

Papua New Guinea: 2012 Article IV Consultation—Staff Report; Public Information Notice

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- The staff report for the 2012 Article IV consultation, prepared by a staff team of the IMF, following discussions that ended on February 28, 2012, with the officials of Papua New Guinea on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on April 30, 2012. The views expressed in the staff report are those of the staff team and do not necessarily reflect the views of the Executive Board of the IMF.
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PAPUA NEW GUINEA

STAFF REPORT FOR THE 2012 ARTICLE IV CONSULTATION

April 30, 2012

KEY ISSUES

Context: National elections are scheduled for June 2012 and the political situation is complicated, with two claimants to the post of Prime Minister. However, the economic impact has been limited, and Papua New Guinea is enjoying robust economic growth supported by high commodity prices, mineral investment inflows, sound fiscal and monetary frameworks, and a healthy banking sector.

Growth prospects: Growth is expected to remain high as the construction of a large liquefied natural gas production facility (LNG) boosts economic activity. Exchange rate appreciation has helped reduce inflation, but domestic cost pressures remain elevated in particular in sectors facing capacity constraints. Risks are broadly balanced, with external risks on the negative side and the potential for new resource projects on the positive side.

Macroeconomic policies: In 2012, tight control of government spending and a flexible exchange rate are needed to contain inflation. Over the medium term, staff advised moving toward steady, affordable increases in public spending. Continued exchange rate flexibility would help dampen the impact of commodity sector shocks.

Raising living standards: The resource sector is expected to make a greater contribution to long-term growth and higher living standards, and could contribute more. The composition of public spending is shifting toward high priority areas, but spending efficiency needs to be improved. Staff welcomed initiatives to strengthen the management of public enterprises and encouraged the authorities to implement structural reforms to support the development of the non-mineral sector.

Financial and external stability: The financial system remains sound and should be able to withstand moderate shocks. The large current account deficits are temporary, reflecting LNG construction, and mostly financed by FDI and medium- to long-term debt. The real exchange rate has appreciated and is expected to remain strong during the resource investment boom.

Approved By
**Masato Miyazaki and
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Discussions took place in Port Moresby during February 16–28, 2012. The staff team comprised Messrs. Schule (Head), Basu, Ochirkhuu, Tan (all APD), Bulman (World Bank), and Batten (AsDB).

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INTRODUCTION

1. Papua New Guinea (PNG) has seen solid GDP growth over the past decade. This owes much to sound macroeconomic policies, improved public finances, moderate inflation, and attractive conditions for foreign investors in the mining and petroleum industries.

2. PNG must manage its current resource investment boom and prospective resource revenues in ways that benefit the whole country. This is a challenging

adjustment task, and will require structural and other policies to assist the required transition in the economy. Prudent fiscal and monetary policies have achieved macroeconomic stability. To preserve these achievements and promote inclusive development, it will be important to combine steady, affordable growth in government spending with improvements in public financial management and expenditure effectiveness, as well as structural reforms.

RECENT ECONOMIC DEVELOPMENTS AND OUTLOOK

3. Real GDP is estimated to have expanded by about 9 percent in 2011. Elevated commodity prices, the construction of a liquefied natural gas (LNG) project, and government spending are boosting the economy and generating inflation pressures (Box 1). The temporary closure of key mines, caused by natural disasters, and dwindling oil production dampened overall output growth. Headline inflation peaked just below 10 percent in the second quarter of 2011, but subsequently eased to 7 percent at year-end in line with declining international food prices and a 21 percent appreciation of the kina in nominal effective terms, although the full effects of the exchange rate appreciation may not have been fully passed through to consumers. Capacity pressures and sector-

specific skilled labor shortages have increased underlying inflation (Figure 1).

Staff's Views

4. The medium-term growth outlook is positive. In 2012, real GDP is projected to grow at 8 percent. LNG construction-related activity will continue at peak levels and mining output is expected to recover. In 2013, however, growth is likely to weaken to about 4 percent, as LNG construction winds down and output at maturing mines slows. LNG production is expected to start in 2014, raising real GDP by about 20 percent when LNG production reaches full capacity in 2015, although GNI will rise by less because of dividend outflows. Thereafter, annual GDP growth is projected to average around 5 percent.

Box 1. Papua New Guinea: Liquefied Natural Gas Projects

PNG LNG Project (ExxonMobil)

Project construction began in 2010 and the first liquefied natural gas (LNG) shipment is scheduled for 2014. Esso Highlands, a subsidiary of ExxonMobil, is operating the project. Building work accelerated in 2011 and is expected to peak in the second quarter of 2012. The main components of the project include:

- Natural gas wells in the Southern Highlands. The first of two drilling rigs has been delivered and earthworks at some sites have been completed.
- Construction of a gas conditioning plant at Hides. Delivery of supplies was complicated by a mudslide in January, and landowner unrest in March led to temporary suspension of work.
- Construction of the main LNG plant site outside Port Moresby. Construction is ahead of schedule and the jetty is more than 50 percent complete.
- Offshore and onshore pipelines connecting the plants. The offshore portion is ahead of schedule, while the onshore portion has been delayed by weather disruption and landowner protests.

More than 14,300 workers are employed by the project, with PNG nationals accounting for 60 percent. Two thousand nationals have been trained through the National Training College. LNG-related goods imports amounted to US\$2 billion in 2011. Mineral sector service and income payments to foreign workers increased by US\$3½ billion between 2008 and 2011.

The US\$15.7 billion construction costs are financed by a mix of 30 percent equity and 70 percent debt, with the government responsible for funding its share of costs (including cost increases). The largest private sector equity participants are ExxonMobil affiliates (33.2 percent) and Oil Search (29 percent). The PNG government owns a 16.8 percent stake, mostly through the Independent Public Business Corporation, and landowners own 2.8 percent. The government also owns shares amounting to 15 percent of Oil Search. To fund initially estimated construction costs, these shares were pledged to Abu Dhabi's International Petroleum Investment Company through an exchangeable bond. They are due to be transferred in 2014, with additional compensation required if the shares are worth less than the initial borrowing of \$A 1.68 billion. The government's share of cost increases in 2011 was financed through domestic debt issuance.

LNG production will reach full capacity in 2015 and boost real GDP by about 20 percent. The annual output of 6.6 million tons is fully contracted to buyers from Japan, mainland China and Taiwan POC. The LNG price is linked to the oil price (Japan Crude Cocktail). Production costs will include goods imports and payments to foreign workers, projected at about US\$1 billion annually. The expected operational life of the project is 30 years.

Fiscal revenues from the LNG project are projected to begin in 2018 and peak in 2024. LNG-related government revenues are projected to grow to around 10 percent of non-mineral GDP by 2024 as extended depreciation allowances are used up.

Future Developments

Esso Highlands plans additional phases of LNG development. The Hides plant will undergo improvements in 2019. New wells are planned at Angore over 2017–18 and Juha over 2021–22.

InterOil and Talisman have independent plans to develop additional gas resources in PNG. InterOil plans to develop the Elk and Antelope gas fields, with estimated construction costs of US\$7 billion and annual production of 7.6-10.6 million tons. Talisman Energy found gas reserves at exploratory wells in 2010 and will spend US\$800 million on further exploration over 2012-15.

5. Inflation pressures are likely to persist. Underlying inflation is driven by elevated election-year public spending and large private sector investments related to the upgrading of mines and mineral exploration activity.

6. The risks to the outlook are broadly balanced. Although the European debt crisis has so far had only a limited impact, it constitutes a major downside risk. Lower commodity prices would reduce government revenue, and tighter financing conditions for multinational companies could deter future FDI. Weaker trading-partner activity could reduce traditional exports and rural incomes. The main domestic downside risks include delays or disruptions to the mining sector and the LNG project. On the upside for growth, the

elections could lead to higher-than-planned public spending in 2012, and a number of additional mining and LNG projects may be realized in the medium term.

Authorities' Views

7. The authorities broadly agreed with staff's assessment of the economic outlook and inflation. They noted that intensification of the European debt crisis would negatively impact global commodity prices and hurt PNG's growth. They agreed that inflation pressures are likely to persist in the medium term, and pointed to increased capital inflows and heightened economic activity related to the LNG project. Their tolerance for inflation is higher than in the pre-LNG construction period.

MANAGING ECONOMIC VOLATILITY

A. Fiscal Policy

8. After a large fiscal deficit in 2009, the budget returned to surplus in 2010. Higher-than-expected commodity prices boosted government revenue and greater spending discipline, including on spending out of trust accounts, resulted in a budget surplus (Figure 2).

9. Gross public debt has declined further, and PNG's risk of debt distress

rating has been upgraded from moderate to low (Appendix III). It declined to 25 percent of GDP in 2011 from over 70 percent of GDP in 2002. Taking into account superannuation arrears and financing of the government's LNG equity stake, gross public debt and non-contingent liabilities amounted to 45 percent of GDP in 2011. The LNG project completion guarantee was another 18 percent of GDP (text table).

Table: Public Debt and Liabilities (in percent of GDP)

	2006	2007	2008	2009	2010	2011	2017	2020
						Est.	Proj.	Proj.
Gross public debt	39.6	33.7	31.7	31.5	25.6	25.2	12.5	6.5
Of which: public domestic debt	18.2	16.9	18.5	19.1	15.2	15.4	5.4	0.0
Of which: public external debt	21.4	16.7	13.2	12.5	10.4	9.8	7.1	6.5
Non-contingent liabilities 1/	8.6	9.3	8.7	26.5	23.6	19.6	2.7	2.0
Of which: superannuation arrears	8.6	9.3	8.7	9.1	7.2	7.0	2.7	2.0
Of which: LNG equity finance	...	...	...	17.4	16.4	12.6	...	...
Gross public debt and non-contingent liabilities	48.3	42.9	40.4	58.1	49.2	44.8	15.2	8.5
Government assets	8.5	12.5	16.8	21.3	22.3	25.9	5.5	7.5
Of which: government deposits and SWF	8.5	12.5	16.8	11.5	12.4	15.9	5.5	7.5
Of which: stake in Oil Search	...	...	...	9.8	9.9	10.0	...	...
Net public debt 2/	39.8	30.4	23.6	36.7	26.9	18.9	9.7	1.0
<i>Memorandum items</i>								
Contingent liabilities 3/	...	...	...	30.3	25.0	18.0	...	...
Nominal GDP (Kina, billions)	16.9	18.8	21.6	22.3	26.4	30.2	77.1	104.7

Sources: PNG authorities and IMF staff calculations.

1/ Does not include guarantees to state-owned enterprises (SOE), which were estimated at 2.5 percent of GDP in 2008 (no updates available).

2/ Gross public debt and non-contingent liabilities less government assets.

3/ Government completion guarantee for LNG project.

Staff's Views

10. For 2012, staff projects a fiscal deficit of 2½ percent of GDP. The government targets a balanced budget. However, their revenue projections are based on an optimistic commodity price forecast for 2012 (although projections for 2013 and beyond are conservative). Moreover, unlike staff, the authorities do not include net withdrawals from trust accounts in their calculation of fiscal deficits. One-off administrative expenditures for the 2012 elections amount to 1 percent of GDP, and tax policy measures are estimated to cost 0.3 percent of GDP. Staff recognized that election-related spending is needed, but raised concerns about the inflationary impact of high

overall spending growth, and advised a reduction in planned spending growth by 1½ percent of GDP in 2012, for instance by delaying some non-critical infrastructure projects and reducing spending out of trust accounts.

11. The increasing importance of resource revenues warrants an adaptation of the fiscal framework. The 2008-2012 Medium-Term Fiscal Strategy (MTFS) helped reduce public debt but was less successful in insulating public spending from volatility in commodity prices. Real public spending per head has fluctuated substantially (text figure), with negative implications for stability in public service provision and investment. To address expenditure volatility, the authorities plan to

introduce medium-term budgeting and a sovereign wealth fund (SWF). The 2013–17 MTFs is currently being discussed and should outline guiding principles for future spending.

12. Staff advised moving away from a quasi-balanced budget approach toward a steady real expenditure path. Medium-term projections foresee a temporary slowdown in revenue growth over 2013–17, mainly owing to lower mining and oil production in the period before LNG tax revenues materialize. Over this period, following current budget policy, the authorities plan to implement matching spending reductions, resulting in average annual cuts to real spending per head of about 1½ percent. Staff advised instead to a medium-term strategy that targets a smooth path for real public spending growth commensurate with medium-term revenue projections. This approach, which should be reflected in the new MTFs, would include:

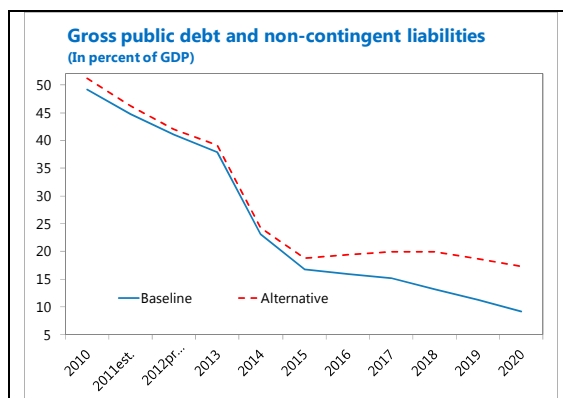
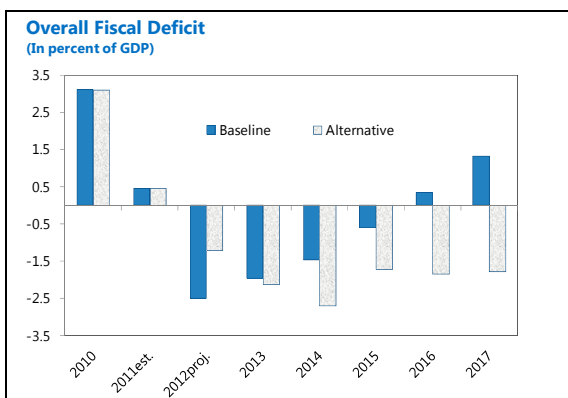
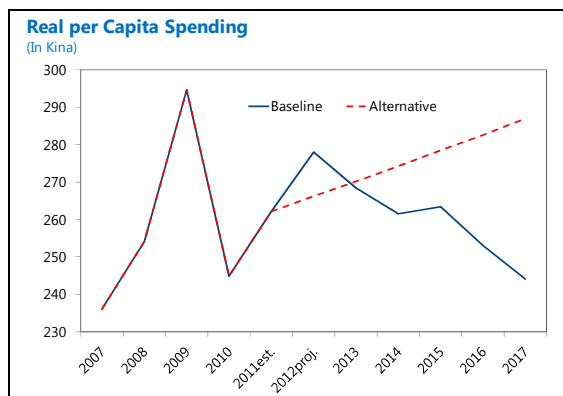
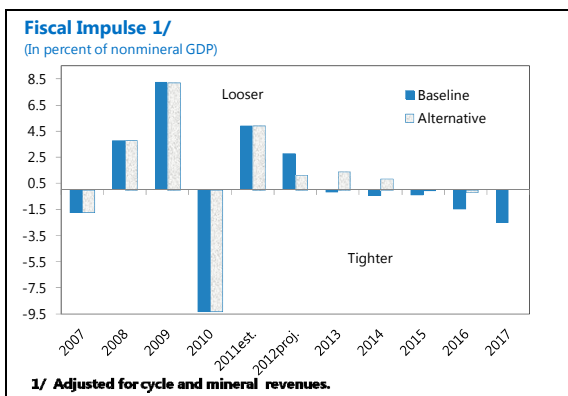
- Reducing planned spending in 2012 and preserving trust account balances for use in later years.
- Increasing real spending per head at a steady rate until 2020 to provide stable financing for essential services and delivery of development targets, and to help smooth domestic consumption. Staff assesses that increasing real spending per head by about 1½ percent per year is consistent with stabilization of gross public debt and non-contingent liabilities. The spending increase can be financed by limited borrowing should revenues be insufficient during 2013–17, without hurting PNG's debt sustainability.
- Revising the planned medium-term expenditure path periodically in future MTFs in line with updated estimates of government revenues, in particular when there is more certainty on LNG revenues.

Papua New Guinea: Medium-Term Fiscal Outlook

	2011	2012	2013	2014	2015	2016	2017
Baseline Scenario							
Total revenue (in millions of Kina)	8994	9431	10125	10908	12336	13584	15070
(In percent of nonmineral GDP)	36.7	33.6	32.5	31.4	31.4	30.6	30.1
Total expenditure (in millions of Kina)	8856	10285	10865	11568	12722	13343	14052
(In percent of nonmineral GDP)	36.1	36.6	34.9	33.3	32.4	30.1	28.1
Development expenditure (In percent of nonmineral GDP) 1/	12.0	12.3	11.2	9.3	5.7	4.9	4.3
Nonmineral overall balance (percent of GDP)	-6.6	-8.0	-7.1	-5.7	-4.1	-3.0	-1.8
Overall balance (in percent of GDP)	0.5	-2.5	-2.0	-1.5	-0.6	0.3	1.3
Trust accounts balance (in percent of GDP)	6.0	4.4	2.0	0.8	0.5	0.0	0.0
Gross public debt (in percent of GDP)	25.2	23.2	21.3	18.4	13.5	13.0	12.5
Real per capita spending (in Kina)	262	278	269	262	263	253	244
Alternative Scenario							
Total revenue (in millions of Kina)	8994	9435	10133	10922	12335	13601	15140
(In percent of nonmineral GDP)	36.7	33.6	32.6	31.5	31.4	30.7	30.3
Total expenditure (in millions of Kina)	8856	9849	10934	12128	13449	14900	16512
(In percent of nonmineral GDP)	36.1	35.1	35.1	34.9	34.2	33.6	33.0
Development expenditure (In percent of nonmineral GDP)	12.0	11.0	11.5	10.6	6.8	6.9	7.2
Nonmineral overall balance (percent of GDP)	-6.6	-6.7	-7.2	-6.9	-5.2	-5.1	-4.9
Overall balance (in percent of GDP)	0.5	-1.2	-2.1	-2.7	-1.7	-1.8	-1.8
Trust accounts balance (in percent of GDP)	6.0	5.7	3.0	0.6	0.0	0.0	0.0
Gross public debt (in percent of GDP)	26.6	24.2	22.6	19.6	15.5	16.4	17.2
Real per capita spending (in Kina)	262	266	270	274	278	283	287

Sources: Papua New Guinea authorities; and IMF staff calculations.

1/ Development expenditure follows the authorities' classification and includes capital spending, aid, and trust account spending.



13. The authorities could generate additional revenue by streamlining existing tax concessions, which are currently on a case-by-case contract basis. Preliminary findings by staff suggest that the average effective tax take in the resource sector corresponds to the low side of fiscal regimes in the world¹. Since the issuance of the 2003 Oil and Gas Policy regulation, the Additional Profits Tax (APT) has not been payable for oil and gas activities, except for specific arrangements made for activities in the gas sector, such as the LNG project. Similarly, the APT is not applicable for the mining sector.

¹ Fiscal Advice on Establishing a Sovereign Wealth Fund, FAD TA report August 2011.

Significant tax revenues from the LNG project are not expected before 2021–22, largely owing to accelerated depreciation allowances.

Authorities' Views

14. The authorities pointed out that the commodity price assumptions were based on consensus forecasts². The past use of conservative assumptions triggered questions by Parliament about the ability of the government to make accurate budget projections, since revenue under-projections had led to supplementary budget submissions

² Energy & Metals Consensus Forecasts' forecasts are the result of a comprehensive quarterly survey of over 30 of the world's most prominent commodity forecasters covering over 25 individual commodities.

in each of the last four years. Nonetheless, the government remains mindful of commodity price volatility, in particular given the substantial risk of a commodity downturn in the current global environment.

15. The authorities broadly agreed with staff's advice to move toward steady and affordable real expenditure increases.

However, they noted that containing public spending in an election year is a challenge. They will monitor closely the implementation of public investment projects and, if required, consider ways to control expenditure. This will include oversight and careful management of

trust accounts funds, including district improvement funds. Looking forward, the authorities believe that moving toward more sustainable and effective medium-term budgeting will enable better planning and smoothing of public spending.

16. The authorities agreed that the resource sector could make a larger contribution to public revenues. In that regard, the authorities expressed their interest in Fund technical assistance to review their current resource taxation regime and, if necessary, present reform proposals.

B. Monetary Policy

17. Inflation slowed down following the Bank of PNG's monetary tightening in 2011.

The Bank of PNG raised its KFR policy rate by 75 basis points to 7¾ percent, increased commercial banks' cash reserve requirements (CRR) by 200 basis points to 6 percent, and issued central bank bills (CBBs) to mop up banking sector liquidity (Figure 3). Most importantly, the kina appreciated by 21 percent in nominal effective terms throughout 2011. The stronger kina, combined with the decline in global food prices in late 2011, dampened import price inflation. As a result, annual headline CPI inflation declined to about 7 percent at the end of the year from near 10 percent in the second quarter.

18. Over the medium term, in the absence of further tightening, inflation is projected to remain above the Bank of PNG's 5 percent reference value. During 2012, election-year government spending and continued LNG construction will generate inflation pressures. Staff projects that entrenched expectations will keep inflation at about 7 percent over the medium term.

19. Inflation expectations should be anchored at the Bank of PNG's reference value. Anchoring expectations would help reduce the cost of fighting future inflationary shocks, and could be achieved by continuing the Bank of PNG's tight policy stance. In the short term, the authorities can raise the CRR for commercial banks. This measure is less

costly for taxpayers than the issuance of CBBs, and has been used to sterilize capital inflow-driven liquidity growth in other countries (Box 2).

20. The authorities should pursue measures to enhance the effectiveness of interest rate-based monetary policy. Current interest rate policy has only limited sway on market rates as long as liquidity remains abundant. A more flexible exchange rate, appropriate combination of quantitative tools including the CRR and CBBs to mop up domestic liquidity, and a SWF that reduces liquidity build-up in the banking system, would help achieve an effective interest-rate transmission channel over the medium term.

21. Greater exchange rate flexibility would provide a buffer against external and domestic demand shocks. While some intervention may be appropriate to *limit short-term exchange rate volatility*, a more flexible exchange rate can be an important shock absorber, for instance when sustained global commodity price rises and capital inflows cause inflationary pressures, as has recently been the case.

22. Coordination between fiscal and monetary policy is crucial to reduce the cost of inflation control. Maintaining expenditure discipline in 2012 would reduce excess demand, while holding trust accounts at the Bank of PNG instead of commercial banks, and rationalizing the use of government working accounts in banks, would facilitate liquidity

management. The authorities' plans to issue guidelines for cash management of trust-account holdings at commercial banks are a positive step.

Authorities' Views

23. The Bank of PNG agreed that inflation is likely to remain above the 5 percent reference value, but is concerned that allowing the exchange rate to appreciate further would hurt traditional exporters. The Bank of PNG sees a risk of elements of Dutch disease developing, because LNG construction-driven exchange rate appreciation may hurt the rural sector if agricultural prices are unable to keep up. This could develop into a bigger problem in the future and the Bank of PNG is of the view that monetary policy should help alleviate the adjustment, at least temporarily. Moreover, the Bank of PNG is comfortable with an inflation rate below 10 percent at a time of high economic growth.

24. The Bank of PNG projects banking sector liquidity to remain elevated. Foreign exchange inflows will continue to be high as LNG construction continues and commodity tax revenues accrue to the government.

25. The authorities have instructed commercial banks to transfer all trust accounts to the Bank of PNG. However, they noted that transferring funds from committed projects' accounts at commercial banks to the central bank is difficult. To improve

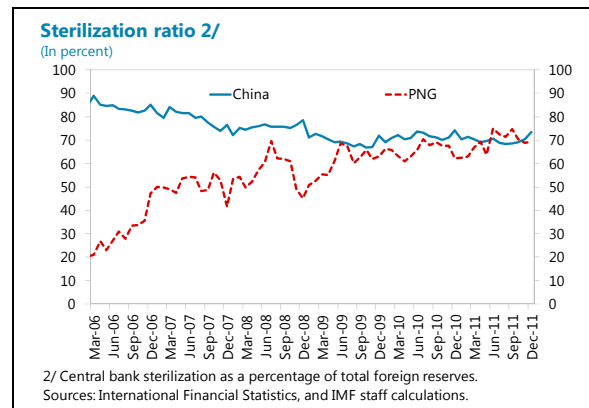
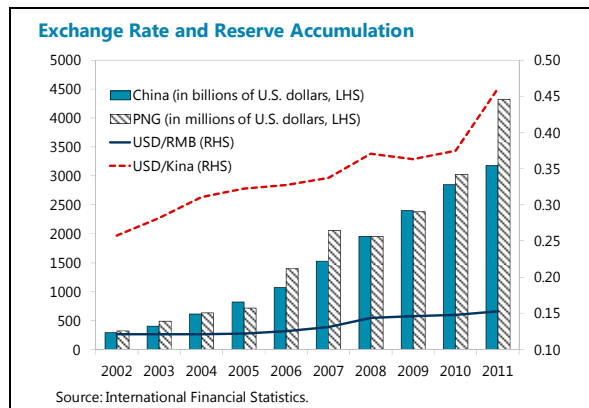
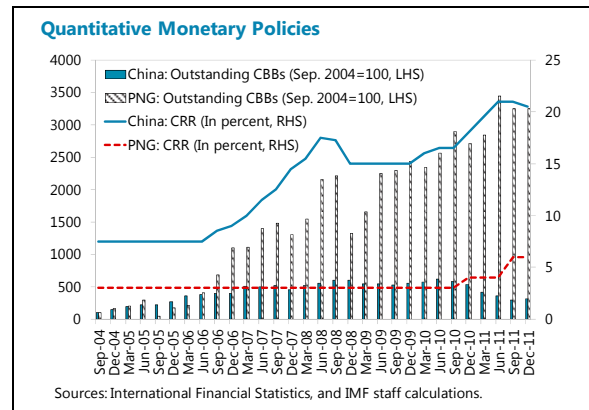
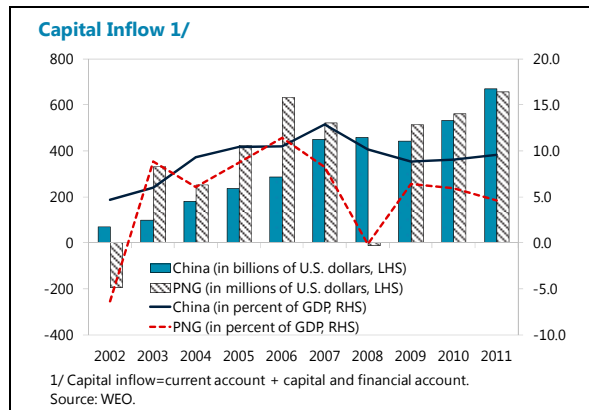
Box 2. Papua New Guinea and China: Similarities in Quantitative Monetary Policies

Over the past decade, both Papua New Guinea (PNG) and China have seen large capital inflows. Although PNG experienced a temporary capital outflow in 2008, capital inflows resumed afterwards and were over 5 percent of GDP in most years. As in the case of the Chinese renminbi, inflows caused persistent appreciation pressure for the kina.

Both central banks opted for foreign exchange intervention. As central banks were the sole market clearers, they accumulated large amounts of foreign exchange reserves and injected the equivalent amount of liquidity in local currency into domestic financial markets. The Bank of PNG allowed more flexibility of the kina in 2011, and the kina appreciated 22 percent against the U.S. dollar, but reserve accumulation remained high.

Cash reserve requirements (CRR) and central bank bills (CBBs) were used to absorb excessive liquidity. China used CRRs aggressively, raising the CRR ratio from 7.5 percent in September 2004 to 20.5 percent in December 2011, while outstanding CBBs were raised by a factor of 3 during the same period. PNG relied more on expensive CBBs, the outstanding amount of which grew by a factor of 32, while the CRR ratio was only increased from 3 percent to 6 percent. The sterilization ratios, calculated as the percentage of liquidity absorbed by the CRR and CBBs, stayed at around 70 percent in both countries in 2011.

The Bank of PNG can achieve the same sterilization effect by further raising the CRR ratio. At the same time, the amount of CBBs can be reduced, so as to lower the cost of liquidity management.



Box 3. Papua New Guinea: Exchange Rate Assessment

Papua New Guinea’s real effective exchange rate appreciated by 27 percent during 2011. The kina appreciated by 22 percent against the U.S. dollar and 24 percent against the Australian dollar.

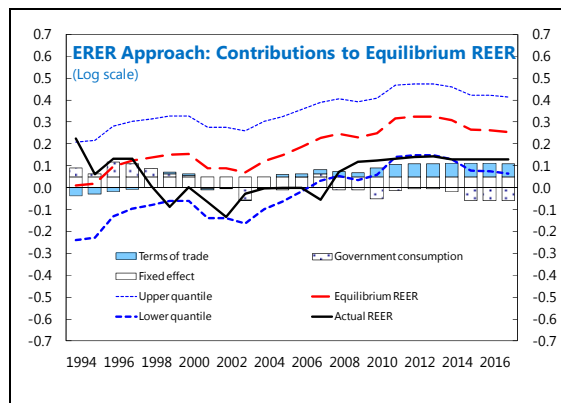
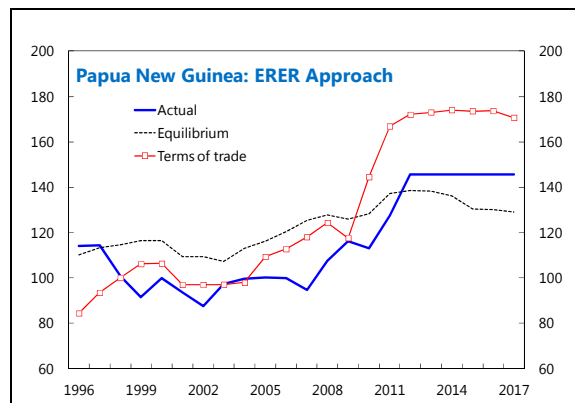
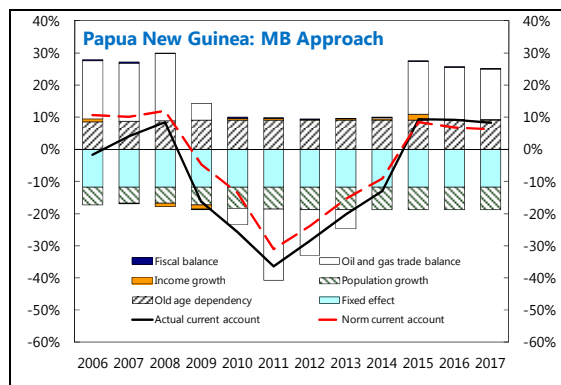
Owing to the projected structural change in the PNG economy, standard CGER methodologies disagree on the exchange rate assessment, with an average overvaluation assessed around zero. For the MB approach, staff used coefficients estimated from a standard CGER regression, but to account for the importance of mineral exports for PNG (including LNG production from 2015), the norm was calculated by substituting PNG’s entire mineral balance (export revenues less wage and dividend payments) in place of the traditional oil trade balance variable. This method indicates an 8½ percent undervaluation. The ERE approach predicts the exchange rate directly from movements in the terms of trade and net foreign assets, and estimates an overvaluation of 13 percent, reflecting the large appreciation over 2011.

Over the medium term, the equilibrium real exchange rate will depend on the precise balance between large trade surpluses and a reversal of LNG investment-related capital inflows, and fiscal policy. Neither of the CGER approaches captures all the details of this specific trade-off (which is sensitive to commodity price assumptions). Staff’s external sector analysis (Table 3) projects a medium-term buildup of reserves at the 2012 real exchange rate, indicating undervaluation. If authorities follow staff’s advice of higher medium-term fiscal spending, the current account norm would decline, pushing toward further undervaluation of the kina today. However, this assessment is tempered by the fact that the real appreciation has pushed up rents and other non-tradable input costs relative to other countries, damaging the competitiveness of the non-mineral sector. This calls for structural reform and infrastructure improvements to raise efficiency and ease structural adjustment.

Exchange Rate Assessment: Baseline Results 1/

	CA/GDP		REER
	Norm	Proj.	Overvaluation
MB approach 2/	6.2	8.3	-8.4
ERER approach 3/	...	...	12.9

1/ All results are expressed in percent.
 2/ Based on a semi-elasticity of the CA/GDP with respect to the REER of -0.25.
 3/ Overvaluation is assessed relative to April 2012.



coordination, the authorities are developing a finance instruction to guide the use and management of trust accounts, particularly working accounts (under current rules, government departments have opened trust accounts at the central bank but then swiftly

moved funds to working accounts at commercial banks). These procedural guidelines are short-term solutions, and trust accounts will cease to exist once the SWF is established.

C. Exchange Rate Assessment and External Stability

26. The current account deficit widened to 36 percent of GDP in 2011. The rise in imports of LNG construction materials worsened the trade balance, and the compensation of foreign workers led to large negative balances for services and income.

27. The kina appreciated by 27 percent in real effective terms during 2011, despite some reserve accumulation by the Bank of PNG. This was helped by a 15 percent appreciation in PNG's terms of trade driven by a spike in the prices of gold, copper, and agricultural commodities. LNG construction-related inflows kept the exchange rate appreciating even during late 2011, when global uncertainty related to the European debt crisis generated volatility, and eventually a decline, in commodity prices. The Bank of PNG allowed the kina to appreciate while continuing to accumulate foreign exchange reserves. Its reserves rose by 40 percent to US\$ 4.3bn by end-2011.

28. Private external debt grew to 82 percent of GDP in 2011. As LNG project partners and subcontractors drew down on

loans to finance construction inputs, the level of private external debt has jumped by 70 percent of GDP since 2008.

Staff's Views

29. The current account deficit is projected to remain high at 28 percent in 2012 and then fall as the LNG construction phase comes to an end. The mineral balance will turn positive in 2014, and LNG production will generate an overall current account surplus from the following year, although dividend outflows will also increase.

30. The real exchange rate is assessed to be on the weak side relative to medium-term fundamentals (Box 3). The external assessment for PNG is complicated by the lack of reliable data on real wages and non-tradables. Staff's judgment of a modest undervaluation is based on the assessment that the increase in LNG-related exports will dominate the reversal in construction-related capital inflows over the medium-term. This assessment is sensitive to commodity price assumptions and fiscal policy – the current

exchange rate is even more undervalued relative to a medium-term scenario where the authorities implement staff's recommended expenditure profile.

31. Staff's public external debt sustainability assessment for PNG has improved (Appendix 3). This is the result of sustained progress in developing fiscal institutions and public debt reduction over the past decade. Regarding the private sector, the recent increase in external debt is related to operations by large multi-national companies (construction is being undertaken by an ExxonMobil subsidiary), and staff projects that it will be repaid steadily once LNG production begins in 2014.

Authorities' Views

32. The authorities agreed that the current account deficit will remain

substantial until LNG construction is completed. For the medium-term, they use more conservative price assumptions than staff and project that the current account will remain in deficit owing to substantial income outflows in the form of mineral company dividends.

33. The authorities agreed that there is low risk of debt distress from the declining ratio of public external debt to GDP, or from the recent growth in private external debt. LNG project completion should result in paydown of private sector debt from 2014, and it should accelerate public debt reduction after 2020, when substantial LNG revenues materialize.

USING RESOURCE REVENUES TO SUPPORT BROAD-BASED DEVELOPMENT

A. Managing Resource Revenue

34. The establishment of the SWF will help manage resource revenue volatility.

Implementation details are still to be determined, in particular the relationship between the SWF withdrawal rules and the new MTFS. However, the institutional framework is guided by international best

practice adapted to the PNG context: a single governance framework, offshore investment and onshore management, integration with the fiscal framework and the budget, and accountability and transparency rules based on the Santiago principles (Box 5).

Box 4. Papua New Guinea: Medium-Term Fiscal Strategies and the Sovereign Wealth Fund 1/

Over the past 10 years, fiscal policies were guided by Medium-Term Fiscal Strategies (MTFS).

The 2002–07 MTFS was a stabilization and structural reform program. Its balanced budget target was achieved in 2004, three years ahead of schedule, but progress on structural reforms was slow. The 2008–12 MTFS added rules to limit the fiscal impact of volatility in resource revenue. It required that resource revenue above a 'normal' level (4 percent of GDP) be used for infrastructure development (70 percent) and debt reduction (30 percent). Annual spending out of trust accounts was capped at 4 percent of GDP. Together these rules imposed an 8 percent of GDP limit on the non-mineral budget deficit.

To address the challenge of smoothing government expenditure and decoupling it from the short-term volatility of natural resource revenues, the authorities decided to establish a Sovereign Wealth Fund (SWF). The Parliament approved the Organic Law on the SWF in late February 2012. The law envisages a consolidated pool of two offshore funds, stabilization (SF) and development (DF). The SWF model, design, and institutional framework were guided by international best practice with consideration of domestic features: a single governance framework to manage the two funds, offshore investment and onshore management, integration with the fiscal framework and the budget, and accountability and transparency rules based on the Santiago principles.

The law provides guidelines for contributions to, and withdrawals from, the funds. It stipulates that contributions to the SF will include all mineral and petroleum revenues, earnings from its investments, and other government contributions. Withdrawals from the SF will go through the budget process and should not exceed 15-year moving average of mineral and petroleum revenues as a share of non-mining revenues. Annual contributions to the DF will be no less than the guaranteed minimum allocation based on the expected average of the LNG project dividends determined by the parliament, earnings from its investments, and other government contributions. There is no clear rule defining withdrawals from the DF except that funds are to be made available to support the development plans of the government in accordance with an act of parliament. Implementation details are still to be determined, in particular the relationship between the SWF withdrawal rules and the new MTFS.

The authorities intend to publish a new MTFS in late 2012 in connection with the planned SWF.

Based on the SF withdrawal rule, the drawdown of funds would be equal to about 6 percent of non-mineral GDP in 2011, largely corresponding to the lower revenue scenario in the 2011 FAD TA report. This report assumes a decline in non-LNG natural resource revenue to a long-run level of 3 percent of non-mineral GDP. On top of this, LNG revenue are projected to average about 3½ percent of non-mineral GDP over 2015–30 in the low revenue scenario, yielding a 'new normal' of about 6½ percent of non-mineral GDP. In a higher revenue scenario the new normal could reach 14 percent of non-mineral GDP.

1/ Fiscal Advice on Establishing a Sovereign Wealth Fund, FAD TA report August 2011.

Staff's Views

35. Staff support the setting up of an SWF. Staff recommend setting withdrawal rules in conjunction with the new MTF. Moreover, the integration of the development fund with the budget process should be clarified and the risk of creating a “parallel budget” minimized. Once the SWF is established, all existing trust accounts should be consolidated with the fund.

36. Medium-term resource revenues may not be substantially higher than in the

B. Structural Reforms and Public Service Delivery

38. PNG's consumers suffer from continued monopolies in staple products such as petroleum and sugar, and the business environment for small- and medium-sized enterprises (SMEs) is poor.

PNG was ranked 101 out of 183 countries regarding the ease of doing business by the World Bank's Doing Business 2012, with particularly negative performance regarding the enforcement of contracts and obtaining construction permits.

39. Revenues from LNG production provide an opportunity for development but direct employment effects will be small.

To generate a broad-based improvement in the living standards of PNG citizens, the government needs to spend more effectively, and structural reforms to improve the efficiency of the private sector and state-owned enterprises (SOEs) should be

recent past. Moreover, the SWF in itself will not solve all long-standing problems of expenditure management. Expenditures need to be better aligned with development priorities.

Authorities' Views

37. The authorities emphasized that the SWF should address economic and social development in line with the development goals of the government. They noted that withdrawals would finance specific projects instead of providing cash hand-outs.

accelerated. It will also be important to continue with initiatives to address long-running allegations of corruption.

Staff's Views

40. The government initiated critical SOE reforms. Measures to strengthen the Independent Public Business Corporation and its mandate are important for improving professional management, commercial orientation, accountability and transparency of SOEs. Moreover, the authorities plan to introduce a robust framework for public-private partnerships (PPPs), with a potential application to electricity generation.

41. Staff recommends further steps to improve competition in sectors with established monopolies, within both the private and public sectors. A more

competitive environment would improve consumer welfare by lowering prices and enhancing product variety, while improved infrastructure and lower production costs would enhance the competitiveness of the non-mineral sector and encourage export diversification. In particular, plans to improve competition in broadband services by replacing PNG Telikom's monopoly with an updated regulatory framework are positive and can build on successes in the deregulation of the telecommunications industry. Staff also supports the government's tariff reduction program. A better-resourced Independent Consumer Competition Commission is instrumental to enforcing competitive behavior, especially in sectors with long-established dominant firms.

42. However, the rice project currently under consideration is concerning, as it is anti-competitive and detrimental to the welfare of consumers. While staff has no objection to supporting rice-growing in PNG, for example by providing transportation

infrastructure, the introduction of exclusive production rights and the proposed import levy are counter-productive and run the risk of replicating inefficient arrangements in other sectors of PNG's economy.

Authorities' Views

43. The authorities are committed to reforming SOEs, improving their administration, enhancing competitiveness and removing corruption. Their package of initiatives to combat graft, for example Taskforce Sweep, should help improve the functioning of public enterprises.

44. The authorities agreed that the proposed rice project has substantial flaws, but intended to get involved in making rice production viable in PNG. They are of the view that rice exports to East Asia could provide jobs for PNG, and that the government should facilitate such large-scale projects. They would welcome advice from development partners regarding more efficient ways to foster such sectors in PNG.

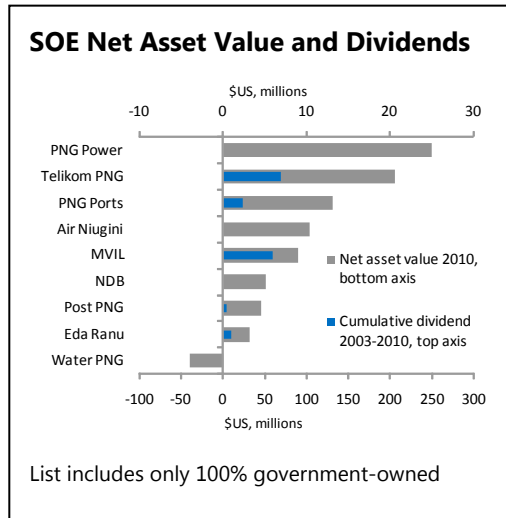
Box 5. State Owned Enterprise Reform^{1,2}

The government of Papua New Guinea (PNG) owns nine State Owned Enterprises (SOEs) which are managed by the Independent Public Business Corporation (IPBC) and vested in the General Business Trust (GBT)³. These SOEs play a significant role in the domestic economy, with a total net asset value of \$US 870 million and responsibility for providing essential public services such as power, water, postal services, banking, telecommunications, air travel, and seaports.

Yet the performance of SOEs in providing services to the people of PNG continues to be poor. Just 12% of households have access to power, and only 15% of schools are connected to the electricity grid. Moreover, while about 47% of the population had access to improved water and sanitation facilities in 1990, only 45% had access in 2008. In 2007, the Port Traffic League ranked the Moresby port 313th out of 365 world ports in terms of efficiency and cost. In 2010, only 12 of PNG's 22 national airports met the International Civil Aviation Organization safety and security standards.

PNG's SOEs impose a significant fiscal burden. Between 2002 and 2010, public investments are estimated to have more than doubled SOEs' asset value, but they paid just \$US 17 million in dividends to the government.

Improving the performance of SOEs has been a policy goal for governments over the last decade. However, with deeply entrenched interest groups and changing government ideologies, progress has been mixed.



Significant SOE reforms were initiated during 1999-2002, including a privatization program, establishment of the Independent Consumer and Competition Commission and implementation of a policy introducing competition into sectors previously reserved for SOEs. However, with a change of government in 2002 came a new policy focused on the consolidation and growth of the SOE portfolio. While progress was made in introducing competition for the telecommunications and airlines sectors, privatization activities were halted and in some cases reversed, and accountability and transparency gradually eroded. During the subsequent period from 2002 to 2010, PNG's SOE portfolio grew rapidly in asset size while generating steadily declining returns.

In the past six months the SOE policy framework has again shifted, with the 2012 National Budget identifying a number of reform priorities. These include setting out the government's dividend expectation for the SOEs, a Community Service Obligation (CSO) policy to ensure SOEs identify and deliver CSOs on a commercial basis, the development of Public Private Partnership (PPP) legislation to complement existing arrangements, and an on-lending policy to ensure a level playing field between SOEs and the private sector.

In addition, a number of initiatives have also been identified to strengthen the role of the IPBC as an independent and transparent manager of SOEs. These initiatives include amending the IPBC Act to clarify IPBC's governance and accountability frameworks; and developing a long-term SOE strategy which identifies opportunities for public-private partnerships, and strengthened SOE monitoring mechanisms.

1/ This box was contributed by Aaron Batten, Asian Development Bank.

2/ Asian Development Bank. 2011. 'Papua New Guinea: Critical Development Constraints', Growth Diagnostics Studies Series, Manila, Philippines.

3/ In 2010, SOEs had a net asset value equivalent to 30% of GDP and comprised between 10-15% of total fixed assets in the economy.

C. Financial Stability and Development

45. The financial sector remains profitable, but vulnerabilities have increased. Returns on equity exceed 100 percent and the capital adequacy ratio is over 20 percent of total assets (Figure 5), while exposure to the heated real estate sector continues to fall. However, the non-performing loans (NPL) ratio increased to 2.3 percent in September 2011 from 1.8 percent in September 2010, and provisioning of commercial banks dropped to around 130 percent from over 230 percent in the same period. Foreign investment positions of the Authorized Superannuation Funds (ASFs)—the largest non-bank financial institutions—were hit by the kina appreciation and global stock market downturn in 2011, and the ASFs are likely to record a net loss for the first time since 2006. Growth in bank credit decreased in 2011 after several years of rapid expansion, in line with limited demand for domestic loans as enterprises opted for cheaper internal financing and overseas borrowing.

Staff's Views

45. The Bank of PNG has strengthened its supervision framework. The Bank imposed stricter limits on financial institutions' exposure to risk (particularly to the heated property sector), increased on-site inspections, carried out stress tests, and took the initiative in improving coordination with supervisory authorities for life and general insurance products. The aim is to conduct regular

meetings with all relevant authorities so they can update one another and obtain an overview of systemic risks.

46. The government has taken several initiatives to support inclusive financial development. They include development of a regulatory environment for mobile banking, capital injection into the National Development Bank, tax incentives for banks to invest in regional branches, setting up a program to improve access to credit for small and medium sized enterprises, and expanding microfinance projects. The government also released draft legislation to facilitate loans secured by personal property.

47. The authorities are making progress in implementing Fund's 2011 FSSA recommendations. The Bank of PNG's Strategic Plan aims to improve financial supervision and develop financial infrastructure. The introduction of a real-time settlement system is a step toward improving the efficiency of the clearance and settlement infrastructure. Legislation to update the payment system law will be presented to Parliament in 2012. Staff encourages implementation of the recommendations made in the July 2011 Asia-Pacific Group on Money Laundering assessment report on anti-money laundering and combating the financing of terrorism (AML/CFT). The Financial Intelligence Unit indicated having issued guidelines on customer due diligence.

Authorities' Views

48. The authorities considered systemic risks to the financial sector to be low. The NPL ratio increased owing to one large enterprise, which temporarily fell back on debt-servicing. Moreover, banks were able to absorb a moderate increase in non-performing loans given their provisioning. The loss of the

ASFs was judged to be a one-off event, and the Bank of PNG has been working with ASFs on reviewing overseas investment risks. The authorities also welcomed the slowdown in credit growth from high rates in past years. The Bank of PNG is reviewing new applications for bank licenses to promote competition and financial inclusiveness.

STAFF APPRAISAL³

49. We commend the authorities for achieving macroeconomic stability and a sustainable fiscal position. To preserve these achievements and promote inclusive development, it will be important to combine steady, affordable growth in government spending with improvements in public financial management and expenditure effectiveness. This should be accompanied by structural reforms and a flexible monetary policy.

50. After 10 years of uninterrupted economic growth, the medium-term outlook remains positive. Risks to the outlook are broadly balanced and predominantly related to the resource sector.

51. Further monetary tightening would likely be needed to anchor inflation

³ See Box 6 for key risks to the PNG economy, and recommended policy responses by the authorities.

expectations at the Bank of PNG's 5 percent reference value. Reducing excess liquidity by raising banks' cash reserve requirements and limiting reserve accumulation would be the most effective ways to achieve tighter monetary conditions. Going forward, greater exchange rate flexibility would provide an important buffer against external shocks.

52. Fiscal policy should target a smooth expenditure path. Such a policy would help sustain solid economic growth with moderate inflation, and provide reliable funding for essential public services. It could be implemented through tighter control of expenditure growth in the current election year, and steady increases in real spending per capita over the medium term.

53. PNG's resource sector could make a larger contribution to public revenues. Efforts to promote this could include strengthening revenue collection, reinforcing the internal revenue and customs services, streamlining existing tax concessions, and

applying the Additional Profits Tax to mining activities, given that the average effective tax take from resources appears to be on the low side of fiscal regimes across the world.

54. The SWF provides a strong framework for insulating public expenditure from volatility in resource revenue, and for improving transparency, accountability, and good governance.

Withdrawal rules should be set in accordance with the new Medium-Term Fiscal Strategy. Once the SWF is established, all existing trust accounts should be consolidated with the fund.

55. We welcome the government's agenda for better public services. Plans to increase the expenditure share of key development priorities—education, health, law and order, and infrastructure—go in the right direction. However, to deliver better public services marked gains in the effectiveness of public spending are needed. Therefore we encourage the authorities to develop a multi-year budget for selected expenditures and invest in the reform of key ministries responsible for planning and service delivery.

56. More competition would benefit consumers and raise efficiency. We encourage the authorities to strengthen enforcement of competitive behavior and replace existing monopolies. The introduction of exclusive production rights and import protection for rice would go in the wrong

direction and hurt consumers. The authorities should proceed with SOE reforms.

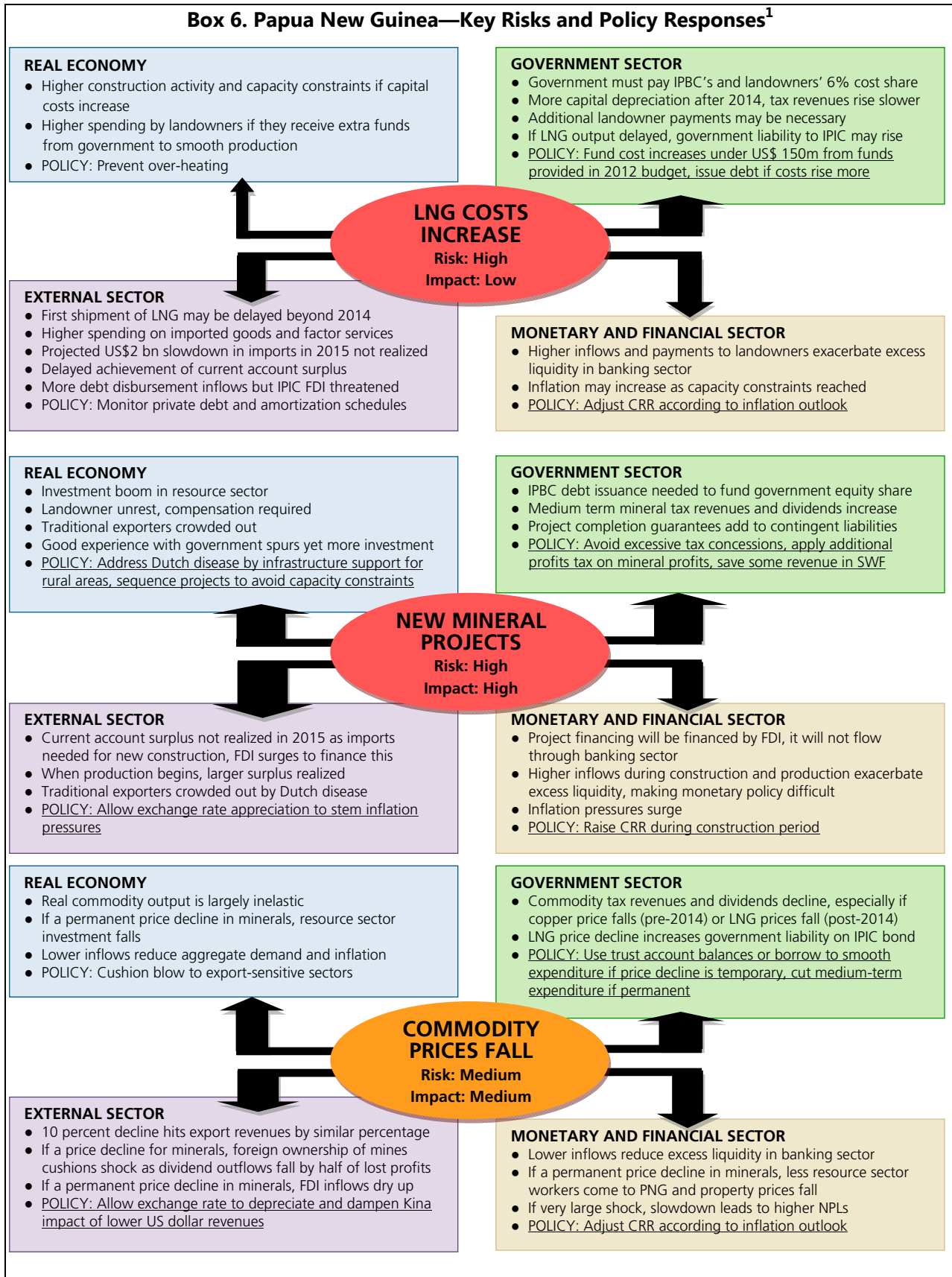
57. The current account deficit is largely financed by FDI and is not expected to threaten external stability. The exchange rate is estimated to be modestly undervalued and reserves are adequate to address potential balance-of-payments needs.

58. The financial sector remains sound. Banks have high capital adequacy ratios and should be resilient to contagion from the Euro area, but need to maintain appropriate lending standards and further reduce exposure to the real estate sector. Financial supervision has been of high quality, and the planned enhanced cooperation among supervisors is welcome. The authorities should implement the remaining 2011 FSAP recommendations.

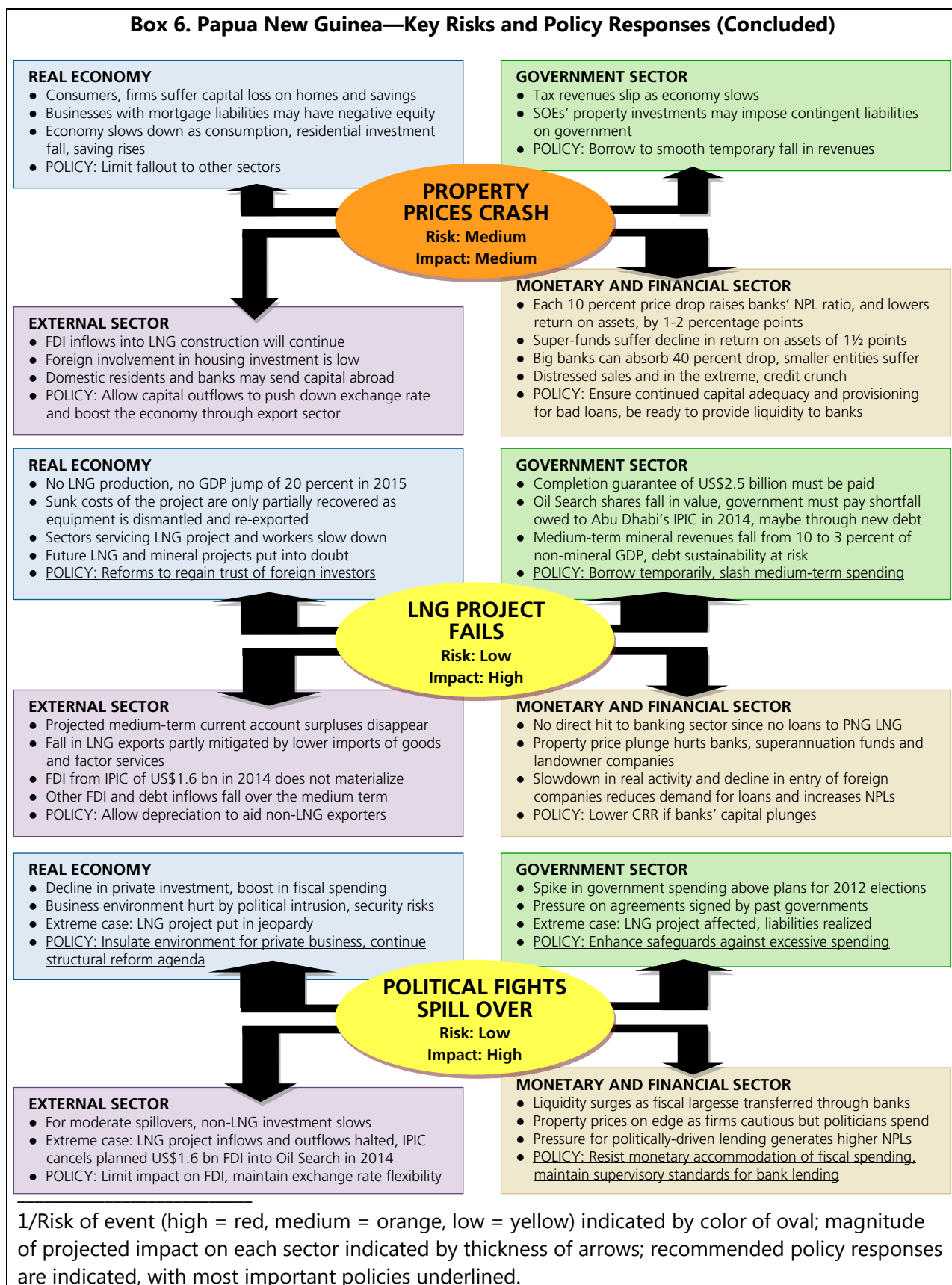
59. The authorities need to urgently tackle structural deficiencies in the provision of national statistics. Gaps in macroeconomic data provision complicate PNG's public policy-making and Fund surveillance. This requires immediate reform and strengthening of the relevant government agencies.

60. It is recommended that the next Article IV consultation be held on the standard 12-month cycle.

Box 6. Papua New Guinea—Key Risks and Policy Responses¹



Box 6. Papua New Guinea—Key Risks and Policy Responses (Concluded)



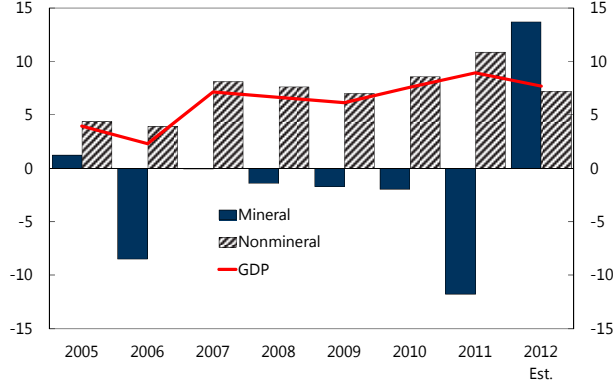
1/Risk of event (high = red, medium = orange, low = yellow) indicated by color of oval; magnitude of projected impact on each sector indicated by thickness of arrows; recommended policy responses are indicated, with most important policies underlined.

Figure 1. Papua New Guinea: Macro Performance

PNG's growth remained solid despite the global crisis...

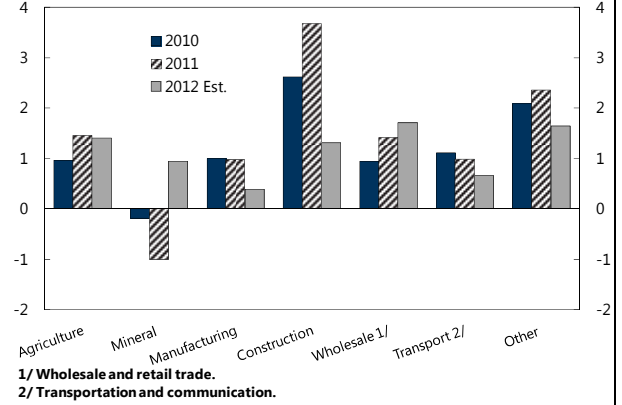
Real GDP Growth

(In percent)



...boosted by activity related to LNG construction...

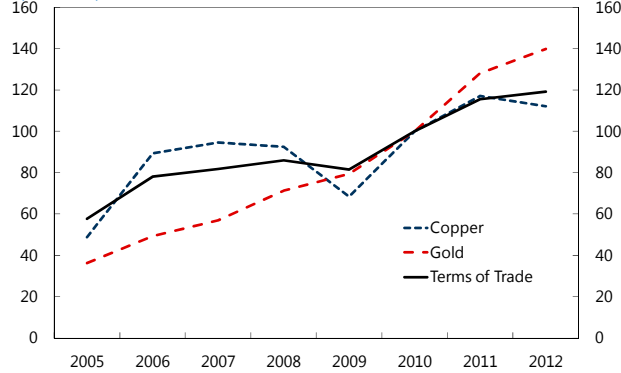
Sector Contribution to GDP growth



...and supported by high commodity prices and improving terms of trade.

Commodity Price Index

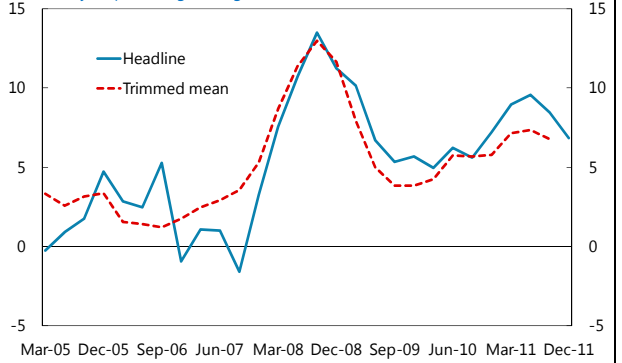
(2010=100)



Inflation picked up...

CPI Inflation

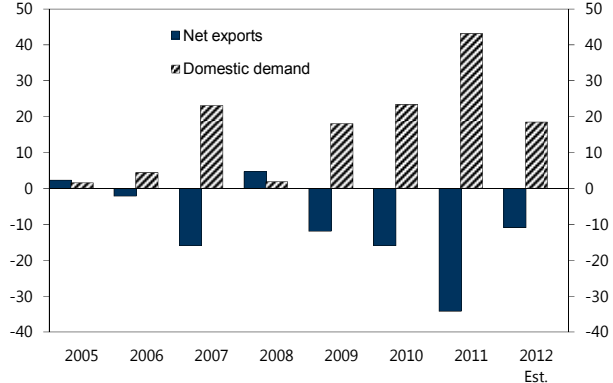
(Year-on-year percentage change)



...driven by excess domestic demand...

Domestic Demand and Net Exports

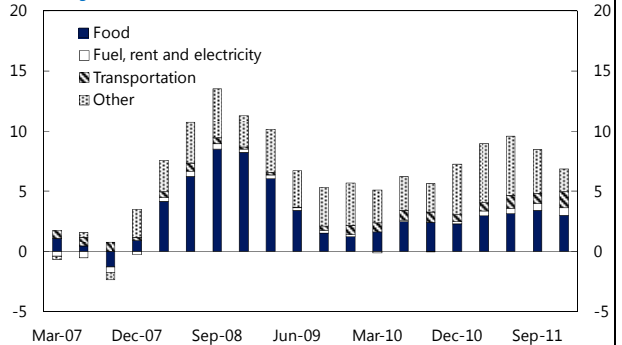
(Contribution to growth)



...and high global food and energy prices.

Contribution to CPI Inflation

(Percentage Points)



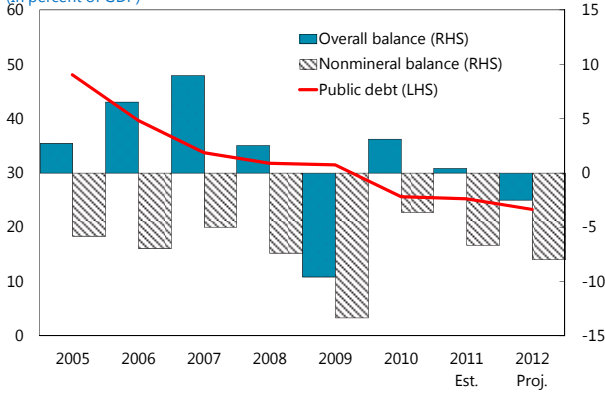
Sources: Bank of Papua New Guinea; International Financial Statistics, *World Economic Outlook*; and IMF staff calculations.

Figure 2. Papua New Guinea—Fiscal Performance

Prudent fiscal policies achieved debt reduction...

Fiscal Balance

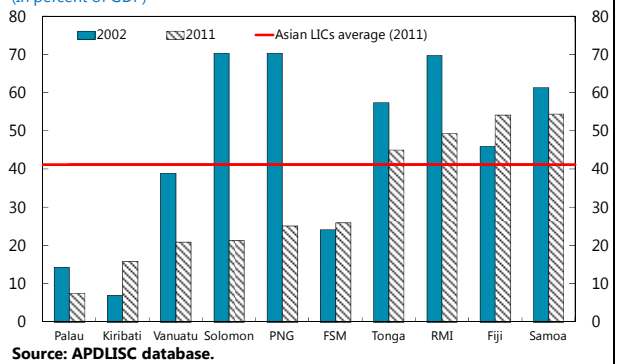
(In percent of GDP)



...at a pace which was remarkable, including in comparison to other countries.

Public Debt

(In percent of GDP)

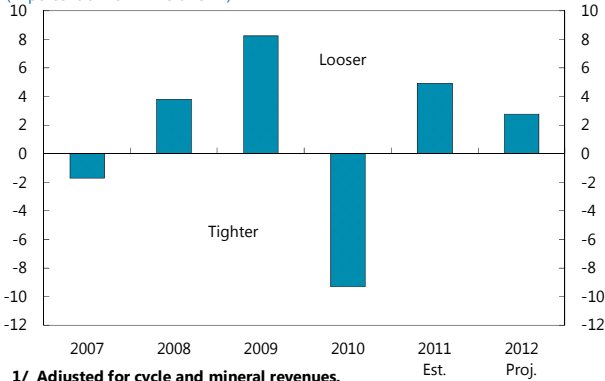


Source: APDLISC database.

After the large adjustment in 2010, the fiscal stance has loosened...

Fiscal Impulse 1/

(In percent of non-mineral GDP)

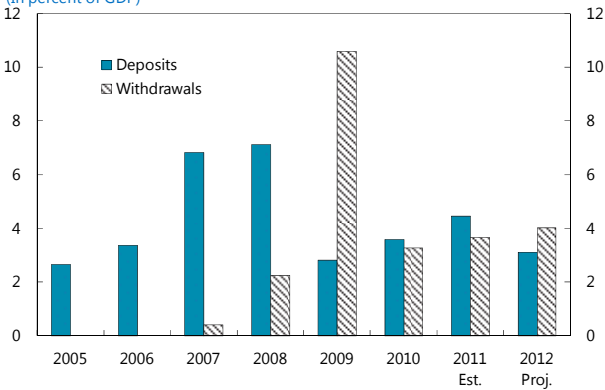


1/ Adjusted for cycle and mineral revenues.

Trust accounts were raided in 2009...

Trust Accounts Movements

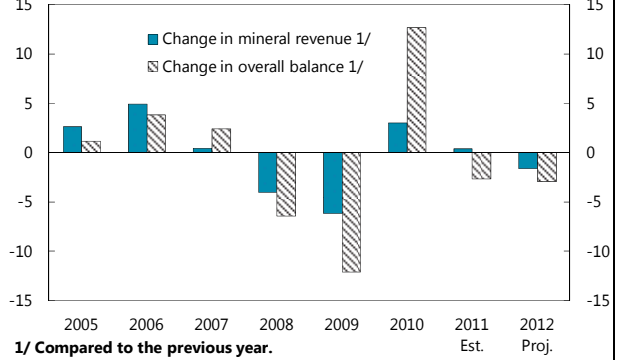
(In percent of GDP)



...while mineral revenues held up thanks to high commodity prices.

Mineral Revenue

(In percent of GDP)

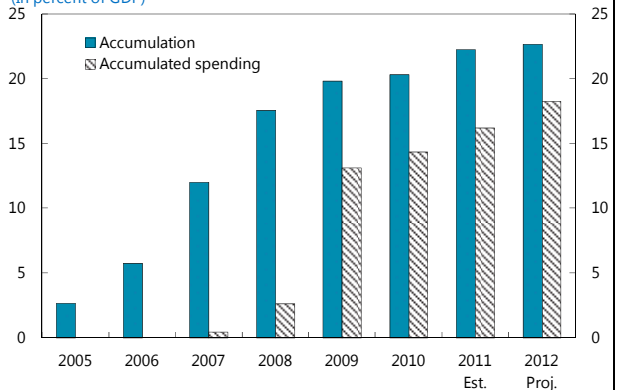


1/ Compared to the previous year.

...leaving a small buffer against volatility and shocks.

Cumulative Spending from Trust Accounts

(In percent of GDP)

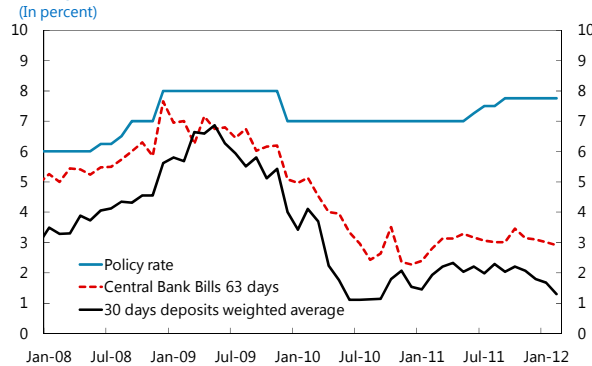


Sources: Papua New Guinea authorities; APDLISC, and IMF staff calculations.

Figure 3. Papua New Guinea—The Monetary Stance

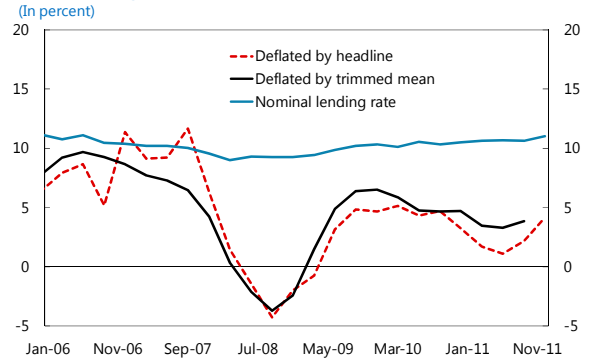
A higher policy rate signaled a tighter policy stance, but the CBB rate did not rise significantly, leaving short-term deposit rates...

Policy Rate



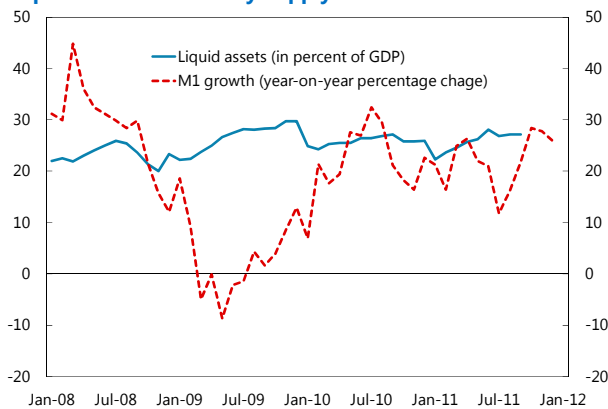
...and lending rates little changed.

Real Lending Rate



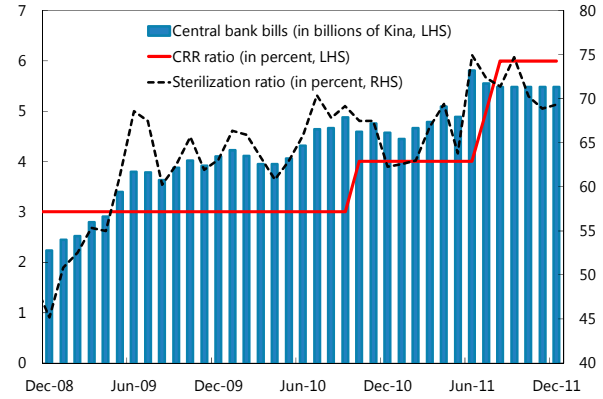
Liquidity and narrow money grew faster than nominal GDP...

Liquid Assets and Money Supply



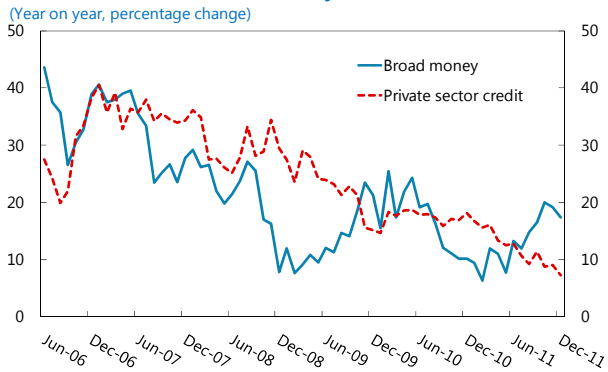
...despite the BPNG's sterilization measures.

Central Bank's Sterilization



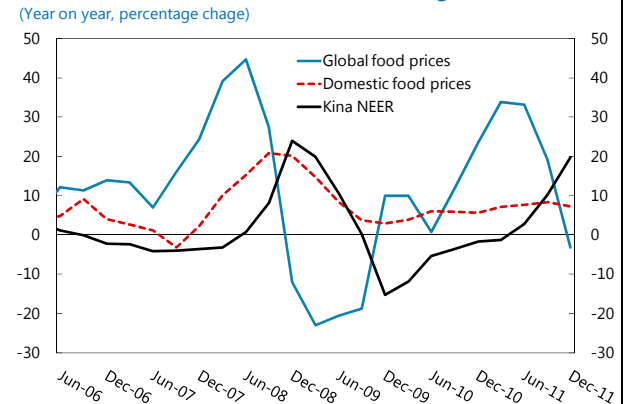
However, broad money growth was in line with nominal GDP growth, and credit to the private sector slowed sharply.

Credit Growth and Broad Money



The exchange rate appreciation and falling global food prices helped contain inflation.

Food Prices and Nominal Effective Exchange Rate



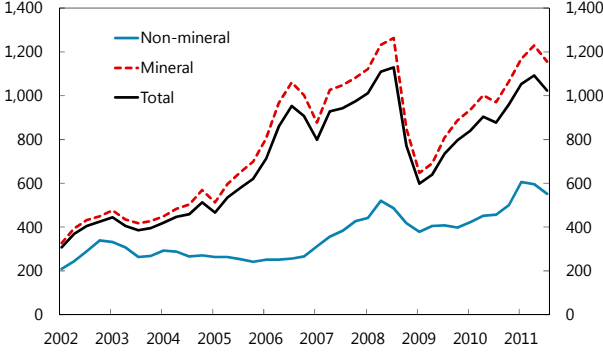
Sources: Bank of Papua New Guinea; International Financial Statistics, and IMF staff calculations.

Figure 4. Papua New Guinea—The External Position

Higher export prices more than compensated for falling output from maturing mines and oil...

Export Price Indices

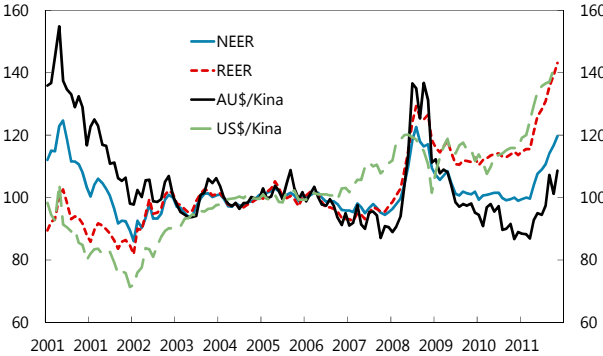
(1994=100)



Nominal and real effective exchange rates appreciated significantly in the second half of 2011 ...

Exchange Rates

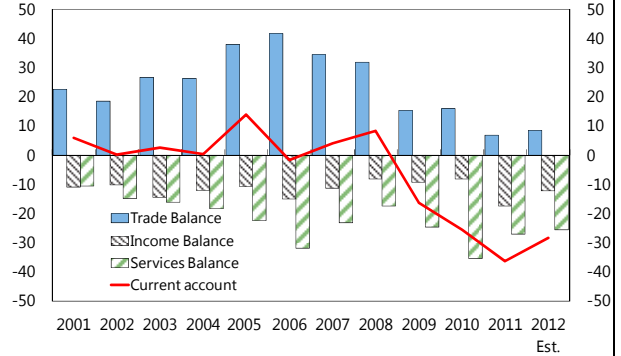
(2005 = 100)



...but the current account deficit widened due to higher imports related to LNG construction.

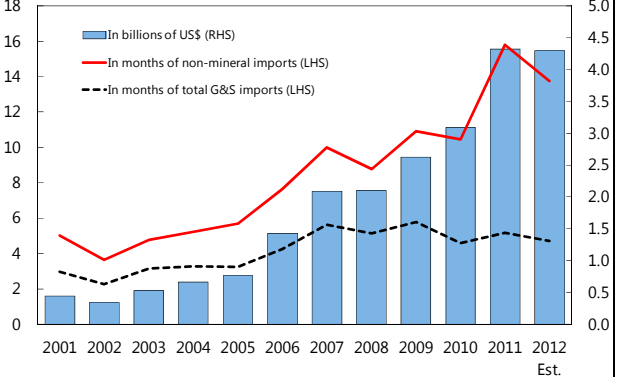
External Trade and Current Account

(In percent of GDP)



...despite increased accumulation of official reserves.

Gross Official Reserves



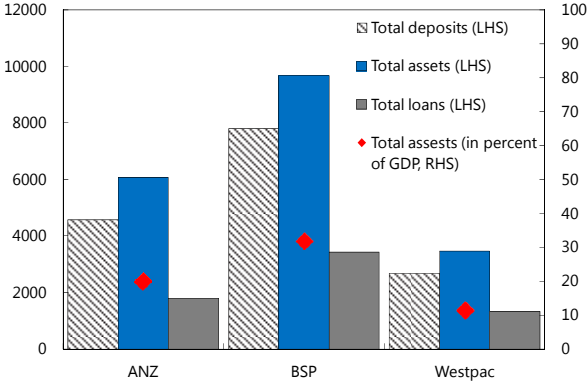
Sources: Bank of Papua New Guinea; Bloomberg; Information Notice System; and IMF staff calculations.

Figure 5. Papua New Guinea—The Banking Sector

The PNG banking sector is dominated by three banks, which are small in terms of total assets...

Banks Assets and Liabilities, August 2011

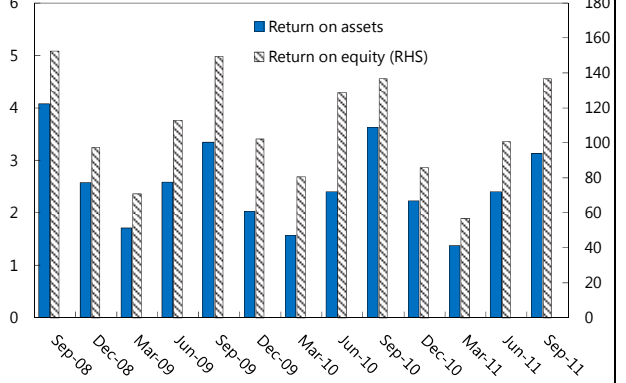
(In millions of Kina)



...but they continue to be quite profitable...

Banks Return on Assets and Equity

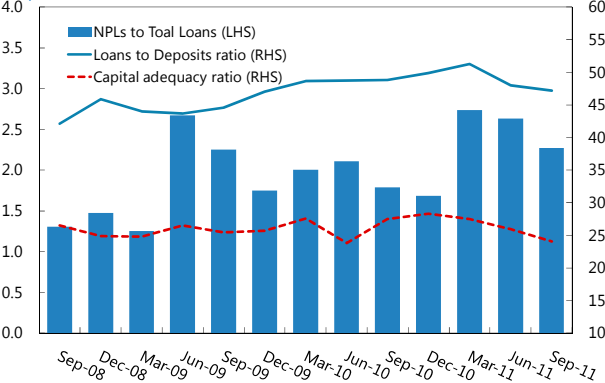
(In percent)



...with low NPLs and high capital adequacy...

Bank Vulnerability Ratios

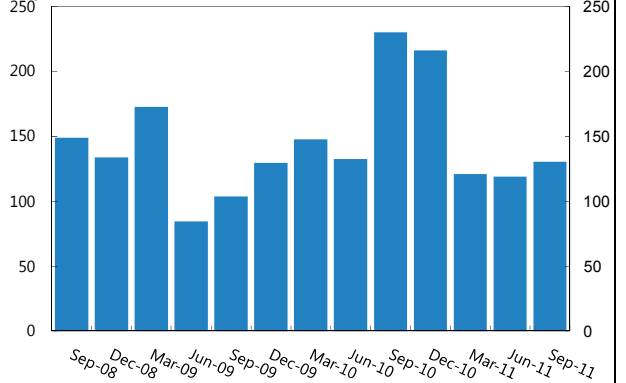
(In percent)



...while provisioning remains high.

Banks Provisioning to NPLs

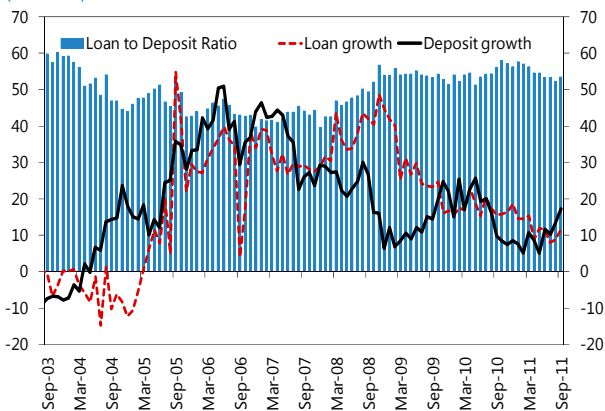
(In percent)



Credit growth slowed down in line with deposit growth.

Growth of Bank Loans and Deposits

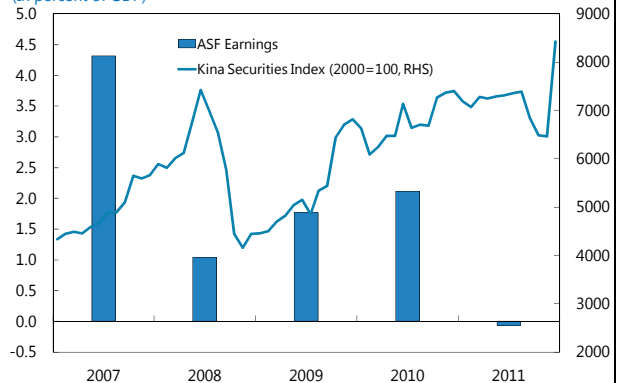
(In Percent)



The superannuation funds generated a net loss in 2011.

Earnings of Superannuation Funds

(In percent of GDP)

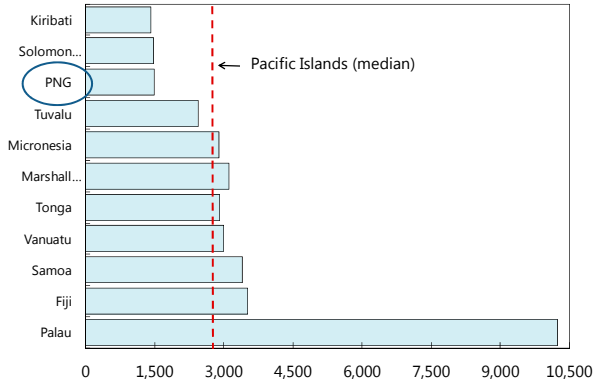


Sources: Bank of Papua New Guinea; International Financial Statistics, and IMF staff calculations.

Figure 6. Papua New Guinea—The Cross-Country Context

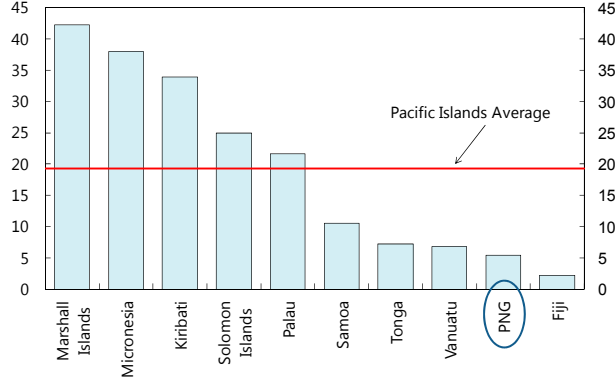
Papua New Guinea is among the lowest income countries in the region...

GDP per Capita, 2010
(In U.S.dollars)



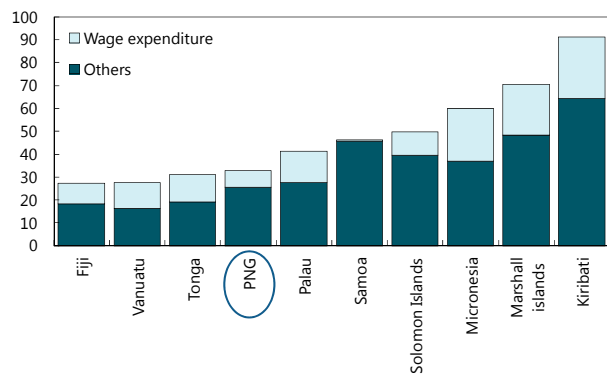
However, it does not depend on foreign aid.

External Grants, 2010
(In percent of GDP)



Government spending is moderate in regional comparison...

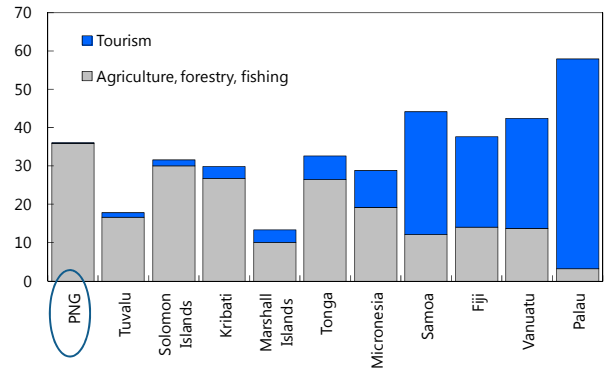
Government Expenditure, 2010
(In percent of GDP)



Sources: Bank of Papua New Guinea; International Financial Statistics, *World Economic Outlook*; and IMF staff calculations.

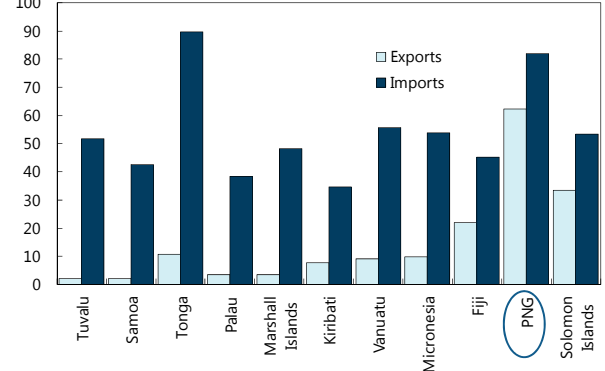
...with a large share of subsistence farming and an underdeveloped tourism industry.

Contribution by Activity, 2010
(In percent of GDP)



Exports are supported by commodity prices while imports are boosted by investment in the resource sector.

Trade Balance, 2010
(In percent of GDP)



...while there is scope for improving the business climate and output per head.

Real GDP per Capita vs. Business Climate

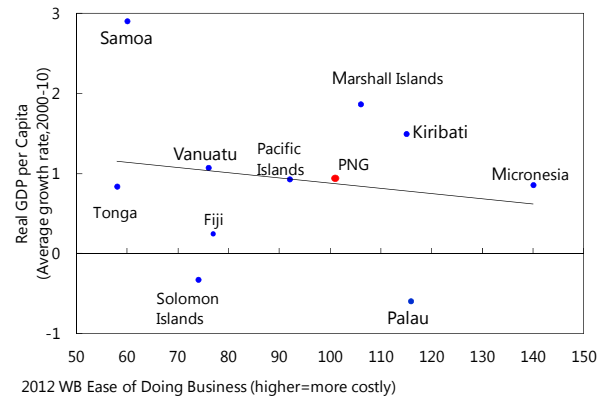


Table 1. Papua New Guinea: Selected Economic and Financial Indicators, 2008–12

Nominal GDP (2010): US\$10 billion 1/

Population (2010): 6.5 million

GDP per capita (2010): US\$1,521

Quota: SDR 131.6 million

	2008	2009	2010	2011	2012
				Est.	Proj.
	(Percent change)				
Real sector					
Real GDP growth	6.6	6.1	7.6	8.9	7.7
Mineral	-1.4	-1.7	-2.0	-11.8	13.7
Nonmineral	7.6	7.0	8.5	10.8	7.2
CPI (annual average)	10.7	6.9	6.0	8.4	6.8
CPI (end-period)	11.2	5.7	7.8	6.9	6.8
	(In percent of GDP)				
Central government operations					
Revenue and grants	32.6	27.3	31.3	29.8	27.5
Expenditure and net lending	30.1	36.9	28.2	29.4	30.0
Overall balance (including grants)	2.5	-9.6	3.1	0.5	-2.5
Nonmineral balance	-7.4	-13.3	-3.6	-6.6	-8.0
Gross public debt	31.7	31.5	25.6	25.2	23.2
Domestic	18.5	19.1	15.2	15.4	13.5
External	13.2	12.5	10.4	9.8	9.7
	(Percent change)				
Money and credit (percentage change)					
Domestic credit	15.7	37.3	4.9	-5.2	18.2
Credit to the private sector	29.5	15.1	18.1	7.3	7.5
Broad money	7.8	21.3	10.2	17.4	13.3
Interest rate (182-day T-bills; period average)	5.9	7.2	6.4	6.8	...
	(In millions of U.S. dollars)				
Balance of payments					
Exports, f.o.b.	5,685	4,511	5,843	7,047	7,788
<i>Of which:</i> Mineral	4,275	3,441	4,444	5,215	5,968
Imports, c.i.f.	-3,140	-3,258	-4,261	-6,186	-6,463
Current account (including grants)	674	-1,325	-2,532	-4,605	-4,374
(In percent of GDP)	8.4	-16.4	-25.6	-36.4	-28.4
Exceptional financing (net)	0.0	0.0	0.0	0.0	0.0
Gross official international reserves	2,095	2,623	3,092	4,323	4,296
(In months of nonmining imports, c.i.f.)	9	11	10	16	14
(In months of goods and services imports)	5	6	5	5	5
Public external debt					
Public external debt-service-ratio (percent of exports) 2/	3.4	1.8	1.4	1.3	1.5
Public external debt-to-GDP ratio (in percent) 2/	13.2	12.5	10.4	9.8	9.7
Exchange rates					
US\$/kina (end-period)	0.373	0.370	0.379	0.467	...
NEER (2005=100, end-period)	117.9	101.5	100.1	121.4	...
REER (2005=100, end-period)	125.7	111.7	114.8	146.1	...
Nominal GDP (millions of kina)	21,601	22,331	26,395	30,167	34,297

Sources: Papua New Guinea authorities; and IMF staff estimates and projections.

1/ Based on period average exchange rate.

2/ Includes central government external debt.

Table 2. Papua New Guinea: Summary Operations of the Central Government, 2008-17

	2008	2009	2010	2011	2012		2013	2014	2015	2016	2017
					Est.	Budget						Proj.	Projections
(In millions of Kina, unless otherwise indicated)											
Revenue	7041	6097	8261	8994	10302	9431	10125	10908	12336	13584	15070
Taxes	3903	4388	5095	6101	6852	6899	7497	8263	9234	10358	11689
Mineral revenue	2136	831	1775	2143	2060	1881	1925	1884	2279	2338	2433
Grants	1002	878	1391	750	1391	652	702	761	823	888	948
Expenditure	6498	8238	7441	8856	10430	10285	10865	11568	12722	13343	14052
Expense	3769	4184	4162	5223	6123	6077	6617	7388	9030	9859	10700
Net acquisition of non-financial assets	2729	4054	3279	3634	4307	4208	4248	4180	3692	3484	3351
<i>Gross operating balance</i>	3272	1912	4099	3771	4179	3354	3508	3520	3306	3725	4370
Overall balance (Net lending (+)/borrowing (-))	543	-2141	820	138	-128	-854	-740	-660	-386	241	1018
Nonmineral overall balance	-1593	-2972	-955	-2005	-2188	-2735	-2665	-2544	-2665	-2097	-1414
CASH FLOWS FROM FINANCING ACTIVITIES:											
Net acquisition of financial assets	-1276	1066	-697	-1726	-819	-30	836	636	96	-441	-1216
Net incurrence of liabilities	445	171	-330	1659	947	884	-96	24	291	200	198
(In percent of GDP)											
Revenue	32.6	27.3	31.3	29.8	30.3	27.5	26.8	24.3	19.0	19.2	19.6
Taxes	18.1	19.7	19.3	20.2	20.2	20.1	19.8	18.4	14.2	14.6	15.2
Mineral revenue	9.9	3.7	6.7	7.1	6.1	5.5	5.1	4.2	3.5	3.3	3.2
Grants	4.6	3.9	5.3	2.5	4.1	1.9	1.9	1.7	1.3	1.3	1.2
Expenditure	30.1	36.9	28.2	29.4	30.7	30.0	28.8	25.8	19.6	18.8	18.2
Expense	17.4	18.7	15.8	17.3	18.0	17.7	17.5	16.5	13.9	13.9	13.9
Net acquisition of non-financial assets	12.6	18.2	12.4	12.0	12.7	12.3	11.2	9.3	5.7	4.9	4.3
<i>Gross operating balance</i>	15.1	8.6	15.5	12.5	12.3	9.8	9.3	7.8	5.1	5.3	5.7
Overall balance (Net lending (+)/borrowing (-))	2.5	-9.6	3.1	0.5	-0.4	-2.5	-2.0	-1.5	-0.6	0.3	1.3
Nonmineral overall balance	-7.4	-13.3	-3.6	-6.6	-6.4	-8.0	-7.1	-5.7	-4.1	-3.0	-1.8
CASH FLOWS FROM FINANCING ACTIVITIES:											
Net acquisition of financial assets	-5.9	4.8	-2.6	-5.7	-2.4	-0.1	2.2	1.4	0.1	-0.6	-1.6
Net incurrence of liabilities	2.1	0.8	-1.3	5.5	2.8	2.6	-0.3	0.1	0.4	0.3	0.3
Difference between above and below the line	1.3	4.0	0.8	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(In percent of nonmineral GDP)											
Revenue	44.8	34.6	40.3	36.7	37.0	33.6	32.5	31.4	31.4	30.6	30.1
Taxes	24.8	24.9	24.9	24.9	24.6	24.6	24.1	23.8	23.5	23.4	23.4
Taxes on income, profits, and capital gains	8.2	9.0	8.3	7.9	8.1	7.9	7.9	7.8	7.8	7.8	7.8
Taxes on payroll & workforce	7.1	7.0	7.3	9.0	8.7	9.1	9.1	9.1	9.1	9.2	9.3
Taxes on property	0.2	0.0	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1
Taxes on goods & services	6.2	6.0	5.8	4.7	4.5	4.8	4.8	4.9	4.9	4.9	4.9
Taxes on international trade & transactions	2.6	2.2	2.8	2.7	2.6	2.2	1.8	1.6	1.1	1.0	0.9
Other taxes	0.6	0.6	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Mineral revenue	13.6	4.7	8.7	8.7	7.4	6.7	6.2	5.4	5.8	5.3	4.9
Mineral and petroleum taxes	12.5	3.9	7.2	8.0	6.7	5.8	5.5	5.0	3.8	3.8	3.5
Mining and petroleum dividends	1.1	0.8	1.5	0.8	0.7	0.9	0.7	0.5	2.0	1.5	1.3
Grants	6.4	5.0	6.8	3.1	5.0	2.3	2.3	2.2	2.1	2.0	1.9
Expenditure	41.4	46.8	36.3	36.1	37.4	36.6	34.9	33.3	32.4	30.1	28.1
Expense	24.0	23.8	20.3	21.3	22.0	21.7	21.3	21.3	23.0	22.2	21.4
Compensation of employees	10.1	10.1	9.0	10.2	8.5	8.5	8.3	8.1	7.8	7.5	7.2
Purchases of goods and services	7.7	7.6	6.2	6.5	8.3	8.3	8.2	8.7	11.0	10.6	10.2
Interest	2.4	2.5	1.7	1.3	1.7	1.4	1.3	1.1	1.0	1.0	0.9
Subsidies	1.6	1.5	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Grants	0.7	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.6	0.6	0.5
Other payments	1.4	1.2	1.2	1.3	1.4	1.5	1.4	1.4	1.3	1.3	1.2
Net acquisition of non-financial assets	17.4	23.0	16.0	14.8	15.5	15.0	13.7	12.0	9.4	7.9	6.7
<i>Gross operating balance</i>	20.8	10.9	20.0	15.4	15.0	11.9	11.3	10.1	8.4	8.4	8.7
Overall balance (Net lending (+)/borrowing (-))	3.5	-12.2	4.0	0.6	-0.5	-3.0	-2.4	-1.9	-1.0	0.5	2.0
Nonmineral overall balance	-10.1	-16.9	-4.7	-8.2	-7.9	-9.7	-8.6	-7.3	-6.8	-4.7	-2.8
Memorandum items:											
Additional priority expenditure (in percent of GDP)	5.3	10.6	3.3	3.6	0.0	4.0	3.5	2.0	0.3	0.0	0.0
Government deposits (in percent of GDP)	16.8	11.5	12.4	15.9	12.1	12.0	8.7	5.9	3.9	4.2	5.5
Gross public debt (in percent of GDP)	31.7	31.5	25.6	25.2	16.7	23.2	21.3	18.4	13.5	13.0	12.5
Domestic (in percent of GDP)	18.5	19.1	15.2	15.4	6.9	13.5	11.5	9.3	6.4	5.9	5.4
External (in percent of GDP)	13.2	12.5	10.4	9.8	9.8	9.7	9.8	9.2	7.1	7.1	7.1
Non-contingent liabilities (in percent of GDP)	8.7	26.5	23.6	19.6	18.0	17.8	16.5	4.7	3.2	3.0	2.7
Net public debt (in percent of GDP) 1/	23.6	29.2	20.5	16.3	10.7	17.3	18.2	17.2	12.8	11.7	9.7
Nonmineral GDP at current prices (in millions of Kina)	15706	17616	20479	24511	27862	28071	31107	34704	39282	44348	50041
GDP at current prices (in millions of Kina)	21601	22331	26395	30167	33991	34297	37777	44874	64851	70914	77065

Sources: Papua New Guinea authorities; and IMF staff estimates.

1/ Gross public debt and non-contingent liabilities less government assets including LNG equity stake.

Table 3. Papua New Guinea: Balance of Payments, 2008–17
(In millions of U.S. dollars)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
				Est.			Proj.			
Current account balance	674	-1,325	-2,532	-4,605	-4,374	-3,247	-2,365	2,337	2,383	2,260
Mineral	1,980	502	-584	-3,308	-2,613	-1,122	70	4,851	5,049	5,001
Nonmineral	-1,307	-1,827	-1,948	-1,297	-1,762	-2,125	-2,436	-2,515	-2,666	-2,741
Trade balance	2,545	1,253	1,582	861	1,325	2,111	2,949	8,825	9,462	9,481
Exports (f.o.b.)	5,685	4,511	5,843	7,047	7,788	8,004	8,814	13,754	14,173	14,302
Mineral	4,275	3,441	4,444	5,215	5,968	6,103	6,811	11,742	12,158	12,292
Nonmineral	1,410	1,070	1,399	1,832	1,819	1,901	2,002	2,012	2,015	2,010
Imports (c.i.f.)	-3,140	-3,258	-4,261	-6,186	-6,463	-5,893	-5,865	-4,929	-4,711	-4,821
Mineral	-1,182	-1,356	-1,866	-3,897	-3,877	-3,060	-2,738	-1,741	-1,415	-1,426
Nonmineral	-1,958	-1,902	-2,396	-2,290	-2,585	-2,833	-3,126	-3,188	-3,296	-3,395
Services	-1,388	-1,998	-3,499	-3,419	-3,937	-3,652	-3,540	-2,358	-2,374	-2,445
Income	-644	-754	-808	-2,204	-1,875	-1,810	-1,855	-4,169	-4,704	-4,845
Current Transfers	161	173	193	158	113	104	81	39	-1	70
Official	172	267	276	315	292	300	309	318	327	334
Private	-10	-94	-83	-157	-180	-196	-228	-279	-328	-264
Capital and financial account balance	-696	1,663	3,055	5,957	4,347	3,635	2,498	-640	-160	-250
Direct investment	-31	420	858	1,750	1,203	990	1,908	378	443	454
Other investment	-665	1,244	2,197	4,207	3,144	2,645	590	-1,018	-603	-704
Medium- and long-term loan	21	2,475	2,176	5,099	2,838	2,382	-1,022	-823	-418	-528
Official (net)	-43	-35	11	316	102	79	86	112	76	77
Private capital flows (net)	63	2,510	2,164	4,783	2,736	2,304	-1,109	-935	-494	-606
Commercial banks	-110	98	89	76	-26	-69	-88	-95	-99	-100
Other	-576	-1,330	-68	-968	332	332	1,700	-100	-87	-76
Net errors and omissions	33	-5	-55	-121	0	0	0	0	0	0
Overall balance	11	333	469	1,231	-27	388	132	1,696	2,223	2,010
Financing	-11	-333	-469	-1,231	27	-388	-132	-1,696	-2,223	-2,010
Reserve assets	-8	-529	-469	-1,231	27	-388	-132	-1,696	-2,223	-2,010
Use of IMF credit	0	0	0	0	0	0	0	0	0	0
Other foreign liabilities	-2	196	0	0	0	0	0	0	0	0
Memorandum items:										
Current account (in percent of GDP)	8.4	-16.4	-25.6	-36.4	-28.4	-20.2	-13.0	9.3	9.1	8.3
Mineral	24.8	6.2	-5.9	-26.1	-17.0	-7.0	0.4	19.4	19.3	18.4
Nonmineral	-16.3	-22.5	-19.7	-10.3	-11.4	-13.2	-13.4	-10.0	-10.2	-10.1
Net international reserves (end-year)										
In millions of U.S. dollars	2,093	2,426	2,895	4,126	4,099	4,487	4,619	6,315	8,538	10,548
Gross official reserves (end-year)										
In millions of U.S. dollars	2,095	2,623	3,092	4,323	4,296	4,684	4,816	6,513	8,735	10,745
In months of imports of goods and services	5.1	5.8	4.6	5.2	4.7	5.5	5.8	9.8	13.3	16.0
Public external debt-service-exports ratio (in percent) 1/	3.4	1.8	1.4	1.3	1.5	1.4	1.2	0.8	0.7	0.7
Public external debt-GDP ratio (in percent) 1/	13.2	12.5	10.4	9.8	9.7	9.8	9.2	7.1	7.1	7.1

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

1/ Public external debt includes central government external debt.

Table 4. Papua New Guinea: Summary Accounts of the Depository Corporations, 2008–12

	2008	2009	2010	2011 Est.	2012 Proj.
Bank of Papua New Guinea (In millions of kina; end of period)					
Net foreign assets	5,566	6,554	7,652	8,847	10,322
Foreign assets	5,608	7,091	8,170	9,266	10,773
Foreign liabilities	42	536	518	419	451
Net domestic assets	-3,946	-4,741	-5,636	-5,589	-6,705
Domestic credit	-1,774	-220	-639	-1,459	-1,116
Net credit to government	-1,827	-261	1,385	2,328	2,073
Claims	107	333	367	395	439
Central government deposits	-1,934	-593	1,019	1,933	1,634
Credit to other sectors	53	40	13	79	79
Other items, net	-2,172	-4,520	-4,997	-4,130	-5,588
<i>Of which:</i> Central Bank Securities (CBBs)	2,136	4,117	4,594	5,687	6,445
Reserve money	1,620	1,814	2,016	3,259	3,617
Currency in circulation	850	1,002	1,193	1,532	1,737
Deposits of other depository corporations	767	808	810	1,724	1,878
Required reserves	303	369	514	945	1,073
Excess reserves	464	440	296	779	805
Other deposits	3	3	13	3	3
Depository Corporations Survey (In millions of kina; end of period)					
Net foreign assets	6,147	7,924	8,968	10,118	11,762
Net domestic assets	3,553	3,846	3,999	5,103	5,490
Domestic credit	4,854	6,665	6,993	6,632	7,838
Net credit to central government	-400	574	-202	-1,073	-438
Claims on other sectors	5,254	6,091	7,195	7,705	8,276
Claims on the private sector	5,128	5,902	6,971	7,479	8,039
Other items, net	-1,301	-2,820	-2,994	-1,529	-2,348
Broad money	9,700	11,770	12,967	15,221	17,252
Narrow money	5,520	6,233	7,644	9,620	10,979
Currency outside other depository corporations	676	789	955	1,189	1,332
Demand deposits	4,844	5,444	6,689	8,431	9,647
Quasi money	4,181	5,537	5,323	5,601	6,273
(Annual percentage change)					
Net foreign assets	-12.6	28.9	13.2	12.8	16.2
Net domestic assets	81.0	8.2	4.0	27.6	7.6
Net domestic credit	15.7	37.3	4.9	-5.2	18.2
<i>Of which:</i> Private sector	29.5	15.1	18.1	7.3	7.5
Broad money	7.8	21.3	10.2	17.4	13.3
<i>Memorandum items:</i>					
Reserve money (percentage change)	-12.0	11.9	11.1	61.7	11.0
Gross international reserves (in millions of US dollars)	2,095	2,623	3,092	4,323	4,296
Nominal nonmineral GDP/Broad money	1.6	1.5	1.6	1.6	1.6

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

Table 5. Papua New Guinea: Indicators of External Vulnerability, 2008–12
(In percent of GDP, unless otherwise indicated)

	2008	2009	2010	2011	2012
				Est.	Proj.
Financial indicators					
Gross public debt 1/ 2/	31.7	31.5	25.6	25.2	23.2
Broad money (percent change, 12-month basis)	7.8	21.3	10.2	17.4	13.3
Private sector credit (percent change, 12 month basis)	29.5	15.1	18.1	7.3	7.5
Interest rate (182-day T-bills; period average)	5.9	7.2	6.4	6.8	...
External indicators					
Exports (percent change, 12-month basis in U.S. dollars)	18.0	-20.6	29.5	20.6	10.5
Imports (percent change, 12-month basis in U.S. dollars)	19.4	3.8	30.8	45.2	4.5
Current account balance	8.4	-16.4	-25.6	-36.4	-28.4
Capital and financial account balance (millions of U.S. dollars)	-695.9	1663.4	3055.3	5957.4	4347.2
<i>Of which:</i> Inward foreign direct investment	-30.6	419.8	857.9	1750.1	1203.0
Gross official reserves (millions of U.S. dollars)	2094.8	2623.5	3092.2	4322.8	4295.9
Central Bank short-term foreign liabilities (millions of U.S. dollars)	1.5	1.7	2.7	2.8	197.2
Commerical bank foreign assets (millions of U.S. dollars)	263.5	578.1	579.0	646.5	697.1
Commerical bank foreign liabilities (millions of U.S. dollars)	46.5	71.2	80.9	61.9	66.7
Gross official reserves (months of nonmineral imports, c.i.f.)	8.8	10.9	10.4	15.8	13.8
Broad money to gross reserves (ratio)	1.7	1.7	1.6	1.6	1.8
Total short-term external debt to reserves (percent) 3/	2.2	2.7	2.6	1.4	1.6
Public external debt to GDP ratio (in percent)	13.2	12.5	10.4	9.8	9.7
Exchange rate (per U.S. dollar; period average)	2.7	2.7	2.6	2.2	...
Financial market indicators					
Foreign currency long-term government debt rating 1/					
Moody's 4/	Ba2	Ba2	Ba2	Ba2	
Standard & Poors	B+	B+	B+	B+	...

Sources: Department of Treasury; Bank of Papua New Guinea; and IMF staff estimates and projections.

1/ End of period.

2/ Includes central government external debt.

3/ Covers only banking system short-term external debt.

Table 6. Papua New Guinea: Medium-Term Scenario, 2008–17

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
				Est.	Projections					
Growth and prices (change in percent)										
Real GDP	6.6	6.1	7.6	8.9	7.7	4.0	7.7	20.0	5.4	4.9
Mineral	-1.4	-1.7	-2.0	-11.8	13.7	5.0	45.8	145.2	2.5	0.3
Nonmineral	7.6	7.0	8.5	10.8	7.2	3.9	4.7	6.2	6.1	6.0
CPI (period average)	10.7	6.9	6.0	8.4	6.8	6.7	6.6	6.5	6.5	6.5
CPI (end-period)	11.2	5.7	7.8	6.9	6.8	6.7	6.6	6.5	6.5	6.5
Central government operations (in percent of GDP)										
Total revenue and grants	32.6	27.3	31.3	29.8	27.5	26.8	24.3	19.0	19.2	19.6
Total revenue	28.0	23.4	26.0	27.3	25.6	24.9	22.6	17.8	17.9	18.3
Of which: Mineral tax revenue	9.1	3.1	5.6	6.5	4.8	4.5	3.8	2.3	2.4	2.3
Grants	4.6	3.9	5.3	2.5	1.9	1.9	1.7	1.3	1.3	1.2
Total expenditure	30.1	36.9	28.2	29.4	30.0	28.8	25.8	19.6	18.8	18.2
Primary balance	4.3	-7.6	4.4	1.5	-1.3	-0.9	-0.6	0.0	0.9	1.9
Nonmineral balance	-7.4	-13.3	-3.6	-6.6	-8.0	-7.1	-5.7	-4.1	-3.0	-1.8
Overall balance	2.5	-9.6	3.1	0.5	-2.5	-2.0	-1.5	-0.6	0.3	1.3
Gross public debt (in percent of GDP) 1/										
Domestic	18.5	19.1	15.2	15.4	13.5	11.5	9.3	6.4	5.9	5.4
External	13.2	12.5	10.4	9.8	9.7	9.8	9.2	7.1	7.1	7.1
Balance of payments (in millions of U.S. dollars)										
Exports, f.o.b.	5,685	4,511	5,843	7,047	7,788	8,004	8,814	13,754	14,173	14,302
Of which: Mineral	4,275	3,441	4,444	5,215	5,968	6,103	6,811	11,742	12,158	12,292
Imports, c.i.f.	-3,140	-3,258	-4,261	-6,186	-6,463	-5,893	-5,865	-4,929	-4,711	-4,821
Current account	674	-1,325	-2,532	-4,605	-4,374	-3,247	-2,365	2,337	2,383	2,260
(In percent of GDP)	8.4	-16.4	-25.6	-36.4	-28.4	-20.2	-13.0	9.3	9.1	8.3
Overall balance (including exceptional financing)	11	333	469	1,231	-27	388	132	1,696	2,223	2,010
Net official reserves (in millions of U.S. dollars)										
(In months of goods and services imports, c.i.f.)	5.1	5.4	4.3	4.9	4.5	5.3	5.5	9.5	13.0	15.7
(In months of nonmining imports, c.i.f.)	8.8	10.1	9.8	15.1	13.1	12.7	12.0	16.0	21.0	25.2
Public external debt service-export ratio (in percent) 2/										
	3.4	1.8	1.4	1.3	1.5	1.4	1.2	0.8	0.7	0.7
Memorandum items:										
Nominal GDP (in millions of U.S. dollars)	8,000	8,105	9,885	12,655	15,393	16,114	18,192	25,046	26,138	27,152
Assumed commodity prices: 3/										
Gold (U.S. dollars per ounce)	872	973	1,225	1,569	1,711	1,731	1,759	1,789	1,825	1,872
Copper (U.S. dollars per ton)	6,963	5,165	7,538	8,823	8,460	8,501	8,436	8,349	8,246	8,150
Oil (U.S. dollars per barrel)	97	62	79	104	115	110	103	97	93	91

Sources: Department of Treasury; Bank of Papua New Guinea; and IMF staff estimates and projections.

1/ Includes central government external debt.

2/ Includes changes in check float.

3/ April 2012 WEO projections.

Table 7. Papua New Guinea: Millennium Development Goals Progress, 1990-2010

	1990	1995	2000	2005	2010
Goal 1: Eradicate extreme poverty and hunger					
Target 1.A: Halve, between 1990 and 2015, the proportion of people whose income is less than \$ 1 a day					
Poverty gap at \$1.25 a day (PPP) (%)	..	12 ..	..	..	..
Poverty headcount ratio at \$1.25 a day (PPP) (% of population)	..	36 ..	..	..	..
Income share held by lowest 20%	..	5 ..	..	..	..
Target 1.B: Achieve full and productive employment and decent work for all, including women and young people					
Employment to population ratio, 15+, total (%)	70	69	70	71	71
Employment to population ratio, ages 15-24, total (%)	57	53	56	57	56
Target 1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger					
Malnutrition prevalence, weight for age (% of children under 5)	..	..	..	18 ..	..
Goal 2: Achieve universal primary education					
Target 2.A: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling					
Literacy rate, youth female (% of females ages 15-24)	..	..	64 ..	..	70
Literacy rate, youth male (% of males ages 15-24)	..	..	69 ..	..	65
Primary completion rate, total (% of relevant age group)	48	52	55 ..	..	..
Total enrollment, primary (% net)	65 ..	..	..	..	..
Goal 3: Promote gender equality and empower women					
Target 3.A: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015					
Proportion of seats held by women in national parliaments (%)	0	0	2	1	1
Ratio of female to male enrollments in tertiary education					
Ratio of female to male primary enrollment					
Ratio of female to male secondary enrollment					
Share of women employed in the nonagricultural sector (% of total nonagricultural employment)	27.9 ..	..	32.1 ..	..	..
Goal 4: Reduce child mortality					
Target 4.A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate					
Immunization, measles (% of children ages 12-23 months)	67	42	62	63	55
Mortality rate, infant (per 1,000 live births)	65	60	55	51	47
Mortality rate, under-5 (per 1,000)	90	81	74	67	61
Goal 5: Improve maternal health					
Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio					
Maternal mortality ratio (modeled estimate, per 100,000 live births)	340	300	290	270	250
Births attended by skilled health staff (% of total)	..	42	41	53 ..	..
Target 5.B: Achieve, by 2015, universal access to reproductive health					
Contraceptive prevalence (% of women ages 15-49)	..	26 ..	..	36 ..	..
Adolescent fertility rate (births per 1,000 women ages 15-19)	..	76	73	69	65
Pregnant women receiving prenatal care (%)	..	78 ..	..	79 ..	..
Goal 6: Combat HIV/AIDS, malaria, and other diseases					
Target 6.A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS					
Prevalence of HIV, female (% ages 15-24)	..	..	..	..	0.8
Prevalence of HIV, male (% ages 15-24)	..	..	..	..	0.3
Prevalence of HIV, total (% of population ages 15-49)	0.1	0.1	0.4	0.8	0.9
Target 6.C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases					
Incidence of tuberculosis (per 100,000 people)	303	303	303	303	303
Tuberculosis cases detection rate (all forms)					
Goal 7: Ensure environmental sustainability					
Target 7.A: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources					
Target 7.B: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss					
Forest area (% of land area)	69.6 ..	..	66.5	65	63.4
CO2 emissions (kg per PPP \$ of GDP)	0	0	0	0	0
CO2 emissions (metric tons per capita)	1	0	0	1	0
Marine protected areas, (% of surface area)					
Terrestrial protected areas (% of total surface area)					
Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation					
Improved sanitation facilities (% of population with access)	47	47	46	47	45
Improved water source (% of population with access)	41	41	39	41	40
Goal 8: Develop a global partnership for development					
Target 8: Various					
Net ODA received per capita (current US\$)	99	79	51	44	62
Debt service (PPG and IMF only, % of exports, excluding workers' remittances)	18	10	8	6	1
Internet users (per 100 people)	0	0	0.8	1.7	1.3
Mobile cellular subscriptions (per 100 people)	0	0	0	1	28
Telephone lines (per 100 people)	1	1	1	1	2
Other					
Fertility rate, total (births per woman)	5	5	5	4	4
GNI per capita, Atlas method (current US\$)	830	1040	620	680	1300
GNI, Atlas method (current US\$) (billions)	3.4	4.9	3.3	4.2	8.9
Gross capital formation (% of GDP)	24.4	21.9	21.9	19.8	17.8
Life expectancy at birth, total (years)	55	56	58	60	62
Literacy rate, adult total (% of people ages 15 and above)	..	..	57 ..	..	60
Population, total (millions)	4.1	4.7	5.4	6.1	6.5
Trade (% of GDP)	89.6	104.7	115.4	137.7	108.9

Source: World Development Indicators database, 2011.

APPENDIX I: PAPUA NEW GUINEA—AUTHORITIES’ RESPONSE TO FUND POLICY ADVICE¹

Fund Recommendations	Policy Actions
Monetary and Exchange Rate Policy	
Monetary policy needs to be tightened to contain inflationary pressures and reduce the risk of higher inflation becoming entrenched in expectations.	The BPNG increased its policy rate twice to 7.75 percent last year. In addition to issuing CBBs to mop up liquidity, the cash reserve requirement has been increased twice by a total of 200 basis points to 6 percent. The nominal effective exchange rate appreciated by 21 percent.
Fiscal Policy	
Tighter fiscal policies during the construction phase of the LNG plant are needed to reduce inflationary pressures.	A small budget surplus was achieved. Spending outside the budget was in line with the MTFS, and is expected to be under the MTFS threshold of 4 percent of GDP.
The government’s decision to allocate funds to meet its superannuation obligations should be implemented as planned. It should develop a payment schedule for remaining unfunded superannuation liabilities.	The authorities met their current obligations but did not allocate funding for the outstanding arrears prior to 2010, which stands at about K2 billion.
The decision to move all new trust accounts to the BPNG should be fully implemented.	Little progress has been made so far. The authorities plan to further strengthen financial and reporting systems. They intend to closely monitor spending from trust accounts and, if required, consider ways to exercise expenditure control. They plan to develop a finance instruction to guide the use of DSIP trust accounts.
The SWF needs to be integrated into the macro framework and supported by other fiscal institutions, such as the MTFS and the Fiscal Responsibility Act.	The authorities plan to review the current MTFS in 2012. They have indicated that the new MTFS will incorporate new guiding principles governing SWF revenue.
It will be important to invest its assets offshore; fully integrate withdrawals into the budget process; and ensure transparency, accountability, and good governance by adopting the internationally accepted Santiago Principles.	The authorities proposed a draft organic SWF law with offshore investments, full integration with the fiscal and budget framework, and transparency, accountability, and good governance in line with international best practices.
Financial Sector Policy	
Banks should be encouraged to maintain strict lending standards. Furthermore, all financial institutions need to guard against overexposure to the property sector.	Lending interest rates have increased somewhat and credit growth has slowed. Financial institutions have reduced their exposure to real estate.
Structural Reforms	
Addressing current supply constraints requires a more supportive environment for the private sector and a revival of the structural reform agenda.	The authorities carried out reviews of all state-owned enterprises in 2011. They announced a removal of remaining telecommunications monopolies and are preparing PNG Power toward being a commercially-oriented business.

Source: IMF Staff.

1/ Advice from the 2011 Article IV Consultation.

APPENDIX II: PAPUA NEW GUINEA—2011 FSSA RECOMMENDATIONS AND AUTHORITIES' RESPONSES¹

FSAP recommendations		Authorities' responses	
Measure	Priority	Time frame ¹	
Banking Sector			
Credit Risk			
<ul style="list-style-type: none"> Monitor current and emerging NPLs with regard to loan duration and sectoral impacts of macroeconomic changes; Conduct a thorough analysis of counterparty exposure concentrations, with a full definition of interconnectedness; and Conduct a thorough analysis of collateral and related lending exposures to property loans. 	High	Medium term	1. The BPNG SDP 2012-2015 stress to improve financial system stability by: <ol style="list-style-type: none"> 1) Consolidate and improve the current staff strength, and enhance staff skills and supervisory methods and practices of the Bank. 2) A two-way process of effective supervision by the Central Bank and compliance by the intermediaries to prudential framework is maintained and enhanced through the application of best market practices. 3) Continue to encourage and require financial institutions to strengthen their risk management capabilities. 4) Develop an analysis of financial system stability and resilience of systematically important institutions, to enable the Bank to monitor developments.
<ul style="list-style-type: none"> Develop monitoring systems and conduct stress tests that assume alternative definitions of liquid assets; Ensure that any withdrawal of government deposits from the banking system is done with careful planning and adequate consultation; and Formalize bank liquidity support arrangements with the BPNG, including through repurchase agreements for government securities stock. 	Medium	Short term	2. The BPNG plans to create a unit for financial stability analysis. Stress test will be conducted to conduct risk assessment on the financial sector.
<ul style="list-style-type: none"> Centralize data management systems; Conduct and document a full risk assessment as the basis for the supervisory strategy; Publish a full set of prudential standards, starting with risk management, market and liquidity risk, but also including governance, credit, and operational risk. Financial statement reporting also needs further standardization; Increase the range of administrative sanctions and make compliance with prudential standards compulsory; and Enhance the capacity of the supervisory staff through training, so that the BPNG can move to full risk-based supervision. 	High	Short and Medium term	3. The BPNG has standing discount facilities to support banks and other financial institutions with liquidity. However, currently the financial institutions, especially the major commercial banks, have ample liquidity, and the facilities have not been used.
<ul style="list-style-type: none"> Make arrangements for liquidity improvement and contingency planning that reduce the risk profile. 	High	Short term	
Regulation and Supervision			
<ul style="list-style-type: none"> Centralize data management systems; Conduct and document a full risk assessment as the basis for the supervisory strategy; Publish a full set of prudential standards, starting with risk management, market and liquidity risk, but also including governance, credit, and operational risk. Financial statement reporting also needs further standardization; Increase the range of administrative sanctions and make compliance with prudential standards compulsory; and Enhance the capacity of the supervisory staff through training, so that the BPNG can move to full risk-based supervision. 	Medium	Medium Term	
<ul style="list-style-type: none"> Make arrangements for liquidity improvement and contingency planning that reduce the risk profile. 	Medium	Short term	
Crisis Management			
<ul style="list-style-type: none"> Establish a discount window lending program, including repurchase agreements; Strengthen BPNG's crisis preparedness by developing a contingency planning framework, including internal procedures on emergency liquidity assistance; and Consider the development of a deposit protection scheme. 	High	Short term	The BPNG SDP 2012-2015 plans to introduce new open market operation measures.
<ul style="list-style-type: none"> Consider the development of a deposit protection scheme. 	High	Short term	Discount window has been established.
<ul style="list-style-type: none"> Consider the development of a deposit protection scheme. 	Low	Long term	Currently there is no plan on deposit protection scheme.
Government Debt Markets			
<ul style="list-style-type: none"> Estimate the scale of broader public-sector debt obligations, such as borrowing and guarantees; Issue BPNG guidelines to market participants on sound procedures for repurchase transactions; Review the regulatory infrastructure, keeping in mind principles to ensure market integrity and price reporting, to allow seamless over-the-counter trading; Introduce a noncompetitive segment of the auction for smaller investors. 	High	Short Term	The authorities plan to include debt borrowed by the Independent Public Business Corporation (IPBC), the governing body of PNG's state-owned enterprises, to the government debt. This helps to estimate the broader public-sector debt obligations.
<ul style="list-style-type: none"> Issue BPNG guidelines to market participants on sound procedures for repurchase transactions; Review the regulatory infrastructure, keeping in mind principles to ensure market integrity and price reporting, to allow seamless over-the-counter trading; Introduce a noncompetitive segment of the auction for smaller investors. 	High	Short Term	The BPNG SDP 2012-2015 aims to support the development of the secondary market and enhance liaison with market participants.
<ul style="list-style-type: none"> Introduce a noncompetitive segment of the auction for smaller investors. 	Medium	Medium Term	BPNG plans to use the TAP facility for trade of securities in small amounts to encourage small investor participation.

FSAP recommendations		Authorities' responses	
Measure	Priority	Time frame ¹	
Payment Systems			
<ul style="list-style-type: none"> Implement the proposed National Payment System Development Program; Establish a Payment Systems Department in the BPNG, and exercise oversight of all payment and securities settlement systems; and Develop regulations/ guidelines for mobile payments and securities settlements. 	High	Medium term	The BPNG SDP 2012-2015 envisages reforming the current payment system, and improving related supervision.
Insurance Sector			
<ul style="list-style-type: none"> Enhance the supervisory functions regarding offsite reporting and monitoring and onsite inspections; Develop guidance on governance, risk management, and internal controls; and Implement the International Association of Insurance Supervisors' principles, as appropriate to the PNG setting. 	High	Short term	<ol style="list-style-type: none"> The BPNG increased onsite inspections on superannuation funds and life insurance companies. The BPNG is working with the Office of Insurance Commissioner to strengthen the cooperation in general life insurance supervision.
Financial Inclusion			
<ul style="list-style-type: none"> Establish a functional coordination mechanism on financial inclusion, including all the government departments and agencies; Set up a national consultative process; and Commence specific data collection on financial inclusion. 	Medium	Short term	<ol style="list-style-type: none"> The BPNG SDP 2012-2015 aims to increase focus on the regulation and supervision of small institutions that cater for Papua New Guineans' involvement in financial inclusion; The Ministry of Finance plans to inject 130 million Kina to the National Development Bank and providing tax incentives for banks to invest in regional branches to improve services in rural areas. The IFC and the government have agreed to establish a
AML			
<ul style="list-style-type: none"> Give BPNG responsibility for enforcing financial institutions' obligations; Complete the customer due diligence regime (especially with more focus on monitoring accounts); and Issue regulations on customer due diligence. 	High	Short term	<p>The FIU is currently under the Police Department. The BPNG has not got the enforcing authority, but the FIU will conduct regular meeting with BPNG to get information.</p> <p>The FIU has issued guidelines on customer due diligence under s14 of the Proceeds of Crime Act 2005.</p>
Sovereign Wealth Funds			
<ul style="list-style-type: none"> The authorities should decide on the funding and withdrawal rules, institutional arrangements, including organizational structure, roles and responsibilities, and investment strategy for the funds decided by the Government. 	High	Short term	SWF bill has been passed by the Parliament in February 2012.

1/ The Financial System Stability Assessment (FSSA) is based on the FSAP mission to PNG during May 12–26, 2010, and was updated after an MCM mission during February 16–21, 2011.

APPENDIX 3: PAPUA NEW GUINEA—DEBT SUSTAINABILITY ANALYSIS¹

Papua New Guinea (PNG) has reduced its risk of public debt distress from moderate to low since the 2011 Article IV Consultation. This reflects both PNG's reduction in public external debt over the past decade, and an enhanced debt capacity under the DSA following an upgrade of the country's policy and institutional rating by the World Bank². Under the baseline scenario, all external debt sustainability indicators remain well below their applicable thresholds. Stress tests indicate that unstable debt dynamics only occur if prices of copper, gold and natural gas collapse and remain low over a decade, and the government borrows abroad to finance current expenditure plans. Total public debt continues its downward path under the baseline, and assets are accumulated after domestic debt is paid off in 2020. In a low risk but high impact scenario, cancellation of the LNG project would derail progress in debt reduction if current expenditure plans are maintained.

¹ Since Papua New Guinea is an IBRD/IDA blend country, this DSA is prepared by Fund staff in consultation with the World Bank and the Asian Development Bank (AsDB) under the IMF-WB DSA framework for Low-Income Countries. The fiscal year of Papua New Guinea is the calendar year.

² The latest Country Policy and Institutional Assessment (CPIA) rating for PNG was 3.30 in 2010 and the average over 2008-10 was 3.27, leading to a policy performance rating upgrade from poor (CPIA \leq 3.25) to medium (3.25 < CPIA < 3.75).

Background

1. PNG has successfully reduced its public and publicly guaranteed (PPG) debt burden over the past decade. Total public debt declined from 71 to 25 percent of GDP from 2001 to 2011 (Table III.1). External public debt fell from 50 to 10 percent of GDP during this period (Tables III.1 and III.3). Multilateral lenders such as the World Bank and the AsDB account for about 75 percent of PPG external debt, and bilateral creditors account for the bulk of the remainder.

2. Private external debt has risen sharply in the run-up to LNG construction (Table III.3). Private external debt jumped to an estimated 82 percent of GDP in 2011 from 12 percent of GDP in 2008,³ driven by medium- and long-term debt draw-downs by the mineral and gas sectors and mainly related to the LNG project (construction is being undertaken by Esso Highlands, an ExxonMobil subsidiary).

³ Staff apportioned the funds flowing into PNG to finance the LNG project in line with Esso Highlands' financing plans (30 percent equity, 70 percent debt).

Economic Outlook and Underlying DSA Assumptions

3. Until full scale LNG production in 2015, PNG's economic performance will be driven by LNG construction, commodity price developments, and spending

associated with the 2012 elections. Real GDP growth increased to 9 percent in 2011 as LNG construction approached its peak phase, and growth is projected to remain high at 8 percent in 2012 before slowing to 4 percent in 2013. Large current account deficits (about 30 percent of GDP) during 2010–12 are being mostly financed by a combination of FDI and loan drawdowns by the mineral sector, and private sector external debt is expected to peak at 96 percent of GDP in 2013. The European debt crisis led to fluctuation in commodity prices in 2011, and although the global outlook has improved, risks remain. PNG's current account is most sensitive to the price of gold, while mineral tax revenues for the government derive mostly from the copper and oil sectors before 2015.

4. From 2015, real GDP and the current account will move in line with the LNG

sector. LNG production will push up real GDP by 20 percent in 2015, and generate a

persistent current account surplus. LNG revenues will be used to pay down the mineral sector's external debt and provide dividend payments to shareholders located abroad and in PNG. Fiscal revenues from LNG are projected to materialize from 2018 and total mineral revenues will reach around 10 percent of non-mineral GDP by 2024 (between the low and moderate revenue scenarios identified in FAD's technical assistance report for PNG's sovereign wealth fund). Box III.1 contains the medium-term macroeconomic framework for the DSA.

External Debt Sustainability Analysis

5. In the baseline scenario, all PPG external debt and debt service indicators stay well below the policy-dependent debt burden thresholds (Figure III.1 and Table III.3).

The PV of PPG external debt as a percentage of GDP is on a declining path and stays under 10 percent in the medium term, far below the 40 percent threshold. The PVs of PPG external debt-to-exports and debt-to-revenue ratios are also expected to stay below their applicable thresholds. After 2015, the external debt burden is expected to fall even faster due to the large projected increase in GDP, exports and revenue from LNG production.

Policy-based PPG External Debt Burden Thresholds for PNG

	Thresholds	2011	PNG's ratios 2012–17	2018–32
PV of debt in percent of				
GDP	40	8.6	7.2	4.8
Exports	150	14.5	13.1	10.5
Revenues	250	31.4	33.8	23.0
Debt service in percent of				
Exports	20	1.3	1.1	0.8
Revenues	20	2.7	2.7	1.7

6. Public external debt sustainability is maintained under all standard stress tests, and would be threatened only in a staff-constructed scenario with a very poor fiscal policy response to a substantial terms of trade shock (Table III.4). Consistent with WEO commodity price forecasts, the baseline scenario predicts PNG's terms of trade to improve in 2012 before settling at a permanently high level. This, combined with the boost from LNG production, makes PNG resilient to a wide range of GDP growth and depreciation shocks. Staff can only generate unstable public external debt dynamics if we instead use the PNG authorities' conservative estimates for export prices for the post-2013 period, impose a permanent reversal of the WEO-projected 16 percent gas price increase between 2011 and 2012,⁴ and then combine these developments with a government

⁴The authorities' projected prices for gold, copper and oil are used. Together with the imposed gas price decline, this amounts to a substantial negative shock to the mineral balance relative to the baseline, growing to 12 percentage points of GDP by 2016 and remaining at that level afterward.

decision to borrow extensively abroad to finance the baseline levels of real consumption and imports, instead of allowing economic adjustment to the terms of trade change. Even in this very low probability scenario, the PV of PPG external debt breaches the threshold of 40 percent of GDP only in 2018. Until 2015, the prices of gold and copper are the most important prices for external sustainability; thereafter, the LNG price is the dominant factor.

7. Delays to the LNG project would generate adverse public and private debt dynamics, even if PPG external debt indicators remain within the thresholds. The historical scenario graphs in Figure III.1 can be interpreted as representing PNG's external public debt dynamics in the absence of LNG construction and production, assuming that historical levels of real GDP growth are maintained. As for private sector external debt, staff projects that when LNG production begins, this debt will be paid down, falling to 21 percent of GDP by 2024. Delays to the

project, or a fall in LNG prices, would set back the private sector amortization schedule envisaged in the DSA.

Public Debt Sustainability Analysis⁵

8. Over the medium and long term, staff's baseline projections for PNG show a full pay-down of domestic public debt by 2020, followed by asset accumulation

(Figure III.2 and Table III.1). The projected downward trend in public debt is aided by the jump in real GDP owing to full-scale LNG production from 2015. Under the authorities' budget assumptions, the transitional period of low mineral revenues during 2013–17 is associated with low government expenditure, so any deficits remain small and the PV of public sector debt continuously declines from 24 percent of GDP in 2011 to 11 percent of GDP in 2017. From 2018 onwards, large projected LNG-related revenues enter the budget without a commensurate increase in government expenditure, resulting in long-term surpluses of about 4 percent of GDP. Domestic public debt is paid off in 2020 and assets are accumulated in a sovereign wealth fund, which measures 29 percent of GDP by 2032.

9. Economic growth and saving of commodity tax revenues are the key factors

⁵ Public debt includes domestic and external debt issued by the central government, less assets in the sovereign wealth fund.

for the projected public debt path as shown in alternative scenarios and bound tests

(Figure III.2 and Table III.2). The PV of public debt to GDP would remain at 11 percent by 2032 if there is a temporary negative shock to real GDP growth in 2013–14 followed by permanently lower revenues and unchanged expenditures.⁶ Such a scenario would likely not materialize because the authorities would adjust fiscal policy. Keeping the primary fiscal deficit at zero from 2012 through 2032, instead of moving into large surpluses over the medium term as in the baseline, would result in the PV of public debt being at 13 percent of GDP by 2017 and rising to 46 percent of GDP by 2032. This scenario is unrealistic but quantifies the sensitivity of the public debt outlook to the LNG revenue projections.

10. Realization of non-contingent liabilities related to superannuation arrears and SOEs, together with the cancellation of the LNG project, would generate unstable debt dynamics (Figure III.2 and Table III.2).

The government's unfunded superannuation liabilities are estimated to be 7 percent of GDP by end-2011, and staff assumes that SOEs' debt-to-GDP ratio is equal to the 2.5 percent of GDP estimated in 2008.⁷ The government has issued a completion guarantee for the LNG

⁶ Growth rates during 2013–14 are set to 2 percent, the historical average minus one standard deviation.

⁷ This estimate in the 2008 Article IV DSA was based on end-2007 financial statements of nine SOEs. Off-balance sheet liabilities, which may be significant, were not considered. Since 2008, data updates have been unavailable.

project of K 5.4 billion, amounting to 18 percent of GDP in 2011, and the public balance sheet would have to absorb this loss if the project is abandoned. Realizations of the above liabilities would not of themselves derail the downward trend in public debt ratios, but the loss of LNG revenues would put public debt on an upward path under current expenditure plans (to a PV of 33 percent of GDP by 2032).

Conclusion

11. Since the 2011 SR, PNG has successfully reduced its risk of public external debt distress from medium to low, and the commendable public debt performance is projected to continue. The authorities' spending plans indicate sustained reduction in both domestic and external public debt over the medium and long term, even during the 2013–17 period of transitionally low fiscal revenues. For expositional purposes in this report, it is assumed that domestic debt is fully paid down first and after that, assets accumulated in a sovereign wealth fund.

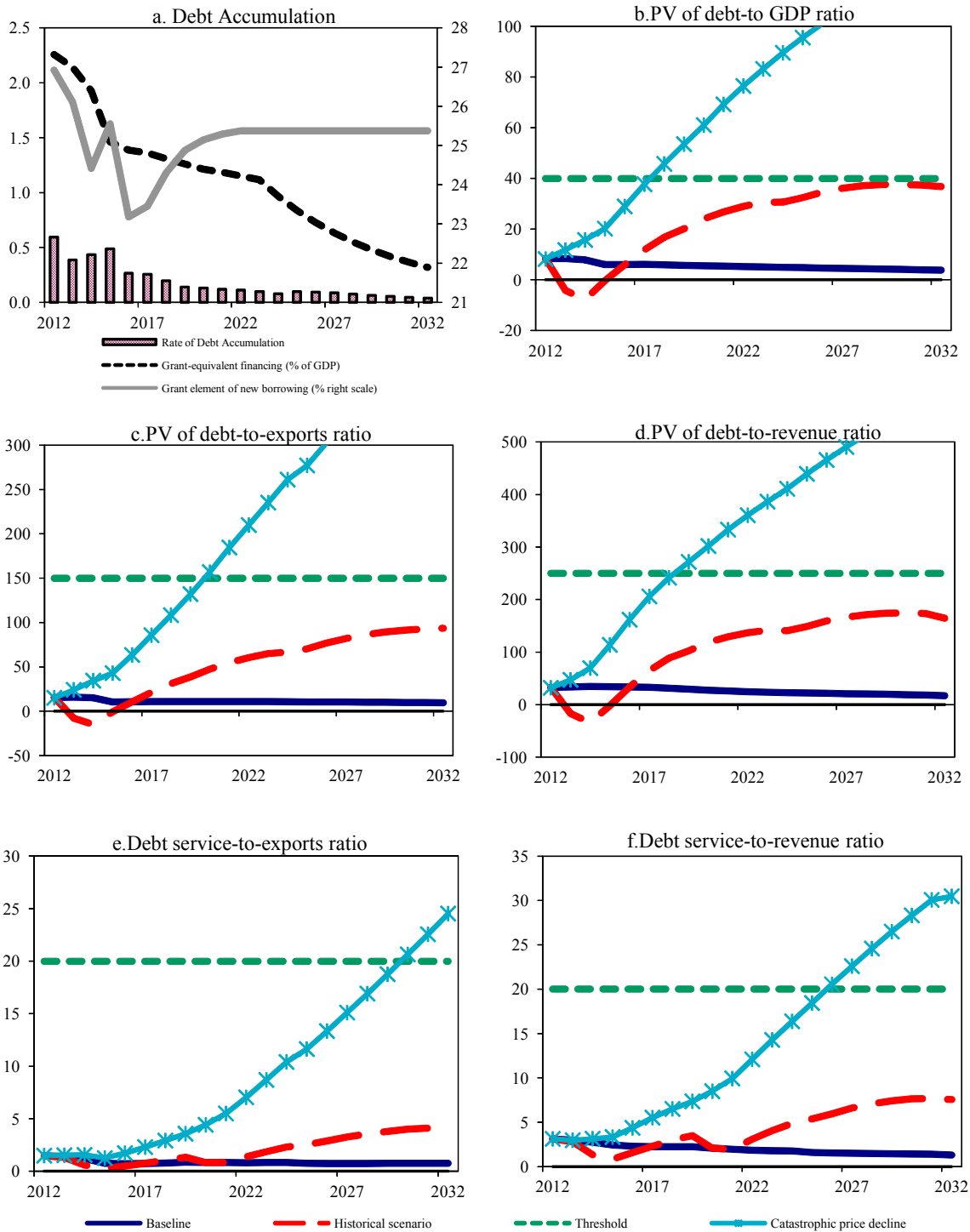
12. PNG's debt dynamics remain stable under standard stress-testing, and would only become unstable in the aftermath of low probability catastrophic shocks. Staff calculate that a severe and permanent shock to gold, copper, oil and gas prices, coupled with a loss of fiscal discipline and extensive foreign borrowing to maintain consumption and imports at baseline levels, would generate an unsustainable debt path. Realization of non-contingent liabilities related to superannuation arrears and SOEs would delay any progress in debt reduction. In the low risk but high impact scenario where the LNG project is cancelled, loss of associated fiscal revenues would ratchet up public debt, assuming that current expenditure plans remain unchanged. In that event, staff would advise that expenditure plans be curbed sharply downward.

Box III.1. Macroeconomic Assumptions Underlying the DSA

- **Real GDP growth** is projected to be 8 percent on average over the medium term, above the historical average of 4 percent, and slow gradually to 3–4 percent in the long run. Over the medium term, growth in the LNG and non-mineral sectors will offset the decline in copper and petroleum production.
- Construction of the **LNG project** will pass its peak phase in 2013, and be finished by 2014. Production and exports are expected to start in 2014 and reach full capacity in 2015, with a maximum capacity of 6.6 million tons of LNG produced annually. Staff estimates that LNG production will raise the level of real GDP by about 20 percent in 2015. However, accounting for substantial income outflows, the LNG project is expected to increase annual GNI by about 8 percent.
- **Inflation** is projected to decline to 7 percent in the near term due to the end of PNG production. It will stabilize at 6.5 percent by 2017, and at around 5 percent in the long run (after 2021).
- The **current account** is in deficit in 2011 and the deficit is expected to remain sizeable until 2015, reflecting strong import growth as well as services and income deficits associated with LNG construction. FDI and medium- to long-term debt inflows are financing most of the imports.
- The **grant element of loans** is expected to decline. As GDP per head rises, the share of external financing provided on concessional terms is expected to decline slightly over the projection period.^{1/}
- The **primary fiscal balance** is estimated to be in surplus of 1.5 percent of GDP in 2011, accounting for spending from the trust accounts. Over the medium term small primary deficits are anticipated, but these turn into large surpluses especially after 2022, as LNG tax revenues are realized.

1/ Grant-equivalent financing (in percent of GDP) decreases over time. From 2016 onwards, the majority of new AsDB disbursements are through OCR facilities, which carry a higher interest rate than ADF loans.

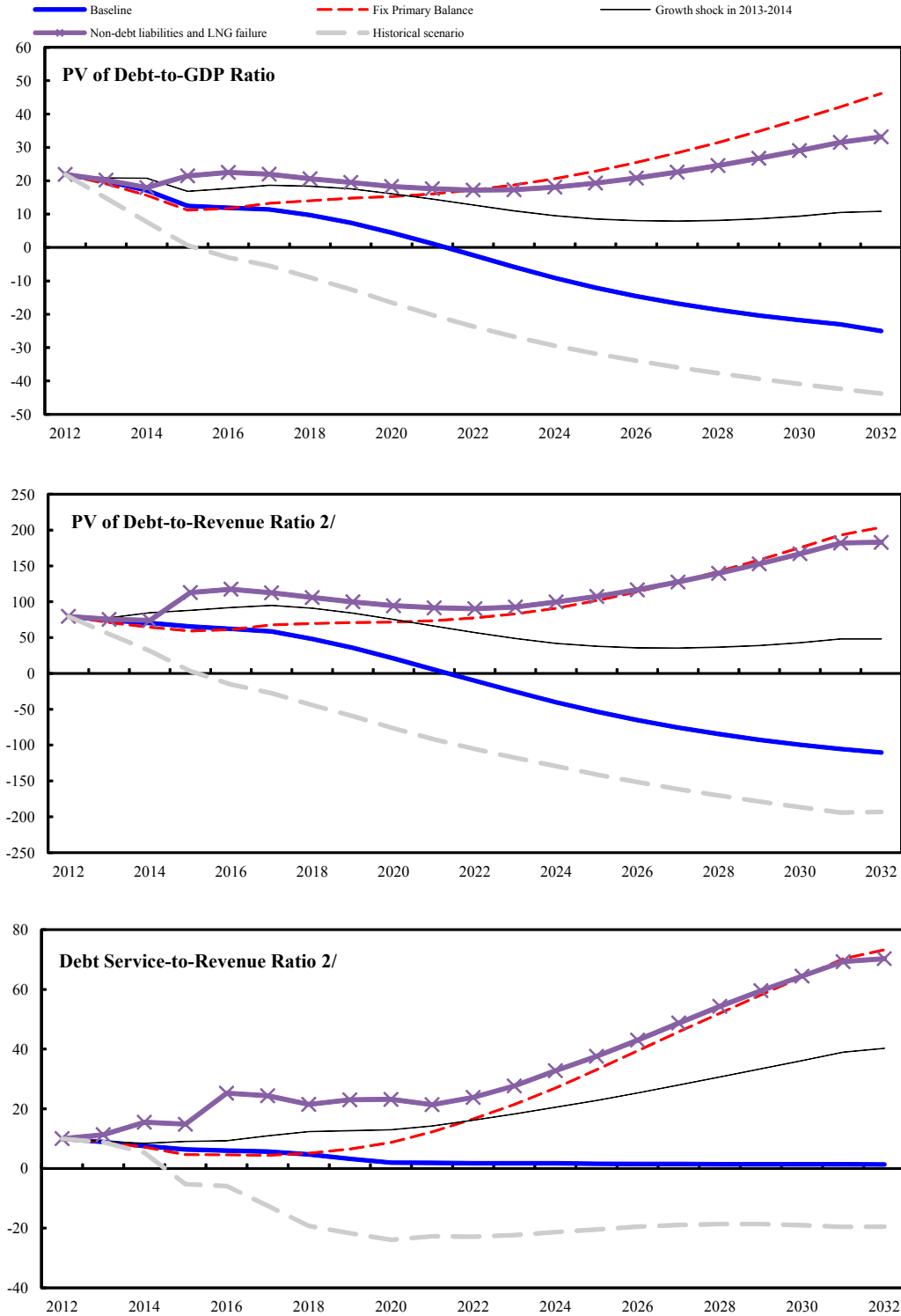
Figure III.1. Papua New Guinea: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2012-2032 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2022. In all figures it corresponds to a catastrophic price decline shock.

Figure III.2. Papua New Guinea: Indicators of Public Debt Under Alternative Scenarios, 2012-2032 1/



Sources: Country authorities; and staff estimates and projections.

1/Gross domestic and external central government debt less assets in sovereign wealth fund.

The most extreme stress test is the test that yields the highest ratio in 2022.

In all figures this corresponds to the failure of the LNG plant.

2/ Revenues are defined inclusive of grants.

Table III.1. Papua New Guinea: Public Sector Debt Sustainability Framework, Baseline Scenario, 2009–2032
(In percent of GDP, unless otherwise indicated)

	Actual			Average	Standard Deviation	Estimate						Projections													
	2009	2010	2011			2012	2013	2014	2015	2016	2017	2012-17 Average		2018-32 Average											
Public sector debt 1/	31.5	25.6	25.2	23.2	21.3	18.4	13.5	13.0	12.5																
o/w foreign-currency denominated	12.5	10.4	9.8	9.7	9.8	9.2	7.1	7.1	7.1																
Change in public sector debt	-0.2	-5.9	-0.4	-2.0	-1.9	-2.9	-4.9	-0.6	-0.5																
Identified debt-creating flows	8.7	-8.2	-5.3	-0.2	0.2	-1.2	-3.9	-1.4	-2.3																
Primary deficit	7.6	-4.4	-1.5	1.3	0.9	0.6	0.0	-1.0	-1.9																
Revenue and grants	27.3	31.3	29.8	27.5	26.8	24.3	19.0	19.2	19.6																
of which: grants	3.9	5.3	2.5	1.9	1.9	1.7	1.3	1.3	1.2																
Primary (noninterest) expenditure	34.9	26.9	28.3	28.8	27.7	24.9	19.0	18.2	17.6																
Automatic debt dynamics	1.1	-3.8	-3.8	-1.5	-0.7	-1.8	-3.9	-0.4	-0.3																
Contribution from interest rate/growth differential	0.5	-2.6	-1.9	-1.5	-0.7	-1.8	-3.9	-0.4	-0.3																
of which: contribution from average real interest rate	2.3	-0.4	0.2	0.2	0.2	-0.3	-0.8	0.3	0.3																
of which: contribution from real GDP growth	-1.8	-2.2	-2.1	-1.8	-0.9	-1.5	-3.1	-0.7	-0.6																
Contribution from real exchange rate depreciation	0.6	-1.2	-1.9	0.0	0.0	0.0	0.0	0.0	0.0																
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																
Privatization receipts (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																
Recognition of implicit or contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																
Debt relief (HIPC and other)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																
Residual, including asset changes	-8.9	2.3	4.8	-1.7	-2.1	-1.7	-1.0	0.8	1.8																
Other Sustainability Indicators																									
PV of public sector debt																									
o/w foreign-currency denominated	...	...	24.0	21.9	19.9	17.1	12.5	11.9	11.4																
o/w external	...	...	8.6	8.4	8.4	7.9	6.1	6.1	6.1																
PV of contingent liabilities (not included in public sector debt)	...	...	8.6	8.4	8.4	7.9	6.1	6.1	6.1																
Gross financing need 2/	17.6	4.5	5.0	8.4	5.9	3.9	1.9	0.8	-0.2																
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	80.4	79.7	74.4	70.4	65.6	62.2	58.5																
PV of public sector debt-to-revenue ratio (in percent)	...	...	87.7	85.6	79.9	75.7	70.3	66.6	62.4																
o/w external 3/	...	...	31.4	32.9	33.8	34.8	34.2	33.9	33.2																
Debt service-to-revenue and grants ratio (in percent) 4/	14.4	9.7	8.8	10.0	8.9	7.6	6.4	6.0	5.7																
Debt service-to-revenue ratio (in percent) 4/	16.9	11.7	9.6	10.8	9.5	8.2	6.9	6.4	6.0																
Primary deficit that stabilizes the debt-to-GDP ratio	7.8	1.5	-1.1	3.3	2.8	3.5	4.9	-0.4	-1.5																
Key macroeconomic and fiscal assumptions																									
Real GDP growth (in percent)	6.1	7.6	8.9	7.7	4.0	7.7	20.0	5.4	4.9																
Average nominal interest rate on forex debt (in percent)	2.0	1.6	1.6	1.6	1.7	1.8	1.9	2.0	2.0																
Average real interest rate on domestic debt (in percent) 6/	12.7	3.1	1.7	2.0	1.7	-2.4	-10.4	4.6	5.2																
Real exchange rate depreciation (in percent, + indicates depreciation)	4.7	-10.1	-19.8	0.0	0.0	...	...	...	...												
Inflation rate (GDP deflator, in percent) 6/	-2.6	9.9	4.9	4.4	5.6	5.9	10.3	20.4	3.8																
Growth of real primary spending (deflated by GDP deflator, in percent)	0.4	-0.2	0.1	0.1	0.1	0.0	0.0	-0.1	0.0																
Growth element of new external borrowing (in percent)	...	...	...	26.9	26.1	24.4	25.6	23.2	23.4																

Sources: Country authorities; and staff estimates and projections.

1/ Gross debt of central government less assets in sovereign wealth fund. State-owned enterprises are not included due to data limitations. Deposits held at the Bank of PNG are not included.

2/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period.

3/ Revenues excluding grants.

4/ Debt service is defined as the sum of interest and amortization of medium and long-term debt.

5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

6/ The GDP deflator increases sharply in 2014-15 owing to a base year effect as the share of real activity accounted for by the oil and gas sector (which has experienced high inflation since the base year of 1998) increases sharply. Rebasings the national accounts to a more recent year is recommended. This would push up projected real GDP growth in 2014-15, reduce the GDP deflator and increase the imputed average real interest rates.

Table III. 2: Sensitivity Analysis for Key Indicators of Public Debt, 2012–2032
(In percent)

	Projections							
	2012	2013	2014	2015	2016	2017	2022	2032
PV of Debt-to-GDP Ratio								
Baseline	22	20	17	12	12	11	-2	-25
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	22	15	8	1	-3	-5	-24	-44
A2. Primary balance is fixed to zero	22	19	16	11	12	13	17	46
A3. Permanently lower GDP growth 1/	22	20	18	13	13	13	4	2
A4. Superannuation arrears, SOEs and LNG project cancellation	22	20	18	21	23	22	17	33
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	22	21	21	17	18	19	13	11
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	22	20	18	14	13	13	-1	-24
B3. Combination of B1-B2 using one half standard deviation shocks	22	18	14	10	11	11	2	-8
B4. One-time 30 percent real depreciation in 2013	22	24	21	16	15	14	1	-21
B5. 10 percent of GDP increase in other debt-creating flows in 2013	22	30	27	21	21	20	7	-13
PV of Debt-to-Revenue Ratio 2/								
Baseline	80	74	70	66	62	59	-10	-110
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	80	55	31	3	-15	-27	-106	-193
A2. Primary balance is fixed to zero	80	71	64	59	61	68	77	204
A3. Permanently lower GDP growth 1/	80	75	73	70	69	68	17	8
A4. Superannuation arrears, SOEs and LNG project cancellation	80	75	74	113	118	112	90	183
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	80	78	85	88	92	95	57	48
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	80	76	76	71	68	64	-5	-104
B3. Combination of B1-B2 using one half standard deviation shocks	80	66	56	54	55	56	9	-36
B4. One-time 30 percent real depreciation in 2013	80	88	85	82	77	73	3	-91
B5. 10 percent of GDP increase in other debt-creating flows in 2013	80	113	112	112	108	104	33	-59
Debt Service-to-Revenue Ratio 2/								
Baseline	10	9	8	6	6	6	2	1
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	10	9	5	-5	-6	-12	-23	-19
A2. Primary balance is fixed to zero	10	9	7	5	5	4	17	73
A3. Permanently lower GDP growth 1/	10	9	8	7	7	7	7	30
A4. Superannuation arrears, SOEs and LNG project cancellation	10	11	15	15	25	24	24	70
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	10	9	8	9	9	11	16	40
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	10	9	8	8	7	7	3	3
B3. Combination of B1-B2 using one half standard deviation shocks	10	9	7	2	2	2	5	20
B4. One-time 30 percent real depreciation in 2013	10	10	9	8	8	8	5	7
B5. 10 percent of GDP increase in other debt-creating flows in 2013	10	9	13	21	16	18	13	14

Sources: Country authorities; and staff estimates and projections.

1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of the length of the projection period.

2/ Revenues are defined inclusive of grants.

Table III.3: External Debt Sustainability Framework, Baseline Scenario, 2009-2032 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical Average ^{6/}	Standard Deviation ^{6/}	Projections							2018-2032					
	2009	2010	2011			2012	2013	2014	2015	2016	2017	Average	2022	2032	Average			
External debt (nominal) 1/	55.0	67.2	91.9			95.0	105.6	87.9	60.6	56.4	52.4					32.4	27.5	
o/w public and publicly guaranteed (PPG)	12.5	10.4	9.8			9.7	9.8	9.2	7.1	7.1	7.1					6.2	4.5	
Change in external debt	30.1	12.2	24.7			3.1	10.6	-17.7	-27.3	-4.1	-4.1					-3.2	-0.1	
Identified net debt-creating flows	10.8	7.0	7.9			14.8	10.4	-4.7	-23.6	-13.9	-12.7					-8.9	-6.9	
Non-interest current account deficit	15.2	24.4	35.4	3.6	16.1	26.9	18.5	11.2	-10.5	-10.2	-10.4	4.3				-8.5	-7.3	-8.5
Deficit in balance of goods and services	9.2	19.4	20.2			17.0	9.6	3.2	-25.8	-27.1	-25.9					-21.4	-17.2	
Exports	57.9	62.3	59.2			54.0	53.3	51.9	57.7	57.2	55.7					48.0	39.4	
Imports	67.1	81.7	79.4			71.0	62.9	55.2	31.9	30.1	29.7					26.7	22.2	
Net current transfers (negative = inflow)	-2.1	-2.0	-1.2	-4.1	2.5	-0.7	-0.6	-0.4	-0.2	0.0	-0.3	-0.4				-1.0	0.2	-0.5
o/w official	-3.3	-2.8	-2.5			-1.9	-1.9	-1.7	-1.3	-1.3	-1.2					-1.0	-0.3	
Other current account flows (negative = net inflow)	8.1	6.9	16.5			10.6	9.5	8.4	15.5	16.9	15.8					13.8	9.8	
Net FDI (negative = inflow)	-5.2	-8.7	-13.8	-4.3	4.5	-7.8	-6.1	-10.5	-1.5	-1.7	-1.7	-4.9				-1.5	-1.2	-1.4
Endogenous debt dynamics 2/	0.8	-8.7	-13.8			-4.3	-1.9	-5.5	-11.7	-2.0	-0.6					1.1	1.6	
Contribution from nominal interest rate	1.2	1.3	1.0			1.5	1.7	1.8	1.1	1.1	2.0					2.2	2.3	
Contribution from real GDP growth	-1.5	-3.4	-4.7			-5.8	-3.6	-7.2	-12.8	-3.1	-2.7					-1.0	-0.8	
Contribution from price and exchange rate changes	1.2	-6.5	-10.0			...	...	...	...	...	...					...	...
Residual (3-4) 3/	19.2	5.2	16.9			-11.7	0.2	-13.0	-3.7	9.8	8.6					5.6	6.8	
o/w exceptional financing	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
PV of external debt 4/	...	...	90.7			93.7	104.2	86.6	59.5	55.4	51.3					31.5	26.8
In percent of exports	...	...	153.3			173.4	195.4	166.7	103.1	96.8	92.3					65.6	68.1
PV of PPG external debt	8.6			8.4	8.4	7.9	6.1	6.1	6.1	7.2				5.3	3.8	4.8
In percent of exports	14.5			15.6	15.8	15.1	10.5	10.6	10.9	13.1				11.0	9.7	10.5
In percent of government revenues	31.4			32.9	33.8	34.8	34.2	33.9	33.2	33.8				24.8	17.0	23.0
Debt service-to-exports ratio (in percent)	13.4	14.7	15.7			16.5	15.3	31.0	19.6	17.0	19.9					22.7	23.5	
PPG debt service-to-exports ratio (in percent)	1.8	1.4	1.3			1.5	1.4	1.2	0.8	0.7	0.7	1.1				0.8	0.7	0.8
PPG debt service-to-revenue ratio (in percent)	4.4	3.3	2.7			3.1	3.0	2.8	2.4	2.3	2.3	2.7				1.9	1.3	1.7
Total gross financing need (Billions of U.S. dollars)	1.4	2.5	3.9			4.3	3.3	3.1	-0.2	-0.6	-0.3					0.3	0.4	
Non-interest current account deficit that stabilizes debt ratio	-14.9	12.2	10.7			23.8	7.9	28.9	16.9	-6.1	-6.3					-5.3	-7.2	
Key macroeconomic assumptions																		
Real GDP growth (in percent)	6.1	7.6	8.9	5.0	2.7	7.7	4.0	7.7	20.0	5.4	4.9	8.3				3.0	3.0	3.2
GDP deflator in US dollar terms (change in percent)	-4.5	13.4	17.5	10.0	8.0	13.0	0.7	4.8	14.7	-1.0	-1.0	5.2				1.9	1.9	1.8
Effective interest rate (percent) 5/	4.7	2.8	1.8	3.3	0.8	2.0	1.9	1.9	1.8	1.9	3.7	2.2				6.4	8.9	7.4
Growth of exports of G&S (US dollar terms, in percent)	-22.3	31.1	21.6	14.6	18.1	11.1	3.3	10.0	53.0	3.5	1.0	13.6				2.6	2.6	2.6
Growth of imports of G&S (US dollar terms, in percent)	11.2	48.4	24.4	19.5	15.2	8.8	-7.3	-0.9	-20.4	-1.5	2.6	-3.1				3.0	3.0	3.0
Grant element of new public sector borrowing (in percent)	26.9	26.1	24.4	25.6	23.2	23.4	24.9				25.4	25.4	25.2
Government revenues (excluding grants, in percent of GDP)	23.4	26.0	27.3			25.6	24.9	22.6	17.8	17.9	18.3					21.2	22.4	21.2
Aid flows (in Billions of US dollars) 7/	0.3	0.6	0.7			0.4	0.4	0.4	0.4	0.4	0.4					0.4	0.2	
o/w Grants	0.3	0.5	0.3			0.3	0.3	0.3	0.3	0.3	0.3					0.4	0.1	
o/w Concessional loans	0.0	0.1	0.4			0.1	0.1	0.1	0.1	0.1	0.1					0.1	0.1	
Grant-equivalent financing (in percent of GDP) 8/			2.3	2.1	1.9	1.5	1.4	1.4					1.1	0.3	0.8
Grant-equivalent financing (in percent of external financing) 8/			70.0	72.9	72.9	72.2	75.9	76.0					79.6	63.6	74.2
<i>Memorandum items:</i>																		
Nominal GDP (Billions of US dollars)	8.1	9.9	12.7			15.4	16.1	18.2	25.0	26.1	27.2					35.1	56.7	
Nominal dollar GDP growth	1.3	22.0	28.0			21.6	4.7	12.9	37.7	4.4	3.9	14.2				4.9	4.9	5.0
PV of PPG external debt (in Billions of US dollars)	...	...	1.2			1.3	1.3	1.4	1.5	1.5	1.6					1.8	2.1
(PVt-PVt-1)/GDPt-1 (in percent)			0.6	0.4	0.4	0.5	0.3	0.3	0.4				0.1	0.0	0.1
Gross workers' remittances (Billions of US dollars)	-0.1	-0.1	-0.2			-0.2	-0.2	-0.2	-0.3	-0.3	-0.3					0.0	-0.2	
PV of PPG external debt (in percent of GDP + remittances)	...	...	8.7			8.5	8.5	8.0	6.1	6.1	6.1					5.3	3.8
PV of PPG external debt (in percent of exports + remittances)	...	...	14.8			15.9	16.2	15.5	10.7	10.8	11.1					11.0	9.8
Debt service of PPG external debt (in percent of exports + remittances)	...	...	1.3			1.5	1.4	1.2	0.8	0.7	0.8					0.8	0.8

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as $[r - g - \rho(1+g)] / (1+g+\rho+g)$ times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = 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. Large residuals in 2009-14 are due to a difference in timing between LNG-related debt disbursements and the shipping of imported component purchases to PNG. Long-run residuals reflect BPNG reserve accumulation.

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

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

6/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

7/ Defined as grants, concessional loans, and debt relief.

8/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the PV of new debt).

Table III. 4: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2012–2032
(In percent)

	Projections							
	2012	2013	2014	2015	2016	2017	2022	2032
PV of debt-to GDP ratio								
Baseline	8	8	8	6	6	6	5	4
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	8	-4	-8	0	6	12	29	37
A2. New public sector loans on less favorable terms in 2012-2032 2	8	9	8	7	7	7	7	6
A3. Strong price decline for Gold, Copper, Oil and Gas from 2013 onwards.	8	12	16	20	29	38	76	127
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	8	8	8	6	6	6	6	4
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	8	13	22	17	17	17	14	8
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	8	9	9	7	7	7	6	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	8	12	17	13	13	13	11	6
B5. Combination of B1-B4 using one-half standard deviation shocks	8	10	20	15	15	15	13	7
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	8	12	11	8	8	8	7	5
PV of debt-to-exports ratio								
Baseline	16	16	15	11	11	11	11	10
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	16	-8	-15	-1	11	21	60	93
A2. New public sector loans on less favorable terms in 2012-2032 2	16	16	16	11	12	12	14	15
A3. Strong price decline for Gold, Copper, Oil and Gas from 2013 onwards.	15	24	34	43	63	86	210	456
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	16	15	15	10	10	11	11	9
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	16	27	58	40	40	41	40	27
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	16	15	15	10	10	11	11	9
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	16	22	33	23	23	24	23	16
B5. Combination of B1-B4 using one-half standard deviation shocks	16	20	39	27	27	27	27	19
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	16	15	15	10	10	11	11	9
PV of debt-to-revenue ratio								
Baseline	33	34	35	34	34	33	25	17
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	33	-17	-34	-2	34	65	137	165
A2. New public sector loans on less favorable terms in 2012-2032 2	33	34	36	37	37	37	31	26
A3. Strong price decline for Gold, Copper, Oil and Gas from 2013 onwards.	32	47	70	114	162	206	361	566
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	33	34	37	36	36	35	27	18
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	33	52	99	95	94	92	66	35
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	33	34	38	37	37	36	27	19
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	33	47	77	74	73	72	52	29
B5. Combination of B1-B4 using one-half standard deviation shocks	33	42	87	84	83	81	59	32
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	33	47	48	47	47	46	35	23

Table III. 4: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2012–2032 (continued)
(In percent)

Debt service-to-exports ratio								
Baseline	1	1	1	1	1	1	1	1
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	1	1	1	0	0	1	1	4
A2. New public sector loans on less favorable terms in 2012-2032 2	1	1	1	1	1	1	1	1
A3. Strong price decline for Gold, Copper, Oil and Gas from 2013 onwards.	1	2	2	1	2	2	7	25
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	1	1	1	1	1	1	1	1
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	1	2	2	2	2	2	3	3
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	1	1	1	1	1	1	1	1
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	1	1	1	1	1	1	2	1
B5. Combination of B1-B4 using one-half standard deviation shocks	1	1	1	1	1	1	2	2
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	1	1	1	1	1	1	1	1
Debt service-to-revenue ratio								
Baseline	3	3	3	2	2	2	2	1
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	3	3	1	1	2	2	3	8
A2. New public sector loans on less favorable terms in 2012-2032 2	3	3	3	2	2	2	2	2
A3. Strong price decline for Gold, Copper, Oil and Gas from 2013 onwards.	3	3	3	3	4	6	12	30
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	3	3	3	3	3	2	2	1
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	3	3	3	4	4	4	5	3
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	3	3	3	3	3	3	2	1
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	3	3	3	4	3	3	4	3
B5. Combination of B1-B4 using one-half standard deviation shocks	3	3	3	4	4	4	4	3
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	3	4	4	3	3	3	3	2
<i>Memorandum item:</i>								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	23	23	23	23	23	23	23	23

Sources: Country authorities; and staff estimates and projections.

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 a 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.



PAPUA NEW GUINEA

STAFF REPORT FOR THE 2012 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

April 30, 2012

Prepared By

Asia and Pacific Department
(In Consultation with Other Departments)

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ANNEX I: PAPUA NEW GUINEA—FUND RELATIONS

(As of March 31, 2012)

Membership Status

Joined: October 9, 1975; Article VIII

General Resources Account

	SDR Million	Percent Quota
Quota	131.60	100.00
Fund holdings of currency	131.16	99.67
Reserve position in Fund	0.44	0.33

SDR Department

	SDR Million	Percent Allocation
Net cumulative allocation	125.49	100.00
Holdings	9.52	7.58

Outstanding Purchases and Loans

	SDR Million	Percent Quota
	0.00	0.00

Latest Financial Arrangements

Type	Approval Date	Expiration Date	Amount Approved (SDR million)	Amount Drawn (SDR million)
Stand-by	3/29/2000	9/28/2001	85.54	85.54
Stand-by	7/14/1995	12/15/1997	71.48	35.34
Stand-by	7/31/1991	9/30/1992	26.36	0.00

Projected Payments to Fund¹

(SDR million; based on existing use of resources and present holding of SDRs):

	Forthcoming				
	2012	2013	2014	2015	2016
Principal					
Charges/interest	0.13	0.18	0.18	0.18	0.18
Total	0.13	0.18	0.18	0.18	0.18

¹ When a member has overdue financial obligations outstanding for more than three months, the amount of such arrears will be shown in this section.

Safeguards Assessments

Under the Fund's Safeguards Assessments policy, the Bank of Papua New Guinea (BPNG) was subject to a transitional assessment based on its Stand-By Arrangement with the Fund, which was approved in March 2000 and expired in September 2001. The transitional assessment was completed on May 4, 2001 and made recommendations to alleviate identified weaknesses. Currently, the BPNG is not subject to the Safeguards Assessments policy.

Exchange Rate Arrangement

Papua New Guinea has a floating exchange rate arrangement; the exchange rate of the kina is determined in the interbank market in which authorized banks participate. Papua New Guinea has accepted the obligations of Article VIII, Sections 2, 3, and 4, and maintains an exchange system free of restrictions on payments and transfers for current international transactions.

Article IV Consultations

The 2010 Article IV consultation discussions were held during February 10–21, 2011. It was concluded by the Executive Board on May 18, 2011 (IMF Country Report No. 11/117). Papua New Guinea is on the 12-month cycle.

Technical Assistance from Headquarters

FAD: A joint FAD/PFTAC mission in March 2000 assisted the authorities in preparing a

Report on the Observance of Standards and Codes Fiscal Transparency Module, published in October 2000. A mission in December 2000 provided advice on the reconciliation of large and volatile differences in fiscal reporting based on information provided by the Treasury Department and information reported by the Bank of Papua New Guinea. A mission in February 2002 assessed progress in improving fiscal transparency. A joint FAD/PFTAC mission visited PNG to provide advice on the sovereign fund management in May 2011.

LEG: A mission in November 1996 provided advice on the legal framework for the National Value-Added Tax. A mission in November 2005 provided advice on the drafting of a tax administration law. A mission in July 2006 provided a comprehensive program of assistance in the development of the AML/CFT regime, including legislative drafting and capacity building. A mission in August/September 2007 assisted the authorities in finalizing the terms of the Revenue Administration Bill.

MFD/MCM: During 2001–03 assistance was provided through missions in bank supervision, financial sector restructuring and improving the accounting framework and monetary operations of the central bank. A resident advisor was assigned to the BPNG research department for 15 months through August 2003. Technical assistance through peripatetic visits was delivered on bank regulation and supervision (2001–February/March 2007, July–August 2009, and

February 2010), medium-term monetary policy formulation (October 2004 and September 2005), reserve management (June 2006–September 2007, March/July–August 2009, January–February 2010), internal audits (2004–August 2007), accounting (September/October 2006–February 2007, February–March/June–July/November 2009), liquidity management (January 2009), and monetary and forex operations (July–August 2009, February 2010).

STA: Four GDDS missions took place in 1995–96; one inspection visit was conducted in April 2001; one mission provided advice on the compilation of national accounts in February 2006; and one mission provided advice on balance of payments in May 2003. A mission reviewed monetary and financial statistics in April 2005 and a follow-up mission took place in May 2006. Subsequently, a multisector statistics mission visited in September 2006 followed by a high level STA visit in December 2007. Two follow-up missions in balance of payments took place in June 2008 and November 2009 and three follow-up missions in monetary and financial statistics took place in April 2008, November 2009 and May 2010. An STA mission visited PNG in January 2012 to provide technical advice on preparation of GDDS metadata, and another STA mission on region finance statistics is planned in May 2012.

Resident Representative: None.

ANNEX II: PAPUA NEW GUINEA—RELATIONS WITH THE PACIFIC FINANCIAL TECHNICAL ASSISTANCE CENTRE¹

(As of April 10, 2012)

Until the Resident Representative position was closed in May 2008, the resident representative helped coordinating TA assistance to Papua New Guinea (PNG), with the extensive assistance provided by the Australian Enhanced

Cooperation Program (ECP). Since 2000, PFTAC has provided more than 25 missions to PNG, and the Government has sent over 50 officials to the Centre's regional seminars, workshops, and training courses in this period.

A. Public Financial Management

PFTAC assisted in the preparation of a ROSC, which was published in October 2000. The PFTAC PFM Advisor has participated in occasional FAD technical assistance missions, and an attachment of one PNG official to PFTAC was completed in April 2007. PNG

participated, with four officials, in the US Treasury study visit in September 2008. In May 2011, the PFTAC macroeconomic advisor participated in an FAD mission on advising PNG on the SWF.

B. Tax Administration and Policy

The IMF Legal Department drafted a Tax Administration Act in 2005, adopted by the Government in 2006, that: (i) the re-established the Internal Revenue Commission as an independent tax authority; and (ii) included customs administrative provisions. An IMF Legal Department mission in September 2007 prepared the Internal Revenue Commission Administration Bill 2007 to strengthen and consolidate all revenue administrative provisions into one

statute. PFTAC has delivered a project to: objectively assess the existing IT system of the Internal Revenue Commission and; develop and draft an information technology strategic plan (ITSP) and: based on the ITSP, draft a

⁹ The Pacific Financial Technical Assistance Centre (PFTAC) in Suva, Fiji is a regional technical assistance institution operated by the IMF with financial support of the Asian Development Bank, Australia, Korea, Japan and New Zealand. The Center's aim is to build skills and institutional capacity for effective economic and financial management that can be sustained at the national level. Member countries are: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, and Vanuatu

business plan for the redevelopment of the IT system. The project comprised of a number of missions between 2006 and 2009 that delivered:

- An assessment of the current and future business drivers.
- Development of the business system architecture for the ITSP.
- Completion of the applications, information and IT technical architecture phases of the ITSP project.
- Recommendations for the management and delivery of IT services within the IRC.

- Completion and approval of the ITSP Transition Plan.
- Drafting of the request for information (RFI) to test the market availability of suitable tax administration packaged software.

Development of a business case to fund redevelopment of the Internal Revenue Commission (IRC) technology system, that is suitable for presentation and decision making by the Government of PNG and other potential donor organizations.

C. Financial Sector Regulation and Supervision

There is no current PFTAC involvement in this area. In October 2005, the BPNG hosted the annual meeting of the Association of Financial Supervisors of Pacific Countries, for which PFTAC is the secretariat. In March 2007, PFTAC funded an attachment for two supervisors from BPNG to assist the Cook Islands' supervisory authority to undertake an on-site examination of a domestic bank. In 2008, PFTAC funded an attachment of one supervisor to assist the Reserve Bank of Fiji under an on-site examination of a local branch of a PNG-based bank. Since 2005, the World Bank and the IMF have jointly prepared an annual Debt Sustainability Assessment. The

Asian Development Bank has joined since 2009. The IMF and the World Bank also collaborate in the development and timely dissemination of reliable economic and financial statistics. The IMF focuses on improving balance of payments, national accounts, and price statistics, while the World Bank provides assistance on issues related to the production of high-quality household and enterprise surveys. Through PRSC10, the World Bank and development partners are supporting the SBV to formulate a regulation that would improve timeliness and availability of monetary and banking sector information.

D. Economic and Financial Statistics

In February 2006, the Advisor briefly assessed the BOP compilation with a view to improve its quality, and to assess progress against recommendations made by previous missions. A multi-sector statistics mission in September 2006 assessed the statistical systems (BOP, national accounts, prices statistics, government finance statistics and monetary statistics), with the PFTAC Advisor assessing the national accounts and providing overall coordination.

E. Macroeconomic Analysis

Following a request by the Bank of Papua New Guinea for assistance in building up a financial programming capacity, the PFTAC macroeconomic advisor designed two work programs for PNG in 2011. The first was on macroeconomic modeling with a stock-taking visit in January, a follow-up visit in May, and a two-week workshop delivering the modeling

The BOP expert provided some TA to progress improvements to the methodology and source data. In 2008 and 2009 the Advisor undertook balance of payment (BOP) statistics missions to review statistics prerequisites, progress in improving compilation methods and source data, as well as to assist Bank of PNG statistics staff in assessing the feasibility of electronic data collection.

techniques to local staff in July. The advisor also planned to, in collaboration with APD, deliver a seminar on the macroeconomic implications of scaling-up expenditure due to increased resource revenues. A preparation visit was conducted in October 2011, and the seminar will be delivered in May 2012.

ANNEX III: PAPUA NEW GUINEA—RELATIONS WITH THE WORLD BANK GROUP

(As of April 10, 2012)

The Fund PNG team led by Mr. Schule (mission chief) met with the World Bank PNG team led by Ms. Bailey (country manager) on February 22, 2012, to identify macrocritical structural reforms and to coordinate the two teams' work for the period February 2012–March 2013.

The teams agreed that in the near term, the authorities' priority is to maintain macroeconomic stability and fiscal sustainability, the pre-requisites for sustained growth. Given the developments of the LNG projects and increased business activity associated with these projects, it is an opportune time, with appropriate policies, to help notably lift living standards in PNG. However, to avoid the paradox of plenty there is a need to effectively manage the revenues from nonrenewable resources. In addition to spending these revenues gradually over time to address development needs such as infrastructure, education, health, and law and order, the authorities will need to be particularly mindful of the absorption capacity of the economy. On top of that, the authorities should not borrow against future LNG revenue to fund large infrastructure projects. Further, holding accumulated assets offshore will be essential to avoid currency appreciation that

would undermine the competitiveness of the non-resource tradable sector.

The Bank and Fund staffs continue to work closely together to support the agenda of enhancing economic growth by helping the country to remove the constraints in the following areas:

- **Macroeconomic policy framework:** The Fund takes the lead on exchange rate issues, monetary policy, and macroeconomic aspects of fiscal policy while the Bank takes the lead on medium-term growth prospects, composition of public expenditure, as well as structural policies to support growth.
- **Public financial management reforms:** The Bank supports Government initiatives on improved diagnostics including sectoral or overall PERs, while the Fund takes the lead on strengthening the implementation of the MTFS, improving coordination between monetary and fiscal policy, and other PFM issues through the PFTAC.
- **Financial sector reforms:** The Bank takes the lead on programs to improve SME access to finance, including through collaborative work with the IFC and the Fund takes the lead on bank regulation and supervision, central bank accounting and internal audit.
- **Energy sector reforms:** Bank takes the lead in reforms to build a financially viable and efficient energy sector while the Fund

monitors implications of quasi-fiscal losses for debt sustainability and monetary management.

- **Sovereign wealth fund:** The Fund takes the lead on guiding the establishment of a SWF aligned to the budget while the Bank takes the lead on discussions regarding mechanisms for linking the SWF(s) to budget processes, investment planning, and the next generation of Medium-Term Fiscal and Debt Strategies.

- **Statistical system reforms:** The two institutions will collaborate on strengthening the statistical authorities.

The following table lists the teams' separate and joint work programs during February 2012–March 2013.

Table III.1. Papua New Guinea: Bank and Fund Planned Activities in Macrocritical Structural Reform Areas, February 2011–March 2012

Title	Products	Provisional Timing of Missions	Expected Delivery Date
1. Bank Work Program	Country Assistance Strategy	Preparatory work starting in first half of fiscal year 2012	Second half of fiscal year 2012
	Statistics TA (household survey, development of revised CPI and national accounts consumption measure)	Ongoing	Household survey results expected first quarter of fiscal year 2012; other components to follow
	Supporting government develop a sovereign wealth fund framework	Presentation of analytical work on managing revenue volatility in April 2010; support for developing framework expected May–August 2011	Ongoing
	Analytical work, technical assistance and possible lending operations in the area of social services (including education)	Ongoing	Implementation throughout fiscal year 2011 and 2012
2. Fund Work Program	Article IV consultations	February 2012	May 2012
	TA mission by STA on General Data Dissemination System (GDSS)	February 2012	February 2012
	TA provision by PFTAC on macroeconomic implications of scaling-up expenditure due to increased resource revenues	January and May 2012	May 2012
	TA provision by PFTAC on BOP statistics	Fiscal year 2012	Fiscal year 2012
	TA mission by STA on introducing standardized report forms for other financial corporations	Fiscal year 2013	Fiscal year 2013
	Staff visit	September 2012	September 2012
	Article IV consultations	February 2013	May 2013

ANNEX IV: PAPUA NEW GUINEA—RELATIONS WITH THE ASIAN DEVELOPMENT BANK

(As of April 10, 2012)

Papua New Guinea (PNG) joined the Asian Development Bank (ADB) in 1971. The ADB has approved 75 loans to PNG totaling \$1,516 million for 51 projects, of which 31 loans (\$748.6 million) have been extended from Ordinary Capital Resources (OCR) and 44 loans (\$767.8 million) from Asian Development Fund (ADF). ADF resources were also used for one grant amounting \$15 million. In addition, \$62.4 million has been provided for 148 technical assistance projects. ADB's active portfolio in PNG is \$805.7 million comprising 19 public sector loans to finance 10 projects (\$657.7 million), six grants (\$72.4 million), 11 technical assistance projects (\$9.6 million), two private sector loans (\$58 million) and a private sector equity investment (\$8.0 million).

In August 2010, ADB and the Government of PNG agreed on a new country partnership strategy, 2011–2015. The strategy was developed in close consultation with the government and other stakeholders, and is well-aligned to the government's Development Strategic Plan (DSP), 2010–2030 and the Medium-Term Development Plan, 2011–2015. It centers on infrastructure improvements and other measures to help PNG plan and implement a successful transition through the conversion of its natural

resources wealth into inclusive economic growth.

In 2011, ADB approved 5 public sector loans of \$195.8 million to finance three projects; i) Bridge Replacement for Improved Rural Access Project, ii) Lae Port Development Additional Financing Project, and iii) Rural Primary Health Services Delivery Project. ADB's ongoing lending activities support road, seaport and airport rehabilitation and improvement, community water transport, renewable power generation and transmission, rural health services delivery, access to microfinance, and expansion of telecommunication services. ADB provides technical assistance in all these areas to improve policy, capacity, and knowledge. ADB also finances experts and programs to improve the government's public financial management, and to mitigate and adapt to climate change risks.

The ADB's lending to PNG for 2013–2015 is expected to remain a blend of OCR and ADF resources. ADB's ADF allocation for PNG for 2013–2015 totals approximately \$180 million and OCR lending is expected to be approximately \$230 million. Indicative non-lending assistance for 2013–2015 totals \$6 million.

Creating private sector-friendly conditions is also a strategic priority and, in PNG, ADB supports (i) the development and implementation of the National Public–Private Partnership Policy Act and corresponding institutions; (ii) the development of a national community service obligation framework for state-owned enterprises; (iii) increased access to finance through microfinance, branchless banking, and secured transactions frameworks; and (iv) public information and private sector advocacy activities.

ADB also invests directly in the private sector in PNG. In 2009, ADB, in collaboration with commercial banks and the International Finance Corporation, provided \$18 million in senior debt to increase Digicel PNG’s term loan facility. The funds are primarily being used to expand Digicel’s network capacity and coverage and upgrade its billing system.

(In millions of U.S. dollars)								
	2004	2005	2006	2007	2008	2009	2010	2011
Loan approvals	19.0	0.0	53.0	100.0	100.0	120.0	70.3	195.8
Loan disbursements	19.2	21.5	29.3	27.4	19.8	17.4	27.9	26.2

ANNEX V: PAPUA NEW GUINEA—STATISTICAL ISSUES

A. Assessment of Data Adequacy for Surveillance

General: Data provision has some shortcomings, but is broadly adequate for surveillance. Severely affected area is national accounts with fiscal accounts and balance of payments of concern as well.

National accounts: The National Statistical Office (NSO) lacks sufficient staff with computer training. The accuracy and reliability of the data are affected by inadequate source data. The Bank of Papua New Guinea (BPNG) and the Department of Treasury produce the most current data. In mid-2000, the NSO released a set of national accounts (NA) estimates: National Income, Expenditure and Product, 1993–98. These estimates were compiled using the 1968 System of National Accounts. However, the NSO has been working to implement the 1993 SNA. In March 2004, the NSO released a preliminary set of national income, expenditure, and production accounts estimates for 1994–2002, rebased to 1998 prices. As these figures are still in need of substantial improvements, the 2006 STA multisector mission recommended against publication of the new GDP data until the needed revisions are made. In an attempt to fill the vacuum, the Treasury—responsible for Government finance statistics (GFS)—has actually assumed the role of estimating the NA for 2002 to the present. Expenditure side data are available until 2006.

Prices statistics: The NSO currently compiles a new quarterly wholesale price index (which it does not publish) and a quarterly consumer price index that is based on weights that are thirty-five years old. The NSO intends to use

the results of the 2009/10 Household Income Expenditure Survey (HIES) to rebase the CPI. The survey documents are currently being prepared for publication

Government finance statistics: Annual GFS reported to STA suffer from insufficient coverage. While central government tax revenue statistics are generally accurate and timely, nontax revenue and public expenditure data are deficient. In particular, development budget expenditures and the utilization of grants and project loans are recorded with long lags, and few records on the use of trust accounts are available. While interest payment records are accurate, there are timing issues regarding the recording of interest on discount securities. These weaknesses contribute to discrepancies in domestic financing between estimates from monetary and debt data and those derived from fiscal records. The 2006 STA multisector mission encouraged the authorities to prepare a list of public sector units to permit a comprehensive delineation of the levels of government, which should help reconcile the GFS with other datasets.

Monetary statistics: Monetary data are now being produced and reported to STA on a regular basis. Previous monetary and financial statistics (MFS) missions helped to (i) finalize the review of the collection, compilation, and dissemination procedures of monetary statistics by the BPNG; (ii) develop a work program to facilitate the full implementation of the methodology recommended in the Monetary and Financial Statistics Manual (MFSM); (iii) introduce the standardized report

forms (SRFs) for reporting monetary data of the central bank, other depository corporations, other financial corporations (OFCs) monetary aggregates; and (iv) finalize the integrated monetary database that meets the data needs of the BPNG, STA, and APD. A MFS mission is scheduled for FY 2013 to introduce the SRF for OFCs with complete institutional coverage.

Balance of payments statistics: Annual balance of payments data are derived from the International Transactions Reporting System (ITRS), which is not tightly monitored despite the BPNG reporting requirements. There are marked differences between the official data on exports and imports of goods and those reported by trading partners. The financial

accounts data are of poor quality because of major deficiencies in data collection, especially in the area of private external debt and foreign direct investment. Quarterly data are also published by the BPNG. The 2006 STA multisector mission identified as a priority the strengthening of current account estimates, including through improved classification of investment earnings, trade credits, and grant receipts as well as enhancing source data for imports and exports. Progress is being made to implement the recommendations from the PFTAC's BOP missions in June 2008 and November 2009. A follow-up PFTAC BOP mission is scheduled for FY 2012, but not yet fielded.

B. Standards and Quality

PNG participates in the General Data Dissemination System (GDDS) since February 2012.

C. Reporting to STA

Papua New Guinea last reported government finance statistics for publication in the *Government Finance Statistics Yearbook* and in *International Financial Statistics* for 1999–2002 and cover only the budgetary central government.

Monetary data are reported to STA for publication in *IFS* on a regular monthly basis.

Balance of payments data for 2010 were reported to STA for publication in *IFS* and *BOPSY*.

National accounts data for 2004 were reported to STA for publication in *IFS*.

Papua New Guinea: Table of Common Indicators Required for Surveillance					
(As of March 30, 2012)					
	Date of Latest Observation	Date Received	Frequency of Data ¹	Frequency of Reporting ¹	Frequency of Publication ¹
Exchange Rates	03/30/12	03/15/12	D	W	W
International Reserve Assets and Reserve Liabilities of the Monetary Authorities ²	01/31/12	03/15/12	W	W	Q
Reserve/Base Money	01/12	03/15/12	M	M	Q
Broad Money	01/12	03/15/12	M	M	Q
Central Bank Balance Sheet	01/12	03/15/12	M	M	Q
Consolidated Balance Sheet of the Banking System	01/12	03/15/12	M	M	Q
Interest Rates ³	01/12	03/15/12	W	W	Q
Consumer Price Index	12/11	03/15/12	Q	Q	Q
Revenue, Expenditure, Balance and Composition of Financing ⁴ —General Government ^{5,8}	N/A	N/A	N/A	N/A	N/A
Revenue, Expenditure, Balance and Composition of Financing ⁴ —Central Government	12/11	03/12	A	A	A
Stocks of Central Government and Central Government-Guaranteed Debt ⁶	12/11	03/12	Q	Q	Q
External Current Account Balance	12/11	03/12	Q	Q	Q
Exports and Imports of Goods and Services	12/11	03/12	Q	Q	Q
GDP/GNP	2009	11/10	A	A	A
Gross External Debt	2011	03/12	Q	A	A
International Investment Position ^{7,8}	N/A	N/A	N/A	N/A	N/A
¹ Daily (D), Weekly (W), Monthly (M), Quarterly (Q), Annually (A), Irregular (I); and Not Available (N/A).					
² Includes reserve assets pledged or otherwise encumbered as well as net derivative positions.					
³ Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes, and bonds.					
⁴ Foreign, domestic bank, and domestic nonbank financing.					
⁵ The general government consists of the central government (budgetary funds, extra-budgetary funds, and social security funds) and state and local governments.					
⁶ Including currency and maturity composition.					
⁷ Includes external gross financial asset and liability positions vis-à-vis nonresidents.					
⁸ Lack of capacity prevented the authorities from providing the data.					



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IMF Executive Board Concludes 2012 Article IV Consultation with Papua New Guinea

On May 14, 2012, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation with Papua New Guinea, and considered and endorsed the staff appraisal without a meeting.¹

Background

Papua New Guinea has seen solid economic growth over the past decade, supported by sound macroeconomic policies, improved public finances, moderate inflation, and attractive conditions for foreign investors in the mining and petroleum industries. While Papua New Guinea remains a low-income country, its resource wealth is an opportunity to raise living standards for all. To achieve its development targets, the government is focusing on public services, including education, health, law and order, and infrastructure. Reforms are under way to raise the efficiency of public enterprises and increase competition in the private sector.

Real GDP is estimated to have increased to about 9 percent in 2011 from about 7.6 percent in 2010. Elevated commodity prices, the construction of a liquefied natural gas project, and government spending are boosting the economy and generating inflation pressures. The temporary closure of key mines, caused by natural disasters, and dwindling oil production dampened overall output growth. Headline inflation peaked just below 10 percent in the second quarter of 2011, but subsequently eased to

¹ Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board. At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: <http://www.imf.org/external/np/sec/misc/qualifiers.htm>.

7 percent at year-end in line with declining international food prices and the appreciation of the kina.

After a large fiscal deficit in 2009, the budget returned to surplus in the last two years. Higher-than-expected commodity prices boosted government revenue and greater spending discipline, including on spending out of trust accounts, resulted in budget surpluses. The Bank of PNG raised its policy rate by 75 basis points to 7¾ percent, increased commercial banks' cash reserve requirements by 200 basis points to 6 percent, and issued central bank bills to mop up liquidity. The nominal effective exchange rate appreciated by 21 percent in 2011.

The financial sector remains profitable and well capitalized, but vulnerabilities have increased. Exposure to the heated real estate sector continues to fall. However, the non-performing loans ratio increased and provisioning of commercial banks dropped.

The current account deficit widened to 36 percent of GDP in 2011, driven by the rise in imports for the construction of the LNG plant and the compensation of foreign workers. The deficit was, however, largely financed by FDI and private external debt related to the LNG project. Public external debt declined to 9.8 percent of GDP by end-2011.

Executive Board Assessment

We commend the authorities for achieving macroeconomic stability and a sustainable fiscal position. To preserve these achievements and promote inclusive development, it will be important to combine steady, affordable growth in government spending with improvements in public financial management and expenditure effectiveness. This should be accompanied by structural reforms and a flexible monetary policy.

After 10 years of uninterrupted economic growth, the medium-term outlook remains positive. Risks to the outlook are broadly balanced and predominantly related to the resource sector.²

Further monetary tightening would likely be needed to anchor inflation expectations at the Bank of PNG's 5 percent reference value. Reducing excess liquidity by raising banks' cash reserve requirements and limiting reserve accumulation would be the most effective ways to achieve tighter monetary conditions. Going forward, greater exchange rate flexibility would provide an important buffer against external shocks.

Fiscal policy should target a smooth expenditure path. Such a policy would help sustain solid economic growth with moderate inflation, and provide reliable funding for essential public services. It could be implemented through tighter control of expenditure growth in

² See Box 6 in the Staff Report for key risks to the PNG economy, and recommended policy responses by the authorities.

the current election year, and steady increases in real spending per capita over the medium term.

PNG's resource sector could make a larger contribution to public revenues. Efforts to promote this could include strengthening revenue collection, reinforcing the internal revenue and customs services, streamlining existing tax concessions, and applying the Additional Profits Tax to mining activities, given that the average effective tax take from resources appears to be on the low side of fiscal regimes across the world.

The SWF provides a strong framework for insulating public expenditure from volatility in resource revenue, and for improving transparency, accountability, and good governance. Withdrawal rules should be set in accordance with the new Medium-Term Fiscal Strategy. Once the SWF is established, all existing trust accounts should be consolidated with the fund.

We welcome the government's agenda for better public services. Plans to increase the expenditure share of key development priorities—education, health, law and order, and infrastructure—go in the right direction. However, to deliver better public services marked gains in the effectiveness of public spending are needed. Therefore we encourage the authorities to develop a multi-year budget for selected expenditures and invest in the reform of key ministries responsible for planning and service delivery.

More competition would benefit consumers and raise efficiency. We encourage the authorities to strengthen enforcement of competitive behavior and replace existing monopolies. The introduction of exclusive production rights and import protection for rice would go in the wrong direction and hurt consumers. The authorities should proceed with SOE reforms.

The current account deficit is largely financed by FDI and is not expected to threaten external stability. The exchange rate is estimated to be modestly undervalued and reserves are adequate to address potential balance-of-payments needs.

The financial sector remains sound. Banks have high capital adequacy ratios and should be resilient to contagion from the Euro area, but need to maintain appropriate lending standards and further reduce exposure to the real estate sector. Financial supervision has been of high quality, and the planned enhanced cooperation among supervisors is welcome. The authorities should implement the remaining 2011 FSAP recommendations.

The authorities need to urgently tackle structural deficiencies in the provision of national statistics. Gaps in macroeconomic data provision complicate PNG's public policy-making and Fund surveillance. This requires immediate reform and strengthening of the relevant government agencies.

Public Information Notices (PINs) form part of the IMF's efforts to promote transparency of the IMF's views and analysis of economic developments and policies. With the consent of the country (or countries) concerned, PINs are issued after Executive Board discussions of Article IV consultations with member countries, of its surveillance of developments at the regional level, of post-program monitoring, and of ex post assessments of member countries with longer-term program engagements. PINs are also issued after Executive Board discussions of general policy matters, unless otherwise decided by the Executive Board in a particular case. The [staff report](#) (use the free [Adobe Acrobat Reader](#) to view this pdf file) for the 2012 Article IV Consultation with Papua New Guinea is also available

Papua New Guinea: Selected Economic and Financial Indicators, 2008–12

Nominal GDP (2010): US\$10 billion 1/ Population (2010): 6.5 million GDP per capita (2010): US\$1,521 Quota: SDR 131.6 million					
	2008	2009	2010	2011 Est.	2012 Proj.
	(Percent change)				
Real sector					
Real GDP growth	6.6	6.1	7.6	8.9	7.7
Mineral	-1.4	-1.7	-2.0	-11.8	13.7
Nonmineral	7.6	7.0	8.5	10.8	7.2
CPI (annual average)	10.7	6.9	6.0	8.4	6.8
CPI (end-period)	11.2	5.7	7.8	6.9	6.8
	(In percent of GDP)				
Central government operations					
Revenue and grants	32.6	27.3	31.3	29.8	27.5
Expenditure and net lending	30.1	36.9	28.2	29.4	30.0
Overall balance (including grants)	2.5	-9.6	3.1	0.5	-2.5
Nonmineral balance	-7.4	-13.3	-3.6	-6.6	-8.0
Gross public debt	31.7	31.5	25.6	25.2	23.2
Domestic	18.5	19.1	15.2	15.4	13.5
External	13.2	12.5	10.4	9.8	9.7
	(Percent change)				
Money and credit (percentage change)					
Domestic credit	15.7	37.3	4.9	-5.2	18.2
Credit to the private sector	29.5	15.1	18.1	7.3	7.5
Broad money	7.8	21.3	10.2	17.4	13.3
Interest rate (182-day T-bills; period average)	5.9	7.2	6.4	6.8	...
	(In millions of U.S. dollars)				
Balance of payments					
Exports, f.o.b.	5,685	4,511	5,843	7,047	7,788
<i>Of which: Mineral</i>	4,275	3,441	4,444	5,215	5,968
Imports, c.i.f.	-3,140	-3,258	-4,261	-6,186	-6,463
Current account (including grants)	674	-1325	-2532	-4605	-4374
(In percent of GDP)	8.4	-16.4	-25.6	-36.4	-28.4
Exceptional financing (net)	0.0	0.0	0.0	0.0	0.0
Gross official international reserves	2,095	2,623	3,092	4,323	4,296
(In months of nonmining imports, c.i.f.)	9	11	10	16	14
(In months of goods and services imports)	5	6	5	5	5
Public external debt					
Public external debt-service-ratio (percent of exports) 2/	3.4	1.8	1.4	1.3	1.5
Public external debt-to-GDP ratio (in percent) 2/	13.2	12.5	10.4	9.8	9.7
Exchange rates					
US\$/kina (end-period)	0.373	0.370	0.379	0.467	...
NEER (2005=100, end-period)	117.9	101.5	100.1	121.4	...
REER (2005=100, end-period)	125.7	111.7	114.8	146.1	...
Nominal GDP (millions of kina)	21,601	22,331	26,395	30,167	34,297

Sources: Papua New Guinea authorities; and IMF staff estimates and projections.

1/ Based on period average exchange rate.

2/ Includes central government external debt.