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Papua New Guinea: Selected Issues and Statistical Appendix

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PAPUA NEW GUINEA

Selected Issues and Statistical Appendix

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Approved by the Asia and Pacific Department

May 20, 2004

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I. External Debt Dynamics and Sustainability[1]

A. Introduction

1. **Over the last decade, Papua New Guinea has evolved from a country with relatively low levels of external debt to one where its debt dynamics are a source of concern.** The increasingly unsustainable debt situation over the past decade was attributable to a number of factors: weak economic and financial management policies, adverse exogenous shocks, political instability, and growing governance and law and order problems. More recently, however, the authorities have begun to adopt domestic demand management policies, primarily fiscal adjustment and a prudent monetary stance, consistent with an improved external position and medium-term reduction of the public external debt burden.

2. **The main objectives of this chapter are to: (i) review the path of Papua New Guinea's external debt over the last decade; (ii) explain the underlying macroeconomic framework to better understand the dynamics behind the external debt profile; (iii) assess the relative scale of the public external debt burden; and (iv) address the issue of public debt sustainability over the medium term.** The chapter is organized as follows: Section B reviews the evolution of Papua New Guinea's total external debt burden and its structure over the last decade; Section C discusses the public external debt projections and the underlying macroeconomic framework; and Section D conducts a comprehensive public external debt sustainability analysis, including a brief discussion of the Fund's new underlying sustainability framework, followed by a discussion of the outcome of the stress tests. Section E offers some concluding remarks, focusing primarily on the medium-term vulnerabilities stemming from adverse shocks.

B. Evolution and Structure of Total External Debt

3. **Between 1994 and 2002, reflecting mainly the slowdown in the mineral sector activity and the policy slippages in the areas of financial management and structural reform, the ratio of total external debt-to-GDP rose from 65 percent to about 85 percent of GDP.** Since then, Papua New Guinea has been making strides in lowering its external debt burden and strengthening its balance of payments position. In 2003, the ratio of total external debt-to-GDP is estimated to have declined to about 65 percent of GDP, owing mainly to a significant increase in GDP, appreciation of the kina, and higher debt-service obligations (Figure I.1).

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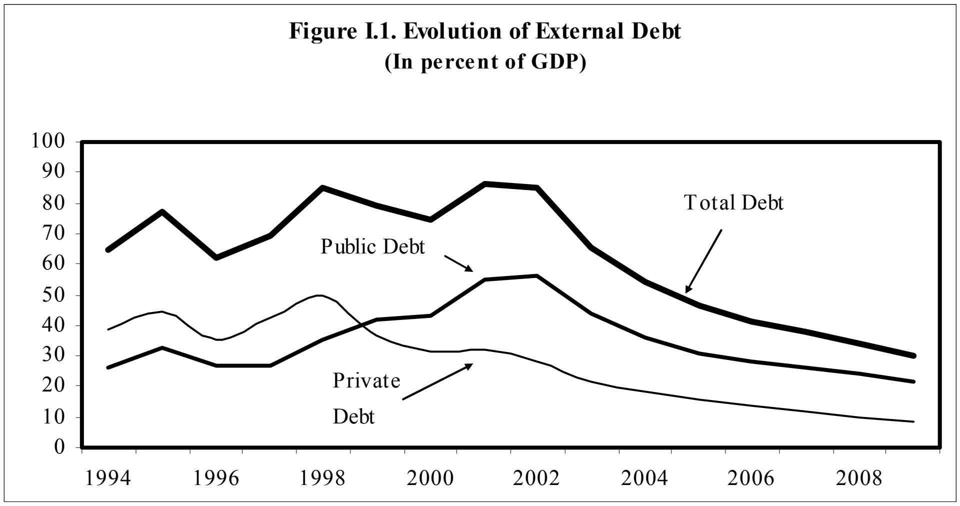
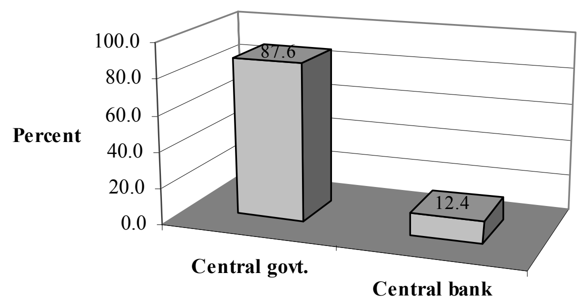
[1] Prepared by Mohammed A. Tareen (ext. 34097).



4. **The underlying trends for public and private external debt over the past decade have been quite different.** Public external debt rose sharply from 26 percent of GDP in 1994 to 56 percent of GDP in 2002, on account of contracting economic activity, mounting financial imbalances, and exchange rate depreciation. In 2003, the level of public debt, though still high, declined to 44 percent of GDP as a result of a recovery in economic activity, and a strengthened external position, helped by favorable export prices. Private external debt has been linked primarily to the construction of new mining and oil sector projects which took place during the 1980s and 1990s. After averaging around 40 percent of GDP in the period 1994–97, the private external debt-to-GDP ratio peaked at nearly 50 percent in 1998, primarily due to construction work on Gobe oil and Lihir gold projects. The private loans needed to finance the large imports led to a sharp increase in U.S. dollar-denominated debt during the construction phase of these projects. After these projects were completed, private external debt levels stabilized in 2000–01, as private loan repayments mostly offset private inflows for the other new smaller projects (notably, the Moran oil field). Since 2001, in the absence of any major new projects and limited private foreign borrowing by the nonmineral sector, private sector debt has fallen progressively to 21 percent of GDP in 2003.

5. **In recent years, Papua New Guinea's public external debt has shown a favorable trend with respect to the composition of creditors, with commercial debt having virtually disappeared.** At end-2003, public external debt comprised predominantly of central government debt (88 percent); and the remainder (12 percent) was accounted for by central bank that mostly consisted of liabilities to the Fund (Figure I.2). A large portion (96 percent) of the central government external debt comprises borrowing from multilateral and official bilateral sources, while 4 percent accounts for borrowing from export credit agencies. The main creditors are the Asian Development Bank, World Bank, IMF, European Union, Australia, and Japan. The bulk of public external debt is denominated in U.S. dollars (45 percent) and the Japanese yen (35 percent).

Figure I.2. Composition of Public External Debt



6. **The burden of debt service has declined somewhat over the last decade.** The scheduled public external debt has fallen from roughly 11 percent in the early 1990s to around 7 percent of exports of goods and nonfactor services in 2003. Central government accounted for virtually all of the public sector debt payments, of which payments to bilateral creditors accounted for almost half. Total (public and private) debt-service ratio has come down from its high of 33 percent in 1994 to about 12½ percent in 2003. However, it should be noted that this ratio is a misleading indicator of Papua New Guinea's ability to meet debt-service payments on account of the self-financing nature of mining and petroleum projects. A large portion of the debt service (roughly 44 percent) was denominated in U.S. dollars.

C. Medium-Term External Debt Scenario

7. **Total external debt projections discussed here assume that the authorities continue to pursue prudent financial management policies and step up their efforts to implement the much needed structural reforms to boost growth and alleviate poverty.** These projections take into account the expected decline in mineral sector output, especially oil production, during the projection period 2004–09. Mineral sector real GDP growth is expected to decline by ½ percent per annum during the period 2006–09, after growing at an average rate of 2½ percent annually in 2004–05. Nonmineral output is projected to grow at about 3 percent annually, supported by strong economic adjustment policies, especially the targeted further fiscal consolidation resulting in a deficit averaging below 1 percent of GDP. The overall real GDP growth is then projected to average about 2½ percent during 2004–09.

8. **Based on this baseline medium-term scenario, public external debt would decline from 44 percent of GDP in 2003 to about 22 percent in 2009, reflecting mainly positive GDP growth, net debt repayments, and exchange rate stability.** The stock of private external debt also shows a sharp decline over the medium term (to 8½ percent of GDP in 2009) due to the expected limited interest by foreign investors in pursuing new mineral projects, in view of their relatively high capital costs, complicated land-ownership issues, law and order problems, and deteriorating infrastructure. The two possible exceptions to this are the Queensland gas pipeline and the Ramu nickel projects, which are presently both stalled at the initial stages of development, owing largely to difficulties in marketing (gas) and

financing (nickel). Without new mineral projects, the stock of total external debt is projected to decline from 65½ percent of GDP in 2003 to about 30 percent of GDP in 2009. These projections do not include any IDA credits or PRGF borrowing from the World Bank and the Fund, nor commercial borrowing in place of concessional lending. The contracting of a large nonconcessional private market loan in place of more concessional multilateral lending would significantly increase the net present value of the stock of public debt.

9. **The public external debt-service ratio is expected to increase marginally in the first two projection years, but decline thereafter over the medium term.** After rising from nearly 7½ percent of exports of goods and nonfactor services in 2003 to about 8 percent in 2005, the debt-service ratio is projected to decline to 4½ percent in 2009.

D. Public External Debt Sustainability Analysis

10. **The methodology used for analyzing public external debt sustainability draws on the forward-looking framework outlined in the recently published Fund paper.**[2] The operational framework is based on two broad pillars: (i) choice of indicative country-specific debt-burden thresholds that are determined on the basis of the quality of the country's policies and institutions; and (ii) an analysis and careful interpretation of actual and projected debt-burden indicators under baseline and plausible shock scenarios. Both steps require an important element of judgment to create a balanced financing strategy for the country.

Establishment of Indicative Thresholds

11. **In establishing the appropriate thresholds for debt-burden indicators, empirical evidence suggests that the quality of a country's policies and institutions figure importantly.** The current framework builds on this finding by making the quality of policies and institutions an explicit factor in setting indicative country-specific thresholds. This also implies that the established thresholds are inherently dynamic in that as countries improve their policies and institutions, they can move to higher levels of debt-sustainability thresholds. Based on the Bank and Fund staff analyses in this area, Table I.1 presents indicative policy-dependent thresholds under three general classifications (poor, medium, and strong) based on the strength of institutions and quality of policies.

12. **The World Bank's comprehensive *Country Policies and Institutions Assessment* (CPIA) index for 2002, which is published in quintiles and encompasses both objective macroeconomic criteria as well as subjective assessments by its staff, rated Papua New Guinea among a group of countries in the fourth quintile, only one quintile above the**

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[2] *Debt Sustainability in Low Income Countries—Proposal for an Operational Framework and Policy Implications*.

Table I.1. Indicative Debt and Debt-Service Thresholds

	Assessment of Quality of Policies and Institutions		
	Poor	Medium	Strong
Net present value of debt-to-GDP	30	45	60
Net present value of debt-to-exports	100	200	300
Net present value of debt-to-revenue	150	200	250
Debt service-to-exports	15	25	35
Debt service-to-revenue	20	30	40

Source: Fund staff calculations presented in Table 2 of *Debt Sustainability in Low Income Countries—Proposal for an Operational Framework and Policy Implications*.

group rated worst in terms of its institutional strength and quality of policies.[3] Based on this overall rating and evaluation of its institutional strength and quality of policies, Papua New Guinea's indicative debt-burden thresholds are considered to fall between the ratios established for poor and average classifications in the above table. Accordingly, indicative ratios of 38 percent of GDP and 150 percent of exports are deemed to be appropriate as upper limits for the net present value (NPV) of public external debt, with a corresponding public external debt-service threshold of 20 percent of exports.

Baseline Public External Debt Projections

13. **The next phase of the sustainability analysis entails applying the new framework to project Papua New Guinea's external debt dynamics under the baseline scenario** (Table I.2). Provided that the assumptions of the baseline medium-term scenario hold, these projections show that the NPV of public external debt would decline from about 40 percent of GDP in 2003 to nearly 21 percent of GDP in 2009, and further to 19 percent of GDP by the end of the 10-year projection period through 2013. These projected ratios are well below the GDP-based indicative threshold of 38 percent. Similarly, the export-based public external debt ratios would decline gradually from 55 percent in 2003 to about 40 percent at end-2009 through end-2013, substantially below the indicative threshold of 150 percent. Public debt-service ratios under the baseline scenario (as noted above) would also decline to about 5 percent of exports of goods and nonfactor services over the medium term and further to about 3 percent by end-2013.

[3] The Bank's CPIA index groups 20 indicators into four broad categories: economic management; structural policies; policies for social inclusion and equity; and public sector management and institutions.

Assessment of Baseline Debt Dynamics

14. **The foregoing analysis clearly suggests that Papua New Guinea's external debt, while significant, would be sustainable provided that the authorities' adhere strictly to the agreed external debt-management strategy, particularly the avoidance of nonconcessional private borrowing to meet the country's financing needs, except for self-financing mining projects.** More broadly, it is apparent that the recent course of debt reduction has depended critically on a number of policy variables that are generally within the authorities' control, such as maintaining fiscal discipline and implementing key structural reform policies. A more rapid pace of debt reduction could have been possible had the authorities continued to follow through with fiscal consolidation targeted under the last Fund arrangement through the period leading up to the mid-2002 general election.

15. **From a capacity to repay perspective, the outlook is relatively positive.** As a share of exports of goods and nonfactor services, Papua New Guinea's debt and debt-service profile appears to be strong. This together with adequate official external reserves (assumed at four months of nonmineral imports throughout the projection period), the country's capacity to repay its future obligations (including to the Fund) does not seem to be a problem, given its excellent past record in this regard.

16. **Assuming that the authorities continue to implement plans for fiscal consolidation and exercise full control over debt-creating factors, then the downside risk to the external debt sustainability would stem largely from exogenous shocks.** Although recently Papua New Guinea has in fact benefited from some positive such factors (notably the substantial increase in international commodity prices), much of these gains could be reversed in the coming years.

Stress Tests—Assumptions and Results

17. **Under the new sustainability framework, the stress tests are conducted for the NPV of public external debt that are distinguishable between alternative scenarios, based on permanent modifications of key baseline assumptions, and bound tests, representing temporary deviations—although some with permanent level effects.** The alternative scenario comprises two tests: (A1) a historical scenario in which the main variables that determine debt dynamics (namely, real GDP growth; inflation, measured by changes in the U.S. dollar GDP deflator; the noninterest external current account in percent of GDP; and nondebt creating flows in percent of GDP) are assumed to remain at their 10-year historical averages. This allows for a realistic comparison of the baseline projections with the country's own history. The second alternative scenario (A2) is a financing scenario in which new borrowing is assumed to be on less favorable terms (a 2 percentage points higher interest rate) throughout the projection period. The bound tests (B1 through B6) apply two-period one standard deviation negative shocks to the key macroeconomic variables (the above mentioned parameters plus export growth, a combined one-half deviation shock, and a

one-time 30 percent depreciation of the kina). The impact of these various stress tests for the key debt-burden indicators are presented in Table I.3 and illustrated in Figure I.3.

18. **Holding the key debt-dynamics parameters constant over the long term at their historical averages (scenario A1), produces some deterioration in the downward path of both debt and debt-service indicators relative to the baseline.** Over the projection period, a two percentage points higher interest rates (scenario A2) flatten the downward path of debt and debt-service ratios in all indicators. Under both these scenarios, however, the debt and debt-service ratios continue to remain below the indicative thresholds for Papua New Guinea. These results indicate that under these shocks, while the debt situation could still remain manageable, there would be little room for any slippages in the implementation of the planned reforms in the fiscal and structural areas. In addition, in the coming period, the stability of the debt outlook would depend on obtaining the assumed concessional financing, rather than relying on the more expensive private market borrowing.

19. **Among the bound tests, the combined shock (lowering the projected real GDP growth and nondebt-creating flows by one-half standard deviation below the historical average in 2004–05) is the worst scenario.** This would cause the NPV of public external debt-to-GDP ratio to reach 57 percent in 2005, before gradually declining to a level of 45 percent in 2009, which is still 24 percentage points higher that the baseline and 7 percentage points above the indicative threshold. Similarly, in the case of the other debt and debt-service indicators, the most challenging outcome would result from lowering the projected export growth by one standard deviation below the historical average in 2004–05. This would result in the ratio of NPV of debt to export of goods and nonfactor services to first rise to 97 percent in 2005 and still be some 50 percentage points higher than the baseline in 2009. The debt-service indicator produces similar pattern, climbing to 13 percent of exports of goods and nonfactor services in 2005, before gradually declining to 7 percent in 2009 (still 2 percentage points above the baseline). Individually, the NPV of debt-to-GDP ratios on average range from 28 to 39 percent over the medium term for the GDP growth shock, the deflator shock, the nondebt creating flows shock, and the 30 percent nominal depreciation shock. It should be noted that while these ratios are higher than the corresponding baseline ratios, they are at or only marginally above the indicative threshold levels. The NPV of debt-to-export ratios and the debt-service ratios, on the other hand, remain below their respective indicative threshold levels.

E. Concluding Remarks

20. **The vulnerabilities highlighted by these tests need to be effectively addressed in the coming period through both proactive public debt and financial management policies.** Papua New Guinea's recent progress in reducing the stock of public external debt, and its capacity to repay future financial obligations highlights that the stock of debt and debt service as they are presently projected are not a problem as such. Under current projections, and with continued adherence to the debt-management strategy, Papua New Guinea's debt burden appears both manageable and sustainable. Rather, concerns about the external debt

sustainability stem essentially from policy slippage and the vulnerability of the balance of payments to potential shocks. In these circumstances, in the near term as well as over the medium term, Papua New Guinea needs to ensure that the country retains donor support in order to obtain highly concessional (rather than nonconcessional) new borrowing to meet its financing needs and provide more cushion for dealing with adverse shocks.

Table I.2. Papua New Guinea: External Debt Sustainability Framework, Baseline Scenario, 2000–2013 1/

(In percent of GDP, unless otherwise indicated)

	Actual			Estimate	Projections							
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average 2004–09	2013
External debt (nominal) 1/	**74.3**	**86.5**	**84.7**	**65.5**	**54.0**	**46.1**	**41.5**	**37.9**	**34.0**	**30.2**	**40.6**	**24.5**
***Of which:* Public and publicly guaranteed (PPG)**	**42.8**	**54.7**	**56.4**	**44.1**	**36.0**	**30.7**	**28.0**	**26.2**	**24.0**	**21.7**	**27.8**	**18.1**
Change in external debt	-4.5	12.2	-1.8	-19.2	-11.5	-7.8	-4.6	-3.6	-3.9	-3.8		-0.3
Identified net debt-creating flows	-12.1	2.8	4.1	-14.5	-7.6	-5.4	-2.9	-2.8	-2.6	-2.0		-0.4
Noninterest current account deficit	**-11.7**	**-10.2**	**-2.8**	**-12.2**	**-6.1**	**-3.7**	**-1.4**	**-1.3**	**-0.9**	**-0.5**	**-2.3**	**1.2**
Deficit in balance of goods and services	2.5	5.3	16.5	5.1	9.4	10.6	12.9	12.9	12.7	12.5		13.1
Exports	71.7	73.1	64.2	71.8	65.6	60.1	56.8	55.2	53.9	51.8		46.2
Imports	74.2	78.4	80.6	76.9	75.0	70.8	69.7	68.0	66.6	64.2		59.3
Net current transfers (negative = inflow)	**-5.2**	**-5.1**	**-6.7**	**-6.9**	**-6.1**	**-5.3**	**-5.4**	**-5.2**	**-5.0**	**-4.7**	**-5.3**	**-4.0**
Other current account flows (negative = net inflow)	-9.0	-10.5	-12.5	-10.3	-9.4	-9.0	-8.9	-9.0	-8.7	-8.3		-7.9
Net FDI (negative = inflow)	**-3.3**	**-2.5**	**-0.7**	**-2.6**	**-1.7**	**-1.6**	**-1.6**	**-1.6**	**-1.7**	**-1.6**	**-1.6**	**-1.3**
Endogenous debt dynamics 2/	**2.9**	**15.6**	**7.5**	**0.2**	**0.2**	**-0.1**	**0.2**	**0.1**	**0.1**	**0.1**		**-0.2**
Contribution from nominal interest rate	3.0	3.3	3.5	2.1	1.6	1.4	1.2	1.1	1.0	0.9		0.5
Contribution from real GDP growth	1.0	2.0	0.8	-1.9	-1.4	-1.5	-1.0	-1.0	-0.9	-0.9		-0.7
Contribution from price and exchange rate changes	-1.0	10.2	3.3	…	…	…	…	…	…	…		…
Residual (3-4) 3/	7.5	9.4	-5.8	-4.7	-3.9	-2.4	-1.7	-0.8	-1.3	-1.8		0.1
Of which: Exceptional financing	-2.0	-4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Net present value (NPV) of external debt 4/	**...**	**...**	**78.8**	**61.0**	**50.1**	**42.9**	**38.5**	**34.9**	**31.5**	**29.3**	**37.9**	**25.3**
In percent of exports	...	...	122.7	84.9	76.4	71.3	67.8	63.3	58.5	56.6		54.7
NPV of PPG external debt	**...**	**...**	**50.4**	**39.6**	**32.1**	**27.4**	**25.0**	**23.3**	**21.5**	**20.7**	**25.0**	**18.9**
In percent of exports	...	...	78.6	55.1	49.0	45.6	44.0	42.2	39.9	40.1		40.8
Debt service-to-exports ratio (in percent)	16.7	23.3	19.8	12.4	12.0	13.1	11.0	9.4	9.4	9.3		6.1
PPG debt service-to-exports ratio (in percent)	**6.8**	**8.0**	**7.9**	**7.3**	**8.0**	**8.1**	**5.9**	**4.4**	**4.3**	**4.5**	**5.8**	**2.9**
Total gross financing need (billions of U.S. dollars)	-0.1	0.1	0.3	-0.2	0.0	0.1	0.1	0.1	0.1	0.1		0.2
Noninterest current account deficit that stabilizes debt ratio	-7.1	-22.5	-1.0	7.1	5.5	4.1	3.2	2.3	3.0	3.3		1.5
Key macroeconomic assumptions												
Real GDP growth (in percent)	-1.2	-2.3	-0.8	2.7	2.5	2.9	2.3	2.5	2.6	2.6	2.6	3.0
GDP deflator in U.S. dollar terms (change in percent)	1.3	-12.1	-3.7	18.4	11.2	4.3	1.6	1.8	1.9	2.2	3.8	1.6
Effective interest rate (percent) 5/	3.8	3.9	3.9	3.0	2.8	2.7	2.7	2.7	2.8	2.9	2.8	2.2
Growth of exports of goods and services (U.S. dollar terms, in percent)	9.0	-12.5	-16.1	36.0	4.0	-1.7	-1.8	1.4	2.1	0.7	0.8	1.3
Growth of imports of goods and services (U.S. dollar terms, in percent)	-0.5	-9.3	-1.7	15.9	11.0	1.3	2.5	1.8	2.4	1.1	3.3	2.9
Grant element of new public sector borrowing (in percent)	...	...	...	49.4	56.5	56.7	57.0	57.0	57.1	57.0	56.9	57.1
Memorandum item:												
Nominal GDP (billions of U.S. dollars)	3.4	3.0	2.8	3.4	3.9	4.2	4.4	4.6	4.8	5.0		6.0

Source: Fund staff simulations.

1/ Includes both public and private sector external debt.

2/ Derived as [r - g - r(1+g)]/(1+g+r+gr) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and r = growth rate of GDP deflator in U.S. dollar terms.

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.

4/ Assumes that NPV of private sector debt is equivalent to its face value.

5/ Current-year interest payments devided by previous period debt stock.

Table I.3. Papua New Guinea: Sensitivity Analyses for Key Indicators of Public and Publicly Guaranteed External Debt, 2003–13
(In percent)

	Estimate	Projections						Average	
	2003	2004	2005	2006	2007	2008	2009	2004–09	**2013**
Net Present Value of Debt-to-GDP Ratio									
Baseline	**40**	**32**	**27**	**25**	**23**	**22**	**21**	**25**	**19**
A. Alternative scenarios									
A1. Key variables at their historical averages in 2004–13 1/	40	36	32	28	24	20	18	26	**5**
A2. New public sector loans on less favorable terms in 2004–13 2/	40	33	29	27	26	25	25	28	**27**
B. Bound tests									
B1. Real GDP growth at historical average minus one standard deviation in 2004–05	40	34	31	28	27	25	24	28	**22**
B2. Export value growth at historical average minus one standard deviation in 2004–05 3/	40	37	40	37	35	33	32	36	**29**
B3. US dollar GDP deflator at historical average minus one standard deviation in 2004–05	40	42	45	41	38	35	34	39	**31**
B4. Net nondebt creating flows at historical average minus one standard deviation in 2004–05 4/	40	34	30	28	26	24	23	28	**21**
B5. Combination of B1–B4 using one-half standard deviation shocks	**40**	**47**	**57**	**53**	**50**	**47**	**45**	**50**	**41**
B6. One-time 30 percent nominal depreciation relative to the baseline in 2004 5/	40	44	38	34	32	29	28	34	**26**
Net Present Value of Debt-to-Exports Ratio									
Baseline	**55**	**49**	**46**	**44**	**42**	**40**	**40**	**43**	**41**
A. Alternative scenarios									
A1. Key variables at their historical averages in 2004–13 1/	55	55	53	49	44	38	35	46	**12**
A2. New public sector loans on less favorable terms in 2004–13 2/	55	50	48	48	48	47	49	48	**58**
B. Bound tests									
B1. Real GDP growth at historical average minus one standard deviation in 2004–05	55	49	46	44	42	40	40	43	**41**
B2. Export value growth at historical average minus one standard deviation in 2004–05 3/	**55**	**71**	**97**	**96**	**93**	**90**	**90**	**89**	**91**
B3. US dollar GDP deflator at historical average minus one standard deviation in 2004–05	55	49	46	44	42	40	40	43	**41**
B4. Net non-debt creating flows at historical average minus one standard deviation in 2004–05 4/	55	52	51	49	47	45	45	48	**46**
B5. Combination of B1-B4 using one-half standard deviation shocks	55	63	75	74	71	69	69	70	**70**
B6. One-time 30 percent nominal depreciation relative to the baseline in 2004 5/	55	49	46	44	42	40	40	43	**41**
Debt-Service Ratio									
Baseline	**7**	**8**	**8**	**6**	**4**	**4**	**5**	**6**	**3**
A. Alternative scenarios									
A1. Key variables at their historical averages in 2004–13 1/	7	9	11	8	7	7	5	8	**4**
A2. New public sector loans on less favorable terms in 2004–13 2/	7	8	8	6	5	5	4	6	**4**
B. Bound tests									
B1. Real GDP growth at historical average minus one standard deviation in 2004–05	7	8	8	6	5	5	4	6	**4**
B2. Export value growth at historical average minus one standard deviation in 2004–05 3/	**7**	**10**	**13**	**11**	**9**	**9**	**7**	**10**	**7**
B3. US dollar GDP deflator at historical average minus one standard deviation in 2004–05	7	8	8	6	5	5	4	6	**4**
B4. Net non-debt creating flows at historical average minus one standard deviation in 2004–05 4/	7	8	8	7	5	5	4	6	**4**
B5. Combination of B1–B4 using one-half standard deviation shocks	7	9	11	9	7	7	6	8	**5**
B6. One-time 30 percent nominal depreciation relative to the baseline in 2004 5/	7	8	8	6	5	5	4	6	**4**
Memorandum item:									
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	61	61	61	61	61	61	61		**61**

Source: Fund staff projections and simulations.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.

2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline., while grace and maturity periods are the same as in the baseline.

3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).

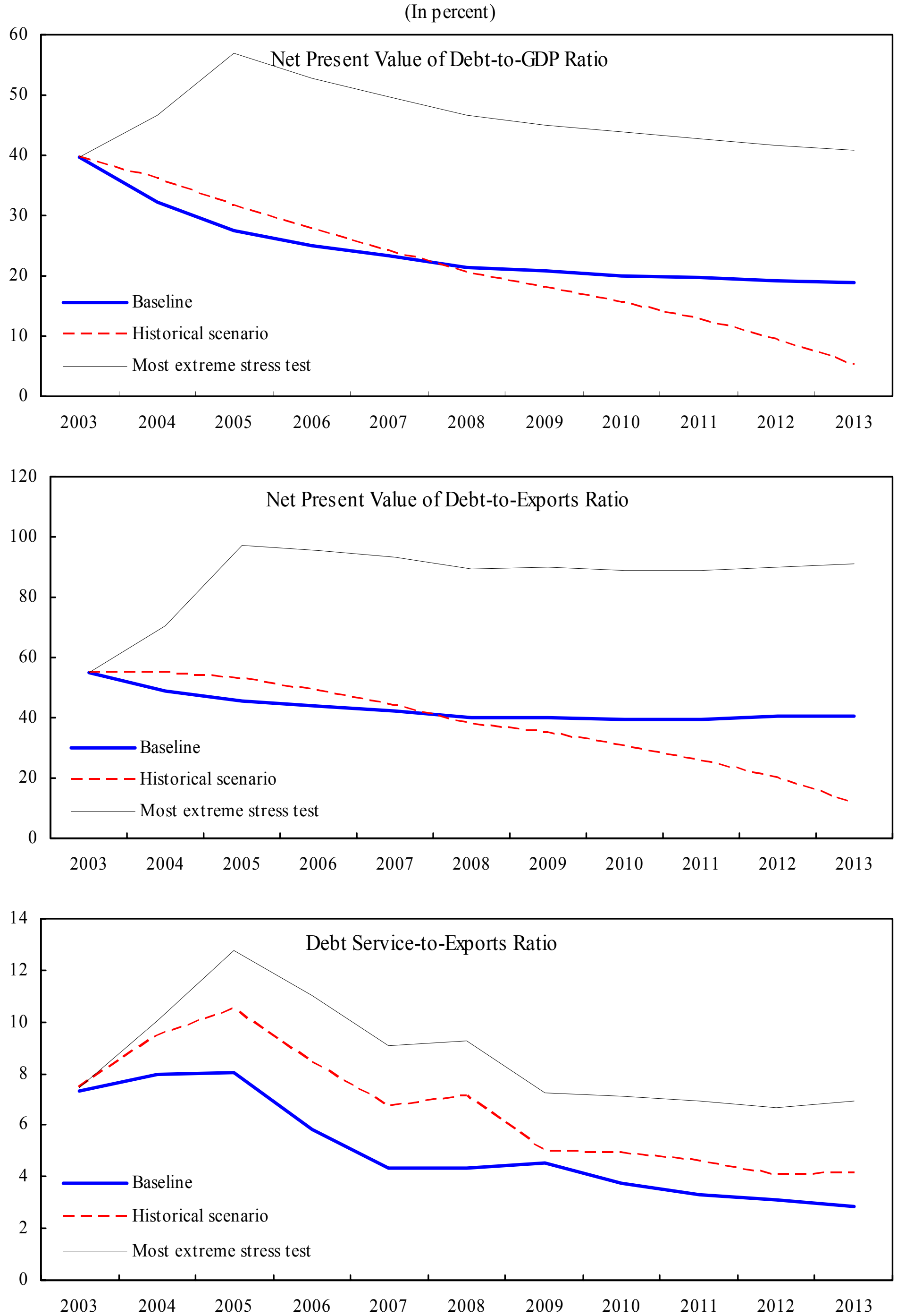
4/ Includes official and private transfers and FDI.

5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.

6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Figure I.3.Papua New Guinea: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2003–13

(In percent)



Source: Fund staff projections and simulations.

II. Public Employment and Wage Bill[1]

A. Introduction

1. **An important part of the government's structural reform program focuses on improving the management of public employment and controlling expenditure on civil service wages and salaries.** At present, the public sector wage bill is unaffordably large (over 9 percent of GDP), causing unsustainable pressure on the budget. The share of wages in total current expenditure has risen from around 33 percent in the early 1990s to 42 percent in 2003, crowding out more essential spending on health, education, and infrastructure.

2. **This chapter summarizes the government's ongoing reform effort aimed at reducing the size of the civil service and the payroll.** As background, Section B traces the reasons for the recent growth and excessive number of public sector employees and Section C details additional factors that have contributed to lack of control over the wage bill. Section D outlines actions recommended by a World Bank-led donor group to downsize the civil service and reduce the share of payroll in government spending in order to release resources for growth oriented activities and poverty reduction, within a restrained spending environment, and indicates how the authorities are addressing these proposals. Section E offers concluding remarks.

B. Civil Service Size

3. **The public sector workforce has expanded rapidly in recent years.** During 1999–2002, the number of workers captured by the central payroll system grew by 12 percent to over 67,000 workers. The decentralization of public human resource management between the Department of Personnel Management (DPM), the Department of Treasury and Finance, and the spending agencies was not conducive to effective control of the overall civil service size. In particular, despite a hiring freeze that has been in effect for the past several years, the number of teachers increased rapidly, essentially because recruitment by the Teachers Service Commission (TSC) was not centrally controlled in a manner consistent with available budgetary resources.

4. **The number of ghost workers was not reduced because of the difficulty, until recently, in identifying them both at headquarters and in the provinces.** This phenomenon was particularly serious among teachers and healthcare workers. The ongoing payroll cleansing exercise, conducted by the DPM as part of the transition to an integrated computerized payroll system called the Concept System, has detected signs of a large number of ghost workers. The indicators include identification of ghost names in established positions, persons on the payroll not linked to established positions, multiple payments to the same individual's bank account, and mismatches between bank accounts and payroll.

[1] Prepared by Naoko Kojo (ext. 35468).

5. **There were also many unattached full-time employees for which no fixed civil service position had been established, as well as an unnecessarily large group of casual public employees, who were remunerated at full pay.** In addition, many public sector workers on the payroll were unproductive and high rates of absenteeism were pervasive.

C. Civil Service Payroll

6. **Weak budgetary control added to pressure on the wage bill.** Expenditure control procedures were inadequate, including the notable absence of a warrant system for payments of allowances, duties, and overtime. As a result, budget appropriations were routinely breached. Unrealistically low allocations for payroll, set by the Treasury often without adequate agreement with the spending agencies, probably encouraged indiscipline. The absence of credible punitive action at a senior level contributed to the recruitment of new workers outside the established ceilings, and granting of performance awards and overtime payments in excess of budgeted allocations. The fiscal outcome for 2003 shows that the excessive increase in payroll spending was accompanied by sharply lower expenditure on nonwage items, including in the social sectors. Moreover, in the education sector, higher spending on salaries was accompanied by under-spending on books.

D. Priority Actions

7. **Against this background, the World Bank's *Public Expenditure Review and Rationalization* (PERR) recommended in mid-2003 the following priority actions to reduce the share of the wage bill in total current expenditure over time.** The essence of these proposals was incorporated into government's Strategic Plan for Supporting Public Sector Reform 2003–07, that was launched in February 2004, as an integral part of its medium-term development strategy. While full details of the timing of implementation and privatization of these changes have not yet been finalized, initial actions are underway.

8. **One action calls for a reduction in the number of civil servants and payroll to sustainable levels.** The government's plan to rely on natural attrition, enforcement of hiring freeze, and retirement programs to gradually reduce the number of regular civil service staff, has proven to be ineffective in the past. Specifically, natural attrition has been more than offset by new hiring, the recruitment freeze has often been ignored, and retirement programs have been considered too costly. The government has recognized the need to take additional measures and the 2004 Budget set the target of reducing the public service by 10 percent in the next three years.

9. **The PERR also proposed that actions should include centralizing administration control over the creation of teaching positions, and ensuring that established ceilings on the number of teachers are fully enforced.** Therefore, the current automatic 2 percent annual increase in recruitment in the education, health, and law and order sectors would need to be reviewed, especially as higher numbers in these sectors would not necessarily result in improved service delivery. Finally, any plan to increase salary scales would have to be carefully assessed, and linked to improvements in public sector productivity and service

delivery. The National Executive Council role would be primarily to ensure that any wage increases are affordable, and the Treasury would have to be closely involved in all pay scale negotiations to ensure fiscal discipline.

10. **Another PERR proposed action deals explicitly with the removal of all ghost workers and the abolition of overpayment of allowances.** An acceleration of payroll computerization, including headcounts and physical verification of employees, would help to eliminate ghost workers. According to the ongoing payroll rationalization exercise, serious overpayments have already been identified so far in 26 national departments. With regard to identifying ghost teachers, the Department of Education should enforce strictly the new verification process requiring all teachers returning from long-term leave to be re-registered. Full implementation of the Concept System by the Department of Education is also expected to lead to lower overpayment of allowances.

11. **A further important initiative is the enforcement of proper expenditure control.** The PERR review states that the Treasury should prepare realistic budget allocations based on available resources and the needs and priorities of the spending agencies, and that it should also strictly enforce the warrant-release mechanism, and enforce the application of sanctions on any spending agency that exceeds its budgeted allocation. The new performance system for department heads increases the incentives for avoiding unjustified spending.

12. **Finally, the PERR proposes that all nonessential casual workers be retrenched and the number of unattached officials reduced.** The implementation of this action has already begun in the Civil Aviation Authority and the Department of Defense. Additional casual civilian workers and servicemen are earmarked for retrenchment from the military services in 2004. The 2004 Budget provides an appropriation to cover, respectively, severance pay and payments of tax liabilities and superannuation contributions for civilians, while the severance pay component for those retrenched from the Department of Defense is to be paid by the Australian government. The government has also begun to implement a so-called sunset policy, whereby unattached officers at full pay are either reassigned to a budgeted position or made redundant.

E. Concluding Remarks

13. **The excessive number of civil servants in recent years has been caused by rising numbers of teachers and ghost workers, as well as casual and unattached employees.** The growth in the payroll has also been caused by poor payroll management procedures and weak budgetary controls. In 2003, the PERR recommended priority actions for immediate implementation to correct the imbalance in current spending, reduce pressure on the fiscal position, and improve service delivery in poverty-reducing areas. While the government has made some progress in computerizing the payroll, identifying ghost workers, and reducing overpayments of allowances, progress in reducing the wage bill has been disappointing.

III. FINANCIAL REFORM OF PENSION FUNDS[1]

1. **This chapter explains how flaws in the architecture of the pension system combined with poor governance in management led to its near collapse in the late 1990s** and how comprehensive and well thought-out reforms in the underlying framework and a strong emphasis on proper governance and supervision led subsequently to noticeable improvements in performance. Section A describes the original structure of the main pension funds when they were established, assesses their financial performance in the 1990s, and draws out the fundamental flaws which led to the sharp deterioration. Section B highlights the essence of the reforms, particularly as they relate to governance, and reviews the rapid and impressive improvement in financial performance which ensued. Section C concludes.

A. Performance of Pension Funds Through 1999

Structure of the Pension Industry

2. **The pension system has covered most of the formal sector almost since independence.** The main exceptions were establishments employing fewer than 20 employees and 6 large agricultural industries (cocoa, coffee, copra, palm oil, rubber, and tea). Mandatory contributions accumulated in various funds, and pensions were paid either in lump sum, annuity, or part annuity form upon eligibility. The largest funds, both in terms of membership coverage and asset accumulation, all government-controlled, were the Public Officers Superannuation Fund for civil servants, the National Provident Fund for the private sector (now called the National Superannuation Fund), and the Defense Force Retirement Benefit Fund for the armed services. Several smaller funds also exist (Table III.1).

Table III.1. Total Assets of Pension Funds, June 2002 1/

	Millions of kina	Share (percent)
1. Public Officers Superannuation Fund (POSF)	744.5	55.4
2. National Superannuation Fund (NASFUND)	326.9	24.3
3. Defense Force Retirement Benefit Fund (DFRBF)	97.3	7.2
4. Aon Master Trust PNG Superannuation Fund	55.0	4.1
5. Ok Tedi Mining Ltd. Superannuation Fund	39.3	2.9
6. Finance Pacific Superannuation Fund	30.6	2.3
7. PNG Workers Superannuation Fund	17.0	1.3
8. University of PNG Superannuation Fund	15.1	1.1
9. Evangelical Lutheran Church Workers Superannuation Fund	14.9	1.1
10. Credit Corporation Staff Superannuation Fund	2.4	0.2
Total	1,343.0	100.0

Source: *Superannuation Reform Within Papua New Guinea Abstract,* by Greg Taylor, Chairman, Superannuation Task Force; and Philip Holdom, Advisor, BPNG; June 6, 2003.

1/ Excluding voluntary funds in the agricultural sector, and a number of very small funds.

[1] Prepared by Eric Sidgwick.

3. **Public Officers' Superannuation Fund** (POSF). Established in 1991 to replace the previous defined-benefit schemes, the POSF is fueled by mandatory contributions from employees (6 percent of salary) of national departments and statutory authorities, and the state (8.4 percent of salary). The state's contribution is paid into the fund only when benefits become payable. Entitlements include lump-sum retirement payments (which can be converted into a pension), group life and disability insurance, retrenchment benefits, and advances for home purchases. Membership declined in the second half of the 1990s, as a result of the transfer of staff from the state bank and a wave of retrenchment, but has stabilized since at around 70,000. Until the recent reforms, the Board—comprising the ex-officio managing director, and three representatives each from the state and the contributors (police, public employees, and teachers associations)—was appointed by the Minister of the Department of Treasury and Planning, and the members acted as trustees of the fund. Board members were responsible for formulating investment policies in accordance with prescribed ministerial investment guidelines. The fund was mandated to report annually to parliament through the Minister.

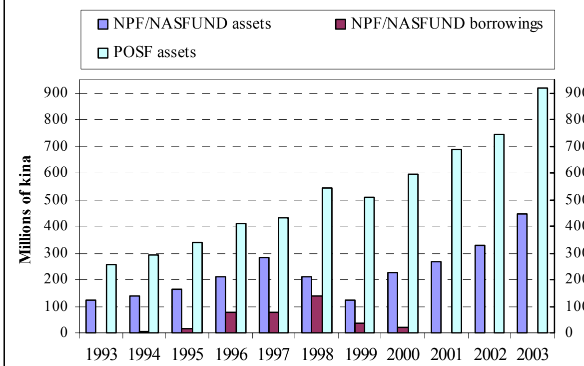
4. **National Provident Fund** (NPF). The NPF began operations in 1980 funded from mandatory participation of all private sector companies with 20 or more employees, except those specifically exempted. Voluntary participation was open to private enterprises with fewer than 20 employees. As a defined-contribution scheme, the NPF was designed to be fully funded from member contributions (5 percent of salary for employees and 7 percent for employers). Though intended as a accumulating retirement fund, with lump-sum benefits paid at age 55 (or after 15 years of contributions), large outflows resulted from payments for disability, unemployment, and housing loan benefits; in practice the bulk of the funds were withdrawn long before retirement age. Membership grew to 71,534 (roughly equal to the POSF) and 981 employers in 2003. Until the recent reforms, the fund was tightly controlled by the government with the Board—comprising three representatives each from: employers, trade unions, and government, with the Secretary of the Department of Treasury and Planning acting a Chairman—appointed by the Minister of the Department of Treasury and Planning. Like the POSF, the fund was subject to ministerial investment guidelines and annual reporting requirements. Following near-collapse at the start of the 1990s, professional management began in 1991. However, while performance improved over the subsequent three years, the underlying structural problems related to excessive government control were not addressed. In 1993, the management contract expired and the NPF carried on thereafter as a self-managed entity.

5. **Defense Force Retirement Benefit Fund** (DFRBF). The fund is a separate mandatory scheme for defense personnel with a unique benefit structure, including defined benefits, 50 percent of which are to be taken as pensions. Membership has been stable at 4,000–5,000, but is to decline gradually over time in line with the government's retrenchment intentions for the defense force. The DFRBF is now the only significant defined benefit scheme in the country, and actuarial assessments are required every three years.

Financial Performance of the Two Main Funds

6. **Financial performance through the mid-1990s was modest.** In the early 1990s, total net assets of the two main funds grew steadily, reaching K 500 million (8½ percent of GDP) in 1995 (Figure III.1). Though the growth in annual returns on the investments of the POSF (the largest in terms of assets) was in line with that of comparable benchmarks for some years, and profits of the NPF rose in the early 1990s to K 31.8 million in 1995, the average return on the funds' investments during this period was below the yield on Treasury bills.

Figure III.1. NPF/NASFUND and POSF: Total Net Assets and Borrowings, 1993–2003



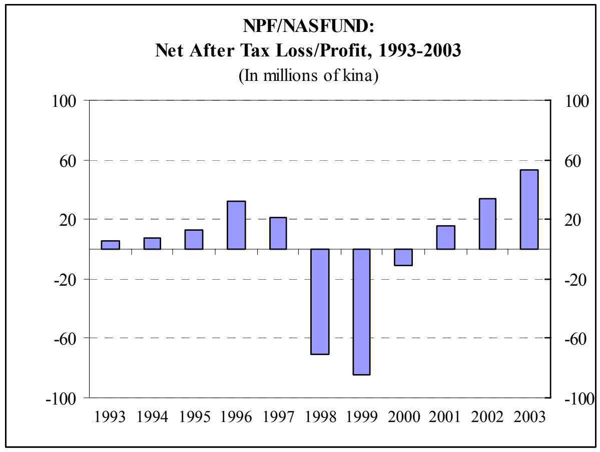
7. **Poor governance caused performance to deteriorate sharply thereafter.** During 1996–97, the management of the NPF approved large illegal borrowings from foreign and domestic commercial banks to finance acquisition of equity (mostly in mining companies), a land purchase, and the construction of a large commercial building (Box III.1). During that time, political uncertainties and widening macroeconomic imbalances caused interest rates to rise, the exchange rate to depreciate, and equity prices to fall. In addition, world mineral prices were also declining. As a result, the NPF was forced to pledge more and more of its equities, which were rapidly losing value, to the banks as security for its ever increasing debt burden. Meanwhile, the POSF also earned a negative real rate of return on its investments, and less than the yield on savings accounts, and the gap widened sharply in 1998 and 1999, partly owing to losses on a failed property deal. The underlying financial soundness of the POSF was also adversely affected by government arrears on its contributions, amounting to K 65 million in 1999, or about 13 percent of total fund assets.

8. **Lack of transparency in the funds' operations, inadequate supervision, and weak quarterly reporting to the Minister and annual reporting to parliament allowed governance problems to fester and remain largely undetected.** Allegations of fraudulent activities in all three pension funds emerged, and rumors of mounting losses (especially at the NPF) spread. Initially, the rumors were successfully dispelled by a restricted circle of people in management who had no incentive to draw any attention to the worsening financial performance and failed to inform the trustees of the real financial position.

9. **The government was forced to intervene.** In response to the growing evidence of major losses of the pension funds during 1999, and as part of the conditionality agreed under IMF and World Bank programs in early 2000, the government agreed to commission

Box III.1. Problems of the National Provident Fund

The financial health of the National Provident Fund (NPF) worsened sharply in the late-1990s. This, mostly as a result of major governance problems in the management of the fund, inadequate supervision, and widening macroeconomic imbalances. After several years of steadily rising profits in the early 1990s, losses totaling K 153 million (about 1¾ percent of GDP) were incurred in 1998 and 1999 (Figure).



In response to such a sharp deterioration in performance, management changes were made, financial and managerial audits of the NPF were undertaken to assess financial viability and recommend corrective measures, and a comprehensive review of the superannuation industry was commissioned. The post mortem identified the following main causes of the losses:

Large borrowings and loans during 1995–99. Though the legislation prohibited the NPF from borrowing, management approved large loans from domestic and foreign banks to fund high-risk equity investments, land purchase, and construction of a large commercial building. In particular, government actively encouraged the Board to invest in mining activities. In addition, illiquid long-term loans were made to government to fund a highway. By end-1998, the debt-to-equity ratio had risen to 68 percent, from 10 percent in 1995, and the construction project suffered large cost overruns.

Over-exposure to equities during 1996–98. Contrary to the conservative investment guidelines issued by the Finance Minister, the portfolio of the fund was significantly over-exposed to equities during 1996–98. By end-1998, the share had risen to 61 percent, from 7 percent in 1995. Moreover, most equities were high-risk resource stocks, which were not income-producing assets at the time.

High vulnerability of the investment portfolio. Beginning in 1995, rising political uncertainties and increasing macroeconomic imbalances led to declining share prices and inflation. Inflation, in turn, caused nominal interest rates to rise and the currency to depreciate. Also, at that time, world mineral prices were declining. As a result, the portfolio suffered from significant foreign exchange losses, rising interest costs on borrowings, and declining values of resource equities. The NPF found itself forced to pledge more and more of its declining-value equities to the banks as security for its ever increasing debt burden.

Persistently weak governance. Even when obvious signs of major problems should have led to corrective actions, trustees and management failed to react appropriately. Instead, management decisions actually compounded the problems. For example, even though unrealized losses totaled about K 70 million at end-1998, the Board and management recommended an income credit to members of 11 percent, costing an additional loss of K 23 million. The credit had to be subsequently reversed.

Inadequate supervision. Though the fund legislation specified that regular financial reports and audit results had to be submitted to the Minister for presentation to parliament, these requirements were not met. Moreover, no independent body was assigned the overall responsibility of regulating and supervising the operations of the NPF, or any other pension fund.

financial and managerial audits. As a result, the full extent of the damage became both clearer and even more alarming. Cumulated losses of the NPF alone were estimated at K 153 million, equivalent to 1¾ percent of GDP. An initial proposal to write down individual members' accounts by 50 percent to bring them in line with current market values was challenged in the courts. However, a realignment of assets and liabilities was subsequently achieved in January 2001 through the National Provident Fund (Financial Reconstruction) Act. As part of the rescue package, member account balances as of end-December 1999 were written down by 15 percent; legislation was enacted to provide a quarterly government grant of K 1 million, indexed to the CPI, for a 15-year period (through 2016); and an additional employer levy of 2 percent was imposed for an initial 3-year period ending December 31, 2003. Also, interest credited to member accounts in 1998 was reversed as the profit and loss statement for that year was found to be incorrect. As a result of this and the realignments, the average effective write-down on members' accounts was about 18 percent, and the additional employer levy is still being applied.

Causes of Financial Problems

10. **In hindsight, much of the original architecture was fundamentally flawed.** The finances of the funds appeared to be appropriate as long as they were not subjected to stress. However, when governance of the funds deteriorated in the late 1990s, their foundation was found to be hollow and too weak to contain, let alone reverse, the negative impacts.

11. **Legislation prescribed excessive government control.** The fund-specific laws were highly prescriptive of the appointment, structure, and behavior of the respective Boards, and ministerial powers were extensive, beginning with the appointment of Board members and the chief executive officer. As a result, with tightening budgetary conditions, especially in the second half of the 1990s, decisions on how to invest the funds often reflected the government's desire to finance capital spending rather than the mandated aim to maximize returns for members.

12. **Investment portfolios performed poorly.** Ministerial investment guidelines were regularly ignored, and benchmarking against other funds and various asset classes was never used to assess performance. Investment managers rarely, if ever, sought outside expertise. As a result of excessive government control, and the weak technical abilities of managers, investment portfolios performed poorly. Moreover, many Board members and some senior fund administrators were out of their depth and/or unable to devote sufficient attention to their duties.

13. **Prudential supervision was inadequate.** Under the original legislation, prudential supervision was entrusted to the Boards. They had neither the ability nor the incentive to properly supervise the administration of their funds, and despite the authority to do so, the successive ministers did not order on-site inspections or enforce penalties for noncompliance. Also, no independent agency was responsible for supervising the pension industry as a whole.

14. **Transparency and accountability were lacking.** Administrators failed to keep the Boards informed or involved in key decisions, because of the aloofness of Board members to what was going on, the lack of regular reporting to the Minister, and inadequate Ministerial supervision. As a result, the funds were run by unqualified officials who exceeded their delegated authority and regularly broke cardinal rules of prudent asset management.

15. **Irregular activities were rife.** As a consequence of the above-mentioned flaws, particularly opaque transparency, irregularities, and outright fraud—especially in the NPF—were rife from the mid-1990s onward. Moreover, the lack of effective supervision meant that these irregularities were left unaddressed for a number of years.

B. Reform Period, 1999–2003

Preparatory Steps

16. **Even before the full extent of the losses was announced, measures were being initiated to redress the situation.** By mid-1999, the new manager of the NPF had already begun to reduce the level of debt and impose stringent financial and management controls. For its part, as indicated above, the new government coordinated a rescue package as part of a broader agenda of financial sector reforms agreed under separate IMF and World Bank lending programs, including new legislation for an independent central bank. The first step included the completion of financial and management audits of the NPF and POSF (in March 2000). The 1999 actuarial assessment of the DFRBF found it to be fully funded (and its sound financial position was confirmed by the 2002 actuarial assessment). Second, the Prime Minister established a Commission of Enquiry to review the operations of the NPF (later extended to the DFRBF) and propose necessary structural reforms (also in March 2000). Third, a Superannuation Fund Bill, designed to provide a comprehensive framework for the regulation and supervision of the pension industry, was passed by parliament (in December 2000). However, the new superannuation legislation was not brought into force because of concerns about some of its provisions, including the immediate capacity of the proposed new regulatory and supervisory authority (the central bank) to fulfill its greatly expanded supervision responsibilities, and the sharp proposed reductions in entitlements for early withdrawal of contributions.

Essence of the Reforms

17. **A Superannuation Task Force was then established by the Prime Minister (in August 2001) to widen the consensus for reform and suggest revisions to the initially proposed legislation.** Its initial recommendations were included in a revised Superannuation Act, which entered into force in May 2002. As a result of these initiatives, the pension industry has undergone fundamental change, placing it on a firmer foundation.

18. **The new legislation is comprehensive.** The new legislation, which supercedes the previous fund-specific laws, covers all superannuity funds. It opens up the industry to new

entrants, which should result in efficiency gains from increased competition. It also requires a progressive shift toward full-funding of new contribution obligations by the government, which will facilitate the portability of pensions between funds, encourage savings mobilization, and deepen the financial market. Importantly, the new legislation assigns exclusive regulatory and supervisory responsibility to the Bank of Papua New Guinea (BPNG), and gives it extensive powers.

19. **Government influence is sharply curtailed.** The government no longer has the power to intervene in individual fund investment decisions, or direct loans for reasons of national interest or any other purpose. Importantly, the separation between, and outsourcing of, investment management and fund administration has erected a wall against political interference, and thereby provide better protection of members' funds.

20. **Good governance is emphasized.** Funds must now have a separate trustee, administration, and investment management structure. Trustees and senior managers are selected subject to rigorous fit and proper criteria, vetted by an independent BPNG, and administrators and investment managers must also meet similar criteria and have professional qualifications. Investment decisions are no longer made by the trustee, but by professional investment managers, consistent with the investment strategy established by the trustee, and within the guidelines set by the BPNG.

21. **Transparency is ensured.** The requirements of an annual audit and publication within three months of the end of the financial year are now being strictly enforced. The BPNG also requires all funds to publish operational expenses in a consistent form, and establish a complaints mechanism. The Association of Superannuation Funds of PNG (ASFPNG), established in June 2002, advises the BPNG and administers members' complaints. In that connection, both the two main funds have set up regularly updated websites that can be used to submit queries and/or complaints.

22. **Strong regulatory and supervisory powers are vested in the BPNG,** outside of direct political control. The BPNG authorizes the establishment of new funds and issue annually renewable licenses for trustees, fund administrators, and investment managers. It also has the power to obtain any information about the affairs of the funds, intervene in the management of the funds in case of wrong-doing, and enforce sanctions and penalties.

Recent Performance

23. **The reforms have already proven very effective.** The new legislation, the sharp reduction in government interference, and the dramatic improvements in governance outlined above have been effective. As a result, the performance of the main funds, especially that of the NPF, has improved sharply.

24. **Profitability has returned to the NPF/NASFUND.** Building on the reforms begun in mid-1999, the rescue package of 2001, and wide-ranging improvements in governance, the

NPF—renamed the National Superannuation Fund (NASFUND) in May 2002—became the first superannuation fund to comply with the new legislation. The resulting turnaround in financial performance between 2000 and 2003 has been impressive. Outstanding debt was eliminated, and net assets grew by an average of 26 percent a year, while net after tax profits jumped from K 16 million in 2001 to K 53 million in 2003, enabling a rebuilding of reserves and a resumption of interest credits to member accounts.

25. **The POSF has also made significant improvements.** A new trustee company was established and licensed by the BPNG in December 2002, comprising a competent commercially experienced Board, and fund administration and investment management were outsourced to professional companies. As a result, net assets grew by an estimated average of 13½ percent a year in the three-year period through 2002, and by 24 percent in 2003, while after tax profits rose to K 46 million in 2002. For its part, so far in 2004, the government has settled about K 20 million in past contribution arrears, reducing the outstanding stock to around K 90 million. It intends to clear the remaining stock in 2004 through a combination of cash payments and issuance of inscribed stock.

26. **Total assets of the funds are now growing rapidly.** At end-2003, total assets of the two main superannuation funds had risen to K 1.4 billion, equivalent to over 11 percent of GDP, or 35 percent of total assets of commercial banks (up from 23 percent in 2000).

27. **Recently, further refinements have been made or are pending.** Though the Act requires all employers, including the state, to promptly remit contributions every two weeks, because of the large budgetary costs involved, the government has opted to phase-in its contributions over a seven-year period, beginning in 2003. In addition, the government has agreed to progressively fund a rising proportion of its liabilities for new members in a gradual move to a fully funded pension system for civil servants. Finally, to encourage long-term savings, the marginal tax rate on fund earnings was reduced from 30 percent to 25 percent in the 2004 Budget. In the future, the intention is to further amend the Act to give contributors the option to retain some of their savings in the fund after retirement, or transfer them to another authorized fund or similar financial organization approved by the BPNG (see Chapter IV: Tax Summary).

28. **The government is also considering further refinements to pension fund legislation that would enhance the reform process.** These include the extent to which funds may retain reserves, the development of pensions as a viable alternative to lump sums on retirement, the extent to which there is superannuation coverage in the rural sector, and the capacity for the BPNG to impose industry levies as cost recovery.

C. Concluding Remarks

29. **The main reasons for the sharp deterioration in the financial performance of the main pension funds in the late 1990s was bad governance and inadequate supervision.** Flaws in the original architecture of the pension system and excessive government influence

also contributed. The near collapse of the NPF, the formation of a new government in mid-1999, and the public deliberations of the Commissions of Enquiry provided both the impetus and rationale for fundamental and far-reaching reforms. The introduction of comprehensive legislation emphasizing a strict division of labor between trustees, fund administrators, and investment managers, combined with strong and independent regulatory and supervisory powers of the BPNG, helped reduce the scope for inappropriate government intervention and fostered dramatic improvements in governance. As a result, performance improved quickly and sharply. The implications for reforms in other areas of the public sector are obvious.

IV. TAX SUMMARY[1]

A. Direct Taxation

Taxation of Individuals

1. **The tax year coincides with the calendar year. Residence is defined as physical presence in Papua New Guinea (PNG) for more than six months out of a given tax year.** Resident individuals are taxed on global income from all sources, subject to double-taxation treaties. Nonresident individuals are liable for tax only on income derived from PNG sources. The maximum number of dependents for whom a tax rebate may be claimed was reduced from four to three in the 2004 Budget.

2. **There are two separate types of assessment:** (i) a fortnightly salary or wages tax assessment; and (ii) an annual nonsalary or wages income assessment. Expenses of earning income are fully deductible, and there are no capital gains or gift taxes. The tax rates on assessed income are shown in Table IV.1.

Table IV.1. Individual Income Tax Rates

Income Bracket	Marginal Tax Rate (Percent)
Below K 6,000	0
K 6,001 to K 16,000	25
K 16,001 to K 70,000	35
K 70,001 to K 95,000	40
Above K 95,000	47

Taxation of Companies

3. **Tax years generally correspond to calendar years, unless there is a sufficient reason to deviate from that rule** (e.g., if the parent company has a different tax year). A company is considered resident for tax purposes if it is incorporated in PNG, has its management in PNG, or is controlled by PNG residents. A resident company is taxed on its global income from all sources. Nonresident companies pay tax only on PNG sourced income.

4. **The general company tax rate is 30 percent, except for authorized superannuation funds and primary production projects** (commencing during 2004–06), for which the applicable rates are 25 percent and 20 percent, respectively. Taxable income

[1] Prepared by Naoko Kojo (ext. 35468).

generally corresponds to accounting income. Company income tax is payable as advanced payment tax (APT), so that companies pay tax on the current year's income. Advanced payment tax is payable in three equal installments on the last business day of April, July, and October each year. Business losses can be carried over for up to 20 years; they cannot be carried back.

A number of tax incentive schemes are operational, including a ten-year tax exemption for companies that establish themselves in one of 41 least developed districts, and tax deductions for agricultural extension services and research and development activities, as introduced in the 2004 Budget.

5. **Dividend withholding tax** of 17 percent is applicable to all dividends paid by resident companies and received by resident companies from sources outside of Papua New Guinea. Dividend withholding tax on dividends paid to nonresidents is a final tax.

6. **Interest withholding tax** of 15 percent was introduced in 1999. Interest withholding tax on interest paid to nonresidents is a final tax. Interest paid by mining and petroleum companies to nonresident financial institutions is exempt.

Taxation of Mining and Petroleum Companies

7. **Mining and petroleum companies are subject to different rates of taxation than nonmining companies** as summarized in Table IV.2. Corporate income tax for mining companies is payable as APT, as for nonmining companies. At the beginning of each year, the International Revenue Commission (IRC) assesses the estimate made by the tax payer and issues an assessment to the mining company. The company then lodges this assessment (in kina) to the central bank account in New York in three equal installments in April, July, and October. Any differences between the APT assessment and income tax assessment are requested to be paid in U.S. dollars. The payment mechanism of corporate income tax for petroleum companies is same as for mining companies, except that APT assessments and lodgment are made in U.S. dollars. Business losses can be carried over with no maximum time period.

Table IV.2. Taxation of Petroleum and Mining Companies

	Mining Companies	Petroleum Companies	
Income tax	30 percent	Operations that began in 2002:	45%
		Operations that began in 2003–17:	30%
		Operations not included above:	50%
Dividend withholding tax	10 percent	None	
Mining levy	Mining levy to be reduced by 5 percentage points every year	None	
Royalties	2 percent on the f.o.b. sales	2 percent of the value of extracted product	

Other Provisions for the Mining and Petroleum Sectors

8. **Depreciation for new mining projects is allowed with a 25 percent decline in the balance pool for all assets, regardless of whether they are long-or short-life assets.** A double depreciation of 200 percent is allowed for mineral exploration expenses incurred after January 1, 2003 that results in a subsequent mining development. The first 100 percent deduction is allowed as a deduction against assessable income. The second deduction arises once a mine commences commercial operations. Ring fencing rules on mines allow up to 25 percent of pooled off-lease exploration expenditure as a deduction for tax purposes, provided that this does not reduce tax payable by more than 25 percent.

9. **A mining levy was introduced in July 1999 to capture the windfall gain of the mining industry from the introduction of the VAT,** which resulted from the zero-rating of their exports in conjunction with the removal of the 11 percent basic import duty for all sectors of the economy. The tax is levied at 11 percent on the imports and deemed imports of the mining industry. In 2002 the government commenced phasing out the mining levy over a four-year period, intending to reduce it by one-fourth of the original amount every year. However, phase out of the mining levy was temporarily suspended in 2003. In 2004 the government reinstituted the phase out at the rate of 5 percentage points, and an additional 5 percentage points per annum every year thereafter.

10. **To promote new petroleum projects, the rate of corporate income tax was reduced from 50 percent to 45 percent for petroleum projects that began in January 2002.** The reduced rate however does not apply to projects that existed at the time of reduction. Furthermore, the government has introduced special fiscal incentives for Petroleum Prospecting Licenses issued before January 1, 2008, which convert to Petroleum Development Licenses before January 1, 2018. This practically entitles all mining projects that commence operation between 2003–17 to a reduced petroleum corporate tax rate of 30 percent for the entire life of the project, usually 10 to 15 years. The reduced corporate income tax rate is aimed at providing incentives for new mining exploration. Additional profit taxes, which were applied to mining and petroleum company income that exceeded an internal rate of return of at least 20 percent, have been abolished for all companies except the prospective Gas-to-Australia Project.

11. **A national resource tax is imposed by the national government** but paid to provincial governments and landowners as a royalty of 2 percent of the net value of output from mining and petroleum projects.

Taxation of Superannuation Funds

12. **All companies employing 20 or more persons are required to provide superannuation for their employees.** Employee contributions are deducted from gross basic salary at a minimum rate of 5 percent, while the employer contributes 7 percent of the

employees' gross salary. Civil servants contribute to the Public Officers Superannuation Fund, where contribution rates of 6 percent for the employee and 8.4 percent for the employer apply.

13. **Superannuation funds are subject to income tax.** The corporate income tax rate for authorized superannuation funds was reduced from 30 percent to 25 percent in 2004. This is expected to increase domestic savings, and boost member returns and benefits over time. To further encourage savings, the government also introduced concessional taxation arrangements in 2004, allowing the retention of funds in the newly established Retirement Savings Accounts (RSAs) up to a maximum of K 100,000. Under the new arrangement, employees exiting a superannuation fund can voluntarily transfer their savings to RSAs. These savings can be drawn down on a periodic basis free of income tax, providing an income stream in retirement. Draw-down rules limit the rate at which monies can be withdrawn in order to protect savings from dissipation. The earnings of RSAs are also free from income tax, subject to the maximum draw-down rules.

14. **The 2004 Budget also introduced concessional tax rates for employer contributions and fund earnings at the benefit stage** in accordance with Table IV.3. Previously, only employees who have been with a fund for more than 15 years benefited from the concessional tax rate of 2 percent.

Table IV.3. Tax Rates Applying to Superannuation Earnings

Years of contribution	Marginal tax rate (percent)
Less than 5 years	Income tax rates as shown in Table IV.1
At least 5 years but less than 10 years	15 percent
At least 10 years but less than 15 years	8 percent
15 years or more	2 percent

B. Indirect Taxation

Goods and Services Tax

15. **A goods and services tax (GST), which replaced the value-added tax (VAT) in 2004, has a uniform tax rate of 10 percent, with zero-rated exports, including for the mining and petroleum sectors.** Exempted goods and services are mainly medical services, financial services, education services and supplies, fine metals, unprocessed logs, and public transportation fees. GST is levied on all imported goods, with the exception of imports for aid projects and diplomatic missions and for the mining and petroleum sectors. All businesses with an expected turnover in excess of K 100,000 must register for GST; registration for other businesses is voluntary.

16. **From 2004, inland GST collections (net of refunds) are distributed between national government and provinces on the basis of 40 percent to the national government and 60 percent to provincial governments.** Each provincial share of the net inland collection is calculated in accordance with the formula set out in the GST Revenue

Distribution Act, which requires the national government to "top up" grants to provinces to ensure that no province receives less than its 2002 distribution. Port collections are not shared with provinces, but only for the national government.

Excise Taxes

17. **Excise taxes are applied to alcoholic beverages (beer, wine, and spirits), cigarettes, other manufactured tobacco products, and fuels.** Since the 1999 tax and tariff reform, excise taxes also apply to a few products that were previously protected by high tariffs. The excise rates for alcohol and tobacco products were indexed by 4 percent every six months since May 1, 2003. However, the 2004 Budget froze the indexation for 12 months until November 31, 2004 with the rates shown in Table IV.4. From December 1, 2004, the excise indexation for alcohol and tobacco products will resume at 2.5 percent every six months.

18. **From the beginning of 2004, an excise duty exemption is granted to business and individual importing tractors for use in agricultural and forestry work.** The excise rate is reduced from 10 percent to 0 percent.

19. **Excise rate applying to poker machines has been reduced from 170 percent to 50 percent for 2004 only.** This is to provide inducement to the gaming industry to replace existing machines.

Table IV.4. Excise Tax Rates

Commodity	Excise Rate
Alcohol (per liter)	
Beer	K 37.69–53.61
Wine and spirits	K 56.94
Tobacco products	
Cigars (per 1,000)	K 135.46
Regular cigarettes (per 1,000)	K 135.46
Spear no filter (per 1,000)	K 67.73
Spear filter (per 1,000)	K 84.53
Smoking tobacco (leaf, per kg.)	K 45.15
Others	K 45.15
Petroleum products	
Gasoline	K 0.61 per liter
Aviation gasoline	K 0.02 per liter
Diesel	K 0.06 per liter (K 0.03 for commercial fishing vessels)
Other	
Pearls, diamonds, and some metals	40 percent
Drying, dictating and answering machines, microwave ovens	30 percent
Motor vehicles	0–110 percent
Arms	60 percent
Poker machines	50 percent

Import Duties

20. **The Harmonized Commodity Description and Coding System (HS Tariff) was adopted in January 1991.** The 1995 revision of the code was adopted in 1996. Papua New Guinea became a member of the World Customs Organization in 1998, and is implementing the WTO agreement on Customs Valuations. Papua New Guinea bound its entire tariff schedule during the Uruguay Round. A seven-year tariff reform program commenced in July 1999, rationalizing the tariff structure and setting a schedule for the phased reductions of tariffs. There are presently four major ad valorem tariff rates (0 percent, 20 percent, 30 percent, and 45 percent) and some additional specific tariff rates. Under the tariff reform program, tariff rates will be reduced a further 5 percentage points to final rates of 15, 25, and 40 percent without exceptions in January 2006.

21. **Preferential import tariff arrangements exist with members of the Melanesian Spearhead Group, and a bilateral arrangement with Fiji.**

Table IV.5. Tariff Rates (in percent)

Tariff Category	Current Tariff Rate	Tariff Rate Prior to July 1999
Duty free	0	0
Input rate	Abolished	5
Basic rate	Abolished	11
Intermediate rate	20	40
Protective rate	30	55
Prohibitive rate	45	75–125

The descriptions of the tariff categories are as follows:

- Duty free items: more than three-fourths of all lines fall into this category.
- Intermediate rate items: intermediate goods.
- Protective rate items: goods that are produced, or potentially can be produced, in Papua New Guinea and are seen as requiring a level of protection.
- Prohibitive rate items: these include vegetables and fruits, beer, cigarettes and cigars, veneer and plywood, and sugar. Tariffs for some of these products (sugar, plywood, and veneer) will be higher than the prohibitive rate during the phased reduction, but set at the general rate in 2006. There is a specific tariff on beer, spirits, cigarettes, and certain tobacco products.

Import Levy

22. **Beginning in 2004, a temporary levy of 2.0 percent is levied on imports**, except imports by the mining and petroleum sectors, by churches and charitable groups, and pharmaceuticals and medical goods. The levy is imposed until December 31, 2004 only.

Export Duties

23. **Export duties are levied only on selected types of products;** the duty varies depending on the product. Export duties are calculated on an f.o.b. basis and are payable before shipment. A preshipment inspection system on the export of round logs has been supplied by a private contractor since late 1994. In 2004, the log export duty rates are revised as shown in Table IV.6. Plantation logs are exempt from duty.

Table IV.6. Log Export Duties

World f.o.b. Log Price (Per m^3)	Log Export Tax in 2004 (Per m^3)	Log Export Tax in 2003 (Per m^3)
Up to US$22.6	P x 9.5%	10%
US$22.6–27.60	P x 23.75% - US$3.22	25%
US$27.60–32.65	P x 42.75% - US$8.46	45%
US$32.65–37.65	P x 47.50% - US$10.01	50%
US$37.65–50.20	P x 52.25% - US$11.80	55%
Over US$50.20	P x 61.75% - US$16.57	65%

Mineral ores and concentrates (excluding gold, silver, and copper) and crocodile skins are charged an export tax set at 5 percent, and sandalwood at a rate of 15 percent.

C. Other Taxes

24. **Poker machine tax** was introduced in October 1996 as a general revenue measure, and last increased in April 2000. The Gaming Machine Act specifies the distribution of the turnover of gaming machines to all stakeholders as shown in Table IV.7.

Table IV.7. Distribution of Poker Machine Tax

Recipient	Share (Percent)
National government	74
Operators	4
Site owners	22

25. **Stamp duties** are imposed by the national government on the execution of certain documents. The rates vary by type of document.

26. **Debit tax** on withdrawals from financial institutions will be introduced during 2003, applying at the rate of 0.01 percent of the withdrawn amount. The Debit Tax will replace the existing K 0.20 stamp duty applying to checks.

27. **Departure tax** of K 30 is payable by all persons departing Papua New Guinea. Departing international passengers also pay a K 30 terminal facility charge to the Civil Aviation Authority.

28. **Land tax** may be imposed by provincial governments although this tax is difficult to implement and collect.

Table 1. Papua New Guinea: GDP by Sector at Current Market Prices, 1999–2003 1/

	1999	2000	2001	2002	Est. 2003
	(In millions of kina)				
Nominal GDP	8,781	9,515	9,948	10,992	12,204
Mineral	2,087	2,663	3,027	2,831	3,062
Nonmineral	6,694	6,852	6,921	8,161	9,142
Of which: Nonagricultural	4,174	4,308	4,492	5,127	5,786
Agriculture, forestry, and fishing	2,521	2,544	2,429	3,034	3,356
Mining and quarrying	2,087	2,663	3,027	2,831	3,062
Manufacturing	798	795	797	938	1,109
Electricity, gas, and water	100	113	118	137	158
Construction	364	374	383	483	588
Wholesale and retail trade	834	830	858	989	1,170
Transport, storage, and communication	430	420	488	504	581
Financing, insurance, real estate, and business services	289	322	358	381	496
Less: Imputed bank service charge	199	224	252	268	319
Community, social, and personal services	1,096	1,134	1,283	1,438	1,495
Import duties	465	547	462	527	510
Less: Subsidies	3	2	2	2	2
	(Annual percentage change)				
Memorandum items:					
Nominal GDP	12.7	8.4	4.6	10.5	11.0
Mineral	27.3	27.6	13.7	-6.5	8.2
Nonmineral	8.9	2.4	1.0	17.9	12.0

Sources: Papua New Guinea National Statistical Office; and Fund staff estimates.

1/ The National Statistical Office is currently revising the national accounts back to 1994, and rebasing them to 1998 prices.

Table 2. Papua New Guinea: GDP by Sector at 1983 Constant Prices, 1999–2003 1/

	1999	2000	2001	2002	Est. 2003
	(In millions of 1983 kina)				
Real GDP	3,803	3,757	3,670	3,639	3,736
Mineral	817	786	822	662	682
Nonmineral	2,986	2,971	2,849	2,977	3,055
Of which: Nonagricultural	1,899	1,785	1,725	1,771	1,808
Agriculture, forestry, and fishing	1,087	1,186	1,124	1,206	1,247
Mining and quarrying	817	786	822	662	682
Manufacturing	344	316	289	296	305
Electricity, gas, and water	51	53	50	50	51
Construction	151	143	134	147	156
Wholesale and retail trade	426	368	346	348	359
Transport, storage, and communication	192	162	172	154	155
Financing, insurance, real estate, and business services	148	154	159	164	169
Less: Imputed bank service charge	105	109	113	117	121
Community, social, and personal services	513	505	534	559	565
Import duties	181	193	156	170	170
Less: Subsidies	1	1	1	1	1
	(Annual percentage change)				
Memorandum items:					
Real GDP	7.6	-1.2	-2.3	-0.8	2.7
Mineral	10.0	-3.8	4.6	-19.4	3.0
Nonmineral	6.9	-0.5	-4.1	4.5	2.6

Sources: Papua New Guinea National Statistical Office; and Fund staff estimates.

1/ The National Statistical Office is currently revising the national accounts back to 1994, and rebasing them to 1998 prices.

Table 3. Papua New Guinea: GDP by Type of Expenditure at Current Market Prices, 1999–2003 1/

(In millions of kina)

	1999	2000	2001	2002	Est. 2003
Gross domestic product	8,781	9,515	9,948	10,992	12,204
Market component	7,714	...	...	...	...
Nonmarket component	1,067	...	...	...	...
Consumption	7,111	...	...	...	...
Private	5,623	...	...	...	...
Market component	4,571	...	...	...	...
Nonmarket component	1,052	...	...	...	...
Government	1,488	...	...	...	...
Gross capital formation	1,439	...	...	...	...
Gross fixed capital formation	1,063	...	...	...	...
Market component	1,047	...	...	...	...
Private	805	...	...	...	...
Government	243	...	...	...	...
Nonmarket	15	...	...	...	...
Change in inventories	377	...	...	...	...
Exports of goods and services	4,153	...	...	...	...
Goods	3,931	...	...	...	...
Services	222	...	...	...	...
Less: imports of goods and services	3,923	...	...	...	...
Goods	3,262	...	...	...	...
Services	660	...	...	...	...

Sources: Papua New Guinea National Statistical Office; and Fund staff estimates.

1/ The National Statistical Office is currently revising the national accounts back to 1994, and rebasing them to 1998 prices.

Table 4. Papua New Guinea: GDP by Type of Expenditure at Constant 1983 Prices, 1999–2003 1/

(In millions of 1983 kina)

	1999	2000	2001	2002	Est. 2003
Gross domestic product	3,803	3,757	3,670	3,639	3,736
Market component	3,122	...	...	...	...
Nonmarket component	682	...	...	...	...
Consumption	3,028	...	...	...	...
Private	2,336	...	...	...	...
Market component	1,665	...	...	...	...
Nonmarket component	671	...	...	...	...
Government	691	...	...	...	...
Gross capital formation	522	...	...	...	...
Gross fixed capital formation	366	...	...	...	...
Market component	355	...	...	...	...
Private	273	...	...	...	...
Government	82	...	...	...	...
Nonmarket	11	...	...	...	...
Change in inventories	156	...	...	...	...
Exports of goods and services	1,471	...	...	...	...
Goods (estimated)	1,392	...	...	...	...
Services (estimated)	79	...	...	...	...
Less: Imports of goods and services	1,216	...	...	...	...
Goods (estimated)	1,012	...	...	...	...
Services (estimated)	205	...	...	...	...

Sources: Papua New Guinea National Statistical Office; and Fund staff estimates.

1/ The National Statistical Office is currently revising the national accounts back to 1994, and rebasing them to 1998 prices.

Table 5. Papua New Guinea: Production of Major Commodities, 1999–2003

	1999	2000	2001	2002	2003
Production volumes					
Crude oil (millions of barrels)	32.0	23.6	21.4	15.4	15.0
Copper (thousands of tonnes)	117.3	126.8	212.6	170.1	230.6
Gold (tonnes)	64.1	72.8	69.1	59.1	68.4
Silver (tonnes)	54.1	61.2	58.6	54.1	61.3
Cocoa (thousands of tonnes)	29.0	38.0	36.3	34.9	40.3
Coffee (thousands of tonnes)	79.2	66.6	51.6	63.1	68.8
Tea (thousands of tonnes)	8.2	8.5	8.8	5.2	6.6
Copra (thousands of tonnes)	63.5	67.2	21.8	15.8	8.4
Copra oil (thousands of tonnes)	50.3	48.0	27.1	28.2	47.7
Palm oil (thousands of tonnes)	253.8	336.3	327.6	323.9	326.9
Rubber (thousands of tonnes)	3.7	3.7	3.6	3.8	4.2
Logs (millions of cubic meters)	1.3	1.4	1.2	1.8	2.0
	(In millions of kina)				
Production values					
Crude oil	1,450	1,922	1,889	1,431	1,485
Copper	441	595	1,074	1,019	1,415
Gold	1,546	1,951	2,115	2,295	3,088
Silver	24	32	37	39	36
Cocoa	85	85	110	226	258
Coffee	417	295	189	277	299
Tea	19	20	22	18	19
Copra	66	60	16	11	6
Copra oil	96	66	27	33	34
Palm oil	338	307	291	390	408
Rubber	5	6	7	9	12
Logs	256	283	234	366	424

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

Table 6. Papua New Guinea: Employment by Sector, 1999–2003

	1999	2000	2001	2002	Prel. June 2003
	(March 2002 =100, annual average) 1/				
Total	105	107	101	103	111
Retail	100	103	101	100	99
Wholesale	115	115	103	97	110
Manufacturing	103	109	100	104	113
Building and construction	131	128	93	105	101
Transportation	109	103	99	107	109
Agriculture, forestry, and fisheries	99	104	102	104	122
Financial and business services	116	106	101	106	97
Mining 2/	95	103	97	99	98
	(Annual percentage change)				
Total	2.5	1.5	-5.5	2.3	7.5
Retail	2.7	2.9	-2.1	-1.1	-0.9
Wholesale	4.6	0.3	-10.7	-5.5	13.4
Manufacturing	3.7	5.5	-8.5	4.0	9.1
Building and construction	-4.2	-2.1	-27.4	13.5	-3.8
Transportation	-5.7	-5.7	-3.7	8.0	1.2
Agriculture, forestry, and fisheries	3.7	4.6	-1.5	1.9	16.7
Financial and business services	5.7	-8.4	-5.4	5.2	-7.9
Mining 2/	1.2	9.4	-6.3	1.8	-1.0

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

1/ Following a revision in the business register, a resampling exercise was conducted in March 2002.

2/ Not included in overall index; excludes subcontractors.

Table 7. Papua New Guinea: Consumer Price Index by Expenditure Group, 1999–2003

	All Groups Total	Food	Drinks, Tobacco, and Betelnut	Clothing and Footwear	Rents, Fuel, and Power	Household Equipment and Operations	Trans-portation and Commun-ication	Miscel-laneous	Bank of Papua New Guinea's Underlying Inflation 1/
	(Percentage change from corresponding quarter of previous year)								
1999									
March	14.2	15.4	12.9	9.8	4.4	25.7	16.1	7.9	15.2
June	14.1	13.9	9.1	12.3	4.3	24.5	23.8	5.0	13.6
September	18.2	19.6	10.8	15.7	4.5	30.2	29.7	6.3	15.2
December	13.2	18.7	-3.8	16.1	3.7	29.4	27.8	5.0	14.3
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	9.2	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	0.2	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	19.0	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	10.5	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
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 8a. Papua New Guinea: Central Government Budget, 1999–2003

(In millions of kina)

	1999	2000	2001	2002	2003
Revenue	2,527	2,966	3,087	3,237	3,657
Tax	1,921	2,315	2,295	2,370	2,678
Nonmineral taxes	266	535	555	365	498
Mineral taxes	1,655	1,780	1,740	2,005	2,180
Nontax	157	145	172	170	232
Of which: Mineral nontax revenue	37	...	42	10	74
Grants	450	507	620	697	747
Budget grants	56	16	71	21	0
Project grants	394	491	550	676	747
Expenditure	2,933	3,071	3,457	3,712	3,813
Recurrent	2,016	2,290	2,414	2,547	2,677
Noninterest recurrent expenditures	1,627	1,868	1,996	2,110	1,987
National departments	970	1,219	1,242	1,357	1,189
Salaries and wages	424	474	540	574	618
Retrenchment costs	14	...	...	...	...
Arrears payments	149	193	91	12	14
Education funding	...	...	...	135	19
Goods and services	382	398	386	568	528
Structural adjustment payments	0	77	40	68	10
Provinces	537	527	589	588	594
Salaries and wages	384	363	420	485	504
Goods and services	85	94	98	49	61
Conditional grants	68	69	71	54	29
Statutory authorities	121	122	165	165	203
Interest	389	422	418	437	690
Domestic	261	284	253	248	528
Foreign	128	138	165	189	161
Development budget and net lending	917	781	1,043	1,165	1,136
Development budget	922	784	1,047	1,170	1,146
Project grants	394	491	550	676	747
Concessional loans	206	84	142	119	135
Nonconcessional loans	0	0	0	138	56
Domestic funds	322	208	355	237	207
Net lending	-5	-3	-4	-5	-10
Overall balance (from above the line)	-406	-105	-370	-475	-156
Errors, omissions, and discrepancy	13	-24	-34	-149	-86
Overall balance (from below the line)	-393	-129	-403	-624	-242
Financing	393	129	403	624	242
Foreign financing (net)	193	15	312	-101	-264
Domestic financing (net)	153	28	-35	677	467
Float	20	58	127	-153	-1
Asset sales	26	27	0	201	40
Memorandum item:					
Nominal GDP (millions of kina)	8,781	9,515	9,948	10,992	12,204

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

Table 8b. Papua New Guinea: Central Government Budget, 1999–2003

(In percent of GDP)

	1999	2000	2001	2002	2003
Revenue	28.8	31.2	31.0	29.4	30.0
Tax	21.9	24.3	23.1	21.6	21.9
Nonmineral taxes	3.0	5.6	5.6	3.3	4.1
Mineral taxes	18.8	18.7	17.5	18.2	17.9
Nontax	1.8	1.5	1.7	1.5	1.9
Of which: Mineral nontax revenue	0.4	...	0.4	0.1	0.6
Grants	5.1	5.3	6.2	6.3	6.1
Budget grants	0.6	0.2	0.7	0.2	0.0
Project grants	4.5	5.2	5.5	6.2	6.1
Expenditure	33.4	32.3	34.7	33.8	31.2
Recurrent	23.0	24.1	24.3	23.2	21.9
Noninterest recurrent expenditures	18.5	19.6	20.1	19.2	16.3
National departments	11.0	12.8	12.5	12.3	9.7
Salaries and wages	4.8	5.0	5.4	5.2	5.1
Retrenchment costs	0.2	...	...	...	...
Arrears payments	1.7	2.0	0.9	0.1	0.1
Education funding	...	...	...	1.2	0.2
Goods and services	4.4	4.2	3.9	5.2	4.3
Structural adjustment payments	0.0	0.8	0.4	0.6	0.1
Provinces	6.1	5.5	5.9	5.3	4.9
Salaries and wages	4.4	3.8	4.2	4.4	4.1
Goods and services	1.0	1.0	1.0	0.4	0.5
Conditional grants	0.8	0.7	0.7	0.5	0.2
Statutory authorities	1.4	1.3	1.7	1.5	1.7
Interest	4.4	4.4	4.2	4.0	5.6
Domestic	3.0	3.0	2.5	2.3	4.3
Foreign	1.5	1.4	1.7	1.7	1.3
Development budget and net lending	10.4	8.2	10.5	10.6	9.3
Development budget	10.5	8.2	10.5	10.6	9.4
Project grants	4.5	5.2	5.5	6.2	6.1
Concessional loans	2.4	0.9	1.4	1.1	1.1
Nonconcessional loans	0.0	0.0	0.0	1.3	0.5
Domestic funds	3.7	2.2	3.6	2.2	1.7
Net lending	-0.1	0.0	0.0	0.0	-0.1
Overall balance (from above the line)	-4.6	-1.1	-3.7	-4.3	-1.3
Errors, omissions, and discrepancy	0.2	-0.3	-0.3	-1.4	-0.7
Overall balance (from below the line)	-4.5	-1.4	-4.1	-5.7	-2.0
Financing	4.5	1.4	4.1	5.7	2.0
Foreign financing (net)	2.2	0.2	3.1	-0.9	-2.2
Domestic financing (net)	1.7	0.3	-0.4	6.2	3.8
Float	0.2	0.6	1.3	-1.4	0.0
Asset sales	0.3	0.3	0.0	1.8	0.3
Memorandum item:					
Nominal GDP (millions of kina)	8,781	9,515	9,948	10,992	12,204

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

Table 9. Papua New Guinea: Central Government Revenue and Grants, 1999–2003

(In millions of kina)

	1999	2000	2001	2002	2003
Total revenue and grants	2,527	2,966	3,087	3,237	3,657
Tax revenue	1,921	2,315	2,295	2,370	2,678
Taxes on income and profit	1,198	1,470	1,509	1,491	1,786
Personal tax	524	544	599	694	758
Company tax	246	265	252	311	335
Dividend withholding tax	47	54	58	62	117
Mineral and petroleum taxes	259	427	435	259	396
Other direct	50	57	52	69	55
Interest withholding tax	37	64	51	22	41
Gaming tax	35	59	62	74	83
Indirect taxes	723	845	786	879	892
Excise tax	171	175	187	179	175
VAT plus mining levy	153	327	319	396	414
VAT (70 percent national share only)	146	218	198	290	312
Mining levy	7	109	120	106	102
Other indirect	1	2	2	1	1
Taxes on international trade	398	342	280	303	302
Import duties	282	89	73	80	74
Export duties (logs)	79	134	98	107	112
Import excises	37	119	108	117	110
Import levy	...	...	...	...	7
Nontax revenue	157	145	172	170	232
Property income	84	27	98	74	160
Dividends	47	27	56	64	86
Mining and petroleum	37	0	42	10	74
Interest and fees	3	3	1	1	4
Other	70	115	73	72	68
Asset sales	...	...	...	22	0
Foreign grants	450	507	620	697	747
Budgetary support	56	16	71	21	0
Project grants	394	491	550	676	747
Memorandum item:					
Revenue, excluding grants	2,078	2,459	2,467	2,540	2,910

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

Table 10. Papua New Guinea: Central Government Fiscal Financing, 1999–2003

(In millions of kina)

	1999	2000	2001	2002	2003
Total financing	379	129	328	607	240
Foreign financing (net)	180	15	254	-141	-266
New borrowing	410	278	627	222	190
Project loans	206	84	172	222	190
Concessional financing	204	193	455	0	0
Amortization	-231	-262	-373	-363	-456
Domestic financing (net)	153	28	-53	701	467
Bank of Papua New Guinea					
Net credit to central government	325	48	-269	245	-49
Securities	-490	-23	-26	-19	-18
Treasury bills	-545	0	0	0	0
Inscribed stock	55	-23	-26	-19	-19
Temporary advance	0	0	0	75	-36
Deposits	815	71	-243	189	6
Commercial banks					
Net credit to central government	-217	-182	23	327	-51
Securities	-234	-127	83	304	-92
Treasury bills	-176	-123	-2	369	-72
Inscribed stock	-58	-4	85	-65	-20
Loans	-59	-12	-5	-4	-1
Deposits	76	-43	-55	27	42
Nonbanks					
Net credit to central government	45	162	193	129	567
Securities	48	158	288	71	572
Treasury bills	89	173	187	70	641
Inscribed stock	-42	-15	101	1	-70
Loans	-3	4	-94	58	-5
Float	20	58	127	-153	-1
Asset sales	26	27	0	201	40

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

Table 11. Papua New Guinea: Central Government Domestic Debt, 1999–2003

(In millions of kina; end of period)

	1999	2000	2001	2002	2003			
					Mar.	Jun.	Sep.	Dec.
Central government net domestic debt: by creditor								
Bank of Papua New Guinea								
Net credit to central government	693	741	472	717	672	729	642	667
Securities	795	772	746	727	717	716	716	709
Treasury bills 1/	633	633	633	633	633	633	633	633
Inscribed stock 2/	162	138	113	94	84	83	82	76
Temporary advance	0	0	0	75	41	97	0	39
Less: Deposits	102	31	275	86	86	84	74	80
Commercial banks								
Net credit to central government	384	202	225	552	750	551	521	501
Securities	572	445	528	832	879	768	757	740
Treasury bills 1/	568	445	443	812	859	768	757	740
Inscribed stock 2/	4	0	85	20	21	0	0	0
Loans	24	12	7	3	0	2	3	2
Less: Deposits	212	255	310	283	129	220	239	240
Nonbanks								
Net credit to central government	470	633	905	948	1,117	1,356	1,348	1,515
Securities	374	532	819	891	1,064	1,303	1,296	1,462
Treasury bills 2/ 3/	291	464	651	721	897	1,147	1,197	1,362
Inscribed stock 2/	83	68	168	170	167	156	98	100
Loans	97	101	85	58	53	53	53	53
Central government net domestic debt: total	1,548	1,575	1,601	2,217	2,539	2,636	2,511	2,684
Total gross domestic debt	1,861	1,861	2,186	2,585	2,755	2,939	2,824	3,004
Securities	1,741	1,748	2,093	2,450	2,661	2,788	2,768	2,911
Treasury bills	1,492	1,542	1,727	2,166	2,389	2,549	2,588	2,735
Inscribed stock 2/	249	206	366	284	272	239	181	175
Loans	120	113	93	135	94	152	56	93
Less: Central government deposits	314	286	584	368	215	304	313	320

Sources: Bank of Papua New Guinea; and Department of Treasury.

1/ Discount value.
2/ Face value.
3/ Less RBA swap in 1999, which is considered external debt.

Table 12: Papua New Guinea: Monetary Survey, 1999–2003

(In millions of kina; end of period)

	1999	2000	2001	2002	2003			
					Mar.	Jun.	Sep.	Dec.
Net foreign assets	699	1,053	1,580	1,419	1,268	1,307	1,372	1,587
Bank of Papua New Guinea	512	812	1,249	908	784	849	1,027	1,288
Foreign assets	574	934	1,656	1,379	1,224	1,285	1,439	1,705
Less: Foreign liabilities	62	122	406	471	440	435	413	418
Commercial banks	187	241	331	511	484	457	345	299
Net domestic assets 1/	2,176	1,977	1,507	1,798	1,956	1,768	1,660	1,523
Domestic credit 1/	2,825	2,699	2,367	2,862	3,036	2,812	2,712	2,666
Net credit to central government 1/	1,077	943	697	1,269	1,423	1,280	1,163	1,169
Bank of Papua New Guinea 1/	693	741	472	717	672	729	642	667
Claims on central government 1/	795	772	746	802	758	813	716	747
Less: Central government deposits	102	31	275	86	86	84	74	80
Commercial banks 1/	384	202	225	552	750	551	521	501
Claims on central government 1/	596	457	535	835	880	771	760	742
Securities	572	445	528	832	879	768	757	740
Loans	24	12	7	3	0	2	3	2
Less: Central government deposits	212	255	310	283	129	220	239	240
Claims on other sectors	1,747	1,756	1,670	1,594	1,613	1,533	1,549	1,497
Claims on the private sector	1,517	1,562	1,543	1,445	1,472	1,401	1,393	1,405
Claims on official entities	159	124	115	128	127	117	137	79
Claims on nonmonetary financial institutions	72	70	12	20	14	15	19	13
Other items (net) 1/	-649	-722	-860	-1,064	-1,080	-1,044	-1,051	-1,143
Broad money	2,875	3,030	3,087	3,217	3,224	3,075	3,032	3,109
Narrow money	1,234	1,272	1,321	1,535	1,603	1,607	1,596	1,708
Currency outside banks	342	285	272	366	327	360	379	399
Demand deposits	891	987	1,049	1,169	1,276	1,246	1,216	1,309
Quasi money	1,641	1,759	1,766	1,682	1,621	1,468	1,436	1,401
Memorandum items:								
Narrow money growth rate 2/	20.8	3.1	3.9	16.2	9.0	4.6	-0.5	11.3
Broad money growth rate 2/	8.8	5.4	1.9	4.2	2.0	-4.4	-5.9	-3.3
Private sector credit growth rate 2/	10.5	3.0	-1.2	-6.3	-0.6	-3.1	-5.4	-2.8
Nominal GDP (in millions of kina)	8,781	9,515	9,948	10,992	11,295	11,598	11,901	12,204
Nominal nonmineral GDP/broad money	2.3	2.3	2.2	2.5	2.6	2.8	2.9	2.9

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: Balance Sheet of the Central Bank, 1999–2003

(In millions of kina; end of period)

	1999	2000	2001	2002	2003			
					Mar.	Jun.	Sep.	Dec.
Net foreign assets	512	812	1,249	908	784	849	1,027	1,288
Foreign assets	574	934	1,656	1,379	1,224	1,285	1,439	1,705
Less: foreign liabilities	62	122	406	471	440	435	413	418
Of which: Non-IMF liabilities	4	2	2	4	11	10	5	13
Net domestic assets 1/	141	-280	-671	-264	-204	-216	-382	-622
Domestic credit 1/	539	167	-74	586	603	633	404	300
Net credit to government 1/	693	741	472	717	672	729	642	667
Securities 1/	795	772	746	727	717	716	716	709
Treasury bills 1/	633	633	633	633	633	633	633	633
Inscribed stock	162	138	113	94	84	83	82	76
Advances	0	0	0	75	41	97	0	39
Less: Central government deposits	102	31	275	86	86	84	74	80
Credit to other sectors	57	59	56	56	56	56	54	55
Claims on the private sector	0	3	3	3	3	4	4	4
Claims on deposit money banks	54	53	52	52	52	52	50	50
Claims on nonmonetary fininancial institutions	3	3	0	0	0	0	0	0
Less: Central bank securities	196	608	586	157	115	152	292	422
Less: Kina facility deposits	15	25	15	30	10	0	0	0
Other items net 1/	-399	-446	-598	-849	-807	-849	-786	-922
Reserve money	653	533	578	644	580	633	645	666
Currency in circulation	421	364	385	472	414	462	474	512
Notes	387	327	349	433	375	422	434	471
Coins	34	36	37	39	39	40	40	41
Deposits of commercial banks	232	169	188	162	160	166	171	153
ESA deposits	95	21	34	8	9	20	31	66
CRR deposits	137	148	154	154	150	146	140	87
Other deposits	5	4	4	9	7	5	0	0
Memorandum items:								
Reserve money growth 2/	70.0	-18.4	8.5	11.4	-5.7	-5.1	0.7	3.4
Use of fund credit (millions of U.S. dollars)	22	39	108	116	118	120	121	122
Gross international reserves (millions of U.S. dollars)	206	304	440	343	335	362	425	512
Exchange rate (U.S. dollar/kina)	0.371	0.326	0.266	0.249	0.274	0.282	0.296	0.300
Exchange rate (U.S. dollar/SDR)	1.373	1.303	1.257	1.360	1.374	1.401	1.430	1.486

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 14. Papua New Guinea: Consolidated Balance Sheet of Commercial Banks, 1999–2003

(In millions of kina; end of period)

	1999	2000	2001	2002	2003			
					Mar.	Jun.	Sep.	Dec.
Net foreign assets	187	241	331	511	484	457	345	299
Foreign assets	286	296	422	615	609	554	404	356
Foreign liabilities	99	56	91	104	125	97	59	56
Reserves	232	169	188	162	160	166	171	153
CRR accounts	137	148	154	154	150	146	140	87
ESA accounts	95	21	34	8	9	20	31	66
Currency	79	79	113	106	87	102	95	113
Domestic credit	2,267	2,487	2,421	2,298	2,474	2,231	2,357	2,416
Net credit to central government	580	810	811	709	866	703	813	923
Claims on central government	792	1,065	1,121	991	995	923	1,052	1,164
Securities	768	1,053	1,114	989	995	921	1,049	1,161
Treasury bills	763	1,053	1,029	968	974	921	1,049	1,161
Inscribed stock	4	0	85	20	21	0	0	0
Loans	24	12	7	3	0	2	3	2
Less: Central government deposits	212	255	310	283	129	220	239	240
Claims on other sectors	1,688	1,677	1,610	1,589	1,609	1,528	1,544	1,493
Claims on the private sector	1,473	1,492	1,483	1,441	1,468	1,397	1,389	1,401
Claims on official entities	159	124	115	128	127	117	137	79
Claims on NFPE's	153	123	114	126	125	112	132	73
Claims on provincial governments	5	1	1	2	3	5	4	6
Claims on nonmonetary financial institutions	56	61	12	20	13	14	18	13
Other items (net)	53	-8	2	-12	-97	-24	-94	-68
Deposits	2,532	2,745	2,815	2,851	2,897	2,714	2,653	2,710
Demand	1,276	1,437	1,550	1,710	1,781	1,739	1,674	1,761
Term	1,257	1,308	1,265	1,141	1,116	976	979	949
Central bank credit	54	53	52	52	52	52	50	50
Agricultural support schemes	53	53	52	52	52	52	52	52
Other	1	0	0	0	0	0	-2	-2
Memorandum items:								
Deposits subject to reserve requirements	2,698	2,956	3,100	3,120	3,012	2,928	2,881	2,948
Implied cash reserve ratio (percent)	5	5	5	5	5	5	5	3
Kina facility borrowings (-deposits)	-15	-25	-15	-30	-10	0	0	0
Liquid assets	931	1,131	1,224	1,089	1,075	1,012	1,159	1,195
Liquid asset ratio (percent)	35	38	39	35	36	35	40	41
Excess ESA balances	80	-4	19	-22	-1	20	31	54
Total commercial bank assets	3,455	3,672	3,926	3,954	3,941	3,777	3,781	3,792
Claims on central government/total assets (percent)	23	29	29	25	25	24	28	28

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

Table 15. Papua New Guinea: Commercial Bank Loans by Sector, 1999–2003

(In millions of kina; end of period)

	1999	2000	2001	2002	2003			
					Mar.	Jun.	Sep.	Dec.
Total	1,768	1,762	1,674	1,593	1,609	1,531	1,548	1,496
Business	1,542	1,522	1,473	1,413	1,444	1,363	1,376	1,301
Agriculture, forestry, and fishing	138	110	200	90	45	47	46	51
Coffee	13	26	11	2	4	5	5	3
Cocoa	50	26	74	56	1	1	1	1
Coconut products	29	0	27	0	1	1	0	0
Palm oil	1	9	38	0	0	0	0	0
Fisheries	9	8	8	6	8	5	10	7
Forestry	20	21	20	15	16	19	18	21
Other 1/	16	20	23	10	15	16	13	20
Manufacturing	68	94	107	136	124	101	117	99
Engineering and metal processing	2	5	4	4	5	9	8	6
Food, drink, and tobacco processing	19	57	71	74	73	47	81	71
Textile, leather, and wood products	16	16	11	8	8	8	8	9
Chemicals, paints, and gases	2	0	1	5	2	1	1	1
Other 2/	29	16	20	44	37	37	19	12
Transport and communication	194	112	126	114	136	126	127	124
Finance	69	67	12	20	13	15	18	13
Commerce	362	368	375	325	414	434	389	373
Retail trade	247	261	232	236	289	290	242	265
Buyers, processors, and exporters	54	48	46	29	78	107	89	75
Wholesale trade	61	59	97	60	48	37	58	33
Building and construction	60	60	61	42	52	58	73	66
Mining and quarrying	19	15	17	69	23	26	24	20
Metals and other mining	18	14	3	47	9	9	11	6
Petroleum and natural gas	1	0	14	22	14	17	14	14
Other business 3/	633	698	576	617	636	556	582	556
Government	29	13	8	5	6	8	7	8
Central government 4/	24	12	7	3	3	2	3	2
Provincial government	5	1	1	2	3	5	3	3
Local government	1	0	0	0	0	1	1	3
Persons	197	227	192	175	160	160	164	187
Advances for housing	91	104	82	126	115	124	126	124
Other personal loans	106	123	111	49	45	36	39	62

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 16. Papua New Guinea: Reserve Requirements, March 1997–December 2003

(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–December 2003	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 17. Papua New Guinea: Interest Rates, 1999–2003

	Kina Deposit Rate 1/	Treasury Bills Weighted Average Auction Yield				Commercial Banks						
						Average Deposit Rate	Weighted Average Lending Rate	Indicative Overdraft Rate	Passbook Accounts	Term Deposits (less than K50,000)		
		28-day	63-day	91-day	182-day					3–6 Months	6–12 Months	12–24 Months
1999	12.80	22.68	22.87	21.66	20.44	8.5	18.2	12.75	3.00–5.25	6.00–11.00	6.00–12.50	6.00–12.00
2000	4.41	15.67	15.56	15.51	14.86	6.7	15.5	16.75	2.50–5.25	6.00–11.50	6.00–11.50	7.25–11.50
2001	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												
January	11.25	9.78	9.59	9.41	9.61	3.9	14.4	13.65	2.00–3.50	4.75–11.50	5.50–10.00	4.00–10.00
February	11.25	9.88	9.83	9.80	9.80	3.7	14.4	13.65	2.00–3.50	5.00–11.50	5.25–10.00	4.00–10.00
March	11.25	9.99	9.94	9.97	9.93	3.3	14.2	13.65	1.50–3.50	5.00–10.50	5.00–10.00	5.00–10.00
April	11.25	10.34	10.08	10.03	9.80	3.0	14.2	13.65	1.50–3.50	4.00–8.00	4.00–10.00	3.00–10.00
May	11.25	10.69	10.42	10.19	10.00	2.9	14.1	13.65	1.00–3.50	4.00–8.00	4.00–10.25	3.00–10.25
June	11.25	11.26	10.78	10.58	10.29	2.5	13.8	13.65	1.00–3.50	4.00–8.00	4.00–10.25	3.00–10.25
July	11.25	11.70	11.11	11.20	10.66	2.5	13.9	8.75	1.50–3.25	4.00–7.25	4.00–10.00	3.00–7.00
August	11.75	12.29	11.90	11.68	11.31	2.6	13.7	8.75	1.50–3.25	3.75–7.00	4.25–10.00	4.75–7.00
September	11.75	12.59	12.43	12.29	11.43	2.8	13.7	8.75	1.50–3.25	4.00–7.00	4.25–10.00	4.75–7.00
October	11.75	12.68	12.70	12.62	11.90	2.8	13.7	8.75	1.50–3.25	4.00–6.00	4.25–6.75	4.75–7.25
November	13.25	14.37	14.13	13.39	12.90	3.4	13.1	8.75	1.50–3.25	4.00–6.00	4.25–6.75	4.75–7.25
December	13.25	15.48	15.10	14.00	13.50	4.7	13.7	8.75	1.50–3.25	4.00–8.00	4.00–7.75	4.75–6.00
2003												
January	13.75	16.66	16.47	16.52	16.80	4.7	13.7	8.75	1.50–3.25	4.00–8.00	4.00–8.00	4.75–7.25
February	14.25	17.76	17.67	17.27	17.11	4.9	13.7	8.75	1.50–3.25	3.50–8.00	4.00–11.00	4.75–8.00
March	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	--	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	--	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	--	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	--	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	--	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	--	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	--	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	--	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	--	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

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 (KFR), 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 18. Papua New Guinea: Balance of Payments, 1999–2003

(In millions of U.S. dollars)

	1999	2000	2001	2002	Est. 2003
Current account balance	96.6	299.5	204.0	-20.3	345.6
Mineral	717.8	1,007.9	802.5	468.4	788.3
Nonmineral	-621.1	-708.4	-598.5	-488.7	-442.7
Trade balance	548.2	724.2	551.8	353.3	782.3
Exports (f.o.b.)	2,019.7	2,214.5	1,877.7	1,645.7	2,213.1
Mineral	1,438.8	1,804.5	1,597.9	1,228.3	1,717.6
Nonmineral	580.9	410.0	279.8	417.4	495.4
Imports (c.i.f.)	-1,471.5	-1,490.3	-1,325.9	-1,292.3	-1,430.7
Mineral	-307.5	-362.9	-394.2	-397.2	-358.7
Nonmineral	-1,164.0	-1,127.4	-931.7	-895.1	-1,072.0
Services balance	-625.5	-602.9	-497.7	-563.9	-674.5
Mineral (net)	-413.6	-433.7	-401.2	-362.7	-570.7
Nonmineral (net)	-211.9	-169.2	-96.5	-201.2	-103.9
Unrequited transfers (net)	173.9	178.2	149.9	190.2	237.8
Official	181.5	188.0	191.6	168.2	195.3
Private	-7.6	-9.8	-41.7	22.0	42.5
Capital account balance	-88.7	-275.3	-239.3	-118.7	-123.9
Medium- and long-term loan disbursements	-394.7	-242.2	-204.6	-164.3	-141.1
Official (net)	-9.6	-64.4	-60.3	-25.9	-75.0
Private (net)	-385.2	-177.8	-144.4	-138.4	-66.1
Direct investment (net)	306.7	113.8	73.9	19.2	89.7
Commercial banks	50.0	1.0	2.0	-33.0	19.0
Other (net)	-50.7	-147.9	-110.6	59.4	-91.5
Exceptional financing	80.0	70.0	135.0	0.0	0.0
Errors and omissions	-43.9	-16.3	-33.3	42.5	-38.6
Overall balance	44.0	77.9	66.3	-96.5	183.1
Change in net international reserves (- increase)	-44.0	-77.9	-66.3	96.5	-183.1
Gross official reserves	-19.3	-98.3	-135.6	96.6	-179.4
IMF (net)	-22.9	18.5	69.9	0.0	-3.7
Purchases	0.0	37.6	71.2	0.0	0.0
Repurchases	-22.9	-19.2	-1.3	0.0	-3.7
Other liabilities	-1.8	2.0	-0.7	-0.1	0.0
Financing gap	0.0	0.0	0.0	0.0	0.0
Memorandum items:					
Current account (in percent of GDP)	2.8	8.7	6.9	-0.7	10.1
Gross official reserves (end-year)					
(In millions of U.S. dollars)	205.8	304.2	439.7	343.1	522.5
(In months of nonmineral imports)	2.1	3.2	5.7	4.6	5.8
Public debt service-export of GNFS ratio	7.7	6.8	8.0	7.9	7.3
Public debt-to-GDP ratio (in percent)	42.2	42.8	54.7	56.4	44.1

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

Table 19. Papua New Guinea: Exports of Major Commodities, 1999–2003

(In millions of U. S. dollars)

	1999	2000	2001	2002	2003
Copper					
Value (millions of U.S. dollars)	225.3	269.8	319.7	262.1	398.6
Volume (thousands of tons)	179.9	158.5	212.6	170.1	230.6
Unit value (U.S. dollars per ton)	1,252.2	1,702.0	1,503.6	1,541.0	1,728.4
(U.S. cents per pound)	56.8	77.2	68.2	69.9	78.4
Gold					
Value (millions of U.S. dollars)	606.4	706.6	628.9	590.4	792.6
Volume (tons)	63.0	72.8	69.1	59.1	68.4
(U.S. dollars per ounce)	299.4	301.9	283.1	310.7	360.4
Petroleum					
Value (millions of U.S. dollars)	542.4	751.0	560.0	368.9	417.5
Volume (thousands of barrels)	30,646.0	25,458.0	21,294.0	15,370.5	14,983.4
Unit value (U.S. dollars per barrel)	17.7	29.5	26.3	24.0	27.9
Silver					
Value (millions of U.S. dollars)	8.3	9.6	9.4	7.7	9.3
Volume (tons)	54.1	61.2	67.7	46.1	61.3
(U.S. dollars per ounce)	4.8	4.9	4.3	5.2	4.7
Logs					
Value (in millions of U.S. dollars)	100.2	102.7	73.1	94.1	119.4
Volume (thousands of cubic meters)	1,312.0	1,399.0	1,212.2	1,834.0	2,016.0
Unit value (U.S. dollars per cubic meter)	76.4	73.4	60.3	51.3	59.2
Coffee					
Value (millions of U.S. dollars)	163.6	106.8	56.1	71.2	84.1
Volume (thousands of tons)	79.2	66.6	51.6	63.1	68.8
Unit value (U.S. dollars per ton)	2,065.5	1,603.7	1,087.2	1,128.4	1,221.8
(U.S. cents per pound)	93.7	72.7	49.3	51.2	55.4
Cocoa					
Value (millions of U.S. dollars)	33.2	30.7	32.6	58.2	72.6
Volume (thousands of tons)	29.0	38.0	36.3	34.9	40.3
Unit value (U.S. dollars per ton)	1,144.2	806.6	898.1	1,667.6	1,800.7
Palm oil					
Value (millions of U.S. dollars)	132.5	111.1	85.2	100.3	115.0
Volume (thousands of tons)	253.8	336.3	327.6	323.9	326.9
Unit value (U.S. dollars per ton)	522.2	330.3	260.1	309.7	351.8
Copra					
Value (in millions of U.S. dollars)	26.1	21.7	4.5	2.8	1.8
Volume (thousands of tons)	63.5	67.2	21.0	15.8	8.4
Unit value (U.S. dollars per ton)	410.7	322.9	214.3	177.2	213.4
Coconut oil					
Value (in millions of U.S. dollars)	37.6	23.8	8.1	8.6	16.1
Volume (thousands of tons)	50.3	48.0	27.1	28.2	47.7
Unit value (U.S. dollars per ton)	747.0	496.7	298.9	305.0	338.3
Tea					
Value (in millions of U.S. dollars)	7.5	7.4	5.5	4.7	5.4
Volume (thousands of tons)	8.2	8.5	7.9	5.2	6.6
Unit value (U.S. dollars per ton)	908.8	869.5	694.2	903.8	823.5
(U.S. cents per kilogram)	90.9	87.0	69.4	90.4	82.4
Rubber					
Value (in millions of U.S. dollars)	2.0	2.3	2.0	2.3	3.5
Volume (thousands of tons)	3.7	3.7	3.6	3.8	4.2
Unit value (U.S. dollars per ton)	530.0	626.7	555.6	605.3	824.7
(U.S. cents per pound)	24.0	23.7	20.6	26.8	33.6
Other					
Value (in millions of U.S. dollars)	135	71	93	98	177
Total exports (in millions of U.S. dollars)	2,019.7	2,214.5	1,877.7	1,645.7	2,213.1
Minerals and petroleum	1,438.8	1,804.5	1,597.9	1,228.3	1,717.6
Nonmineral	580.9	410.0	279.8	417.4	495.4

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

Table 20. Papua New Guinea: Direction of Trade, 1999–2003

(In percent of total)

	1999	2000	2001	2002	Est. 2003
Exports (f.o.b.) by destination					
Australia	26.3	30.0	24.6	42.8	45.8
Japan	11.6	11.3	10.6	15.9	12.6
People's Republic of China 1/	2.8	6.5	4.2	4.4	6.5
Germany	6.6	4.1	4.0	3.5	6.1
Korea	4.7	3.8	3.0	5.1	5.4
Thailand	1.2	1.0	2.4	1.0	1.0
United Kingdom	3.5	2.8	2.1	2.8	2.5
United States	4.6	1.3	1.5	4.6	2.7
New Zealand	0.2	0.7	1.3	1.5	0.5
Philippines	1.9	0.6	2.3	1.8	3.3
Singapore	0.4	0.7	0.8	3.7	2.1
Netherlands	1.8	0.5	0.6	1.8	1.2
Malaysia	0.6	0.4	0.3	0.0	0.4
Hong Kong, SAR	0.2	0.2	0.2	0.3	0.9
Other	33.8	36.1	42.0	10.8	9.0
Imports (c.i.f.) by origin					
Australia	53.1	49.7	51.2	59.1	54.2
Singapore	12.8	19.9	19.0	5.7	6.6
Japan	5.6	4.0	4.6	5.1	5.0
New Zealand	4.1	3.8	4.0	4.0	5.0
Malaysia	3.6	3.4	2.8	2.1	1.9
People's Republic of China 1/	2.6	2.2	1.9	1.8	5.0
United States	3.6	2.2	2.2	8.7	10.2
Germany	0.6	0.7	0.7	0.9	0.8
Thailand	1.7	1.7	1.5	1.6	1.5
Hong Kong, SAR	1.4	1.2	0.9	0.8	0.9
Korea	1.2	1.0	0.9	0.8	0.6
United Kingdom	1.1	0.7	0.6	3.3	1.2
Netherlands	0.2	0.3	0.5	0.1	0.2
Philippines	0.3	0.2	0.2	0.3	0.2
Other	8.2	8.8	9.1	5.7	6.7

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

1/ Excluding Hong Kong, SAR and Macau.

Table 21. Papua New Guinea: Net Services and Transfers, 1999–2003

(In millions of U.S. dollars)

	1999	2000	2001	2002	2003
Services balance (net)	-625.5	-602.9	-497.7	-563.9	-674.5
Factor services	-285.3	-218.4	-249.9	-225.8	-439.4
Interest	-105.0	-76.7	-80.5	-79.2	-65.9
Receipts	17.2	26.2	18.5	19.9	6.3
Mineral	10.7	14.5	11.6	9.6	2.4
Nonmineral	3.0	1.6	1.1	5.3	-5.8
Official	3.5	10.1	5.8	5.0	9.7
Payments	-122.2	-102.9	-99.0	-99.1	-72.2
Mineral	-46.1	-41.0	-30.5	-33.5	-16.0
Nonmineral	-15.4	-7.6	-8.7	-15.0	-7.7
Official	-60.7	-54.3	-59.9	-50.6	-48.6
Concessional	-48.1	-49.6	-52.3	-45.7	-43.8
Nonconcessional	-10.6	-2.9	-3.8	-1.3	-1.4
IMF charges	-2.1	-1.8	-3.8	-3.6	-3.4
Dividends	-156.8	-120.0	-151.6	-131.2	-358.4
Receipts	5.6	1.1	1.5	7.4	6.9
Mineral	0.0	0.0	0.0	0.0	0.0
Nonmineral	5.6	1.1	1.5	7.4	6.9
Payments	-162.4	-121.1	-153.1	-138.6	-365.3
Mineral	-114.7	-66.9	-116.1	-92.6	-262.9
Nonmineral	-47.7	-54.2	-37.0	-46.0	-102.4
Other factor service payments	-23.5	-21.7	-17.8	-15.4	-15.1
Nonfactor services	-283.9	-330.6	-183.9	-289.3	-152.5
Freight, insurance, and travel receipts	16.9	18.9	28.1	7.3	22.7
Travel payments	-42.9	-40.5	-29.9	-32.1	-25.3
Mineral	-1.8	-1.8	-1.3	-1.4	-1.6
Nonmineral	-41.1	-38.7	-28.6	-30.7	-23.7
Other	-257.9	-309.0	-182.1	-264.5	-149.9
Receipts	231.3	239.0	257.8	162.0	233.4
Mineral	96.0	106.4	84.9	32.5	44.9
Nonmineral	135.3	132.6	172.9	129.5	188.5
Payments	-489.2	-548.0	-439.9	-426.5	-383.3
Mineral	-301.4	-391.0	-285.9	-228.5	-254.9
Nonmineral	-187.8	-157.0	-154.0	-198.0	-128.4
Other	-56.3	-53.9	-63.9	-48.8	-82.6
Unrequited transfers	173.9	178.2	149.9	190.2	237.8
Official	181.5	188.0	191.6	168.2	195.3
Receipts	181.5	188.0	191.6	168.2	195.3
Australia budgetary support	22.0	3.6	20.9	0.0	0.0
Project and commodity aid	154.4	178.7	163.0	162.8	195.3
Other grants	5.1	5.7	7.7	5.4	0.0
Payments	0.0	0.0	0.0	0.0	0.0
Private	-7.6	-9.8	-41.7	22.0	42.5
Receipts	61.8	62.7	25.6	80.8	124.0
Payments	-69.4	-72.5	-67.3	-58.8	-81.5

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

Table 22. Papua New Guinea: Public External Debt Outstanding, 1999–2003

	1999	2000	2001	2002	2003
	(In millions of U.S. dollars)				
Public external debt	1,452	1,476	1,620	1,595	1,516
Central government	1,348	1,354	1,429	1,403	1,328
Multilateral creditors	798	785	853	854	843
Of which: World Bank Group	334	345	380	363	346
Asian Development Bank	401	387	414	426	436
Bilateral creditors	507	546	536	499	434
Of which: Australia	1	85	99	87	53
Japan	447	413	386	357	335
Commercial creditors	43	23	39	51	51
Central bank	103	122	192	192	188
Of which: IMF liabilities	23	39	107	116	123
	(In percent of GDP)				
Public external debt	42.2	42.8	54.7	56.4	44.1
Central government	39.2	39.3	48.3	49.6	38.6
Multilateral creditors	23.2	22.8	28.8	30.2	24.5
Bilateral creditors	14.7	15.8	18.1	17.6	12.6
Commercial creditors	1.3	0.7	1.3	1.8	1.5
Memorandum items:					
Nominal GDP (in millions of U.S. dollars)	3,444	3,447	2,961	2,828	3,437

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

Table 23. Papua New Guinea: Public External Debt Service, 1999–2003

(In millions of U.S. dollars)

	1999	2000	2001	2002	Est. 2003
Total public sector	177.4	169.9	172.3	142.8	180.7
Principal	113.4	114.4	112.4	92.2	132.1
Interest	64.0	55.5	59.9	50.6	48.6
Central government	152.4	148.9	167.2	139.2	173.6
Principal	90.5	95.2	111.1	92.2	128.4
Interest	61.9	53.7	56.1	47.0	45.2
Multilateral creditors	85.2	85.9	83.5	73.8	74.5
Principal	53.7	54.3	52.9	48.6	51.6
Interest	31.5	31.6	30.6	25.2	22.9
World Bank Group	50.4	48.8	41.9	37.3	37.6
Principal	33.7	32.3	29.0	26.8	27.4
Interest	16.7	16.5	12.9	10.5	10.2
Asian Development Bank	28.6	31.4	31.0	31.1	30.2
Principal	15.4	17.6	17.7	18.2	18.8
Interest	13.2	13.8	13.3	12.9	11.4
Other	6.2	5.7	10.6	5.4	6.7
Principal	4.6	4.4	6.2	3.6	5.4
Interest	1.6	1.3	4.4	1.8	1.3
Bilateral	34.8	46.5	56.0	55.4	85.1
Principal	19.1	31.1	36.4	34.9	64.2
Interest	15.7	15.4	19.6	20.5	20.9
Australia	0.3	0.2	5.6	19.9	46.8
Principal	0.0	0.2	0.1	12.4	38.9
Interest	0.3	0.0	5.5	7.5	7.9
China	0.0	0.2	0.7	0.6	1.3
Principal	0.0	0.0	0.4	0.4	1.1
Interest	0.0	0.2	0.3	0.2	0.2
Japan	28.7	44.7	39.2	29.9	31.2
Principal	15.7	30.0	28.4	18.7	19.9
Interest	13.0	14.7	10.8	11.2	11.3
Other	5.8	1.4	10.5	5.0	5.8
Principal	3.4	0.9	7.5	3.4	4.3
Interest	2.4	0.5	3.0	1.6	1.5
Other commercial	32.4	16.5	27.7	10.0	14.0
Principal	17.7	9.8	21.8	8.7	12.6
Interest	14.7	6.7	5.9	1.3	1.4
Banks	17.6	11.3	18.6	7.5	6.8
Principal	9.1	7.0	14.9	7.1	6.4
Interest	8.5	4.3	3.7	0.4	0.4
Other	14.8	5.2	9.1	2.5	7.2
Principal	8.6	2.8	6.9	1.6	6.2
Interest	6.2	2.4	2.2	0.9	1.0
Central bank	25.0	21.0	5.1	3.6	7.1
Principal	22.9	19.2	1.3	0.0	3.7
Interest	2.1	1.8	3.8	3.6	3.4
Memorandum item:					
Public debt-service ratio	7.7	6.8	8.0	7.9	7.3

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

Table 24. Papua New Guinea: Official International Reserves, 1999–2003

(In millions of U.S. dollars)

	1999	2000	2001	2002	2003
Net international reserves	182.9	256.0	331.4	226.2	398.5
Gross official reserves	205.8	304.2	439.7	343.1	522.5
Gold	21.2	21.2	21.2	21.2	25.9
SDR	0.7	12.2	0.0	0.0	0.0
Foreign exchange	183.8	270.7	418.5	321.8	496.5
IMF position	0.1	0.1	0.1	0.1	0.1
Foreign liabilities	23.0	48.2	108.3	116.9	124.0
Fund credit	23.4	38.8	107.4	116.2	123.3
Other	-0.4	1.6	0.9	0.7	0.7
Memorandum item:					
Gross official reserves					
(In months of nonmineral imports)	2.1	3.2	5.7	4.6	5.8

Sources: Bank of Papua New Guinea; and Fund staff estimates.