not adopted a systematic approach as to how use mineral revenue windfalls.** Revenue windfalls have indeed neither been systematically spent nor saved. For example, the increases in mineral revenue in 2003 and 2004 led to different policy reactions (Table 3). In 2003, the mineral revenue increase allowed a reduction in non-mineral revenue, and was associated with sharp reductions in expenditure, thus resulting in significant fiscal savings. In 2004, the policy response was different. The increase in mineral revenue was accompanied by an improvement in non-mineral revenue and very little adjustment on the expenditure side, leading to significant fiscal savings. If we look at the response to reductions in mineral revenue, the policy response is yet different. For example, in 2002 lower mineral revenue had little effect on non-mineral revenue and led to a reduction in expenditure and a worse overall fiscal balance. Underlying these differences is that starting in 2003, the authorities embarked on a significant fiscal adjustment plan that focused on reducing expenditure independently of revenue performance. This has broken the correlation between mineral revenue performance and expenditure.

Table III.3. Papua New Guinea: Fiscal Response to Mineral revenue Shocks Non-Mineral Balance (Central Government) (In percent of GDP)					
	2001	2002	2003	2004	2005
Mineral revenue shock 1/	0.2	-2.5	1.2	1.4	1.4
Non-mineral revenue reaction 2/	1.3	-0.1	0.7	-1.3	1.8
Expenditure reaction	1.6	-1.1	-3.2	-0.1	-1.9
Savings 3/	-2.6	-1.4	3.7	2.7	1.6

Source: Authorities data and Staff estimates.
 1/ A mineral revenue shock is defined as a variation in mineral related revenue from one year to the next.
 2/ Non-mineral revenue reaction is defined as a decrease in non-mineral revenue (a positive number indicates a decrease in non-mineral revenue).
 3/ Savings are defined as changes in the overall fiscal balance.

D. What Do We Conclude?

22. **To date, Papua New Guinea is on the right track in dealing with the challenges that mineral-rich countries face in formulating fiscal policy.** These challenges arise from the fact that mineral revenue is volatile in the short-term and exhaustible in the long term. As a result, fiscal authorities in these countries need to define a policy to: (a) avoid the significant macroeconomic and fiscal costs associated to short-term variations in the fiscal stance; and (b) determine the optimal use of mineral revenue over time that maximizes social welfare and guarantees the long-term sustainability of fiscal policy. To address these challenges, fiscal authorities should assess their fiscal stance focusing on non-mineral balances. In the short term, they should avoid unintended fluctuations in the overall non-mineral balance. In the long term, they should identify the level of non-mineral primary balance that maximizes welfare while guaranteeing fiscal sustainability over time. In Papua New Guinea's case, by adopting a fiscal adjustment plan that reduces expenditure independently of revenue performance, the strategy effectively addresses the short-term challenge. For the longer term, a parallel debt policy of progressively reducing debt-to-GDP ratios over time has so far met the long-term challenge although significant increase in future mineral revenue may warrant some attention to the long-term dynamics of non-mineral balances.

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Table 1. Papua New Guinea: GDP by Sector at Current Market Prices, 2000-04

	2000	2001	2002	<u>2003</u> Est.	<u>2004</u> Est.
(In millions of kina)					
Nominal GDP	9,736	10,396	11,657	12,858	13,790
Mineral	2,464	2,401	2,150	2,533	2,873
Non-mineral	7,272	7,995	9,507	10,326	10,916
<i>Of which</i> : Non-agricultural	3,965	4,418	5,079	5,297	5,544
Agriculture, forestry and fishing	3,307	3,578	4,428	5,029	5,372
Mining, quarrying, and petroleum	2,464	2,401	2,150	2,533	2,873
Manufacturing	698	731	729	766	803
Electricity, gas and water	140	167	195	217	227
Construction	528	702	996	1,069	1,125
Wholesale and retail trade	321	558	746	802	839
Transport, storage and communication	258	258	268	284	298
Financing, insurance, real estate and business services	396	407	407	423	442
Less: Imputed bank service charge	163	179	185	188	196
Community, social and personal services	1,297	1,241	1,352	1,354	1,402
Import duties	494	535	575	572	606
Less: Subsidies	3	3	3	3	3
(In percent of GDP)					
Memoranda items:					
Nominal GDP	100.0	100.0	100.0	100.0	100.0
Mineral	25.3	23.1	18.4	19.7	20.8
Non-mineral	74.7	76.9	81.6	80.3	79.2
<i>Of which</i> : Non-agricultural	40.7	42.5	43.6	41.2	40.2
Agriculture, forestry and fishing	34.0	34.4	38.0	39.1	39.0
Mining, quarrying, and petroleum	25.3	23.1	18.4	19.7	20.8
Manufacturing	7.2	7.0	6.3	6.0	5.8
Electricity, gas and water	1.4	1.6	1.7	1.7	1.6
Construction	5.4	6.8	8.5	8.3	8.2
Wholesale and retail trade	3.3	5.4	6.4	6.2	6.1
Transport, storage and communication	2.7	2.5	2.3	2.2	2.2
Financing, insurance, real estate and business services	4.1	3.9	3.5	3.3	3.2
Less: Imputed bank service charge	1.7	1.7	1.6	1.5	1.4
Community, social and personal services	13.3	11.9	11.6	10.5	10.2
Import duties	5.1	5.1	4.9	4.5	4.4
Less: Subsidies	0.0	0.0	0.0	0.0	0.0

Sources: Data through 2002 provided by the National Statistical Office; data for 2003-04 from the Treasury Department.

Table 2. Papua New Guinea: GDP by Type of Expenditure at Current Market Prices, 2000-2004

	2000	2001	2002	<u>2003</u> Est.	<u>2004</u> Est.
	(In millions of kina)				
Gross domestic product	9,736	10,396	11,657	12,858	13,790
Market component	7,996	8,191	8,770	9,581	10,287
Nonmarket component	1,740	2,206	2,887	3,277	3,502
Consumption	5,956	6,650	8,847	8,587	9,650
Private	4,343	4,962	7,060	6,783	7,787
Government	1,613	1,688	1,788	1,804	1,862
Gross investment	2,131	2,386	2,470	2,714	2,903
Gross fixed capital formation	1,988	2,200	2,264	2,496	2,676
Change in inventories	144	186	206	219	228
Domestic demand	8,087	9,037	11,317	11,302	12,553
Foreign balance (net)	1,649	1,360	339	1,557	1,237
Exports of goods and services	6,443	6,792	7,100	8,559	8,982
Imports of goods and services	4,794	5,432	6,761	7,003	7,746
	(In percent of GDP)				
Memoranda items:					
Gross domestic product	100.0	100.0	100.0	100.0	100.0
Market component	82.1	78.8	75.2	74.5	74.6
Nonmarket component	17.9	21.2	24.8	25.5	25.4
Domestic demand	83.1	86.9	97.1	87.9	91.0
Consumption	61.2	64.0	75.9	66.8	70.0
Private	44.6	47.7	60.6	52.8	56.5
Government	16.6	16.2	15.3	14.0	13.5
Gross investment	21.9	23.0	21.2	21.1	21.1
Foreign balance (net)	16.9	13.1	2.9	12.1	9.0

Sources: Data through 2002 provided by the National Statistical Office; data for 2003-04 from the Treasury Department.

Table 3. Papua New Guinea: GDP by Type of Expenditure at Constant 1983 Prices, 2000-04

	2000	2001	2002	<u>2003</u> Est.	<u>2004</u> Est.
(In millions of 1983 kina)					
Gross domestic product	7,741	7,728	7,954	8,185	8,428
Market component	6,256	6,233	6,423	6,614	6,816
Nonmarket component	1,485	1,495	1,531	1,571	1,612
Consumption	4,397	5,289	4,529	5,564	6,354
Private	2,846	3,737	3,025	4,095	4,908
Government	1,552	1,552	1,505	1,469	1,446
Gross investment	2,047	2,001	2,059	2,819	3,403
Gross fixed capital formation	1,887	1,834	1,892	2,652	3,236
Change in inventories	160	167	167	167	167
Domestic demand	6,444	7,290	6,589	8,383	9,756
Foreign balance (net)	1,296	439	1,366	-199	-1,328
Exports of goods and services	5,775	5,703	6,543	6,115	6,331
Imports of goods and services	4,479	5,264	5,178	6,314	7,659
(Annual percentage change)					
Memoranda items:					
Gross domestic product	-0.1	-0.2	2.9	2.9	3.0
Market component	0.4	-0.4	3.0	3.0	3.1
Nonmarket component	-2.3	0.7	2.4	2.6	2.6
Domestic demand	-3.5	14.4	-10.6	30.0	18.0
Consumption	-7.3	20.3	-14.4	22.9	14.2
Private	-13.6	31.3	-19.1	35.4	19.8
Government	7.1	0.0	-3.1	-2.4	-1.6
Gross investment	7.0	-2.3	2.9	36.9	20.7
Foreign balance (net)	18.6	-66.2	211.3	-114.5	568.8

Sources: Data through 2002 provided by the National Statistical Office; data for 2003-04 from the Treasury Department.

Table 4. Papua New Guinea: Production of Major Commodities, 2000–04

	2000	2001	2002	2003	2004
Production volumes					
Crude Oil (millions of barrels)	23.6	21.4	15.4	15.0	12.6
Copper (thousands of tonnes)	126.8	212.6	170.1	230.6	173.9
Gold (tonnes)	72.8	69.1	59.1	68.4	67.3
Silver (tonnes)	61.2	58.6	54.1	61.3	49.5
Cocoa (thousands of tonnes)	38.0	36.3	34.9	40.3	41.5
Coffee (thousands of tonnes)	66.6	51.6	63.1	68.8	63.0
Tea (thousands of tonnes)	8.5	8.8	5.2	6.6	8.1
Copra (thousands of tonnes)	67.2	21.8	15.8	8.4	19.2
Copra oil (thousands of tonnes)	48.0	27.1	28.2	47.7	45.1
Palm oil (thousands of tonnes)	336.3	327.6	323.9	326.9	339.0
Rubber (thousands of tonnes)	3.7	3.6	3.8	4.2	3.8
Logs (millions of cubic meters)	1.4	1.2	1.8	2.0	2.0
(In millions of kina)					
Production values					
Crude Oil	1,922	1,889	1,431	1,632	1652.2
Copper	595	1,074	1,019	1,415	1544.2
Gold	1,951	2,115	2,295	2,811	2779.5
Silver	32	37	39	36	31.5
Cocoa	85	110	226	258	218
Coffee	295	189	277	299	283.8
Tea	20	22	18	19	22.9
Copra	60	16	11	7	17
Copra oil	66	27	33	67	81
Palm oil	307	291	390	421	438.7
Rubber	6	7	9	12	13.8
Logs	283	234	366	370	355.7

Sources: Data provided by the Papua New Guinea authorities, and Fund staff estimates.

Table 5. Papua New Guinea: Employment by Sector, 2002–September 2005

	2002	2003	2004	2005 Sept.
	(March 2002 =100, annual average) 1/			
Total	102.2	109.9	111.1	112.7
Retail	98.2	99.6	100.7	91.2
Wholesale	102.8	113.4	117.0	135.3
Manufacturing	102.2	107.5	112.2	130.4
Building and construction	90.5	98.7	96.7	107.4
Transportation	106.3	105.8	107.9	105.1
Agriculture, forestry, and fisheries	104.1	119.0	117.5	115.5
Financial and business services	102.9	108.4	111.1	106.1
Mining 1/	98.8	97.6	102.3	103.0
	(Annual percentage change)			
Total	1.6	7.5	1.1	2.5
Retail	-2.4	1.4	1.1	-1.3
Wholesale	0.1	10.3	3.2	10.7
Manufacturing	2.7	5.2	4.4	16.1
Building and construction	-2.6	9.1	-2.0	4.4
Transportation	6.9	-0.5	2.0	-2.1
Agriculture, forestry, and fisheries	1.9	14.3	-1.3	0.9
Financial and business services	2.4	5.3	2.5	1.2
Mining 1/	2.0	-1.2	4.8	6.6

Source: Bank of Papua New Guinea, *Quarterly Economic Bulletin*.

1/ Not included in overall index; excludes subcontractors.

Table 6. Papua New Guinea: Consumer Price Index by Expenditure Group, 2000–September 2005

	All Groups Total	Food	Drinks, Tobacco, and Betelnut	Clothing and Footwear	Rents, Fuel, and Power	Household Equipment and Operations	Transportation and Communication	Miscellaneous	Bank of Papua New Guinea's Underlying Inflation 1/
(Percentage change from corresponding quarter of previous year)									
2000									
March	19.6	19.9	13.3	18.2	8.2	24.0	28.5	21.2	15.0
June	21.9	19.6	28.2	17.8	8.3	23.2	22.3	20.2	14.4
September	12.2	8.8	18.6	14.3	5.6	8.0	13.0	13.6	7.9
December	10.0	7.7	13.9	13.0	7.3	2.2	11.3	11.5	5.5
2001									
March	8.9	5.9	15.5	11.2	2.5	3.7	10.2	4.4	4.4
June	7.8	7.9	11.7	12.5	6.8	-0.7	4.7	6.7	4.6
September	10.0	11.8	13.3	12.0	7.7	2.0	4.6	9.1	6.6
December	10.4	12.5	13.5	11.1	7.7	2.6	4.6	9.5	8.0
2002									
March	10.5	15.9	10.7	10.9	7.1	0.2	5.8	-2.0	9.4
June	9.4	17.3	4.5	9.6	1.4	4.7	5.5	-2.0	11.1
September	12.3	17.1	8.2	8.6	1.4	9.6	13.7	0.3	13.7
December	14.8	17.8	13.9	6.5	2.7	12.7	17.8	1.2	15.5
2003									
March	20.7	23.7	22.2	5.1	7.1	19.3	33.4	17.6	18.4
June	19.0	14.9	20.0	4.6	7.9	16.3	32.9	16.2	15.7
September	11.8	8.9	10.2	4.9	7.9	12.6	21.6	13.0	10.4
December	8.4	6.9	5.9	4.1	1.4	9.0	15.9	12.0	6.7
2004									
March	2.5	-1.4	1.1	3.9	1.3	0.2	-0.1	16.5	1.6
June	1.9	2.8	0.7	4.1	3.3	0.9	-1.9	16.4	2.3
September	1.6	1.7	-0.1	1.5	8.2	-0.8	0.0	16.5	2.0
December	2.4	-0.6	6.7	0.7	15.7	-1.7	-0.3	15.4	2.0
2005									
March	0.1	1.4	2.5	-1.4	8.8	-3.5	-8.3	4.4	3.3
June	0.8	1.4	2.4	-2.1	16.6	0.9	-3.9	2.3	2.6
September	1.4	3.4	5.4	-2.6	6.7	-2.3	-6.2	2.0	3.2
Memorandum item:									
Weights in total basket (percent) 2/	100.0	40.9	20.0	6.2	7.2	5.3	13.0	7.5	63.6

Sources: *Consumer Price Index*, National Statistical Office; and Bank of Papua New Guinea's *Quarterly Economic Bulletin*.

1/ Excluding food and goods and services subject to administered prices.

2/ Weights are based on the 1977 expenditure survey.

Table 7a. Papua New Guinea: Central Government Budget 2001–05

(In millions of kina)

	2001	2002	2003	2004	2005 Rev. budget
Revenue	3,087	3,237	3,657	4,317	5,004
Tax	2,295	2,370	2,678	3,220	3,493
Mineral taxes	555	365	498	736	975
Nonmineral taxes	1,740	2,005	2,180	2,484	2,518
Nontax	172	170	232	248	228
<i>Of which:</i> mineral nontax revenue	42	10	74	60	85
Grants	620	697	747	850	1,283
Budget Grants	71	21	0	0	0
Project Grants	550	676	747	850	1,283
Expenditure	3,457	3,713	3,811	4,104	5,101
Recurrent	2,414	2,547	2,677	2,831	2,933
Noninterest recurrent expenditures	1,996	2,110	1,987	2,461	2,585
National departments	1,242	1,357	1,189	1,576	1,746
Salaries and wages	540	574	618	681	699
Arrears payments	91	12	14	37	86
Education funding	0	135	19	40	41
Goods and services	386	568	528	752	854
Structural adjustment payments	40	68	10	67	66
Other	186	0	0	0	0
Provinces	589	588	594	678	641
Salaries and wages	420	485	504	589	551
Goods and services	98	49	61	65	55
Conditional grants	71	54	29	24	35
Other	0	0	0	0	0
Statutory authorities	165	165	203	207	198
Interest	418	437	690	370	348
Domestic	253	248	528	239	237
Foreign	165	189	161	131	111
Development budget and net lending	1,043	1,166	1,134	1,273	2,168
Development budget	1,047	1,171	1,144	1,283	1,772
Project grants	550	676	747	850	1,283
Concessional Loans	142	120	134	74	133
Nonconcessional loans	0	138	56	25	11
Domestic Funds	355	237	207	334	345
Net lending	-4	-5	-10	-10	396
Overall balance (from above the line)	-370	-476	-154	213	-96
Errors, omissions, and discrepancy	-34	-137	-51	-64	0
Overall balance (from below the line)	-404	-612	-206	150	-97
Financing	404	612	206	-150	97
Foreign financing (net)	312	-101	-266	-222	-156
Domestic financing (net)	-35	665	432	-83	252
Float	127	-153	-1	130	0
Asset sales	0	201	40	25	0
Memorandum items:					
Nominal GDP (in millions of kina)	10,396	11,657	12,858	13,790	15,143

Sources: Data provided by the Papua New Guinea authorities; and Fund staff estimates.

Table 7b. Papua New Guinea: Central Government Budget 2001–05

(In percent of GDP)

	2001	2002	2003	2004	2005
					Rev. budget
Revenue	29.7	27.8	28.4	31.3	33.0
Tax	22.1	20.3	20.8	23.3	23.1
Nonmineral taxes	5.3	3.1	3.9	5.3	6.4
Mineral taxes	16.7	17.2	17.0	18.0	16.6
Nontax	1.6	1.5	1.8	1.8	1.5
<i>Of which:</i> Mineral nontax revenue	0.4	0.1	0.6	0.4	0.6
Grants	6.0	6.0	5.8	6.2	8.5
Budget Grants	0.7	0.2	0.0	0.0	0.0
Project Grants	5.3	5.8	5.8	6.2	8.5
Expenditure	33.2	31.8	29.6	29.8	33.7
Recurrent	23.2	21.8	20.8	20.5	19.4
Noninterest recurrent expenditures	19.2	18.1	15.5	17.8	17.1
National departments	11.9	11.6	9.3	11.4	11.5
Salaries and wages	5.2	4.9	4.8	4.9	4.6
Arrears payments	0.9	0.1	0.1	0.3	0.6
Education funding	0.0	1.2	0.2	0.3	0.3
Goods and services	3.7	4.9	4.1	5.5	5.6
Structural adjustment payments	0.4	0.6	0.1	0.5	0.4
Other	1.8	0.0
Provinces	5.7	5.0	4.6	4.9	4.2
Salaries and wages	4.0	4.2	3.9	4.3	3.6
Goods and services	0.9	0.4	0.5	0.5	0.4
Conditional Grants	0.7	0.5	0.2	0.2	0.2
Statutory authorities	1.6	1.4	1.6	1.5	1.3
Interest	4.0	3.7	5.4	2.7	2.3
Domestic	2.4	2.1	4.1	1.7	1.6
Foreign	1.6	1.6	1.3	1.0	0.7
Development budget and net lending	10.0	10.0	8.8	9.2	14.3
Development budget	10.1	10.0	8.9	9.3	11.7
Project grants	5.3	5.8	5.8	6.2	8.5
Project concessional Loans	1.4	1.0	1.0	0.5	0.9
Nonconcessional loans	0.0	1.2	0.4	0.2	0.1
Domestic Funds	3.4	2.0	1.6	2.4	2.3
Net Lending	0.0	0.0	-0.1	-0.1	2.6
Overall balance (from above the line)	-3.6	-4.1	-1.2	1.5	-0.6
Errors, omissions, and discrepancy	-0.3	-1.2	-0.4	-0.5	0.0
Overall balance (from below the line)	-3.9	-5.3	-1.6	1.1	-0.6
Financing	3.9	5.3	1.6	-1.1	0.6
Foreign financing (net)	3.0	-0.9	-2.1	-1.6	-1.0
Domestic financing	-0.3	5.7	3.4	-0.6	1.7
Float	1.2	-1.3	0.0	0.9	...
Asset sales	0.0	1.7	0.3	0.2	...
Memorandum item:					
Nominal GDP (in millions of kina)	10,396	11,657	12,858	13,790	15,143

Sources: Data provided by the Papua New Guinea authorities; and Fund staff estimates.

Table 8. Papua New Guinea: Central Government Revenue and Grants 2001–05

(In millions of kina)

	2001	2002	2003	2004	2005 Rev. budget
Total revenue and grants	3,087	3,237	3,657	4,317	5,004
Total revenue	2,467	2,540	2,910	3,468	3,736
Tax revenue	2,295	2,370	2,678	3,220	3,493
Taxes on income and profit	1,509	1,491	1,786	2,223	2,530
Personal tax	599	694	758	827	875
Company tax	252	311	335	437	442
Dividend withholding tax	58	62	117	123	140
Mineral and petroleum taxes	435	259	396	634	891
Other direct	52	69	55	79	70
Interest withholding tax	51	22	41	33	19
Gaming tax	62	74	83	91	94
Indirect taxes	786	879	892	997	963
Excise tax	187	179	175	203	249
VAT plus mining levy	319	396	414	417	420
VAT (70 percent national share only)	198	290	312	316	336
Mining levy	120	106	102	101	84
Other indirect	2	1	1	1	1
Taxes on international trade	280	303	302	376	293
Import duties	73	80	74	151	94
Export duties (logs)	98	107	112	102	114
Import excises	108	117	110	123	86
Import levy	0	0	7	0	0
Nontax revenue	172	170	232	248	243
Property income	98	74	160	165	166
Dividends	56	64	86	105	66
Mining and petroleum	42	10	74	60	100
Interest and fees	1	1	4	3	5
Other	73	72	68	80	73
Asset sales costs	0	22	0	0	0
Foreign grants	620	697	747	850	1,283
Budgetary support	71	21	0	0	0
Australia	71	21	0	0	0
Other	0	0	0	0	0
Project grants	550	676	747	850	1,283

Sources: Data provided by the Papua New Guinea authorities; and Fund staff estimates.

Table 9. Papua New Guinea: Central Government Fiscal Financing 2001–05

(In millions of kina)

	2001	2002	2003	2004	2005 Rev. budget
Total Financing	404	612	206	-150	97
Foreign financing (net)	312	-101	-266	-222	-156
New borrowing	627	258	190	181	144
Project loans	172	258	190	99	144
Concessional financing	456	0	0	82	0
Amortization	315	358	456	403	300
Domestic financing (net)	-35	665	432	-83	252
Bank of Papua New Guinea					
Net credit to central government	-269	233	-83	-20	...
Securities	-26	-31	-48	35	...
Treasury bills	0	-12	-29	35	...
Inscribed stock	-26	-19	-19	-1	...
Temporary advance	0	75	-36	-39	...
Deposits	-243	189	1	-16	...
Commercial Banks					
Net credit to central government	23	327	-51	102	...
Securities	83	304	-92	137	...
Treasury bills	-2	369	-72	-299	...
Inscribed stock	85	-65	-20	436	...
Loans	-5	-4	-1	-1	...
Deposits	-55	27	42	-34	...
Nonbanks					
Net credit to central government	210	105	566	-164	...
Securities	288	71	571	-164	...
Treasury bills	187	70	641	-473	...
Inscribed stock	101	1	-71	308	...
Loans	-77	34	-5	0	...
Float	127	-153	-1	130	0
Asset sales	0	201	40	25	0

Sources: Data provided by the Papua New Guinea authorities; and Fund staff estimates.

Table 10. Papua New Guinea: Central Government Domestic Debt, 2001-September 2005

(In millions of kina; end of period)

	2001	2002	2003	2004	2005		
					Mar.	Jun.	Sept.
Central government domestic debt: by creditor							
Bank of Papua New Guinea							
Net credit to central government	472	705	622	601	608	529	638
Securities	746	715	667	702	702	705	706
Treasury bills 1/	633	621	592	627	627	627	628
Inscribed stock 2/	113	94	76	75	75	78	78
Temporary advance	0	75	39	0	0	0	15
Less: Deposits	275	86	84	101	94	176	83
Commercial Banks							
Net credit to central government	225	552	501	603	573	574	560
Securities	528	832	740	876	861	890	859
Treasury bills 1/	443	812	740	441	425	440	246
Inscribed stock 2/	85	20	0	436	436	451	613
Loans	7	3	2	1	1	2	1
Less: Deposits	310	283	240	275	288	318	300
Nonbanks							
Net credit to central government	843	948	1,514	1,350	1,433	1,447	1,382
Securities	819	891	1,461	1,297	1,380	1,394	1,329
Treasury bills 2/	651	721	1,362	890	973	891	803
Inscribed stock 2/	168	170	99	407	407	503	527
Loans	24	58	53	53	53	53	53
Central government net domestic debt: total	1,540	2,205	2,637	2,554	2,614	2,550	2,580
Total gross domestic debt	2,124	2,573	2,962	2,930	2,996	3,045	2,963
Securities	2,093	2,438	2,868	2,875	2,942	2,990	2,894
Total treasury bills	1,727	2,154	2,694	1,958	2,025	1,958	1,676
Loans	31	135	94	54	54	55	69
Less: Central government deposits	584	368	325	376	382	495	383

Sources: Data provided by the Bank of Papua New Guinea; and Department of Treasury.

1/ Discount value.

2/ Face value.

Table 11. Papua New Guinea: Monetary Survey, 2001–June 2005

(In millions of kina; end of period)

	2001	2002	2003	2004	2005	
					Mar.	Jun.
Net foreign assets	1,580	1,419	1,616	2,157	2,005	1,988
Bank of Papua New Guinea	1,249	908	1,317	1,862	1,691	1,723
Foreign assets	1,656	1,379	1,735	2,063	1,808	1,760
Less: Foreign liabilities	406	471	418	201	117	37
Commercial banks	331	511	299	296	314	265
Net domestic assets	1,507	1,798	1,494	1,430	1,565	1,676
Domestic credit	2,367	2,850	2,620	2,655	2,757	2,846
Net credit to central government 1/	697	1,257	1,123	1,204	1,198	1,152
Bank of Papua New Guinea 1/	472	705	622	601	638	677
Claims on central government 1/	746	790	706	702	721	760
Less: Central government deposits	275	86	84	101	83	83
Commercial banks 1/	225	552	501	603	560	475
Claims on central government 1/	535	835	742	878	860	829
Securities	528	832	740	876	859	828
Loans	7	3	2	1	1	0
Less: Central government deposits	310	283	240	275	300	354
Claims on other sectors	1,670	1,594	1,497	1,451	1,559	1,695
Claims on the private sector	1,543	1,445	1,383	1,352	1,436	1,582
Claims on official entities	115	128	101	74	106	99
Claims on nonmonetary financial instituti	12	20	13	25	17	14
Other items, net 1/	-860	-1,052	-1,126	-1,225	-1,192	-1,170
Broad money	3,087	3,217	3,109	3,587	3,570	3,664
Narrow money	1,321	1,535	1,708	2,215	2,252	2,312
Currency outside banks	272	366	399	420	384	430
Demand deposits	1,049	1,169	1,309	1,795	1,869	1,882
Quasi money	1,766	1,682	1,401	1,373	1,318	1,352
Memoranda items:						
Narrow money growth rate 2/	3.9	16.2	11.3	29.6	34.8	20.0
Broad money growth rate 2/	1.9	4.2	-3.3	15.4	18.7	11.9
Private sector credit growth rate 2/	-1.2	-6.3	-4.3	-2.2	4.4	16.8
Nominal nonmineral GDP/broad money	2.6	3.0	3.3	3.0

Sources: Data provided by the Papua New Guinea authorities; and Fund staff estimates.

1/ From January 2002 BPNG stopped netting the outstanding stock of its own short-term securities from from its gross holdings of government treasury bills, and now records its total holdings of treasury bills as assets and the outstanding stock of central bank securities as liabilities. This led to a shift in the composition of credit to the central government from the commercial banks to the BPNG in March 2002.

2/ Percent change from corresponding period of previous year.

Table 12. Papua New Guinea: Balance Sheet of the Central Bank, 2001-June 2005

(In millions of kina; end of period)

	2001	2002	2003	2004	2005	
					Mar.	Jun.
Net foreign assets	1,249	908	1,317	1,862	1,691	1,723
Foreign assets	1,656	1,379	1,735	2,063	1,808	1,760
Less: Foreign liabilities	406	471	418	201	117	37
<i>Of which: Non-IMF liabilities</i>	2	4	13	1	0	3
Net domestic assets 1/	-671	-264	-651	-988	-988	-1,029
Domestic credit 1/	-74	574	254	-262	-298	-408
Net credit to government 1/	472	705	622	601	638	677
Securities 1/	746	715	667	702	706	742
Treasury bills 1/	633	621	592	627	628	633
Inscribed stock	113	94	76	75	78	109
Advances	0	75	39	0	15	18
Less: Central government deposits	275	86	84	101	83	83
Credit to other sectors	56	56	55	29	29	28
Claims on the private sector	3	3	4	5	5	5
Claims on deposit money banks	52	52	50	24	24	23
Claims on nonmonetary financial institutions	0	0	0	0	0	0
Less: Central bank securities	586	157	422	891	965	1,114
Less: Kina facility deposits	15	30	0	0	0	0
Other items net 1/	-598	-837	-905	-726	-690	-621
Reserve money	578	644	666	874	702	694
Currency in circulation	385	472	512	531	479	544
Notes	349	433	471	489	437	500
Coins	37	39	41	42	43	44
Deposits of commercial banks	188	162	153	332	218	140
ESA deposits	34	8	66	231	114	33
CRR deposits	154	154	87	101	104	107
Other deposits	4	9	0	10	5	10
Memoranda items:						
Reserve money growth 2/	7.6	11.4	3.4	31.2	15.8	8.9
Use of fund credit (millions of U.S. dollars)	107.5	116.3	121.5	64.3	37.6	10.3
Gross international reserves (millions of U.S. dollars)	440.1	340.1	520.6	639.1	581.0	564.8
Exchange rate (U.S. dollar/kina)	0.27	0.25	0.30	0.32	0.32	0.32
Exchange rate (U.S. dollar/SDR)	1.26	1.36	1.49	1.55	1.51	1.46

Sources: Data provided by Papua New Guinea authorities; and Fund staff estimates.

1/ From January 2002 BPNG stopped netting the outstanding stock of its own short-term securities from its gross holdings of government treasury bills, and now records its total holdings of treasury bills as assets and the outstanding stock of central bank securities as liabilities.

This led to a shift in the composition of credit to the central government from the commercial banks to the BPNG in March 2002.

2/ Percent change from corresponding period of previous year.

Table 13. Papua New Guinea: Consolidated Balance Sheet of Commercial Banks, 2001-June 2005

(In millions of kina; end of period)

	2001	2002	2003	2004	2005	
					Mar.	Jun.
Net foreign assets	331	511	299	296	314	265
Foreign assets	422	615	356	364	381	338
Foreign liabilities	91	104	56	69	67	73
Reserves	188	162	153	332	218	140
CRR accounts	154	154	87	101	104	107
ESA accounts	34	8	66	231	114	33
	0	0	0	0	0	0
Currency	113	106	113	112	96	114
Domestic credit	2,421	2,298	2,416	2,914	3,053	3,252
Net credit to central government	811	709	923	1,494	1,525	1,589
Claims on central government	1,121	991	1,164	1,769	1,825	1,942
Securities	1,114	989	1,161	1,768	1,824	1,942
Treasury bills	443	812	740	441	246	152
Inscribed stock	85	20	0	436	613	676
Inscribed stock of maturity < 3 years	85	20	0	278	325	348
Inscribed stock of maturity > 3 years	0	0	0	157	288	328
Loans	7	3	2	1	1	0
Less: Central government deposits	310	283	240	275	300	354
Claims on other sectors	1,610	1,589	1,493	1,420	1,528	1,663
Claims on the private sector	1,483	1,441	1,379	1,347	1,431	1,577
Claims on official entities	115	128	101	48	80	72
Claims on NFPE's	114	126	95	44	77	70
Claims on provincial governments	1	2	6	4	3	3
Claims on nonmonetary financial institutions	12	20	13	25	16	14
Other items, net	-186	-175	-221	-462	-468	-513
Deposits	2,815	2,851	2,710	3,168	3,187	3,234
Demand	1,550	1,710	1,761	2,298	2,385	2,415
Term	1,265	1,141	949	870	802	819
Central bank credit	52	52	50	24	26	23
Discount facility	0	0	0	0	0	0
Repurchase agreements	0	0	0	0	0	0
Agricultural support schemes	52	52	52	26	26	29
Other	0	0	-2	-2	0	-6
Memoranda items:						
Deposits subject to reserve requirements	3,100	3,120	2,948	3,393	3,455	3,503
Implied cash reserve ratio (percent)	0	5	3	3	3	3
Kina facility borrowings (-deposits)	-15	-30	0	0	0	0
Liquid assets	638	932	900	1,036	766	622
Liquid asset ratio (percent)	0	30	31	31	22	18
Excess ESA balances	19	-22	66	231	114	33
Total commercial bank assets	3,926	3,954	3,893	4,355	4,428	4,539
Claims on central government/total assets (percent)	29	25	30	41	41	43

Sources: Data provided by Papua New Guinea authorities; and Fund staff estimates.

Table 14. Papua New Guinea: Commercial Bank Loans by Sector, 2001–September 2005

	2001	2002	2003	2004	2005			2001	2002	2003	2004	2005		
					Mar.	Jun.	Sep.					Mar.	Jun.	Sep.
	(In millions of kina; end of period)							(In percent of total credit; end-period)						
Total	1674	1593	1495	1421	1531	1662	1721	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Business	1473	1413	1331	1223	1294	1410	1458	88.0	88.7	89.0	86.1	84.5	84.8	84.7
Agriculture, forestry, and fishing	200	90	51	64	98	129	117	12.0	5.6	3.4	4.5	6.4	7.7	6.8
Coffee	11	2	3	1	3	27	26	0.6	0.1	0.2	0.1	0.2	1.6	1.5
Cocoa	74	56	1	24	8	15	8	4.4	3.5	0.1	1.7	0.5	0.9	0.4
Coconut products	27	0	0	1	1	0	0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Palm oil	38	0	0	0	28	28	25	2.3	0.0	0.0	0.0	1.9	1.7	1.5
Fisheries	8	6	7	19	22	24	19	0.4	0.4	0.4	1.4	1.4	1.5	1.1
Forestry	20	15	21	8	12	13	18	1.2	0.9	1.4	0.5	0.8	0.8	1.0
Other 1/	23	10	20	12	25	21	20	1.4	0.7	1.3	0.8	1.6	1.3	1.2
Manufacturing	107	136	99	95	101	113	114	6.4	8.6	6.6	6.7	6.6	6.8	6.6
Engineering and metal processing	4	4	6	3	11	13	27	0.3	0.3	0.4	0.2	0.7	0.8	1.5
Food, drink, and tobacco processing	71	74	71	45	44	49	47	4.2	4.7	4.8	3.2	2.9	3.0	2.7
Textile, leather, and wood products	11	8	9	10	5	4	4	0.6	0.5	0.6	0.7	0.3	0.2	0.2
Chemicals, paints, and gases	1	5	1	0	6	4	5	0.0	0.3	0.1	0.0	0.4	0.3	0.3
Other 2/	20	44	12	36	35	42	32	1.2	2.8	0.8	2.5	2.3	2.5	1.8
Transport and communication	126	114	124	72	70	72	91	7.5	7.2	8.3	5.1	4.5	4.3	5.3
Finance	12	20	13	25	16	14	9	0.7	1.2	0.9	1.7	1.1	0.8	0.5
Commerce	375	325	373	384	336	422	446	22.4	20.4	25.0	27.0	22.0	25.4	25.9
Retail trade	232	236	265	214	214	264	290	13.9	14.8	17.7	15.1	14.0	15.9	16.8
Buyers, processors, and exporters	46	29	75	94	95	120	123	2.7	1.8	5.0	6.6	6.2	7.2	7.2
Wholesale trade	97	60	33	76	27	38	33	5.8	3.8	2.2	5.3	1.8	2.3	1.9
Building and construction	61	42	66	66	81	94	91	3.6	2.7	4.4	4.7	5.3	5.7	5.3
Mining and quarrying	17	69	20	6	12	6	11	1.0	4.3	1.3	0.4	0.8	0.3	0.6
Metals and other mining	3	47	6	6	12	6	11	0.2	2.9	0.4	0.4	0.8	0.3	0.6
Petroleum and natural gas	14	22	14	0	0	0	0	0.9	1.4	0.9	0.0	0.0	0.0	0.0
Other business 3/	576	617	587	511	581	561	580	34.4	38.7	39.2	36.0	37.9	33.7	33.7
Government	8	5	8	5	4	3	1	0.5	0.3	0.6	0.3	0.3	0.2	0.1
Central government 4/	7	3	2	1	1	1	0	0.4	0.2	0.1	0.1	0.1	0.0	0.0
Provincial government	1	2	3	2	1	1	1	0.0	0.1	0.2	0.1	0.1	0.1	0.0
Local government	0	0	3	2	2	2	1	0.0	0.0	0.2	0.1	0.1	0.1	0.0
Persons	192	175	156	193	231	251	263	11.5	11.0	10.4	13.6	15.1	15.1	15.3
Advances for housing	82	126	103	121	133	142	144	4.9	7.9	6.9	8.5	8.7	8.5	8.4
Other personal loans	111	49	52	73	99	110	119	6.6	3.1	3.5	5.1	6.4	6.6	6.9

Source: Bank of Papua New Guinea, *Quarterly Economic Bulletin*.

1/ Includes rubber, tea, and cattle.

2/ Includes printing and packaging.

3/ Includes hotels and restaurants, real estate, renting and business services, electricity, and gas and water supply.

4/ Excludes short-term government debt instruments and other deposits.

Table 15. Papua New Guinea: Reserve Requirements, March 1997–September 2005

(In percent)

Period	Cash Reserve Requirement	Minimum Liquid Assets Ratio	Total Requirement
March 1997–July 1998	0	20	20
August 1998–November 1998	0	20	20
December 1998–January 12, 1999	0	0	0
January 15, 1999–February 1999	10	0	10
March 1999–May 1999	5	15	15
June 1999–August 1999 1/	5	20	25
September 1999–December 2002	5	25	30
October 2003–September 2005	3	25	28

Source: Bank of Papua New Guinea.

1/ From June 1999, CRR deposits at the central bank were excluded from the definition of liquid assets.

Table 16. Papua New Guinea: Interest Rates, 2001-September 2005

	Kina Facility Rate	Kina Deposit Rate 1/	Commercial Banks										
			Treasury Bills				Weighted Average Deposit Rate	Weighted Average Lending Rate	Indicative Overdraft Rate	Passbook Accounts	Term Deposits (less than K50,000)		
			Weighted 28-day	Average 63-day	Auction 91-day	Yield 182-day					3-6 Months	6-12 Months	12-24 Months
2001 (December)	12.00	11.25	10.15	10.17	10.26	10.23	4.1	14.6	13.65	2.50-5.25	5.50-11.50	5.75-11.50	5.00-10.00
2002 (December)	14.00	13.25	15.48	15.10	14.00	13.50	5.6	13.7	8.75	1.50-3.25	4.00-6.00	4.00-7.75	4.75-6.00
2003													
January	14.50	13.75	16.66	16.47	16.52	16.80	4.7	13.7	8.75	1.50-3.25	4.00-8.00	4.00-7.75	4.75-7.25
February	15.00	14.25	17.76	17.67	17.27	17.11	4.9	13.7	8.75	1.50-3.25	3.50-8.00	4.00-8.00	4.75-8.00
March	15.00	14.25	18.62	18.62	18.66	18.19	4.9	13.4	8.75	1.50-3.25	3.50-8.00	4.00-11.00	4.75-8.00
April	15.00	--	19.10	19.26	19.43	19.83	5.0	13.8	10.25	2.00-3.25	3.50-7.25	4.00-11.00	4.75-8.00
May	15.00	--	19.39	19.57	19.94	20.03	5.0	13.0	10.25	2.00-3.25	4.00-8.00	4.00-11.00	4.75-9.00
June	16.00	--	19.59	19.75	20.11	20.23	4.6	13.1	10.25	2.00-3.25	4.00-8.00	4.25-11.00	4.25-9.00
July	16.00	--	19.69	19.84	20.31	20.45	4.8	13.3	10.25	2.00-3.25	4.00-7.50	4.25-11.00	4.75-9.00
August	15.00	--	19.13	19.56	19.98	20.09	4.6	13.0	10.25	2.00-3.25	4.00-7.50	4.25-11.00	4.00-9.00
September	15.00	--	18.52	19.08	19.47	19.54	4.2	13.3	10.25	1.00-3.25	4.00-8.25	4.25-11.00	4.50-9.00
October	14.00	--	17.33	17.65	17.58	17.65	3.8	13.0	10.25	1.00-3.25	3.50-8.25	4.25-7.50	4.00-9.00
November	14.00	--	16.46	16.97	16.83	17.40	3.0	13.4	10.50	1.00-3.25	4.00-8.25	4.25-7.50	4.00-9.00
December	14.00	--	16.13	16.36	16.30	16.91	3.0	13.5	10.50	1.00-3.25	4.00-8.25	4.25-8.75	4.00-9.00
2004													
January	13.00	--	15.76	15.73	16.00	16.74	2.7	13.9	10.50	0.50-3.25	4.00-7.50	4.25-8.75	4.75-9.00
February	13.00	--	15.52	15.52	15.77	16.48	2.4	13.5	10.50	0.50-3.25	4.25-7.50	4.25-8.75	4.75-9.00
March	12.00	--	12.38	13.59	13.90	14.16	2.2	13.6	10.50	0.50-3.25	4.00-7.50	4.25-8.00	4.75-9.00
April	11.00	--	9.91	10.38	10.18	10.40	1.8	13.5	10.75	0.50-3.25	4.00-5.00	4.25-8.75	4.75-9.00
May	10.00	--	7.67	7.86	8.34	8.85	1.8	13.2	10.75	0.50-2.20	2.75-7.00	2.75-8.75	4.00-9.00
June	10.00	--	6.90	6.76	7.02	8.26	1.5	13.3	10.75	0.50-2.20	2.75-7.00	2.75-8.75	4.00-9.00
July	10.00	--	6.55	6.35	6.37	7.73	1.5	13.7	10.75	0.50-2.20	2.75-6.25	2.75-8.75	4.00-9.00
August	10.00	--	5.48	5.00	5.00	5.00	1.6	13.4	10.75	0.50-2.20	2.75-7.00	2.80-8.00	4.00-9.00
September	9.00	--	4.44	4.06	4.74	5.43	1.5	13.3	10.75	0.50-2.20	2.00-7.00	2.75-8.00	4.00-9.00
October	7.00	--	4.64	4.47	4.85	5.49	1.4	13.1	10.75	1.75-2.00	2.00-8.00	2.25-4.85	4.00-9.00
November	7.00	--	3.16	2.95	2.98	3.13	1.3	12.4	10.75	1.75-2.00	1.50-8.00	1.50-4.85	2.50-9.00
December	7.00	--	3.14	3.44	3.70	4.57	1.1	12.1	8.00	1.75-2.00	0.65-8.00	0.65-4.85	1.00-9.00
2005													
January	7.00	--	3.20	3.14	4.11	4.56	0.9	12.0	8.00	1.75-2.00	0.65-4.85	0.65-4.85	1.00-8.00
February	7.00	--	3.14	3.32	4.13	4.73	0.9	12.2	8.00	1.50-2.25	0.65-4.85	0.65-4.85	1.00-9.00
March	7.00	--	3.54	--	4.09	4.37	0.9	11.9	8.00	1.50-2.26	0.65-4.85	0.65-4.85	1.00-9.00
April	7.00	--	4.11	--	4.24	4.66	0.9	11.6	8.00	1.25-2.00	0.65-4.00	0.65-4.85	0.65-9.00
May	7.00	--	3.75	--	4.28	4.50	0.9	11.6	8.00	1.25-2.00	0.65-4.00	0.65-4.00	0.65-9.00
June	7.00	--	4.06	--	3.95	4.47	1.0	11.8	8.00	1.00-2.00	0.65-4.00	0.65-4.00	0.65-9.00
July	7.00	--	3.97	--	4.24	4.53	0.9	11.4	8.00	1.00-2.00	0.65-4.00	0.65-4.00	1.00-1.25
August	7.00	--	2.84	--	2.77	3.05	0.9	11.4	8.00	1.00-2.00	0.65-4.00	0.65-5.25	1.00-2.50
September	6.00	--	--	--	0.84	1.14	0.8	11.1	8.00	1.00-2.00	0.35-4.00	0.50-2.82	0.75-2.50

Source: Bank of Papua New Guinea, *Quarterly Economic Bulletin*.

1/ Prior to February 2001, the kina deposit rate was determined by a weekly auction for deposits conducted by the central bank. Since then the Bank of Papua New Guinea has announced a Kina Facility rate, and the deposit rate was set 125 basis points below this rate until July 2000, when the margin was reduced to 75 basis points. The facility was abolished in April 2003.

Table 17. Papua New Guinea: Balance of Payments, 2001-04

(In millions of U.S. dollars)

	2001	2002	2003	2004
Current account balance	201	-31	159	88
Mineral	802	473	728	793
Nonmineral	-601	-503	-569	-705
Trade balance	556	344	718	760
Exports (f.o.b.)	1,878	1,646	2,153	2,554
Mineral	1,598	1,228	1,635	1,863
Nonmineral	280	417	518	690
Imports (c.i.f.)	-1,321	-1,301	-1,435	-1,794
Mineral	-394	-397	-325	-482
Nonmineral	-927	-904	-1,109	-1,312
Services balance	-497	-571	-795	-853
Mineral (net)	-401	-358	-582	-588
Nonmineral (net)	-96	-213	-213	-265
Unrequited transfers (net)	142	196	235	182
Official	184	174	199	142
Private	-42	22	36	40
Capital account balance	-252	-104	-23	35
Medium- and long-term loan disbursements	-218	-154	-151	-213
Official (net)	-60	-26	-100	-101
Private capital flows (net)	-158	-128	-51	-113
Foreign direct investment (net)	74	19	97	26
Change in net foreign assets of commercial banks	2	-33	-60	-1
Other (net)	-110	63	90	224
Exceptional financing	135	0	0	0
Overall balance	66	-100	184	184
Change in net international reserves (- increase)	-66	100	-184	-184
Gross official reserves	-136	100	-181	-118
IMF (net)	70	0	-6	-62
Purchases	72	0	0	0
Repurchases	-1	0	-6	-62
Other foreign liabilities	-1	0	3	-4
Memoranda items:				
Current account (in percent of GDP)	6.5	-1.0	4.4	2.1
Gross official reserves (end-year)				
In millions of U.S. dollars	440	340	521	639
In months of nonmineral imports	5.7	4.5	5.6	5.8
Public external debt-service-exports ratio (in percent) 1/	7.9	7.9	7.5	8.7
Public external debt-GDP ratio (in percent) 1/	48.7	51.5	44.1	34.5

Sources: Data provided by the Papua New Guinea authorities; and Fund staff estimates.

1/ Public external debt includes central government, central bank external debt, and statutory authorities.

Table 18. Papua New Guinea: Exports of Major Commodities, 2001-04

	2001	2002	2003	2004
Copper				
Value (in millions of U.S. dollars)	319.7	262.1	393.0	478.7
Volume (thousands of tons)	212.6	170.1	230.6	173.9
Unit value (U.S. dollars per ton)	1503.6	1541.0	1704.2	2753.0
(U.S. cents per pound)	68.2	69.9	77.3	124.9
Gold				
Value (in millions of U.S. dollars)	628.9	590.4	780.0	861.8
Volume (tons)	69.1	59.1	68.4	67.3
Unit value (U.S. dollars per ounce)	283.1	310.7	354.7	398.3
Petroleum				
Value (in millions of U.S. dollars)	560.0	368.9	452.5	512.6
Volume (thousands of barrels)	21294.0	15370.5	14983.4	12564.7
Unit value (U.S. dollars per barrel)	26.3	24.0	30.2	40.8
Silver				
Value (in millions of U.S. dollars)	9.4	7.7	9.3	10.1
Volume (tons)	67.7	46.1	64.2	46.7
Unit value (U.S. dollars per ounce)	4.3	5.2	4.5	6.7
Logs				
Value (in millions of U.S. dollars)	73.1	94.1	102.6	110.3
Volume (thousands of cubic meters)	1212.2	1834.0	2016.0	2012.0
Unit value (U.S. dollars per cubic meter)	60.3	51.3	50.9	54.8
Coffee				
Value (in millions of U.S. dollars)	56.1	71.2	82.8	88.0
Volume (thousands of tons)	51.6	63.1	68.8	63.0
Unit value (U.S. dollars per ton)	1087.2	1128.4	1203.5	1396.9
(U.S. cents per pound)	49.3	51.2	54.6	63.4
Cocoa				
Value (in millions of U.S. dollars)	32.6	58.2	71.5	67.6
Volume (thousands of tons)	36.3	34.9	40.3	41.5
Unit value (U.S. dollars per ton)	898.1	1667.6	1774.2	1629.0
Palm oil				
Value (in millions of U.S. dollars)	85.2	100.3	116.9	136.0
Volume (thousands of tons)	327.6	323.9	326.9	339.0
Unit value (U.S. dollars per ton)	260.1	309.7	357.6	401.3
Copra				
Value (in millions of U.S. dollars)	4.5	2.8	1.8	5.3
Volume (thousands of tons)	21.0	15.8	8.4	19.2
Unit value (U.S. dollars per ton)	214.3	177.2	214.3	277.8
Copra Oil				
Value (in millions of U.S. dollars)	8.1	8.6	18.7	25.1
Volume (thousands of tons)	27.1	28.2	47.7	45.1
Unit value (U.S. dollars per ton)	298.9	305.0	392.0	556.9
Tea				
Value (in millions of U.S. dollars)	5.5	4.7	5.4	7.1
Volume (thousands of tons)	7.9	5.2	6.6	8.1
Unit value (U.S. dollars per ton)	694.2	903.8	818.2	876.7
(U.S. cents per kilogram)	69.4	90.4	81.8	87.7
Rubber				
Value (in millions of U.S. dollars)	2.0	2.3	3.4	4.3
Volume (thousands of tons)	3.6	3.8	4.2	3.8
Unit value (U.S. dollars per ton)	555.6	605.3	809.5	1126.2
(U.S. cents per pound)	25.2	27.5	36.7	51.1
Other				
Value (in millions of U.S. dollars)	92.6	97.9	115.0	246.6
Total exports (in millions of U.S. dollars)	1877.7	1645.7	2153.0	2553.7
Minerals and petroleum	1597.9	1228.3	1634.8	1863.3
Nonmineral	279.8	417.4	518.2	690.4

Sources: Data provided by the Papua New Guinea authorities; and Fund staff estimates.

Table 19. Papua New Guinea: Direction of Trade, 2000–04

(In percent of total)

	2000	2001	2002	2003	2004
Exports (f.o.b.) by destination					
Australia	30.0	24.6	42.8	45.7	45.6
Japan	11.3	10.6	15.9	12.8	10.8
People's Republic of China 1/	6.5	4.2	4.4	6.7	4.9
Germany	4.1	4.0	3.5	6.6	7.1
Korea	3.8	3.0	5.1	5.4	6.1
United Kingdom	2.8	2.1	2.8	2.5	3.5
United States	1.3	1.5	4.6	2.7	2.2
New Zealand	0.7	1.3	1.5	0.5	0.4
Philippines	0.6	2.3	1.8	3.5	4.0
Singapore	0.7	0.8	3.7	2.1	2.2
Netherlands	0.5	0.6	1.8	1.1	1.5
Malaysia	0.4	0.3	0.0	0.4	0.9
Hong Kong, SAR	0.2	0.2	0.3	0.9	0.1
Other	37.1	44.4	11.8	9.1	10.7
Imports (c.i.f.) by origin					
Australia	49.7	51.2	59.1	54.8	57.3
Singapore	19.9	19.0	5.7	6.6	6.2
Japan	4.0	4.6	5.1	4.8	4.6
New Zealand	3.8	4.0	4.0	5.2	3.4
Malaysia	3.4	2.8	2.1	2.3	1.7
People's Republic of China 1/	2.2	1.9	1.8	4.6	3.3
United States	2.2	2.2	8.7	9.6	8.4
Germany	0.7	0.7	0.9	0.3	0.2
Hong Kong, SAR	1.2	0.9	0.8	0.9	0.8
Korea	1.0	0.9	0.8	0.5	0.5
United Kingdom	0.7	0.6	3.3	1.0	0.7
Netherlands	0.3	0.5	0.1	0.0	0.0
Philippines	0.2	0.2	0.3	0.3	0.2
Other	10.6	10.6	7.3	9.1	12.7

Sources: Data provided by the Papua New Guinea authorities; and Fund staff estimates.

1/ Excluding Hong Kong SAR and Macau.

Table 20. Papua New Guinea: Net Services and Transfers, 2001-04
(In millions of U.S. dollars)

	2001	2002	2003	2004
Services balance (net)	-497.3	-571.3	-794.8	-853.1
Factor services	-249.5	-225.9	-406.7	-368.2
Interest	-80.1	-79.2	-52.9	-41.9
Receipts	18.5	19.9	9.6	16.0
Mineral	11.6	9.6	1.7	10.2
Nonmineral	1.1	5.3	0.7	0.8
Official	5.8	5.0	7.2	5.0
Payments	-98.6	-99.1	-62.5	-57.9
Mineral	-30.5	-33.5	-12.8	-10.2
Nonmineral	-8.7	-15.0	-0.9	-4.0
Official	-59.4	-50.6	-48.8	-43.7
Concessional	-52.3	-45.7	-44.5	-40.0
Nonconcessional	-3.8	-1.3	-1.4	-0.8
IMF charges	-3.3	-3.6	-2.9	-2.9
Gap interest	0.0	0.0	0.0	0.0
Dividends	-151.6	-131.3	-353.8	-326.3
Receipts	1.5	7.3	6.2	2.1
Mineral	0.0	4.2	5.2	0.5
Nonmineral	1.5	3.1	1.0	1.6
Payments	-153.1	-138.6	-360.0	-328.4
Mineral	-116.1	-92.6	-259.1	-222.7
Nonmineral	-37.0	-46.0	-100.9	-105.7
Other factor service payments	-17.8	-15.4	0.0	0.0
Nonfactor services	-183.9	-296.6	-307.9	-420.0
Freight, insurance	28.1	7.3	22.4	29.8
Travel payments	-29.9	-32.1	-51.3	-51.7
Mineral	-1.3	-1.4	-1.6	-2.8
Nonmineral	-28.6	-30.7	-49.7	-48.9
Other	-182.1	-271.8	-279.0	-398.1
Receipts	257.8	154.7	208.0	175.3
Mineral	84.9	32.5	41.4	45.6
Nonmineral	172.9	122.2	166.6	129.7
Payments	-439.9	-426.5	-487.0	-573.4
Mineral	-285.9	-228.5	-276.3	-344.0
Nonmineral	-154.0	-198.0	-210.7	-229.4
Other	-63.9	-48.8	-80.2	-64.9
Unrequited transfers	142.1	196.4	235.1	181.7
Official	183.8	174.4	199.1	141.8
Receipts	183.8	174.4	199.1	141.8
Australia budgetary support	20.9	0.0	5.8	0.0
Project & Commodity aid	155.2	169.0	193.3	141.8
Other grants	7.7	5.4	0.0	0.0
Payments	0.0	0.0	0.0	0.0
Private	-41.7	22.0	36.0	39.9
Receipts	25.6	80.8	116.4	117.1
Payments	-67.3	-58.8	-80.4	-77.2

Sources: Data provided by the Papua New Guinea authorities; and Fund staff estimates.

Table 21. Papua New Guinea: External Debt Outstanding, 2000-04

	2000	2001	2002	2003	2004
	(In millions of U.S. dollars)				
Total external debt	2,354	2,289	2,304	2,311	2,127
Public external debt 1/	1,514	1,530	1,570	1,617	1,489
Central government	1,394	1,390	1,430	1,473	1,411
Multilateral creditors	790	844	841	865	861
Of which: World Bank Group	345	380	363	348	334
Asian Development Bank	387	409	419	443	452
Bilateral creditors	571	516	541	553	496
Of which: Australia	85	99	99	87	40
Japan	423	371	391	412	406
Commercial creditors	33	29	48	55	54
Central bank	39	109	115	124	64
Of which: IMF liabilities	39	108	115	120	64
Commercial statutory authorities	80	31	25	20	15
Private external debt	840	758	733	694	637
Of which: mineral sector	546	470	454	415	349
	(In percent of GDP)				
Memoranda items					
Total external debt	67	74	77	64	50
Total public external debt 1/	43	50	52	45	35
Central government external debt	40	45	48	41	33
Multilateral creditors	22	27	28	24	20
Bilateral creditors	16	17	18	15	12
Commercial creditors	1	1	2	2	1
Central bank	1	4	4	3	1
Commercial statutory authorities	2	1	1	1	0
Private external debt	24	25	24	19	15
Nominal GDP (in millions of U.S. dollars)	3,521	3,081	2,999	3,618	4,280

Sources: Data provided by the Papua New Guinea authorities; and Fund staff estimates.

1/ Including central government, central bank, and commercial statutory authorities.