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PAPUA NEW GUINEA

December 2014

2014 ARTICLE IV CONSULTATION—STAFF REPORT; AND PRESS RELEASE

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2014 Article IV consultation with Papua New Guinea, the following documents have been released and are included in this package:

- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on a lapse of time basis, following discussions that ended on August 22, 2014, 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 November 10, 2014.
- A **Debt Sustainability Analysis** prepared by the staffs of the IMF and the World Bank.
- An **Informational Annex** prepared by the IMF.
- A **Staff Supplement** of November 19, 2014 updating information on recent developments.
- A **Press Release**.

The document listed below has been or will be separately released.

Selected Issues Paper

The policy of publication of staff reports and other documents allows for the deletion of market-sensitive information.

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INTERNATIONAL MONETARY FUND

PAPUA NEW GUINEA

STAFF REPORT FOR THE 2014 ARTICLE IV CONSULTATION

November 10, 2014

KEY ISSUES

Context. Papua New Guinea's (PNG) economy is experiencing an important transition, as new liquefied natural gas (LNG) production and exports commence. While resource sector activity in 2014–15 will be buoyed by gas production, non-resource sector growth will remain low in 2014 as LNG production has little knock-on effect on the wider economy. Meanwhile, the sharp fiscal expansions of the past three years have significantly reduced fiscal space, and excess demand for foreign exchange has persisted following a large *de facto* appreciation of the kina after the introduction in early June 2014 of a trading band around the official exchange rate and the requirement for banks to use the band in their transactions with customers.

Outlook and risks. The overall growth outlook in the short run is favorable, but it masks weakness in the non-resource sector and employment conditions. Risks to the near-term outlook are increasingly tilted to the downside as global economic weakness could weigh on external demand and commodity prices, with fiscal stimulus limited by the need to ensure debt sustainability. The recent exchange rate measure also heightens risks to the growth outlook as well as to the external position.

Policy assessment. A key challenge facing PNG is to maintain fiscal and debt sustainability while pursuing development objectives. Continued macroeconomic and financial stability will also require better management of excess banking system liquidity and exchange rate policy. To meet these challenges, policies should aim to:

- Consolidate the fiscal position in line with the government's current debt targets through restraining low-impact expenditure and strengthening revenue collection.
- Improve spending quality, through improved composition and public financial management, and ensure budget integrity in managing public resources.
- Withdraw excess liquidity held by banks more fully and allow the exchange rate to be more determined by market forces in order to eliminate excess demand for foreign exchange.
- Accelerate structural reforms, focusing on lowering the cost of doing business, to support non-resource sector growth.

Approved By
David Cowen (APD) and Ranil Salgado (SPR)

Discussions took place in Port Moresby and Goroka during August 8–22, 2014. The team comprised Mr. Yang (head and regional resident representative), Mses. Hunter and Rauqeuqe, and Messrs. Oh and Washimi (all APD). Mr. South (OED) and staff from the World Bank and Asian Development Bank also participated in the discussions.

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CONTEXT

1. **Papua New Guinea's (PNG) economy has entered a transitional growth period, as new liquefied natural gas (LNG) production and exports commence.** The successful completion of the LNG project, ahead of schedule in May 2014, has demonstrated a new level of capacity to undertake large-scale commercial development and has increased investor confidence in developing large projects in the future.

2. **However, spillovers from the LNG project to the rest of the economy are limited, with structural weaknesses also impeding higher, broad-based growth in the non-resource sector.** Papua New Guinea faces high costs of doing business. At present, job-intensive small and medium-sized enterprises (SMEs) and agricultural activity are burdened by inadequate infrastructure, high energy costs, lack of skilled workers, limited access to credit, poor security, and regulatory weaknesses.

3. **Meanwhile, policy buffers to counter exogenous shocks have shrunk.** The sharp fiscal expansions of the past three years have significantly reduced fiscal space, with large fiscal deficits and rising public debt. Inflation is moderate, but foreign reserves, while still adequate (at 4 months of prospective imports at end-September), have fallen substantially from their record levels, and excess demand in the foreign exchange (FX) market may have worsened following the introduction in early June 2014 of a trading band around the official exchange rate and the requirement for banks to use the band in their transactions with customers.

OUTLOOK AND RISKS

4. **Economic activity is expected to expand by 5.8 percent in 2014, largely driven by LNG production.** With production reaching full capacity next year, real GDP growth is projected to surge to around 19.5 percent in 2015 (Table 1).[1] However, given modest direct spillovers from the resource sector, non-resource sector growth is expected to remain weak in 2014 at only 0.5 percent, but rise in 2015 to 4 percent. Headline inflation is projected to exceed 5 percent in 2014, reflecting the effects of the kina depreciation in the first part of the year and fiscal stimulus, but moderate slightly over the medium term consistent with strengthening in the external and fiscal positions and recent decline in oil prices (Table 5).[2] The current account deficit is expected to narrow substantially in 2014 and turn to a surplus in 2015, on account of increasing LNG exports.

[1] The GDP numbers cited in this report are based on a methodology using 1998 as the base period of a fixed weight index. Given the enormous structural change that has since taken place, the authorities are developing a chain-linking methodology to more accurately capture real GDP. Meanwhile, the authorities are extending GDP coverage, which will result in higher levels of GDP estimates.

[2] The recent large increases in minimum wages (up to 40 percent) are unlikely to result in a significant increase in inflation, as their impact is confined to a few formal sectors, such as plantation activity and retail services.

5. Risks to the outlook are increasingly tilted toward the downside (Appendix 1). In the near term, global economic weakness could weigh on external demand and commodity prices, with room for fiscal stimulus limited by the need to ensure debt sustainability. The recent measure resulting in the effective appreciation of the exchange rate also heightens risks to the growth outlook and the external position, as non-resource exports could be adversely affected. Over the longer term, development of LNG production in Australia and shale gas elsewhere could reduce gas prices, export earnings, and government revenue. Lower LNG and mineral prices, together with higher funding costs in a post-quantitative easing era, could also affect foreign direct investment (FDI). Upside risks include the potential for a second LNG project and further mineral resource development (Box 1).

POLICY DISCUSSIONS

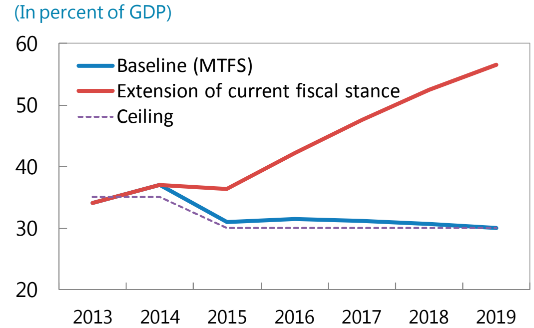
6. Overview. The economic transition underway calls for an adjustment of macroeconomic policies to ensure stability. Fiscal consolidation will need to be anchored by government's existing debt targets, with more focus on improving the quality of expenditure. Greater exchange rate flexibility will be required to cushion the economy from shocks, while more complete withdrawal of banking system excess liquidity would help strengthen monetary policy transmission and also alleviate the downward pressure on the kina. These policies should be supported by faster and deeper structural reforms to create an environment that is conducive for private sector investment, job creation, and inclusive growth.

A. Fiscal Policy and Resource Revenue Management

7. The large fiscal expansion of the past three years has reduced PNG's fiscal space, with new LNG revenue not sufficient to replenish it and allow for spending to grow at the current pace. Under staff's baseline, the overall fiscal deficit is expected to be 7.2 percent of GDP in 2014—a slight improvement from 8.0 percent of GDP in 2013 (Table 2). Reflecting this, gross central government debt is expected to exceed the 35 percent cap set under the government's Medium-Term Fiscal Strategy (MTFS) for 2014 and the 30 percent cap for 2015 and beyond. Although PNG's external debt burdens are low with the debt sustainability analysis continuing to suggest a low risk of debt distress for external public debt (see Annex I), there has been a significant increase in overall public debt, which amounts to about

Government Debt

(In percent of GDP)

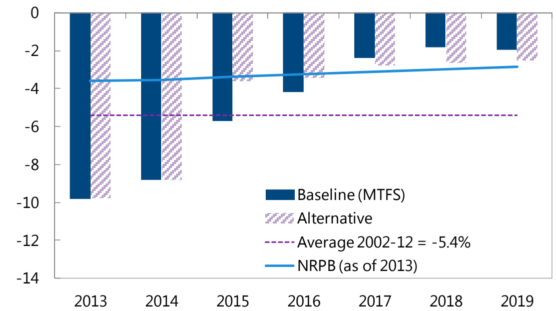


Source: IMF staff calculations.

51 percent of GDP once arrears to a superannuation fund and other liabilities are taken into account.[3]

8. Keeping the debt ratio below the legislated ceiling will require somewhat faster fiscal consolidation than envisaged in the MTFS. Staff recommended continuing to anchor fiscal policy with the current debt target, but using the non-resource primary balance (NRPB) as the underlying fiscal target. Given the volatility of resource sector output and revenues, using the overall fiscal balance as a fiscal target tends to lead to procyclical spending—a shortcoming that NRPB targets can help overcome. Achieving the 30 percent debt target in 2015 would imply an NRPB deficit of about 3.6 percent of non-resource GDP (NRGDP) in 2014 (equivalent to an overall deficit of 1.0 percent of GDP), with a gradual reduction to 2.5 percent of GDP by 2019.[4] If such a prudent policy is pursued over the longer term, PNG could eventually build up net financial wealth of about 20 percent of NRGDP by 2050, providing considerable resources for macroeconomic stabilization and intergenerational wealth sharing. To facilitate policy communication, budget documentation could continue to be framed on the basis of the overall fiscal balance but with policy measures geared toward achieving the underlying NRPB targets.

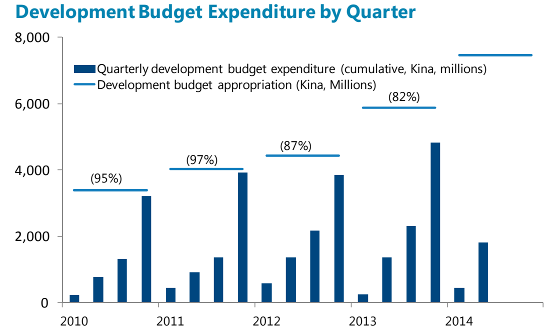
Non-Resource Primary Balance
(In percent of non-resource GDP)



Source: IMF staff calculations.

9. To achieve these targets, the bulk of fiscal adjustment will need to come from expenditure restraint. In the near to medium term, limited scope exists to increase revenue, including from LNG production because of accelerated depreciation arrangements for the LNG project. On the other hand, a slowdown in the growth of development expenditure would help facilitate fiscal adjustment and ease capacity constraints.[5] However, it will necessitate stricter discipline over the use of public resources, notably ceasing the practice of transferring unused funds stemming from poor project implementation into project trust accounts towards the end of the fiscal year.

Development Budget Expenditure by Quarter



Sources: National Budget Documents (various years); and ADB calculations.
( ) is the percent of expenditure overbudget appropriation during each year.

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[3] Generally speaking, the debt-to-GDP ratio tends to understate PNG's debt burden due to its large net income outflows (about 10 percent of GDP).

[4] A selected issues paper has been prepared on fiscal adjustment based on a variant of the permanent income hypothesis.

[5] Under PNG's previous expenditure classification, recurrent expenditure has seen rapid increases over the past two years. However, with the integration of recurrent and development budgets introduced in 2013 with IMF assistance, the new classification actually shows only a small increase in recurrent expenditure over the past two years (Table 2).

10. Within a more restrained resource envelope, the government should shift its policy focus towards improving expenditure quality. For 2014, staff advised the postponement of non-essential expenditures in light of an expected revenue shortfall (0.9 percent of GDP) and the recent spike in long-term government borrowing costs. Over the near to medium term, greater efficiency of public spending can be achieved through reprioritization of projects to bring planned infrastructure investments into line with implementation capacity (Appendix 2). The expenditure mix also needs to be carefully examined to prioritize improvements in the delivery of frontline health and education services and to allocate sufficient resources for maintenance of existing assets and other critical recurrent expenditure.

11. Over the longer term, fiscal space is expected to be created by additional revenue stemming from an ongoing tax review as well as improved fiscal regimes of extractive industries. Staff noted that the tax review, which is being undertaken with IMF technical assistance (TA), presents an important opportunity to improve the efficiency and fairness of the tax system. Scope also exists to limit income tax holidays for new mining projects given PNG's comparatively low collection of extractive industry revenues. Staff also stressed the urgency of conducting mining industry audits to eliminate potential revenue leakages. Recognition should also be given to the tax review's overarching nature in the concurrent reviews of mining and SME policy, with strong cooperation imperative among relevant agencies. Staff welcomed ongoing efforts to implement IMF TA recommendations on improving extractive industries fiscal regimes, which so far have focused on tax progressivity and government equity participation.

12. Stronger public financial management (PFM) is needed to improve development outcomes. Progress has been made in operationalizing the Integrated Financial Management System (IFMS), integrating recurrent and development budgets, and undertaking public expenditure review and a Public Expenditure and Financial Accountability (PEFA) assessment. Further efforts will be needed to improve cash management and medium-term budgeting practices, which should help reduce the use of multiple trust accounts to roll-over project funding. Moreover, debt management practices will need to be strengthened to minimize funding costs and risks, including through better fiscal and monetary coordination. Care should be taken in the exercise to lengthen the maturity of domestic debt in order to reduce rollover risks posed by the government's heavy reliance on short-term debt, while being sensitive to long-term borrowing costs. Staff urged that for all government-contracted loans, including those obtained via state-owned enterprises (SOEs), established procedures be observed and the terms and conditions of all loans be published to ensure fiscal transparency and debt sustainability.

13. The proposed sovereign wealth fund (SWF) should be brought into operation as soon as practical. The organic law passed in early 2012 followed the Santiago Principles and established a sound legislative framework for the SWF. Staff encouraged the authorities to adhere to this framework in the current review of the legislation. Following protocols set out in the framework, resource revenue should be channeled through the government's budget to the greatest extent possible. At the same time, staff urged strong transparency and governance of the proposed Kumul Trust, given government plans to channel some resource revenue to this entity.[6] Having attained candidacy for the Extractive Industry Transparency Initiative (EITI) in March 2014, PNG should move quickly toward full EITI membership to better safeguard public resources.

Authorities' Views

14. The authorities agreed that fiscal consolidation will be needed to ensure debt sustainability.[7] They remain committed to achieving legislated debt targets, but noted that anticipated spending pressures may necessitate a medium-term perspective. The authorities welcomed staff's proposal to use the NRPB as the fiscal target while acknowledging the need for clear communication of fiscal targets. They agreed that capital expenditure implementation needs to be improved and that priority areas of recurrent expenditure should be protected. For 2014, they will consider postponement of some lower-priority projects.

B. Monetary, Exchange Rate and Financial Sector Issues

15. Monetary policy remains accommodative, in the face of weak non-resource activity and a benign inflation outlook, but policy transmission remains weak given excess liquidity (Box2). The Bank of PNG (BPNG) raised the cash reserve requirement (CRR) on banks from 9 percent to 10 percent in September 2014. However, to further reduce excess liquidity, staff recommended that government deposits and trust accounts be moved from commercial banks to the BPNG and that purchases of government paper by the BPNG at primary auctions be completely sterilized. A reduction in the liquidity overhang would also help alleviate the depreciation pressure on the kina by reducing kina supply. Despite a decline in banks' lending rates, growth of credit to the private sector slowed and turned negative (y/y) in July 2014, reflecting the weak non-resource sector. In this environment, the Bank of PNG (BPNG) has kept its policy rate, the Kina Facility Rate (KFR), unchanged at 6¼ percent since March 2013. Staff recommended that were inflation pressures to intensify, the BPNG could tighten more aggressively, targeting broad money growth, through open market operations by issuing additional Central Bank Bills (CBBs) and by further raising the CRR, as necessary.

16. However, recent changes in exchange rate policy are likely to exacerbate excess demand for FX. The foreign exchange market became disorderly in the early part of 2014 when banks quoted widely diverging rates from the official (interbank) rate in their transactions with customers. In early June 2014, the BPNG imposed a 150 basis points band on FX buy-sell spreads around the official rate and require banks to use the band, leading to a *de facto* kina appreciation of around 17 percent (Box 3). Staff welcomed the 5-10 basis points depreciation per week

[6] The Kumul Trust aims to reorganize and consolidate public assets under the umbrella of a single trust. See Box 5 in the 2013 staff report.

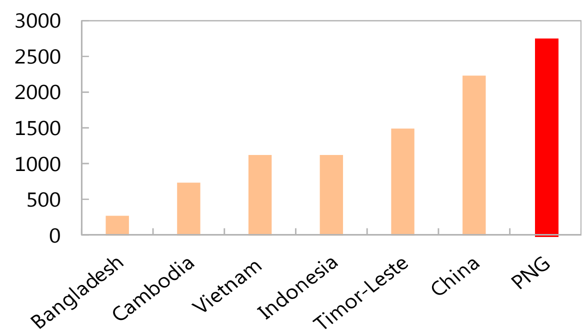
[7] See Appendix 3 for the authorities' response to Fund policy advice in the past.

(6-12 percent per annum) since the introduction of the band, but noted that the pace is insufficient to meaningfully reduce excess demand for FX, as it incentivizes exporters to delay FX sales while encouraging importers to demand more FX. Continued FX sales by the BPNG could jeopardize its foreign reserve position if it is forced to intervene persistently and/or on a large scale.

17. To mitigate this risk, the kina exchange rate should be allowed to move more quickly to a market-clearing level. Staff indicated that this could be better achieved if the BPNG conducted its FX interventions through transparent, competitive auctions rather than through outright sales, with the resulting exchange rate used as a first approximation of the market-clearing interbank rate. As market conditions improve, staff noted that the BPNG's interventions should be two-sided and aimed only at smoothing short-term volatility. The trading band could also be removed once steps were taken to increase competition and transparency in the FX retail market in order to avoid excessive spreads. Such policy intentions should be clearly communicated to the market. Staff is currently assessing the trading band and tax clearance certificate regime in order to determine whether they are consistent with PNG's obligations under Article VIII of the IMF Articles of Agreement.

18. Papua New Guinea's external position is expected to improve over time in line with its medium-term fundamentals. The exchange rate assessment suggests that the kina is moderately undervalued and is expected to strengthen over the medium term on account of expected LNG earnings (Box 4). Under these circumstances, staff noted that a major challenge ahead was to improve the competitiveness of the non-resource sector (including agriculture), whose export share in the world market has remained insignificant and stagnated over the past decade. To offset possible Dutch disease effects arising from a large resource sector, actions are needed to raise productivity in the non-resource sector, particularly in view of PNG's comparatively high minimum wages.[8] While foreign reserves are projected to increase from 2015 onward, their current level has limited room to fall before it becomes inadequate under the *de facto* crawl-like exchange rate regime effected by the trading band.

Cross-Country Comparision of Minimum Wages
(In US$; annualized)



Sources: Minimum weekly wage for PNG is K3.2 per hour; minimum monthly wage for Timor-Leste is provided by the authorities; data for rest of the countries are based on U.S. Department of Labor and WageIndicators.org.

19. The banking system remains stable, underpinned by strong capital adequacy and ample liquidity. Banks continue to be profitable and non-performing loans ratios are low (Table 7). Banks' high liquidity ratios—with more than half of their assets held in government securities or cash—partly reflect the structurally low levels of lending. The loan-to-deposit ratio has been

[8] Total factor productivity growth in PNG was slightly negative over the period 2000-13.

consistently below 50 percent, among the lowest in the Pacific Island region. Banks' direct exposure to the property sector is limited and their indirect exposure is confined to small liquidity risk arising from potential withdrawals of deposits by superannuation funds, which have invested heavily in the property sector. The recent price declines in the high-end property market have had limited impact on superannuation funds, which have also reduced their exposure to the market.

20. Papua New Guinea was placed on the Financial Action Task Force's (FATF) 'gray list' in early 2014. The authorities have made a high-level political commitment to address anti-money laundering/combating the financing of terrorism (AML/CFT) regulatory and operational deficiencies. They have developed an AML/CFT National Strategic Plan, which is aimed at addressing the action items within an agreed timeframe with the FATF, with assistance from Australia and the Asian Development Bank.

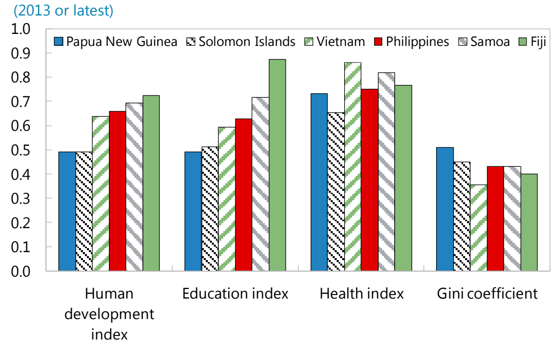
Authorities' Views

21. The BPNG emphasized their continued commitment to a floating exchange rate regime. They argued that the trading band was imposed to restore orderly condition in the FX market by reducing the excessive margins that banks earned on their foreign exchange transactions. The BPNG dismissed evidence of any increase in excess demand for FX by banks since the introduction of the trading band and saw the FX market as normalizing under current policies. The authorities also believed that a slow kina depreciation would help ensure orderly market conditions in adjusting to FX shortages. To reduce excess liquidity, the BPNG indicated it was actively exploring options beyond the recent increase in the CRR, including coordinating with the government to move its deposits to the BPNG.

C. Structural Reforms for Inclusive Growth

22. An acceleration of structural reforms is needed to improve the environment for business development and job creation. Surveys indicate that inadequate infrastructure, poor security, and lack of skilled workers are among the top impediments to business development in PNG, justifying the priority that the government has given to investment in infrastructure, health, education, and law and order. Potential returns on public investment in these areas are high, but more efficient use of existing resources will be needed to realize such gains, including through capacity development, careful evaluation and planning for investments, and improved expenditure mix to achieve better development outcomes (Appendix 2). Moreover, to create more jobs and diversify the non-resource sector, PNG should aim to attract more foreign know-how and capital by easing investor concerns about restrictions on foreign ownership. While recognizing that the last increase in minimum wages was in 2008, staff

Social Indicators
(2013 or latest)



Sources: UNDP; and ADB
Note: Scale from 0 to 1 with 1 representing highest in development, education, health, and income inequality.

noted that the recent large increases could have a negative impact on employment, and that future increases should take place in a gradual manner in line with productivity improvements. Recent progress in increasing competition in public utilities and telecommunications has resulted in greater service coverage and lower prices, an outcome that will not only help improve service delivery for the poor, but also reduce the cost of doing business. Staff encouraged the authorities to clarify corporate objectives for SOEs, notably those pertaining to their community services obligations.[9]

23. Greater efforts are required to develop the agricultural sector for the benefit of the vast majority of the population. Within the budget envelope, the strong focus on roads will need to be maintained given the importance for agricultural products to have access to markets in urban centers and overseas.[10] Staff also noted the need to protect farm crops and property from theft and welcomed initiatives to expand agricultural extension services. Continued innovations are also being made in PNG's drive for financial inclusion, such as rural credit unions/cooperatives targeting farmers in remote areas. Staff commended rural women's groups for their active role in capacity development and social protection at the grassroot levels.

Authorities' Views

24. **The authorities agreed with the need to develop the non-resource sector, as set out in their Vision 2050.** Infrastructure development to support the agricultural sector and rural areas is also a key part of the Medium-Term Development Plan, but is constrained by limited implementation capacity as well as resource availability. In addition, they viewed the reform of poorly performing SOEs as a key priority for improving service delivery and economic efficiency.

D. Statistics

25. Progress has been made in the production of macroeconomic statistics, but fundamental reforms are needed for further improvements. Staff welcomed recent data releases, including the 2011 census data, the household income and expenditure survey, and the rebased CPI series. However, PNG continues to face challenges in the timely compilation of accurate macroeconomic statistics, especially data on national accounts, the CPI, and balance of payments. Strengthening capacity will foremost require a decisive response to institutional weaknesses in the National Statistics Office (NSO). In this regard, staff welcomed the authorities' recent initiatives to reform the NSO and recommended IMF TA in support.

[9] These obligations are related to service delivery on a non-commercial basis and require government subsidies to recover costs.

[10] Papua New Guinea's road infrastructure compares unfavorably with most major economies in the Pacific region in terms of road density and quality. Moreover, only 12 percent of the population has access to electricity.

Authorities' Views

26. The authorities are firmly committed to statistical improvement. They recognized the importance of sound macroeconomic statistics for informed policy decisions and Fund surveillance. The authorities look forward to collaborating with development partners, including the IMF and Australia, to develop statistical capacity and conduct a review of the NSO, which is expected to produce an action plan in coming months to be implemented over a three-year period.

STAFF APPRAISAL

27. Papua New Guinea's economy is undergoing an important transition. While the commencement of LNG production will boost overall GDP growth in 2014-15, the slow growth of the non-resource sector calls for a renewed policy focus on inclusive growth in the post-LNG construction era. Prudent macroeconomic policies are essential to maintaining debt sustainability and external and financial stability during the transition.

28. Following strong government expenditure growth over the past three years, steadfast fiscal consolidation is now needed to ensure debt sustainability. With modest LNG revenue expected over the medium term, expenditure restraint will be key to meeting existing government debt targets and provide an opportunity to align spending levels with absorptive capacity and improve spending quality.

29. Better expenditure prioritization and public financial management will be crucial for improving development outcomes. High priority should be given to implementing high-impact projects and improving the delivery of frontline health and education services, including through sufficient allocation of critical recurrent expenditure. Recent progress on strengthening PFM is welcomed, but greater efforts are needed in improving the management of trust accounts, cash flows, and public debt, notably transparency in contracting government and SOE loans.

30. The sovereign wealth fund should be put into operation as soon as practical. The authorities' intention to retain the essential features of the original SWF design is welcome, in particular the strong commitment to ensuring resource revenues are channeled through the budget to the greatest extent possible. This move would better enable the use of public resources to achieve development priorities and is consistent with the SWF's role in macroeconomic stabilization and wealth sharing.

31. Greater exchange rate flexibility is needed to safeguard external buffers and eliminate imbalances in the foreign exchange market. To these ends, the BPNG should allow the exchange rate to be more market-determined and move quickly to a market-clearing rate through competitive FX auctions. Over the medium term, PNG's external position is expected to strengthen on account of its macroeconomic fundamentals. To improve monetary policy effectiveness, the BPNG should mop up excess liquidity more fully in the banking system, which would help reduce excess demand for FX as well as improve monetary policy transmission.

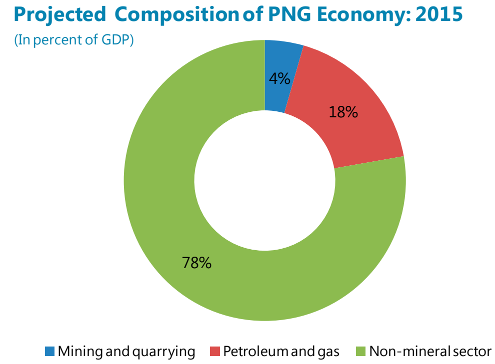
32. Structural reforms should be accelerated and deepened to create conducive conditions for broad-based growth. Continued efforts are needed to improve infrastructure, security, and health and education outcomes, attract more FDI, and accelerate SOE reforms in order to reduce business costs, create more jobs, and improve service delivery. A revival of agriculture and a strengthening of the SME sector supported by innovations in financial inclusion will also be vital for improving the livelihood of the majority of the population.

33. Notwithstanding the recent progress, determined action is needed to improve macroeconomic statistics. Some shortcomings in macroeconomic statistics continue to hamper surveillance and policy making. The authorities' commitment to reforming the NSO is a strong step in this direction, with increased IMF TA expected to assist reform efforts and to improve capacity.

34. It is proposed that the next Article IV consultation with PNG will be held on the standard 12-month cycle.

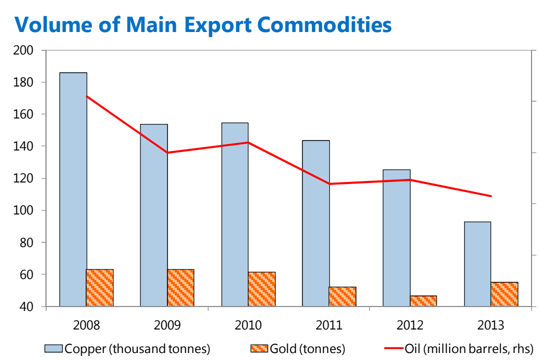
Box 1. Papua New Guinea: Update on the Mineral Sector

The first liquefied natural gas (LNG) shipment from the PNG LNG project took place in May 2014, ahead of schedule. The project started in 2010, with a total cost of US$19 billion, equivalent to 120 percent of 2012 GDP. LNG production will reach its annual full capacity of 6.9 million tons per annum by 2015, plateauing at that level for an expected 30 years. This will not only offset the decline in the country's matured crude oil production, but also elevate PNG's hydrocarbon sector to a new level. Because of its possible development cost advantage in the Asia Pacific region, PNG has potential for new gas projects over the medium term.



Petroleum output from existing fields has been on a natural decline in recent years as oil fields mature. Crude oil production commenced in 1991, while the country's first oil refinery started operation in 2005. At its peak in 1993, production was close to 130,000 barrels a day, but this has now fallen to around 28,000 barrels per day, with most now used for domestic refining. Despite the output decline, Puma Energy Holding's acquisition this year of Inter Oil's oil refinery indicates willingness of foreign investors to continue to operate refining capacity in the PNG market.

On the mining front, aside from the fall in the global prices for gold, copper and silver, a few legacy mines face operational, environmental and social challenges, which have affected output. The impact has been particularly pronounced at Ok Tedi, the country's longest operating copper and gold mine, which has suffered from diminishing earnings over the years due to declines in original ore reserves. Ok Tedi's mining lease has been recently extended to 2025. The Porgera gold mine, once regarded as one of the world's top producing gold mines, has also experienced a drop in production and revenue. Key operational challenges at this mine include increased illegal mining and resolution to the resettlement of landowners outside of the special mining lease area.



In contrast, a few other mines are expanding processing and production, helping boost growth in the sector. The Lihir gold and silver mine currently ranks as the world's third largest gold producing mine and is a relatively low-cost operation by global standards. After a major expansion of its processing plant last year, operational capacity is expected to reach one million ounces of gold per annum. Prior to the LNG Project, the US$2.1 billion Ramu nickel mine represented the single largest mining investment in PNG in the past decade. The mine is expected to reach full capacity next year. There are also a number of smaller gold and silver mines that hold considerable promise.

Source: IMF staff compilation and estimates.

Box 2. Papua New Guinea: The Effects of Excess Liquidity on Monetary Policy Effectiveness

Excess liquidity has accumulated in the financial system as a result of unsterilized purchases of foreign exchange by the BPNG over the past decade.[1] During the period of record-high commodity prices sizeable export tax receipts were paid to the government in US dollars. These FX receipts were converted to kina by the BPNG, and the portion of kina revenue which was then deposited with the commercial banks added to banking system reserves as the BPNG did not completely sterilize this added liquidity.

The growth in domestic liquidity did not result in excess credit growth or inflation. Excess reserves added demand for short-dated CBBs and Treasury bills, lowering short-term market interest rates and driving a wedge between these rates and the KFR policy rate. However while around half of financial system assets are held in liquid Treasury bills and CBBs, less than half is represented by loans. Banks attribute this asset composition to the lack of lending opportunities, due to structural constraints including lack of collateral and limited contract enforceability.

Excess liquidity should be removed to increase the effectiveness of monetary policy. Should a monetary policy tightening be required in the future, excess liquidity would need to be withdrawn before the interest rate channel of monetary policy could regain effectiveness. Moreover, large excess kina reserves raise the risk of a sharp depreciation through the sale of liquid Kina assets when risk aversion is on.

A number of tools are available for liquidity withdrawal, but an important step will be to transfer government deposits to the BPNG. While the BPNG can continue to withdraw liquidity through CBB issuance and increases in the CRR, transfer of government deposits has the added benefit of improving the government's cash management (these deposits were around K630 million at end-September 2013, which exceeds the amount of excess reserves held by banks at end-2013). As well as contributing to excess liquidity, government deposits held in multiple trust accounts have resulted in a fragmented system of cash management that reduces transparency and leads to inefficient use of public resources.

Source: IMF staff compilation.

[1]Excess liquidity is defined as bank reserves in excess of required reserves.

Box 3. Papua New Guinea: Exchange Rate Trading Band

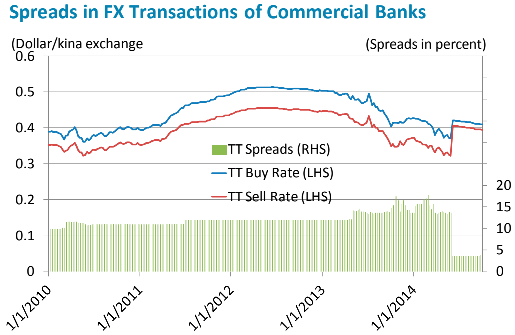
Liquidity in PNG's foreign exchange (FX) market has swung widely in recent years, largely driven by real sector flows. Between 2010 and 2012, FX supply was abundant due to inflows associated with the PNG LNG project and strong commodity prices, leading to the rapid appreciation of the kina. This upswing reversed in 2013, as FDI inflows declined and commodity prices fell and the kina started to depreciate. The BPNG sought to slow the kina depreciation through its FX sales in the interbank market, but despite this effort, FX supply continued to tighten over 2013 as major disruptions to mining operations and cash crop exports reduced FX earnings.

Despite pressures, the official (interbank) rate was held constant from October 2013 to early June 2014. However, the BPNG's net FX sales in the interbank market were insufficient to meet the demand of authorized dealers (mostly banks). As a result, official and market rates diverged, especially after 2013, as authorized dealers sold the available FX at heavily depreciated rates to their customers to meet demand. At the same time, the spreads in the retail market widened sharply.

On June 4, 2014 the BPNG imposed a 150 basis point trading band on FX buy-sell spreads of authorized dealers around the official rate. This forced market exchange rates into line with the official rate, causing a 17 percent *de facto* appreciation of the kina vis-a-vis the U.S. dollar at the time.

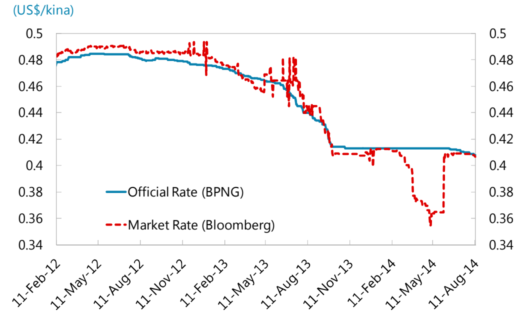
Since the introduction of the band, the official rate has depreciated at a rate of 5-10 basis points per week (6-12 percent per annum) and the BPNG has continued to intervene through FX sales. Discussions with some exporters suggest that the early June appreciation has reduced their revenues in kina terms and has at least initially discouraged FX sales by exporters. At the same time, many importers and other FX users are complaining about increased difficulties in obtaining adequate amounts of FX at prevailing exchange rates. Banks have also expressed concerns that the trading band has reduced FX liquidity and added to delays in filling customer orders for FX.

Spreads in FX Transactions of Commercial Banks



Sources: Website of Bank South Pacific

FX Rates
(US$/kina)



Sources: BPNG; Bloomberg

Source: IMF staff estimates

Box 4. Papua New Guinea: External Sector Assessment

The kina has generally been weakening since 2013, as commodity prices softened and capital inflows associated with the LNG project passed their peak. Between January 2013 and July 2014, the kina depreciated by 9 percent in nominal effective exchange rate (NEER) terms, 14 percent against the U.S. dollar, and 4 percent against the Australian dollar. Despite PNG's higher inflation relative to its trading partners, the kina depreciated by 7 percent during the same period in real effective exchange rate (REER) terms, reflecting the large nominal depreciation.

CGER assessments suggest a moderate undervaluation of the kina. The assessment results show a wide range of 0-21 percent in undervaluation. However, given that (i) most of these results lie in the lower half of the range and (ii) the External Sustainability (ES) approach relies on the current level of net foreign assets (which is expected to increase with LNG production, thus shifting the equilibrium exchange rate upward), more weight has been placed on the results from the other three approaches. Overall, these results suggest that a stronger kina may prevail over the medium term as LNG exports increase, notwithstanding downward pressure on the currency in the short term.

Exchange Rate Assessment: Baseline Results

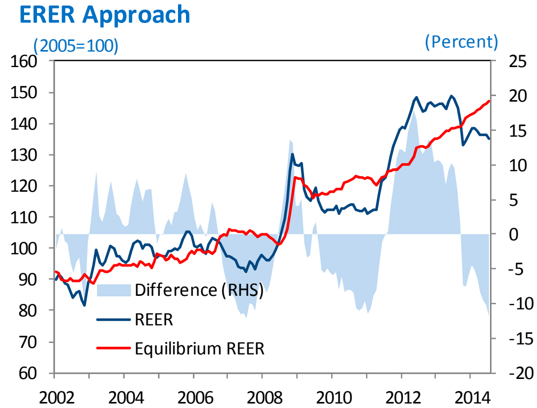
(in percent)

	CA/GDP Norm	CA/GDP Underlying 1/	REER Overvaluation
PPP approach	...	...	0.3
ES approach 2/	...	...	-20.6
MB approach 3/	3.5	5.6	-6.2
ERER approach 4/	...	...	-8.1

1/ Staff projection over 2019
2/ CA norm stabilizing NFA at -30.8 percent of GDP, assuming a nominal GDP growth rate of 7.2 percent.
3/ Beidas-Strom and Cashin, IMF WP/11/195, Table 2.A, specification IV. Based on a semi-elasticity of the CA/GDP with respect to the REER of -0.31.
4/ Overvaluation is assessed relative to July 2014.

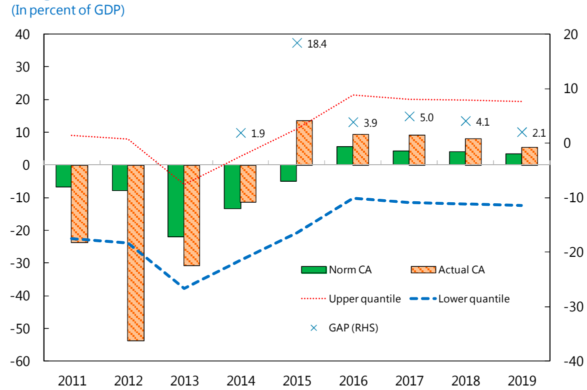
Sensitivity analysis shows the results from the Macroeconomic Balance (MB) approach are sensitive to some key assumptions. For example, if the level of commodity export volumes is 20 percent lower than the baseline over the forecast period, the analysis would indicate an 8 percent overvaluation. While less dramatic, a 20 percent decline in commodity export prices would result in only marginal overvaluation. Moreover, while maintaining macroeconomic stability may point to the need for a stronger kina over the medium term, the recent resource boom has already put considerable pressure on the tradable non-resource sector, suggesting greater efforts will be needed to improve its competitiveness.

ERER Approach



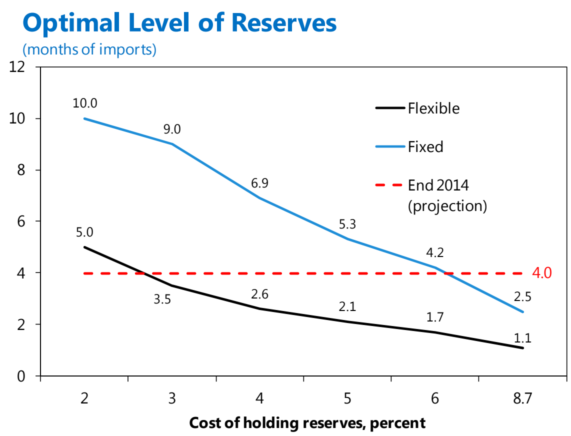
Augmented MB Approach

(In percent of GDP)



Box 4. Papua New Guinea: External Sector Assessment (Concluded)

Focusing on the current level of reserves, the reserve metric approach suggests that PNG's current reserve holdings are slightly below the adequate level (estimated to be close to 5 month of imports).[1] On the other hand, the optimal reserve approach indicates that the current holdings are well above the optimal level (about 2.5 months of imports for the fixed regime). Given that this latter result depends critically on the long-term opportunity cost of holding reserves, which is currently estimated to be 8.7 percent, more weight should be placed on the result from the reserve metric approach. Over the medium term, the level of foreign reserves is expected to increase once LNG production reaches full capacity.



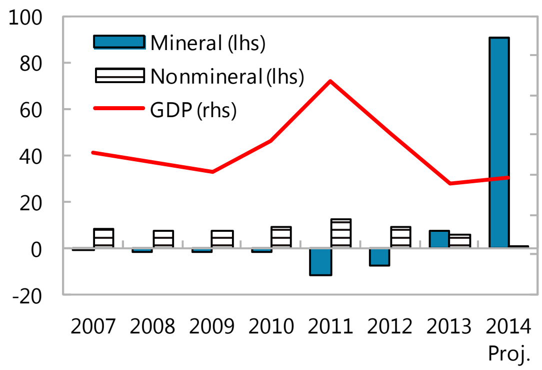
Source: IMF staff estimates and projections.

[1] The metrics are based on the specifications in Nkunde Mwase's IMF Working Paper (WP/12/205). The metric for the floating regime is 4.7 months of imports, while the one for the fixed regime is 4.9 months of imports. Note that reserve requirements are reduced by the fact that the mining sector traditionally meets much of its own FX needs, rather than drawing on official reserves.

Figure 1. Papua New Guinea: Macro Performance

Economic growth is projected to pick up with the start of LNG production in May 2014…

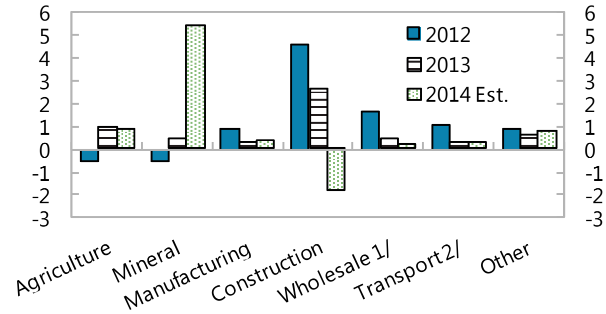
Real GDP Growth
(In percent)



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

…but non-resource industries are expected to be less buoyant as the LNG-related construction boom has ended.

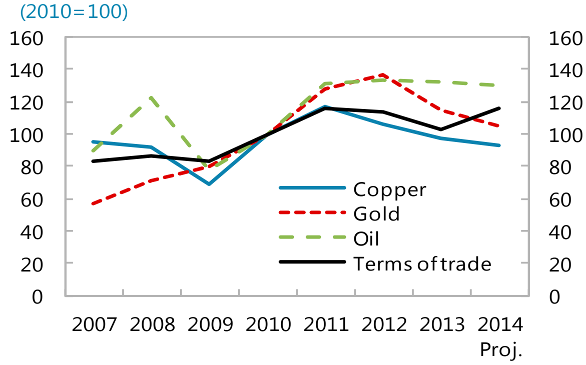
Sector Contribution to Real GDP Growth
(In percent of GDP)



Sources: Papua New Guinea authorities; and IMF staff estimates and projections.
1/ Wholesale and retail trade.
2/Transportation and communication.

After declining over the year, commodity prices are stabilizing.

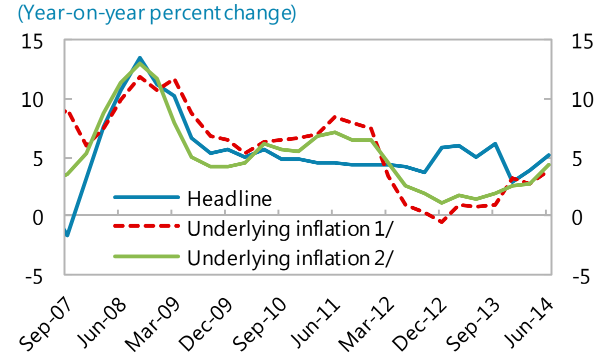
Commodity Price Index
(2010=100)



Sources: Papua New Guinea authorities.; IMF, *International Financial Statistics*; and IMF, *World Economic Outlook*.

Meanwhile, inflation has inched up recently…

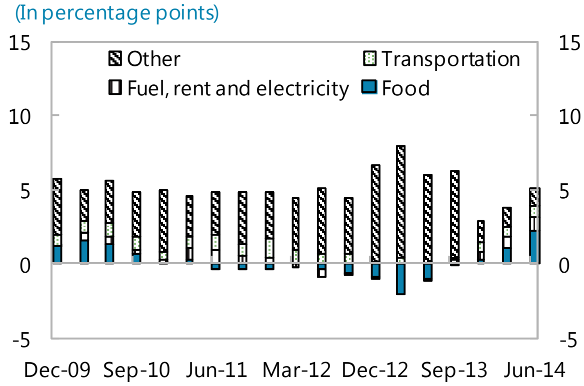
CPI Inflation
(Year-on-year percent change)



Sources: BPNG; and Papua New Guinea authorities.
1/ Excludes seasonal, excise and price control.
2/ Trimmed mean by BPNG.

…on account of higher prices for food and services…

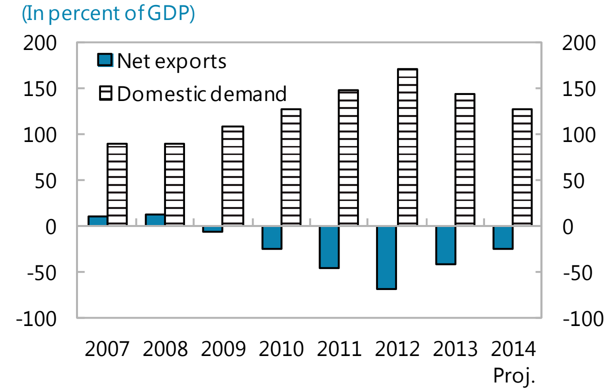
Contribution to CPI Inflation
(In percentage points)



Sources: Bank of Papua New Guinea; and Papua New Guinea authorities.

…and upward pressure from increased fiscal spending.

Real Domestic Demand and Net Exports
(In percent of GDP)

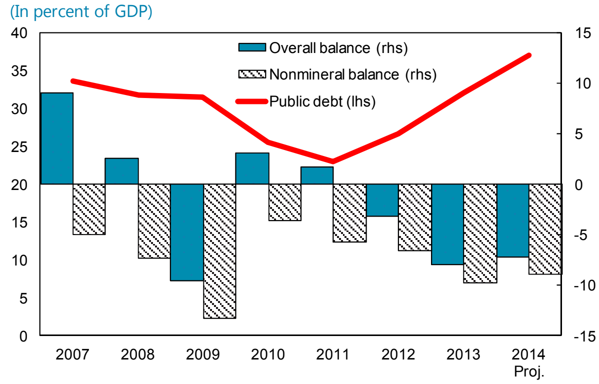


Sources: Papua New Guinea authorities; and IMF staff estimates and projections.

Figure 2. Papua New Guinea: Fiscal Performance

The overall fiscal deficit continued to increase in 2013 and is expected to remain high in 2014.

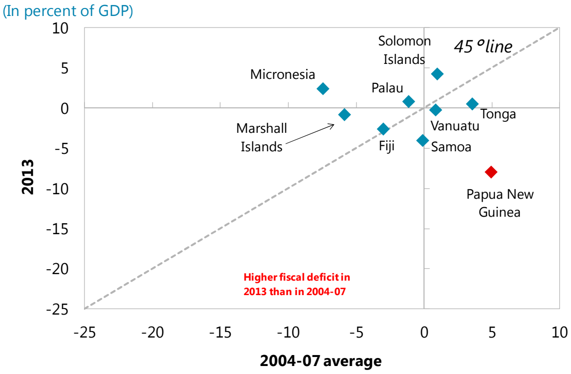
Fiscal Balance
(In percent of GDP)



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

Compared with the previous decade, the recent fiscal balance has deteriorated distinctly…

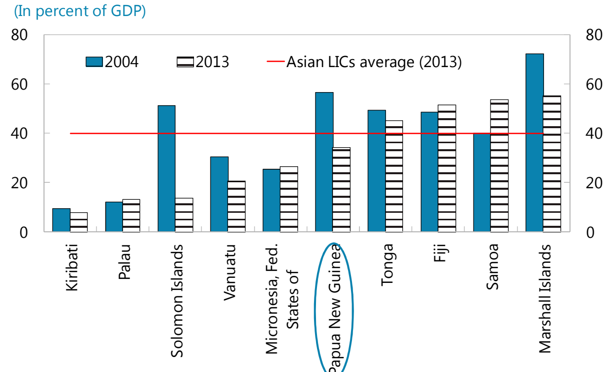
Fiscal Balance
(In percent of GDP)



Sources: Country authorities; and IMF staff calculations and estimates.

…but government debt remains relatively low compared with many other Pacific Island countries.

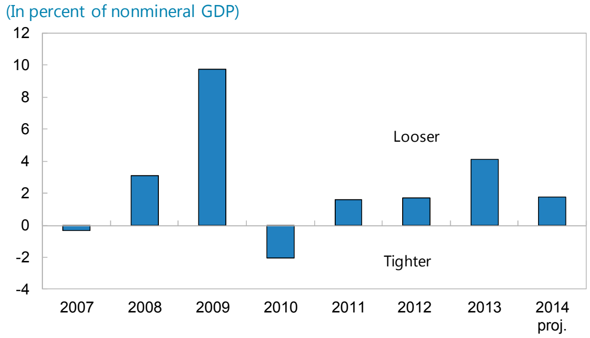
Public Debt
(In percent of GDP)



Source: Country authorities; and IMF staff estimates.

The fiscal stance has continued to loosen…

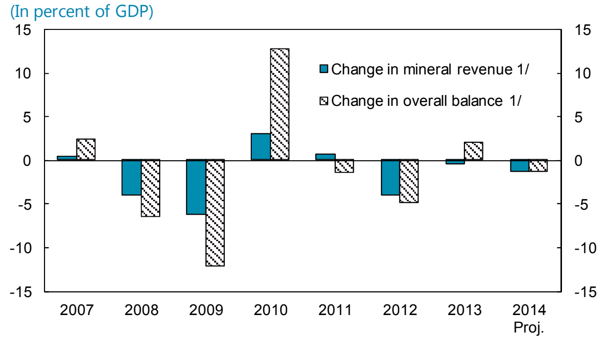
Fiscal Stance
(In percent of nonmineral GDP)



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

…while overall government revenue is set to decline in 2014 despite some increases to mineral revenues.

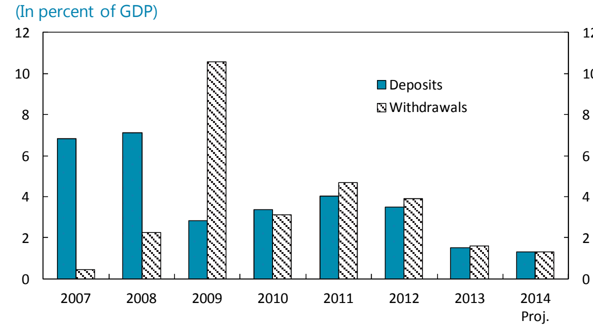
Mineral Revenue
(In percent of GDP)



Sources: Papua New Guinea authorities; and IMF staff estimates and projections.
1/ Compared to the previous year.

Meanwhile, the role of the trust accounts has declined, mostly since 2009

Trust Accounts Movements
(In percent of GDP)

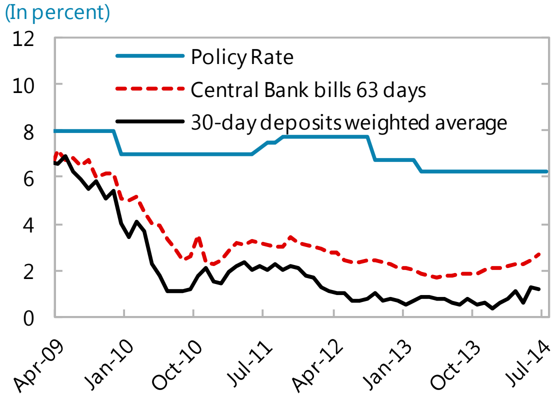


Sources: Papua New Guinea authorities; and IMF staff estimates and projections.

Figure 3. Papua New Guinea: Monetary Policy

The policy stance has been loosened as inflation fell…

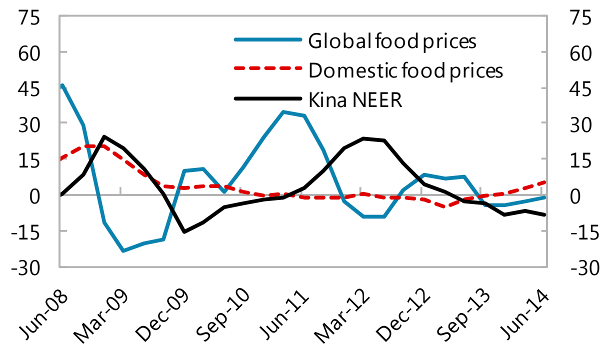
Policy Rate
(In percent)



Source: Bank of Papua New Guinea.

…and notwithstanding recent increases, generally stable food prices have greatly contributed to low inflation.

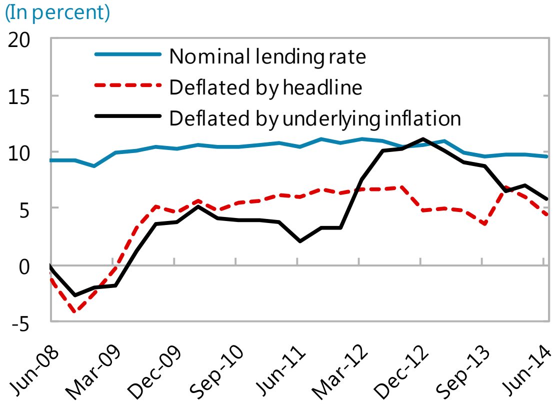
Food Prices and Nominal Effective Exchange Rate
(Year-on-year percentage change)



Sources: IMF, *International Financial Statistics*; and IMF staff calculations.

While the nominal interest rates have not dropped much, real interest rates have fallen over the past year.

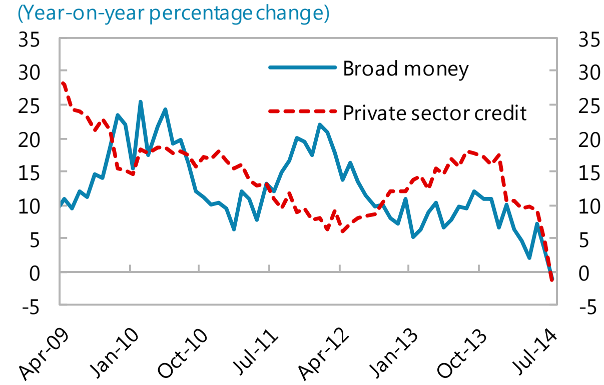
Real Lending Rate
(In percent)



Source: Bank of Papua New Guinea.

The growth of broad money and private sector credit has also fallen recently as the resource boom faltered…

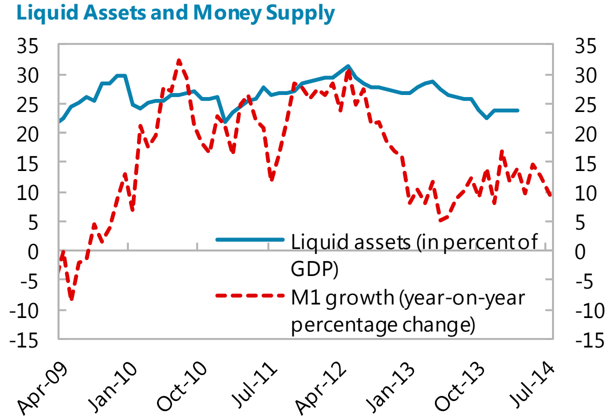
Credit Growth and Broad Money
(Year-on-year percentage change)



Source: Bank of Papua New Guinea; and IMF, *International Financial Statistics*.

However, ample liquidity remains…

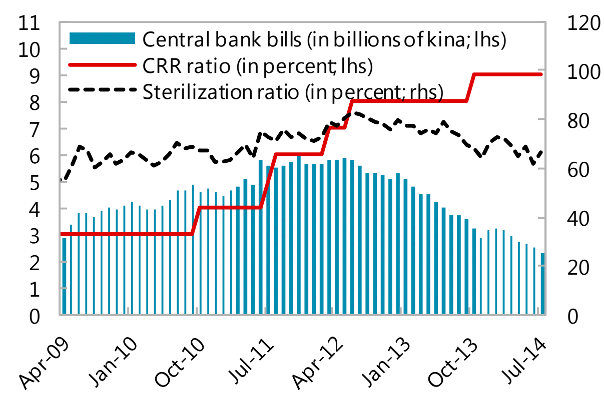
Liquid Assets and Money Supply



Source: Bank of Papua New Guinea; and IMF, *International Financial Statistics*.

…given insufficient sterilization….

Central Bank's Sterilization

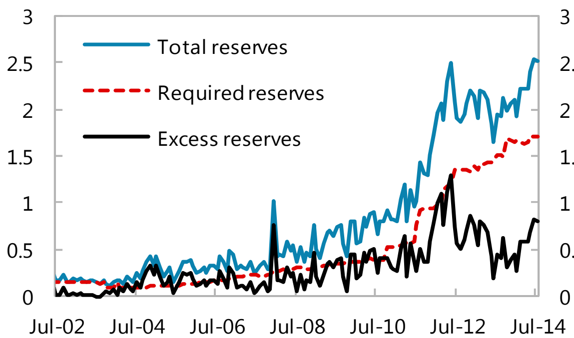


Source: Bank of Papua New Guinea; and IMF staff calculations.

Figure 4. Papua New Guinea: Monetary Policy (concluded) and the External Position

...and a rapid increase in reserves from early 2009...

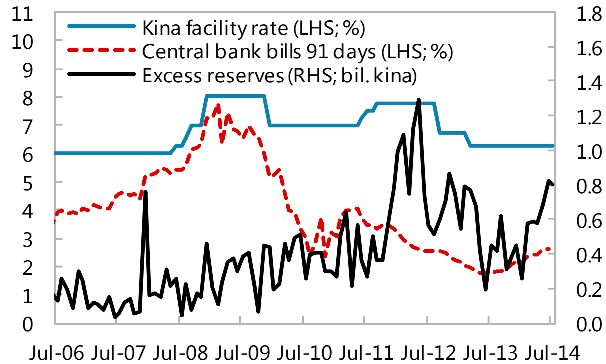
Banks' Reserves
(In billions of kina)



Sources: Papua New Guinea authorities; and IMF, *International Financial Statistics*.

... which has put downward pressure on short-term interest rates.

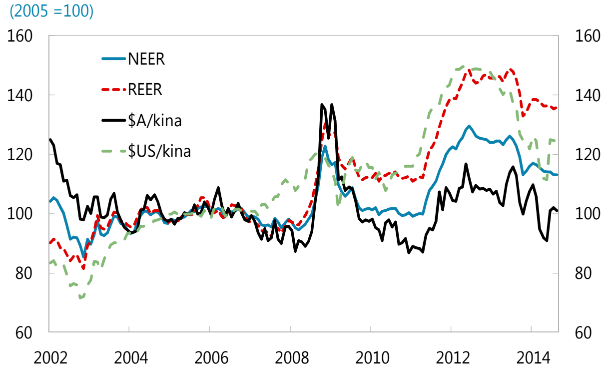
Excess Reserves and Central Bank Bill Yields



Sources: Papua New Guinea authorities; and IMF, *International Financial Statistics*.

Exchange rates have depreciated rapidly since 2013...

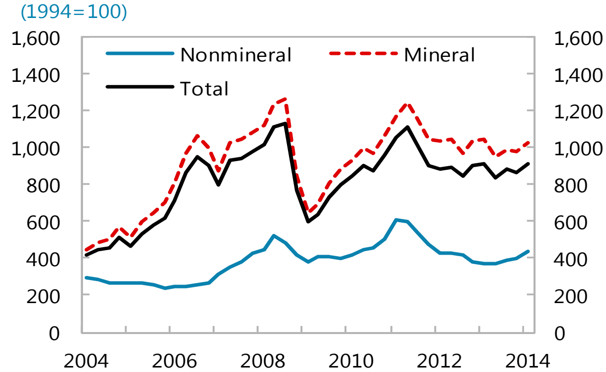
Exchange Rates
(2005 =100)



Sources: Bloomberg; and IMF staff calculations.

...as capital inflows associated with the LNG project passed the peak and the terms of trade worsened.

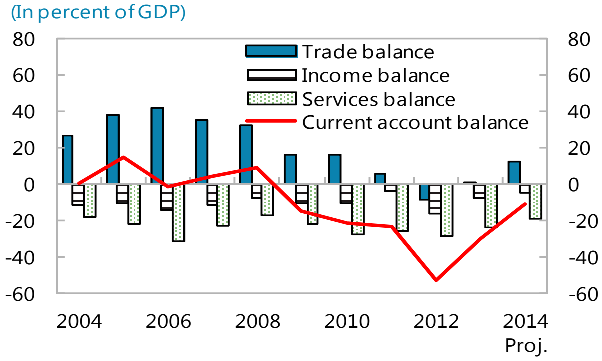
Export Price Indices
(1994=100)



Source: Bank of Papua New Guinea.

However, the current account deficit should narrow sharply as project-related imports fall and LNG exports increase.

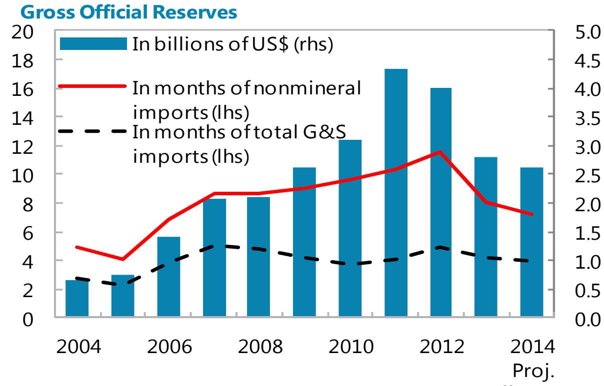
External Trade and Current Account
(In percent of GDP)



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

Official reserves have declined sharply but are expected to stabilize this year, assuming limited intervention going forward.

Gross Official Reserves

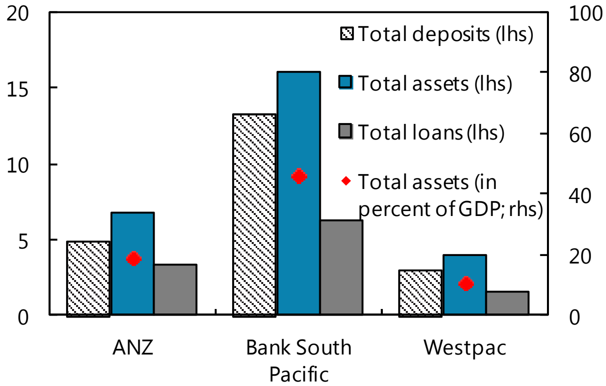


Source:s Papua New Guinea authorities; and IMF staff estimates and projections.

Figure 5. Papua New Guinea: The Banking Sector

The banking sector is dominated by three banks…

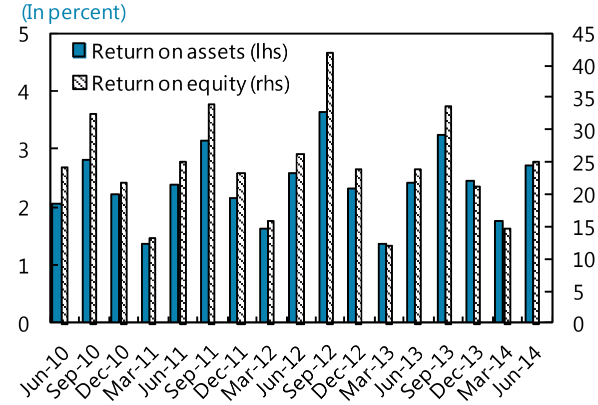
Banks' Assets and Liabilities, June 2014
(In billions of kina)



Source: Bank of Papua New Guinea.

…and they continue to be quite profitable…

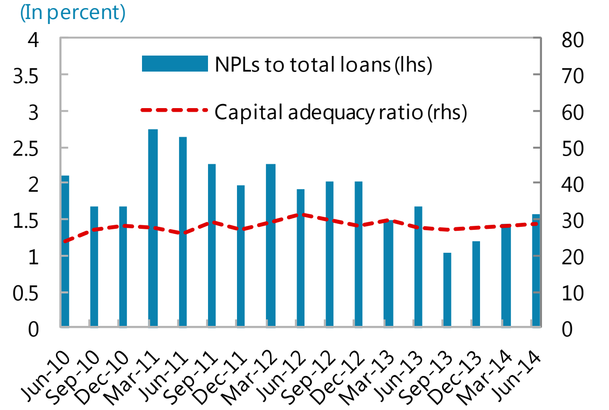
Banks' Return on Assets and Equity
(In percent)



Source: Bank of Papua New Guinea.

…with low NPLs and high capital adequacy…

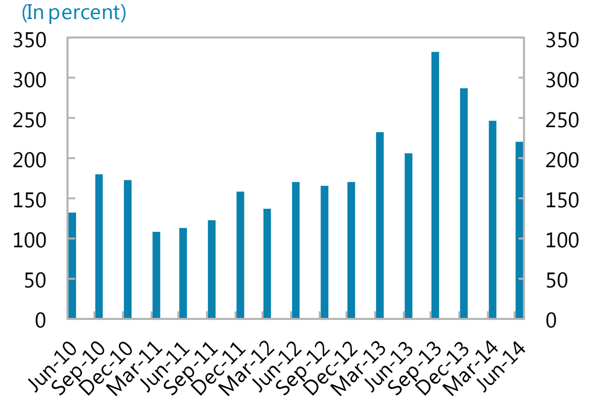
Bank Vulnerability Ratios
(In percent)



Source: Bank of Papua New Guinea.

…while provisioning also remains high.

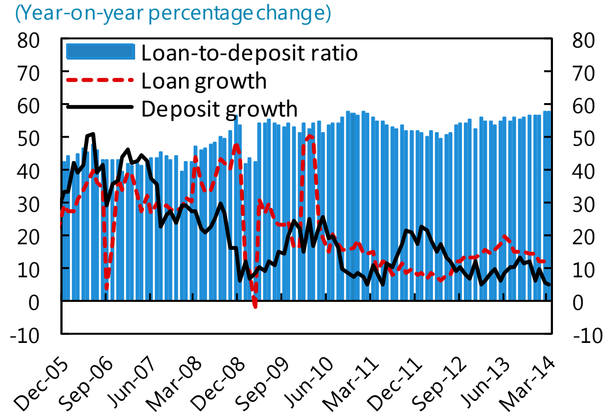
Bank Provisioning to NPLs
(In percent)



Source: Bank of Papua New Guinea.

The loan-to-deposit ratio has stayed low reflecting deposit-based funding structure and excess liquidity.

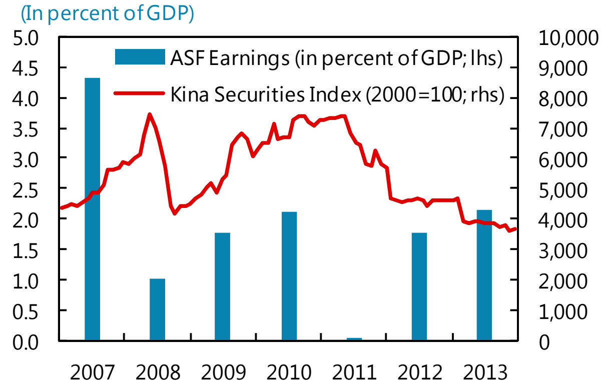
Growth of Bank Loans and Deposits
(Year-on-year percentage change)



Source: Bank of Papua New Guinea.

Meanwhile, earnings of superannuation funds improved a little after a big drop in 2011.

Earnings of Superannuation Funds
(In percent of GDP)

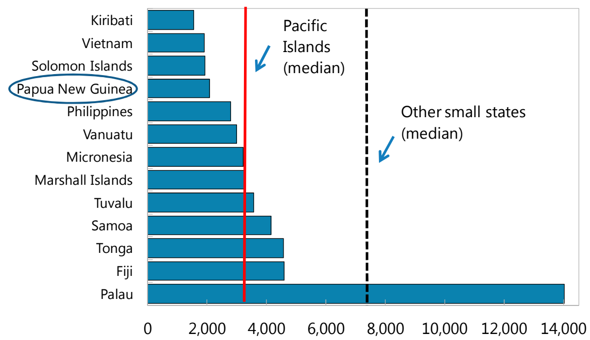


Source: Papua New Guinea authorities; and IMF, *International Financial Statistics.*

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

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

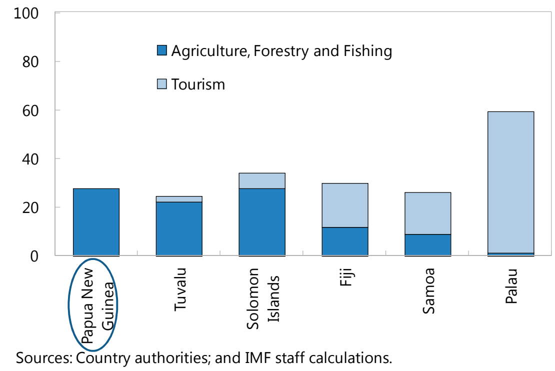
GDP per Capita, 2013
(In U.S. dollars)



Sources: Country authorities; IMF, *World Economic Outlook*; and IMF staff calculations.

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

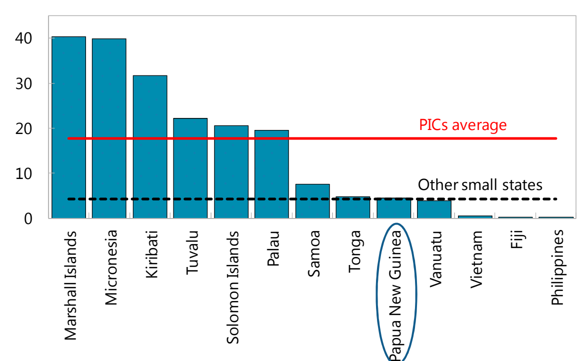
Real GDP - Selected Industries, 2013
(In percent of GDP)



Sources: Country authorities; and IMF staff calculations.

However, it does not depend much on foreign aid.

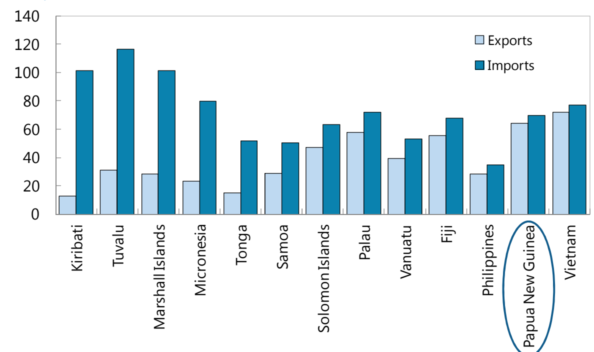
External Grants, 2005-13
(In percent of GDP)



Sources: Country authorities; and IMF staff calculations.

The trade account is more balanced than peer countries.

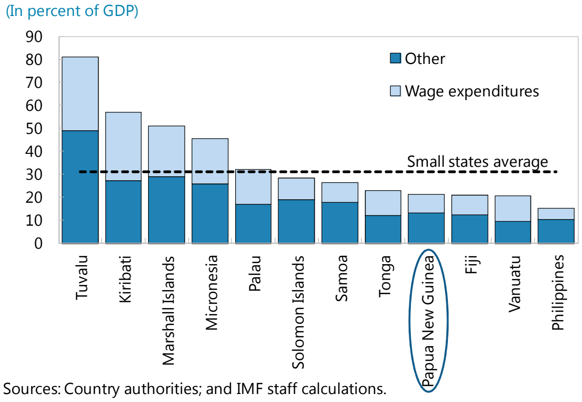
Trade of Goods and Services, 2005-13
(In percent of GDP)



Sources: Country authorities; and IMF staff calculations.

Government recurrent spending is moderate in regional comparison…

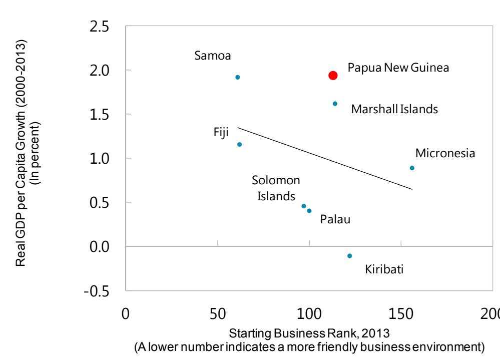
Recurrent Government Expenditure, 2013
(In percent of GDP)



Sources: Country authorities; and IMF staff calculations.

…while there is scope for improving the business climate.

Business Environment and Real GDP per Capita Growth



Sources: World Bank Group, *Doing Business* reports; and IMF staff calculations.

Table 1. Papua New Guinea: Selected Economic and Financial Indicators, 2010–15

Nominal GDP (2013):	US$15.4 billion 1/
Population (2013):	7.3 million
GDP per capita (2013):	US$2,098
Quota:	SDR 131.6 million

	2010	2011	2012	2013	2014	2015
				Est.	Proj.	
			(Percentage change)			
Real sector						
Real GDP growth	7.7	10.7	8.1	5.5	5.8	19.6
Resource 2/	-2.0	-11.8	-7.4	7.2	90.6	150.5
Nonresource	8.7	12.8	9.2	5.4	0.5	4.0
CPI (annual average)	6.0	4.4	4.5	5.0	5.3	5.0
CPI (end-period)	4.9	4.4	5.8	2.9	6.3	5.0
			(In percent of GDP)			
Central government operations						
Revenue and grants	31.3	30.4	29.2	28.2	30.1	25.3
Expenditure and net lending	28.2	28.7	32.4	36.1	37.3	27.8
Net lending(+)/borrowing(-) [Overall balance] (Revenue - expenditure)	3.1	1.7	-3.2	-8.0	-7.2	-2.5
Nonresource net lending(+)/borrowing(-)	-3.6	-5.7	-6.6	-9.9	-8.9	-5.8
			(Percentage change)			
Money and credit (percentage change)						
Domestic credit	4.9	-5.2	37.7	40.9	…	…
Credit to the private sector	18.1	7.9	12.1	17.5	…	…
Broad money	10.2	17.8	10.9	6.7	…	…
Interest rate (182-day Treasury bills; period average)	5.2	4.3	5.8	5.0	…	…
			(In billions of U.S. dollars)			
Balance of payments						
Exports, f.o.b.	5.9	6.9	6.3	5.6	6.3	12.4
Of which: Nonresource	4.4	4.9	4.5	4.1	4.3	10.1
Imports, c.i.f.	-4.3	-6.3	-7.7	-5.5	-4.4	-4.7
Current account (including grants)	-2.1	-3.0	-8.2	-4.7	-1.8	2.7
(In percent of GDP)	-21.5	-23.6	-53.6	-30.8	-11.4	13.5
Gross official international reserves	3.1	4.3	4.0	2.8	2.6	3.8
(In months of goods and services imports)	3.7	4.1	5.0	4.2	4.0	5.5
			(In percent of GDP)			
Government debt						
Government gross debt	25.6	23.0	26.7	34.0	37.0	31.0
External debt-to-GDP ratio (in percent) 3/	10.7	8.3	7.3	8.1	9.0	7.8
External debt-service ratio (percent of exports) 3/	1.5	1.3	1.5	1.5	1.8	0.7
Exchange rates						
US$/kina (end-period)	0.3785	0.4665	0.4755	0.4130	…	…
NEER (2005=100, end-period)	100.7	108.6	125.5	121.4	…	…
REER (2005=100, end-period)	112.7	122.5	144.3	143.0	…	…
Nominal GDP (in billions of kina)	26.4	30.5	32.1	34.6	39.8	52.2

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

1/ Based on period average exchange rate.

2/ Resource sector includes production of mineral, petroleum, and gas and directly related activities such as mining and quarrying, but excludes indirectly related activities such as transportation and construction.

3/ Public external debt includes external debt of the central government, the central bank, and statutory authorities.

Table 2. Papua New Guinea: Summary Operations of the Central Government, 2010–15

	2010	2011	2012	2013	2014	2015
					Proj.	
	(In millions of kina, unless otherwise indicated)					
Revenue and grants	8,261	9,280	9,358	9,740	11,974	13,243
Nonresource revenue	5,095	5,991	7,324	8,196	9,750	9,840
Resource revenue	1,775	2,264	1,103	667	669	1,722
Grants	1,391	1,025	931	878	1,555	1,681
Expenditure 1/	7,441	8,764	10,383	12,500	14,848	14,526
Expense (old classification)	4,162	5,348	6,200	7,386	11,687	11,695
Expense (new classification)	n.a.	n.a.	9,165	10,303	11,687	11,695
Net acquisition of nonfinancial assets (old classification)	3,279	3,416	4,184	5,113	3,161	2,831
Net acquisition of nonfinancial assets (new classification)	n.a.	n.a.	1,218	2,196	3,161	2,831
Gross operating balance	4,099	3,932	3,158	2,354	287	1,548
Net lending(+)/borrowing(-) [Overall balance]	820	516	-1,026	-2,760	-2,874	-1,283
Nonresource net lending(+)/borrowing(-) [Nonresource overall balance]	-955	-1,748	-2,129	-3,426	-3,543	-3,005
Nonresource primary balance	-602	-1,332	-1,696	-2,942	-2,815	-1,996
Cash flows from financing activities: 2/						
Net acquisition of financial assets	-697	-1,763	359	-186	0	0
Net incurrence of liabilities	-336	938	2,347	2,896	2,874	1,283
Domestic	-245	906	2,182	2,535	2,316	1,056
Foreign	-90	31	165	361	558	226
	(In percent of GDP)					
Revenue and grants	31.3	30.4	29.2	28.2	30.1	25.3
Nonresource revenue	19.3	19.6	22.8	23.7	24.5	18.8
Resource revenue	6.7	7.4	3.4	1.9	1.7	3.3
Grants	5.3	3.4	2.9	2.5	3.9	3.2
Expenditure 1/	28.2	28.7	32.4	36.1	37.3	27.8
Expense (old classification)	15.8	17.5	19.3	21.4	29.3	22.4
Expense (new classification)	n.a.	n.a.	28.6	29.8	29.3	22.4
Net acquisition of nonfinancial assets (old classification)	12.4	11.2	13.0	14.8	7.9	5.4
Net acquisition of nonfinancial assets (new classification)	n.a.	n.a.	3.8	6.3	7.9	5.4
Gross operating balance	15.5	12.9	9.8	6.8	0.7	3.0
Net lending(+)/borrowing(-) [Overall balance]	3.1	1.7	-3.2	-8.0	-7.2	-2.5
Nonresource net lending(+)/borrowing(-) [Nonresource overall balance]	-3.6	-5.7	-6.6	-9.9	-8.9	-5.8
Cash flows from financing activities: 2/						
Net acquisition of financial assets	-2.6	-5.8	1.1	-0.5	0.0	0.0
Net incurrence of liabilities	-1.3	3.1	7.3	8.4	7.2	2.5
	(In percent of nonresource GDP)					
Revenue and grants	40.3	37.3	34.0	32.5	37.5	38.0
Nonresource revenue	24.8	24.1	26.6	27.3	30.6	28.3
Taxes on income, profits, and capital gains	8.3	7.7	8.2	8.7	10.4	10.5
Taxes on payroll and workforce	7.3	8.7	9.6	9.4	9.2	9.2
Taxes on property	0.2	0.2	0.2	0.2	0.9	0.3
Taxes on goods and services	5.8	4.2	5.7	5.9	5.8	5.8
Taxes on international trade and transactions	2.8	2.9	2.5	2.5	1.7	1.8
Other taxes	0.5	0.4	0.4	0.7	2.5	0.6
Resource revenue	8.7	9.1	4.0	2.2	2.1	4.9
Mineral and petroleum taxes	7.2	8.3	3.6	2.2	2.1	2.7
Mining and petroleum dividends	1.5	0.8	0.4	0.0	0.0	2.3
Grants	6.8	4.1	3.4	2.9	4.9	4.8
Expenditure 1/	36.3	35.3	37.8	41.7	46.6	41.7
Expense (old classification)	20.3	21.5	22.5	24.6	36.6	33.6
Expense (new classification)	n.a.	n.a.	33.3	34.4	36.6	33.6
Compensation of employees	9.0	9.2	8.8	9.3	9.8	8.8
Purchases of goods and services	6.2	7.8	8.7	10.5	14.3	12.8
Interest	1.7	1.7	1.6	1.6	2.3	2.9
Subsidies	1.4	1.2	1.4	0.0	0.0	0.0
Grants	0.7	0.7	0.8	0.7	4.3	3.8
Other payments	1.2	1.0	1.3	0.0	0.0	0.0
Net acquisition of nonfinancial assets (old classification)	16.0	13.7	15.2	17.1	9.9	8.1
Net acquisition of nonfinancial assets (new classification)	n.a.	n.a.	4.4	7.3	9.9	8.1
Gross operating balance	20.0	15.8	11.5	7.8	0.9	4.4
Net lending(+)/borrowing(-) [Overall balance]	4.0	2.1	-3.7	-9.2	-9.0	-3.7
Nonresource primary balance	-2.9	-5.4	-6.2	-9.8	-8.8	-5.7
Memorandum items:						
Additional priority expenditure (in percent of GDP)	3.3	4.7	3.9	1.6	0.0	0.0
Government deposits (in percent of GDP)	12.3	15.8	11.7	11.4	9.9	7.6
Gross government debt (in percent of GDP)	25.6	23.0	26.7	34.0	37.0	31.0
Domestic (in percent of GDP)	15.2	15.5	19.3	25.2	27.7	23.2
External (in percent of GDP)	10.4	7.5	7.4	8.8	9.2	7.9
Non-contingent liabilities (in percent of GDP)	23.6	19.5	17.8	16.8	13.9	12.1
Net public debt (in percent of GDP) 3/	20.4	14.0	21.1	28.7	33.2	29.6
Nonresource GDP at current prices (in millions of kina)	20,504	24,853	27,500	29,982	31,892	34,823
GDP at current prices (in millions of kina)	26,421	30,522	32,070	34,595	39,843	52,246

Sources: Department of Treasury; and IMF staff estimates and projections.

1/ As the authorities integrated recurrent and development budgets from 2014, there is discontinuation in the classification.

2/ Discrepancies between the overall balance and financing arise because transactions of trust accounts are not fully accounted for due to data weakness.

3/ Gross government debt and non-contingent liabilities less government assets including Oil Search equity stake.

Table 3. Papua New Guinea: Balance of Payments, 2010–19
(In millions of U.S. dollars)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
				Est.			Proj.			
Current account balance 1/	-2,091	-3,040	-8,244	-4,750	-1,827	2,749	1,999	2,014	1,834	1,364
Resource	-201	-2,772	-5,241	-2,298	196	4,583	4,023	4,012	3,900	3,474
Nonresource	-1,879	-1,477	-3,022	-2,452	-2,023	-1,834	-2,023	-1,998	-2,066	-2,111
Trade balance	1,564	628	-1,439	75	1,865	7,667	7,179	7,090	7,029	6,666
Exports (f.o.b.)	5,857	6,906	6,267	5,592	6,259	12,358	12,145	12,215	12,308	12,498
Resource	4,444	4,854	4,502	4,053	4,344	10,057	9,819	9,848	9,912	10,062
Nonresource	1,413	2,052	1,765	1,539	1,916	2,301	2,326	2,367	2,396	2,437
Imports (c.i.f.)	-4,293	-6,278	-7,705	-5,517	-4,394	-4,691	-4,967	-5,125	-5,278	-5,832
Resource	-1,939	-3,625	-4,726	-2,930	-1,700	-1,776	-1,801	-1,701	-1,752	-2,200
Nonresource	-2,354	-2,654	-2,980	-2,587	-2,695	-2,915	-3,166	-3,423	-3,526	-3,632
Services	-2,765	-3,360	-4,432	-3,767	-3,124	-2,825	-2,791	-2,613	-2,691	-2,772
Income	-1,079	-553	-2,492	-1,223	-776	-2,277	-2,554	-2,631	-2,710	-2,792
Current Transfers	190	246	119	165	208	183	165	168	207	261
Capital and financial account balance	2,564	4,467	7,487	3,563	1,637	-1,618	-1,712	-2,025	-1,113	-1,110
Direct investment 2/	554	1,024	1,883	904	2,100	630	641	658	675	693
Other investment	2,009	3,443	5,604	2,659	-1,463	-2,248	-2,353	-2,683	-1,788	-1,802
Medium- and long-term loans	1,820	4,367	8,221	-193	-916	-1,696	-1,765	-2,073	-1,146	-1,064
Commercial banks	89	76	-88	-6	-47	-27	-37	-32	-35	-100
Other	100	-1,000	-2,528	2,858	-500	-525	-551	-579	-608	-638
Net errors and omissions	-4	-197	436	0	0	0	0	0	0	0
Overall balance	469	1,231	-321	-1,187	-190	1,131	287	-11	721	254
Financing	-469	-1,231	321	1,187	190	-1,131	-287	11	-721	-254
Reserve assets	-469	-1,231	321	1,187	190	-1,131	-287	11	-721	-254
Memorandum items:										
Current account (in percent of GDP)	-21.5	-23.6	-53.6	-30.8	-11.4	13.5	9.5	9.2	8.0	5.6
Resource	-2.1	-21.5	-34.1	-14.9	1.2	22.5	19.1	18.3	17.0	14.3
Nonresource	-19.3	-11.5	-19.6	-15.9	-12.6	-9.0	-9.6	-9.1	-9.0	-8.7
Net international reserves (end-year)										
In millions of U.S. dollars	2,895	4,126	3,804	2,617	2,427	3,558	3,845	3,834	4,555	4,808
Gross official reserves (end-year)										
In millions of U.S. dollars	3,092	4,323	4,001	2,814	2,624	3,755	4,042	4,031	4,752	5,006
In months of imports of goods and services	3.7	4.1	5.0	4.2	4.0	5.5	5.9	5.7	6.3	6.7
Public external debt-service-exports ratio (in percent) 3/	1.5	1.3	1.5	1.5	1.8	0.7	0.8	0.8	0.9	1.0
Public external debt-GDP ratio (in percent) 3/	10.7	8.3	7.3	8.1	9.0	7.8	7.8	7.5	7.1	6.9

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

1/ Includes staff's estimates related to the PNG LNG project.

2/ For 2014, FDI includes IPIC's conversion of exchangeable bonds into Oil Search shares.

3/ Public external debt includes external debt of the central government, the central bank, and statutory authorities.

Table 4. Papua New Guinea: Summary Accounts of the Depository Corporations, 2010–15

	2010	2011	2012	2013	2014	2015
					Proj.	
Bank of Papua New Guinea			(In millions of kina; end of period)			
Net foreign assets	7,652	8,847	8,004	6,363	4,736	7,672
Foreign assets	8,170	9,266	8,415	6,842	5,235	8,187
Foreign liabilities	518	419	412	479	499	515
Net domestic assets	-5,636	-5,589	-4,170	-2,510	81	-1,652
Domestic credit	-639	-1,423	-438	-99	193	333
Net credit to government	-652	-1,501	-487	-156	136	277
Claims	367	431	499	863	1,155	1,296
Central government deposits	1,019	1,933	985	1,019	1,019	1,019
Credit to other sectors	13	79	49	56	56	56
Other items, net	-4,997	-4,166	-3,732	-2,411	-112	-1,985
Of which: Central bank securities	-4,594	-5,687	-5,149	-3,199	-938	-2,739
Reserve money	2,016	3,259	3,834	3,853	4,816	6,020
Currency in circulation	1,193	1,532	1,679	1,749	2,015	2,642
Deposits of other depository corporations	810	1,724	2,142	2,101	2,799	3,376
Required reserves	514	945	1,391	1,652	1,737	1,907
Excess reserves	296	779	751	449	1,062	1,469
Other deposits	13	3	13	3	3	3
Depository Corporations Survey			(In millions of kina; end of period)			
Net foreign assets	8,968	10,117	9,475	8,269	6,931	10,551
Net domestic assets	4,066	5,176	7,491	9,835	12,133	10,347
Domestic credit	6,993	6,630	9,131	12,862	15,042	16,685
Net credit to central government	-202	-1,077	297	2,755	4,534	5,346
Claims on other sectors	7,195	7,707	8,834	10,107	10,508	11,339
Claims on the private sector	6,971	7,522	8,434	9,914	10,310	11,135
Other items, net	-2,927	-1,454	-1,639	-3,028	-2,909	-6,338
Broad money	13,034	15,293	16,967	18,104	19,064	20,898
Narrow money	7,644	9,620	11,148	12,047	12,527	13,844
Currency outside other depository corporations	955	1,188	1,214	1,300	1,404	1,517
Demand deposits	6,689	8,431	9,934	10,746	11,123	12,327
Quasi-money	5,323	5,612	5,756	5,995	6,474	6,992
Securities other than shares	67	62	62	62	62	62
			(Annual percentage change)			
Net foreign assets	13.2	12.8	-6.3	-12.7	-16.2	52.2
Net domestic assets	4.3	27.3	44.7	31.3	23.4	-14.7
Net domestic credit	4.9	-5.2	37.7	41	16.9	10.9
Of which: Private sector	18.1	7.9	12.1	17.5	4.0	8.0
Broad money	10.2	17.3	10.9	6.7	5.3	9.6
Memorandum items:						
Reserve money (percentage change)	11.1	61.7	17.6	0.5	25.0	25.0
Gross international reserves (in millions of U.S. dollars)	3,092	4,323	4,001	2,826	2,624	3,755
Nominal nonresource GDP/Broad money	1.6	1.6	1.6	1.7	1.7	1.7

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

Table 5. Papua New Guinea: Medium-Term Scenario, 2010–19

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
				Est.			Proj			
Growth and prices (percentage change)										
Real GDP 1/	7.7	10.7	8.1	5.5	5.8	19.6	3.3	3.4	3.5	3.5
Resource	-2.0	-11.8	-7.4	7.2	90.6	150.5	-0.7	-0.6	-0.6	-0.6
Nonresource	8.7	12.8	9.2	5.4	0.5	4.0	4.5	4.5	4.5	4.5
CPI (period average)	6.0	4.4	4.5	5.0	5.3	5.0	5.0	5.0	5.0	5.0
CPI (end-period)	4.9	4.4	5.8	2.9	6.3	5.0	5.0	5.0	5.0	5.0
Central government operations (in percent of GDP)										
Total revenue and grants	31.3	30.4	29.2	28.2	30.1	25.3	24.6	24.4	24.2	24.7
Total revenue	26.0	27.0	26.3	25.6	26.2	22.1	22.1	22.1	22.6	23.3
Of which: Resource revenue	6.7	7.4	3.4	1.9	1.7	3.3	2.7	2.4	2.5	2.7
Grants	5.3	3.4	2.9	2.5	3.9	3.2	2.5	2.3	1.6	1.4
Total expenditure	28.2	28.7	32.4	36.1	37.3	27.8	26.7	25.8	25.6	26.0
Expense	...	...	28.6	29.8	29.3	22.4	21.6	21.0	20.7	21.1
Net acquisition of nonfinancial assets	...	...	3.8	6.3	7.9	5.4	5.1	4.8	4.9	4.9
Primary balance	4.4	3.1	-1.8	-6.6	-5.4	-0.5	-0.1	0.8	1.2	1.3
Nonresource net lending(+)/borrowing(-) (Revenue - expenditure)	-3.6	-5.7	-6.6	-9.9	-8.9	-5.8	-4.9	-3.9	-3.9	-4.0
Net lending(+)/borrowing(-) [Overall balance]	3.1	1.7	-3.2	-8.0	-7.2	-2.5	-2.1	-1.4	-1.5	-1.3
Nonresource primary balance (in percent of nonresource GDP)	-2.9	-5.4	-6.2	-9.8	-8.8	-5.7	-4.2	-2.4	-1.8	-2.0
Gross public debt (in percent of GDP) 2/	25.6	23.0	26.7	34.0	37.0	31.0	31.5	31.1	30.6	30.0
Domestic	14.9	14.7	19.4	25.9	27.9	23.3	23.7	23.6	23.6	23.0
External	10.7	8.3	7.3	8.1	9.0	7.8	7.8	7.5	7.1	6.9
Balance of payments (in millions of U.S. dollars) 3/										
Exports, f.o.b.	5,857	6,906	6,267	5,592	6,259	12,358	12,145	12,215	12,308	12,498
Of which: Resource	4,444	4,854	4,502	4,053	4,344	10,057	9,819	9,848	9,912	10,062
Imports, c.i.f.	-4,293	-6,278	-7,705	-5,517	-4,394	-4,691	-4,967	-5,125	-5,278	-5,832
Current account	-2,091	-3,040	-8,244	-4,750	-1,827	2,749	1,999	2,014	1,834	1,364
(In percent of GDP)	-21.5	-23.6	-53.6	-30.8	-11.4	13.5	9.5	9.2	8.0	5.6
Overall balance (including exceptional financing)	469	1,231	-321	-1,187	-190	1,131	287	-11	721	254
Gross official reserves (in millions of U.S. dollars)	3,092	4,323	4,001	2,814	2,624	3,755	4,042	4,031	4,752	5,006
(In months of goods and services imports, c.i.f.)	3.7	4.1	5.0	4.2	4.0	5.5	5.9	5.7	6.3	6.7
(In months of nonmining imports, c.i.f.)	9.6	10.4	11.6	8.1	7.3	10.0	10.7	10.4	11.9	12.2
Public external debt service-export ratio (in percent) 4/	1.5	1.3	1.5	1.5	1.8	0.7	0.8	0.8	0.9	1.0
Memorandum items:										
Nominal GDP (in millions of U.S. dollars)	9,716	12,873	15,391	15,413	16,096	20,328	21,085	21,968	23,001	24,339
Assumed commodity prices: 5/										
Gold (U.S. dollars per ounce)	1,225	1,569	1,669	1,411	1,290	1,286	1,295	1,320	1,351	1,394
Copper (U.S. dollars per ton)	7,538	8,823	7,959	7,331	6,986	7,052	7,043	7,021	6,991	6,967
Oil (U.S. dollars per barrel)	79	104	105	104	103	99	97	95	94	93

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

1/ Real GDP growth projections are based on the chained Laspeyres measure.
2/ Public external debt includes external debt of the central government, the central bank, and statutory authorities.
3/ Includes staff's estimates related to the PNG LNG project.
4/ Public external debt service includes changes in check float.
5/ August 2014 IMF WEO projections.

Table 6. Papua New Guinea: Indicators of External Vulnerability, 2010–13
(In percent of GDP, unless otherwise indicated)

	2010	2011	2012	2013 Est.
Financial indicators				
Gross public debt 1/ 2/	25.6	23.0	26.7	34.0
Broad money (percentage change, 12-month basis)	10.2	17.8	10.9	6.7
Private sector credit (percentage change, 12-month basis)	18.1	7.9	12.1	17.5
Interest rate (182-day Treasury bills; period average)	5.2	4.3	5.8	5.0
External indicators				
Exports (percentage change, 12-month basis in U.S. dollars)	29.4	17.9	-9.3	-10.8
Imports (percentage change, 12-month basis in U.S. dollars)	31.6	46.2	22.7	-28.4
Current account balance	-21.5	-23.6	-53.6	-30.8
Capital and financial account balance (in millions of U.S. dollars)	2,563.5	4,466.6	7,486.7	3,382.6
Of which: Inward foreign direct investment	554.2	1,023.7	1,882.8	903.9
Gross official reserves (in millions of U.S. dollars)	3,092.2	4,322.8	4,001.5	2,634.4
Central Bank short-term foreign liabilities (in millions of U.S. dollars)	196.0	195.5	195.8	198.0
Commerical bank foreign assets (in millions of U.S. dollars)	579.0	655.3	793.0	1,127.2
Commerical bank foreign liabilities (in millions of U.S. dollars)	80.9	62.8	93.1	339.9
Gross official reserves (in months of nonresource imports, c.i.f.)	9.6	10.4	11.6	7.6
Broad money to gross reserves (ratio)	1.6	1.7	2.0	2.7
Total short-term external debt to reserves (in percent) 3/	2.6	1.5	2.3	12.9
Public external debt-to-GDP ratio (in percent)	10.7	8.3	7.3	8.1
Exchange rate (kina per U.S. dollar; period average)	2.6	2.1	2.1	2.4
Financial market indicators				
Foreign currency long-term government debt rating 1/				
Moody's	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/ Public external debt includes external debt of the central government, the central bank, and statutory authorities.
3/ Short-term external debt covers only the banking system.

Table 7. Papua New Guinea: Financial Soundness Indicators of Deposit-Taking Institutions, 2010–14 1/

(In percent)

	2010	2011	2012	2013	2014 Est.
Capital Adequacy					
Capital to risk-weighted assets 2/	28.3	26.9	28.0	27.9	28.7
Tier 1 capital to risk-weighted assets	21.1	19.6	20.1	21.0	20.5
Asset Quality					
Nonperforming loans to total loans	1.7	2.0	2.0	1.2	1.6
Past due loans to total loans	2.2	5.1	2.8	2.2	2.8
Provision for losses to NPL	173.6	158.2	170.9	288.0	220.2
Earnings and Profitability					
Return on assets	2.2	2.2	2.3	2.4	2.7
Return on equity 3/	21.8	23.1	23.7	21.2	25.1
Liquidity					
Liquid assets to total assets	56.6	58.5	56.6	55.2	53.7
Loan-to-deposit ratio	49.9	46.3	46.9	50.3	52.8
Other					
Capital to total assets 2/	13.7	12.8	13.6	15.2	15.1
Risk-weighted assets to total assets	48.5	47.5	48.7	54.5	52.7

Sources: Bank of Papua New Guinea; and IMF staff calculations.
1/ Fourth quarter data for each year. For 2014, as of June 2014.
2/ Capital base includes Tier 1 and 2 capital.
3/ Return on equity is calculated with Tier 1 capital.

Table 8. Papua New Guinea: Status of Millennium Development Goals

Progress on Millennium Development Goals (MDGs)		
	Global targets	**Papua New Guinea's National Targets**
Goal 1: Eradicate extreme poverty and hunger	Off track	On track
Goal 2: Achieve universal primary education	Off track	Mixed
Goal 3: Promote gender equality and empower women	Off track	Mixed
Goal 4: Reduce child mortality	Off track	On track
Goal 5: Improve maternal health	Off track	Off track
Goal 6: Combat HIV/AIDS, malaria and other diseases	Off track	Off track
Goal 7: Ensure environmental sustainability	Off track	Off track
Goal 8: Develop a global partnership for development	Off track	Not a national target

Sources: UNDP Papua New Guinea; and Pacific Islands Forum Secretariat, 2012 and 2013 Pacific Regional MDGs Tracking Reports.

Appendix I. Papua New Guinea: Risk Assessment Matrix[1/]

Potential Deviations from Baseline

Source of Risks	**Overall Level of Concern**		**Policy Recommendations**
	Likelihood of Severe Realization of Risk in the Next one–three Years (high, medium or low)	**Expected Impact if Risk is Realized** (high, medium or low)	
1. Protracted period of slower growth in advanced and emerging economies	**High** Prolonged slow growth in advanced economies and emerging markets would reduce exports and GDP growth and weaken investor sentiment. This could result in a large drop in world commodity prices.	**High** A sharp decline in export earnings would worsen the trade balance. It would also reduce fiscal revenue and weaken the reserves buffer. FDI inflows would also be adversely affected.	Introduce temporary fiscal and monetary stimulus; allow the kina to depreciate to boost non-resource exports; accelerate structural reforms to improve competiveness.
2. Sustained decline in energy prices	**Medium** The large number of new LNG and shale gas projects coming on stream in Australia and North America, coupled with weak global demand, would depress global gas prices.	**High** Lower LNG prices would reduce fiscal revenue, export proceeds, and foreign reserves. Development of future LNG projects would become less likely.	Allow the kina to depreciate and accelerate structural reforms to boost non-resource exports; tighten the fiscal stance to buttress the external position; reprioritize spending to support export-oriented infrastructure.
3. Property market correction	**Low/Medium** Property prices in Port Moresby and Lae would fall further with the completion of the LNG project and the emergence of excess capacity.	**Medium** Authorized superannuation funds and local banks that have invested in or lent to the proper sector could be adversely affected.	Accelerate clearance of superannuation arrears; write down losses in the funds; ensure banks' capital adequacy.
4. Political instability and worsening security	**Medium** Political tensions could rise, leading to broader instability, which could worsen law and order problems.	**Medium/High** Rent-seeking behavior could intensify and more nonproductive expenditures could arise. Confidence and investment could falter.	Resist monetary accommodation of a fiscal expansion, focusing any increased spending on improving security, but with greater fiscal transparency.
5. Natural disasters	**Low/Medium** PNG is prone to earthquakes, flooding, volcanic eruptions, and cyclones.	**Medium/High** Given PNG's poor infrastructure and weak capacity, the economic impact could be significant.	Ensure fiscal buffers are adequate to support affected groups and spend more on preparation and prevention; encourage take-up of disaster insurance.

1/ The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood of risks listed is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability of 30 percent or more). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly.

Appendix II. Improving the Quality of Public Expenditure

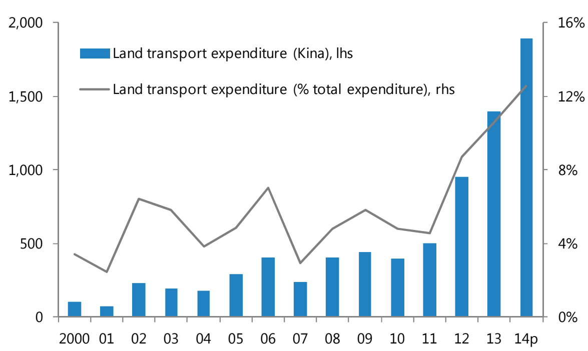
This appendix, prepared by Asian Development Bank and the World Bank staffs, summarizes some of the key findings on how PNG has managed its public expenditure. These findings suggest that within the existing resource envelope substantial room exists to improve development outcomes through better implementation of transport infrastructure projects and more efficient delivery of health and education services.

A. Transport Infrastructure

The fiscal expansion undertaken by the PNG government over the last three years has been heavily focused on transport infrastructure, especially roads. The 2014 Budget appropriated approximately K1.7 billion for the sector, more than triple the funds allocated in 2011 and a tenfold increase since 2003. Between 2011 and 2014 the share of budget expenditure allocated to the sector increased from 4 percent to 12 percent.

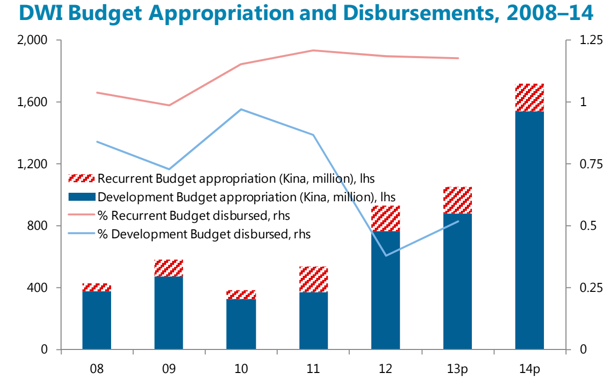
Higher funding for transport infrastructure has helped fill financing gaps for a sector that is vital to enhancing the population's connectivity to markets and access to essential social services. However, the scaling up has also amplified existing shortfalls in institutional and technical capacity. For instance, the Department of Works and Implementation (DWI), which is responsible for approximately 85 percent of the Government's 2014 land transport program, disbursed just 52 percent of its original development budget appropriation in 2013 and 38 percent in 2012. While particularly evident in complex infrastructure projects, which require detailed preparation and supervision, fiscal expansion has amplified project implementation challenges across the public sector.

Expenditure on Land Transport, 2000–14



Source: National Budget Documents (various years), ADB calculations.

DWI Budget Appropriation and Disbursements, 2008–14



Source: National Budget Documents (various years), ADB calculations.

Limited technical and institutional capacities are a major cause of implementation challenges but other factors also contribute. A lack of alignment between sector agency budget submissions and the final Cabinet-approved budget has often required agencies to hurriedly prepare and implement unfamiliar projects. Further, limited feasibility and design work before projects are financed have frequently led to unrealistic cost estimates, tendering delays, and difficulties in attracting sufficient private-sector construction capacity.

Amplifying these challenges has also been an emphasis on funding new capital projects, with lower priority given to operational and maintenance costs. Between 2009 and 2014, the proportion of recurrent to total budget allocations fell from 60 percent to 51 percent. Again, this trend is particularly evident in the transport sector, with recurrent spending comprising just 11 percent of DWI's expenditure in 2014, down from 33 percent in 2011. This has limited the ability of sector agencies to expand their human resources in response to growing investment demands, and jeopardizes the sustainability of investments by limiting routine maintenance.

To address implementation challenges, a period of more moderate funding growth for the transport sector may be appropriate. This would give sector agencies a chance to 'catch up' with their investment backlog and to focus on building the technical and institutional capacity required to deliver cost effective and sustainable infrastructure. Efforts by the government to strengthen infrastructure planning and budgeting should also be supported. This includes ongoing work to integrate the recurrent and development budgets as a means of reducing the bias towards new capital investment, as well as efforts to publish accurate five-year forward spending estimates to strengthen project preparation and planning.

B. Health and Education

Public expenditure on education has increased substantially over the last decade and is now closer to international benchmarks, although PNG still lags its peers on performance indicators such as literacy rates. The growth in the education budget over recent years has been driven mainly by the expansion of the tuition fee-free subsidies, which are a key component of the government's plan to provide universal access to basic education. These subsidies have led to rapid increases in enrolment rates, which have been accompanied by progress toward reducing educational imbalances between rural and urban areas and between girls and boys.

However, it appears that growth in total education spending has not kept pace with the rapid rise in enrolments, highlighting the importance of improving the composition of spending. Pupil-teacher ratios have risen in most provinces. At the same time, significant discrepancies between budget appropriations and actual spending have appeared in recent years, with persistent underspending of recurrent budgets allocated for teacher training coinciding with repeated years of overspending on school subsidies. Moreover, some budgeted allocations to capital spending have been overly ambitious given supply-side constraints, with the National Department of Education (NDE)'s 'development' expenditures averaging only around two-thirds of the amount initially appropriated. Unspent funds are typically transferred to trust accounts and are not easily redirected to cover recurrent spending needs.

While recent gains in access to education are welcome, equal attention now needs to be devoted to improving quality. The NDE has made some progress, implementing regular school performance assessments, investing in updated curricula, and undertaking evaluations of student learning in early grades. But further efforts will be needed to ensure that teacher training and deployment keep pace with student enrolments, and that other important recurrent expenditures (such as classroom materials and books) receive sufficient priority.

The government has also increased its spending on health in recent years, although access to quality health services remains limited. Rates of infant and maternal mortality in PNG are high compared with other countries at similar levels of income, and health service contact rates remain relatively low. More funds have been allocated to frontline service providers recently, and the government has also committed to provide free primary health care and subsidized specialist health care. However, provincial health spending remains only a fraction of the cost of essential service delivery in some cases. Moreover, delays in transferring funds from central and provincial governments mean that in some provinces health function grants fail to reach service providers in a timely fashion, and hence in these provinces prohibiting user fees may in fact undermine service delivery.

Efficiency savings can be realized by allocating more resources to primary care, reviewing the mix of spending on inputs, reforming the procurement and distribution of medical supplies, and implementing improvements in planning and budgeting. Hospital services currently account for a disproportionate share of total health spending, even though they are less cost-effective than primary care services in many cases. Other aspects of the expenditure mix could also be reviewed: personnel emoluments have risen to over half of total health expenditure, while budget provisions for the maintenance of buildings and equipment have at times proven inadequate. Strengthening public financial management – including by reducing fragmentation in the financing system and clarifying accountabilities and reporting arrangements – would be an important step toward reducing leakages and ensuring that allocated funds reach service providers more quickly.

Appendix III. Papua New Guinea: Authorities' Responses to Fund Advice

Fund Recommendation	Policy Actions
Monetary, Financial, and Exchange Rate Policies	
• Enhance the effectiveness of monetary policy, with the BPNG taking more aggressive steps to remove excess liquidity, including through open market operations, increasing the CRR, and moving government deposits from commercial banks to the BPNG.	Excess liquidity remains sizable, but the BPNG is actively considering options to withdraw liquidity and discussing specific measures for implementation. Meanwhile, the CRR was increased from 9 percent to 10 percent in September 2014.
• Maintain a floating exchange rate regime to help absorb external shocks.	The official interbank exchange rate remained unchanged from October 2013 to early June 2014, even though banks transacted with their customers at more depreciated rates. The BPNG subsequently introduced a band on FX trading spreads around the interbank rate, leading to a large *de facto* kina appreciation. The interbank rate has since been depreciating slowly, but FX shortages have persisted.
• Continue to monitor the impact of price corrections in the heated segments of the real estate sector buoyed by the LNG project. Macroprudential policies need to be considered and stress tests should be conducted regularly.	The BPNG has been monitoring the exposure of superannuation funds and banks to the property sector. Work is underway to establish a separate macroprudential unit within the BPNG and to improve macroprudential data.
• Implement FATF AML/CFT recommendations.	Following the placement of PNG on the FATF "gray-list" in early 2014, the authorities have developed an AML/CFT National Strategic Plan aimed at addressing the action items within an agreed timeframe with the FATF.
Fiscal Policy	
• Adopt a fiscal policy stance consistent with keeping public debt in line with the government's targets and ensuring debt sustainability. The government should also pay greater attention to improving the quality of spending.	The authorities remain committed to achieving legislated debt targets, but continued fiscal expansion has led to estimated debt levels above the targets. Progress has been made in operationalizing the IFMS, integrating recurrent and development budgets, public expenditure reviews, and the PEFA assessment.
• Devote greater efforts to revenue collection, especially through in improving tax compliance and rationalizing tax exemptions and concessions.	A series of measures were announced in the 2014 budget, and revenue administration has improved. Audits of extractive industries have been initiated and a comprehensive tax review is under way.
• Safeguard the integrity of the SWF for it to play a key role in managing PNG's resource revenues.	The revision of the SWF law is under way and the SWF is expected to be operational in 2015. The authorities have indicated that they intend to follow sound principles in amending the legislation.

Appendix III. Papua New Guinea: Authorities' Responses to Fund Advice (concluded)

Fund Recommendation	Policy Actions
Structural Reform	
• Improve revenue transparency, including taking required steps to secure EITI membership.	Papua New Guinea attained candidacy for the EITI in March 2014 and is preparing to disclose required data to become EITI-compliant.
• Improve governance and accountability of public enterprises.	Competition in public utilities and telecommunications has been strengthened. More work is needed to clarify SOEs' operating objectives and community services obligations.
• Ensure the Kumul trust and companies' political independence and focus on stated corporate goals.	The authorities are reviewing the Kumul trust initiatives, with a view to enhancing transparency and improve the management efficiency of state assets.
Statistics	
• Develop a strategic plan to resolve the long-standing shortcomings in CPI and national accounts statistics.	The authorities have initiated a three-stage plan to reform the National Statistical Office (NSO). Meanwhile, the NSO has shown signs of improvement, as reflected in recent data releases.

INTERNATIONAL MONETARY FUND

PAPUA NEW GUINEA

November 10, 2014

STAFF REPORT FOR THE 2014 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITY ANALYSIS

Approved By
David Cowen and Ranil Salgado (IMF)
Satu Kahkonen (IDA)

Prepared by the staffs of the International Monetary Fund (IMF) and the International Development Association (IDA)[1]

This Debt Sustainability Analysis (DSA) indicates that Papua New Guinea's (PNG) risk of debt distress remains low based on an assessment of public and publicly-guaranteed (PPG) external debt, in line with the results of the DSA for the 2013 Article IV consultation.[2] However, factoring in public domestic and private external debt and contingent liabilities, the overall risk of debt distress has risen since then, and a failure to consolidate the fiscal position would result in unsustainable debt dynamics. Data on debt and other liabilities, particularly off-budget and public enterprise debt, need much improvement.

[1] This DSA was prepared jointly with the World Bank, in accordance with the Debt Sustainability Framework for low-income countries approved by the Executive Boards of the IMF and the IDA.

[2] Papua New Guinea is rated as a medium performer for its policies and institutions for the purposes of the IMF-World Bank low-income country DSA framework.

BACKGROUND

1. **Papua New Guinea's (PNG) public and external debt burdens have fallen significantly over the past decade.** Public debt declined from 62 percent of GDP at end-2004 to about 22 percent of GDP in 2011, but rose to around 34 percent in 2013.[3] Public and publicly guaranteed (PPG) external debt also declined sharply, from a peak of over 50 percent of GDP in 2001 to around 9 percent in 2013. Around 70 percent of current public external debt is owed to the Asian Development Bank and the World Bank. Domestic debt consists of treasury bills (45 percent) and inscribed stocks (55 percent) with an average maturity of 5 years. The main creditors are resident banks and superannuation funds.

UNDERLYING ASSUMPTIONS

2. **Over the medium term, PNG's growth prospects and current account will be heavily influenced by its extractive sector.** Box 1 summarizes the medium-term macroeconomic framework underlying this DSA update. Economic activity is projected to continue to expand in 2014, with real GDP expected to grow at 5.8 percent in 2014 and 19.6 percent in 2015 when LNG production reaches full capacity. The current account deficit narrowed in 2013 due to the winding down of the construction of the LNG project. With LNG exports now coming on stream, the deficit is expected to continue to decline in 2014 and turn into a surplus in 2015.

EXTERNAL DSA

3. **The baseline scenario indicates that all PPG external debt ratios stay well below the indicative thresholds.** The present value (PV) of the external debt stock is expected to rise in the near term because of an A$1.2 billion loan (6.8 percent of GDP) that government took in early 2014, but fall over the medium term as this loan is repaid and with the expectation that new external borrowing will be moderate.[4] Thereafter, the debt stock remains flat over time (Figure 1). The public external debt service ratios follow a similar profile, with higher debt service initially rising as a result of this loan but subsequently falling to very low levels, reflecting PNG's relatively small external debt stock as well as the fact that most of its public external debt is highly concessional.

[3] Gross national income (GNI) may be a better indicator to normalize PNG's debt burden, given large net outflows of primary income from the country's resource sector. In 2013, public debt was 38 percent of GNI, compared to 34 percent of GDP. However, the use of GNI throughout this DSA does not qualitatively change the results reported here.

[4] The government contracted this loan from the Union Bank of Switzerland (UBS) in March 2014 to finance the purchase of a 10 percent stake in the Oil Search Limited, an oil and gas exploration company. The terms and conditions of this loan have not been disclosed. For the purpose of this DSA, staff has assumed a two-year loan maturity with 8 percent annual interest for the time being and included it as part of publicly guaranteed external debt—the same as the government's own accounting. Meanwhile, Abu Dhabi's International Petroleum Investment Company (IPIC) turned its A$1.68 billion convertible bond holding into shareholding in Oil Search in March, 2014.

4. Papua New Guinea is vulnerable to certain extreme shocks despite the currently low external debt burden, but these shocks have a low probability of materializing. There is a protracted breach of the PV of debt-to-GDP ratio under the historical and extreme exports shock scenarios and a breach of the PV of public external debt-to-exports ratio under the extreme exports shock scenario.[5] All of these scenarios would be tantamount to a major delay or complete failure of the LNG project. In the historical scenario, for instance, when the current account deficit is fixed at the ten-year average of 2004–13, the simulation effectively keeps imports at levels elevated by the LNG project and rules out the expected large increases in LNG exports going forward. Given that LNG production has already commenced, such an outcome is very unlikely. In a scenario in which LNG production is assumed to be 50 percent lower than the baseline over the medium term (the "LNG shock" scenario), the PV of debt-to-GDP ratio would fall more slowly over time but the debt burden would remain sustainable. While PNG's current account balance is volatile because of its dependence on commodity exports, the large current account deficits in recent years have been exceptional because of the large imports required for the construction of the LNG project. Given this, stress tests based on the recent current account deficits and volatility tend to overstate the risk of debt distress.

PUBLIC DSA

5. The public debt dynamics for PNG remains stable, but there are risks to this outlook.[6] The public debt burden is expected to decline continuously over the projection period under the baseline, namely if the government follows through with fiscal consolidation as committed under its Medium-Term Fiscal Strategy (Figure 2). A shock to reduce LNG production by 50 percent over the medium term would slow the decline of the debt burden and keep it at a higher level, but the debt dynamics remains sustainable. However, a failure to consolidate the fiscal position would result in an unsustainable debt burden. There are also risks arising from superannuation arrears and public enterprise liabilities. The former are estimated to be about 6½ percent of GDP at end-2013 and the latter about 7½ of GDP, although data on public enterprise liabilities are incomplete and not up to date. Once these liabilities and contingent liabilities are taken into account, there would be a noticeable increase in the public debt burden over the medium term, as shown in the customized scenario ("All other liabilities included") for the public DSA.[7]

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[5] These breaches are larger than shown in the previous DSA largely because revised data show higher trade volatility, which results in larger shocks applied to the analysis based on historical data.

[6] Public debt includes domestic central government debt and external public and publicly guaranteed debt.

[7] This scenario assumes that the full amount of superannuation arrears is added to the debt stock, and 100 percent of SOEs debt is realized to become actual liabilities and added to the debt stock. The SOEs debt stock is assumed to grow in line with nominal GDP.

AUTHORITIES' VIEWS

6. **The authorities agreed with the DSA findings, noting that the current risk of debt distress is low, but fiscal consolidation is crucial for debt sustainability.** The authorities remain committed to achieving the legislated debt targets. They also recognized the importance of more comprehensive data on debt and other liabilities, in particular, off-budget and public enterprise debt, in assessing PNG's overall debt burdens.

CONCLUSION

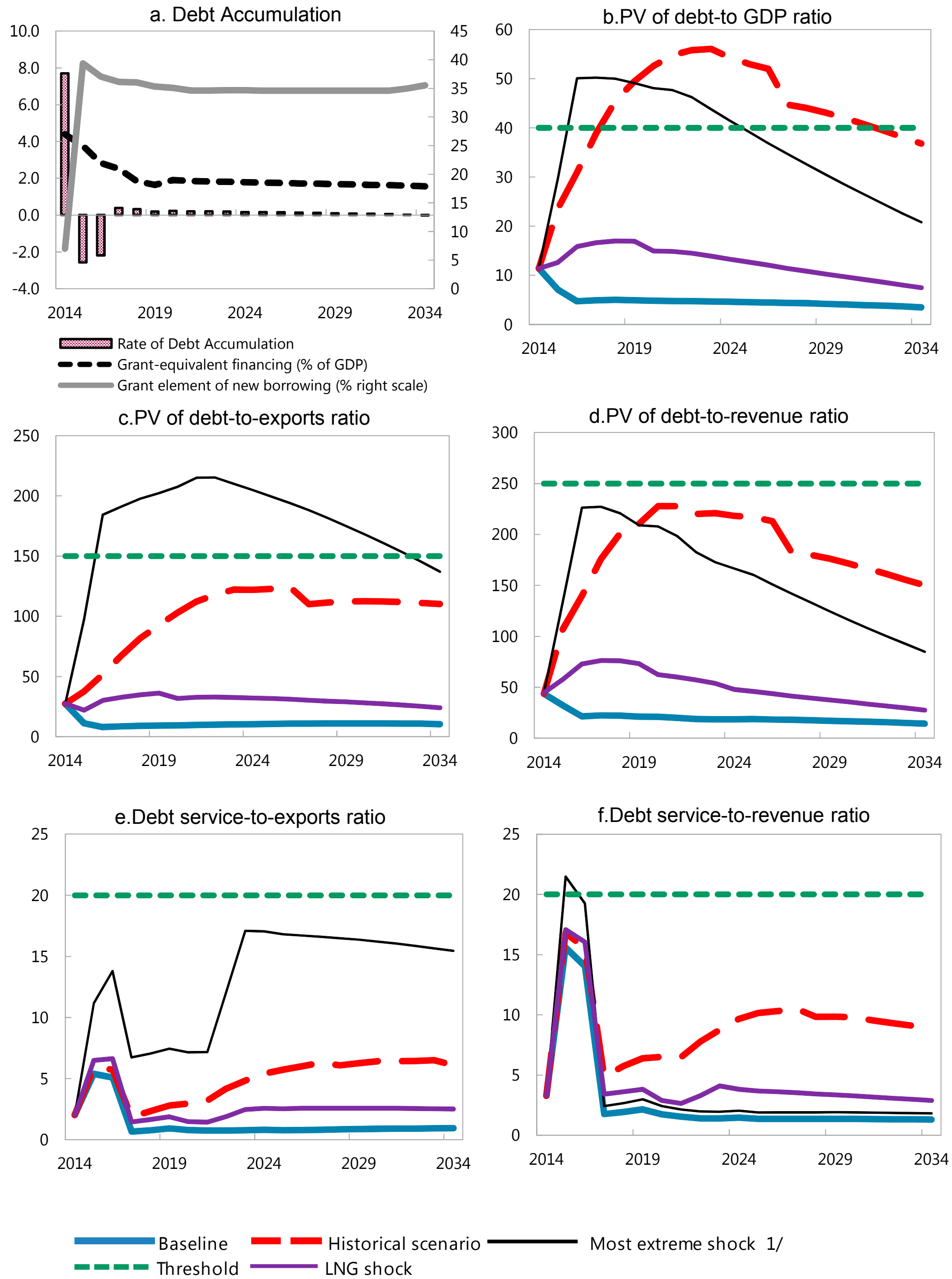
7. **Papua New Guinea's PPG external debt remains at low risk of debt stress.** However, the overall risk of public debt distress has increased, given the rising stock of public domestic debt in recent years. Contingent and non-contingent liabilities significantly increase the public debt burden, and a failure to consolidate the fiscal position would result in unsustainable debt dynamics. The government needs to adhere to its existing debt targets while focusing on improving spending quality to make the most out of a restrained resource envelope in meeting the country's development needs.

Box 1. Macroeconomic Assumptions Underlying the DSA Update

Macroeconomic assumptions for this DSA are generally more conservative than those for the previous DSA. In particular, projections of GDP growth and inflation are somewhat lower than those for the 2013 DSA, as are projections of the long-term external current account balance. This largely reflects a less favorable outlook for the resource sector owing to forecasts of lower commodity prices and volumes.

- **Real GDP growth** is projected at 7 percent on average over the medium term (reflecting the boost of LNG production), and to slow to 3 percent in the long run.
- **Inflation** is expected to stabilize at about 5 percent over the medium and long term.
- **The current account** (including grants) will remain in deficit until 2014, primarily reflecting the strong import growth related to the construction phase of the LNG project. It is expected to turn into a surplus in 2015 as LNG production and exports increase and imports related to the LNG project wind down. The surplus is projected to be 6 percent of GDP on average during 2015–25.
- **The grant element of loans** (excluding the UBS loan) is expected to decline gradually. As per capita income rises, the share of external financing provided on concessional terms is expected to decline over the projection period.
- **The primary fiscal balance** is estimated to be in deficit of 5.4 percent of GDP in 2014. During the current medium-term fiscal strategy period (2013–2017), a continuous primary deficit of 2.4 percent of GDP on average is expected. The primary fiscal balance is projected to turn into surplus in 2021, averaging 0.5 percent of GDP during 2021–34.

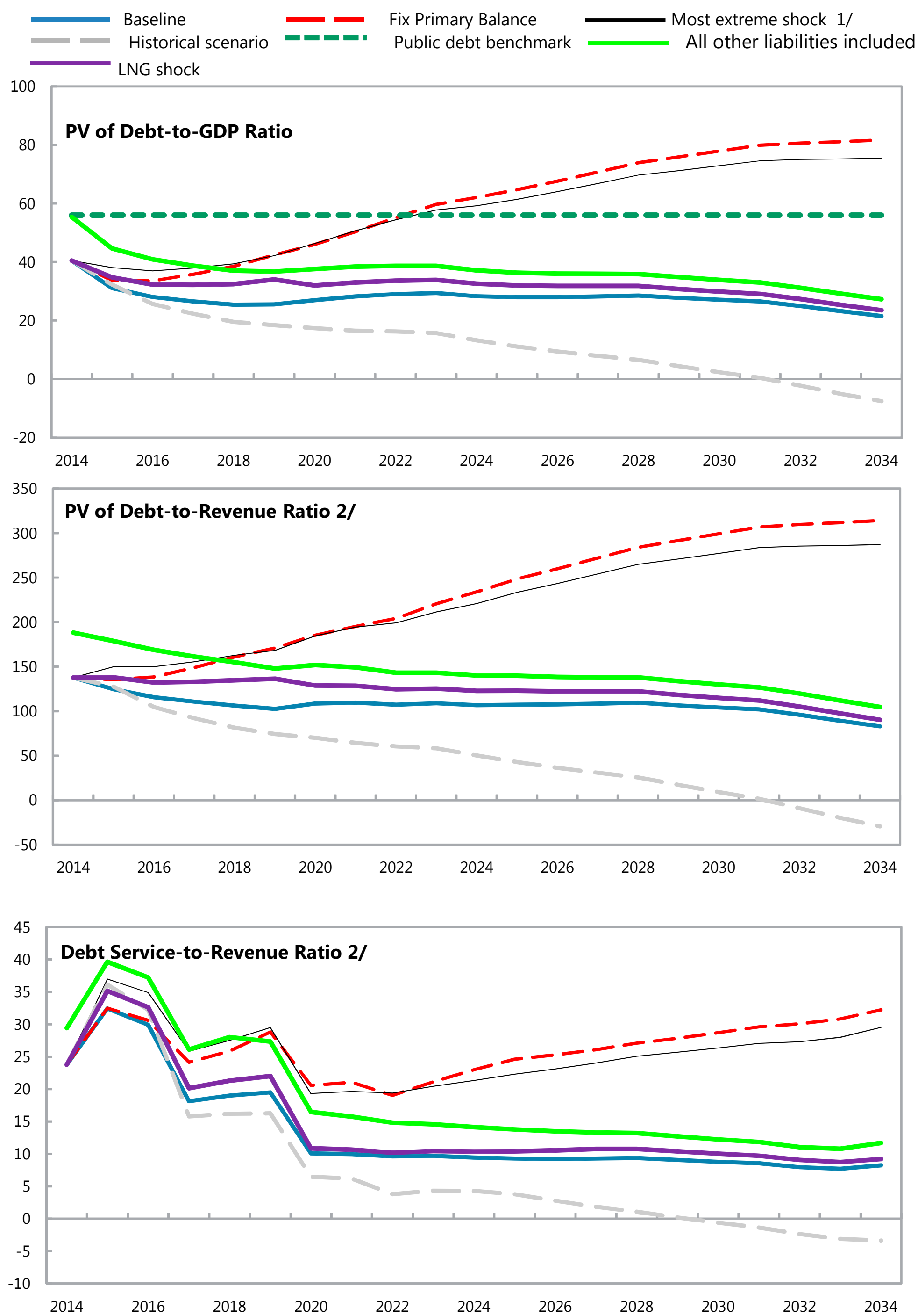
Figure 1. Papua New Guinea: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2014–2034



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2024. In figure b. it corresponds to a Exports shock; in c. to a Exports shock; in d. to a Exports shock; in e. to a Exports shock and in figure f. to a One-time depreciation shock.

Figure 2. Papua New Guinea: Indicators of Public Debt Under Alternative Scenarios, 2014–2034



Sources: Country authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio on or before 2024.
2/ Revenues are defined inclusive of grants.

Table 1a. Papua New Guinea: External Debt Sustainability Framework, Baseline Scenario, 2011–2034

(In percent of GDP, unless otherwise indicated)

	Actual			Historical 6/	Standard 6/	Projections									
				Average	Deviation							2014-2019			2020-2034
	2011	2012	2013			2014	2015	2016	2017	2018	2019	Average	2024	2034	Average
External debt (nominal) 1/	99.5	143.3	145.3			139.9	100.5	86.3	73.7	66.1	58.3		28.0	4.6	
of which: public and publicly guaranteed (PPG)	8.3	7.3	8.1			15.2	10.7	8.4	8.5	8.5	8.4		6.9	4.6	
Change in external debt	27.6	43.9	2.0			-5.4	-39.5	-14.2	-12.5	-7.7	-7.8		-5.0	-0.3	
Identified net debt-creating flows	-2.0	25.1	24.7			-9.8	-38.3	-15.8	-15.0	-13.4	-10.6		-5.0	-0.8	
Non-interest current account deficit	22.5	51.9	29.4	10.7	20.7	9.7	-14.6	-10.1	-9.6	-8.3	-6.0		-1.7	1.2	-1.6
Deficit in balance of goods and services	21.2	38.1	24.0			7.8	-23.8	-20.8	-20.4	-18.9	-16.0		-10.8	-6.9	
Exports	57.0	43.8	38.9			41.6	63.0	59.8	57.8	55.7	53.4		44.5	33.4	
Imports	78.2	82.0	62.8			49.4	39.2	39.0	37.4	36.8	37.4		33.7	26.5	
Net current transfers (negative = inflow)	-1.9	-0.8	-1.1	-3.1	2.4	-1.3	-0.9	-0.8	-0.8	-0.9	-1.1		-1.1	0.2	-0.6
of which: official	-3.1	-2.8	-2.7			-2.3	-1.8	-1.7	-1.8	-1.8	-1.8		-1.7	-1.5	
Other current account flows (negative = net inflow)	3.2	14.5	6.5			3.2	10.1	11.5	11.6	11.4	11.1		10.2	8.0	
Net FDI (negative = inflow)	-8.0	-12.2	-5.9	-6.1	5.4	-13.0	-3.1	-3.0	-3.0	-2.9	-2.8		-2.5	-2.0	-2.3
Endogenous debt dynamics 2/	-16.5	-14.6	1.2			-6.5	-20.6	-2.6	-2.4	-2.1	-1.8		-0.8	-0.1	
Contribution from nominal interest rate	1.1	1.7	1.4			1.6	1.1	0.6	0.4	0.3	0.4		0.1	0.1	
Contribution from real GDP growth	-5.8	-6.7	-7.9			-8.1	-21.7	-3.2	-2.8	-2.4	-2.2		-0.9	-0.1	
Contribution from price and exchange rate changes	-11.8	-9.5	7.7			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	29.5	18.8	-22.7			4.4	-1.2	1.6	2.5	5.7	2.8		0.1	0.5	
of which: 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/	...	...	141.3			136.1	96.9	82.7	70.2	62.6	54.8		25.7	3.5	
In percent of exports	...	...	363.7			327.5	153.8	138.2	121.5	112.4	102.6		57.8	10.6	
PV of PPG external debt	...	...	4.2			11.4	7.1	4.8	4.9	5.0	5.0		4.6	3.5	
In percent of exports	...	...	10.7			27.4	11.3	8.0	8.5	9.1	9.3		10.4	10.5	
In percent of government revenues	...	...	16.2			43.6	32.1	21.5	22.4	22.3	21.1		18.6	14.3	
Debt service-to-exports ratio (in percent)	16.4	15.4	10.0			37.4	20.7	20.4	17.8	10.0	10.0		9.1	1.1	
PPG debt service-to-exports ratio (in percent)	1.3	1.4	1.4			2.0	5.4	5.1	0.7	0.8	0.9		0.8	1.0	
PPG debt service-to-revenue ratio (in percent)	2.4	2.3	2.3			3.3	15.6	14.0	1.8	1.9	2.1		1.5	1.3	
Total gross financing need (Billions of U.S. dollars)	3.1	7.1	4.2			2.0	-1.0	-0.2	-0.5	-1.3	-0.8		-0.1	-0.2	
Non-interest current account deficit that stabilizes debt ratio	-5.1	8.0	27.4			15.1	24.9	4.1	2.9	-0.7	1.9		3.3	1.5	
Key macroeconomic assumptions															
Real GDP growth (in percent)	10.7	8.1	5.5	5.9	2.9	5.8	19.6	3.3	3.4	3.5	3.5	6.5	3.0	3.0	3.0
GDP deflator in US dollar terms (change in percent)	19.7	10.6	-5.1	9.2	8.3	-1.3	5.6	0.4	0.7	1.2	2.2	1.5	1.8	1.8	1.9
Effective interest rate (percent) 5/	2.1	2.0	1.0	3.0	1.4	1.2	1.0	0.6	0.5	0.5	0.6	0.7	0.3	1.6	0.7
Growth of exports of G&S (US dollar terms, in percent)	18.9	-8.0	-11.2	11.1	18.6	11.7	91.4	-1.5	0.7	0.8	1.6	17.5	1.7	2.1	1.8
Growth of imports of G&S (US dollar terms, in percent)	36.6	25.3	-23.3	18.7	19.4	-17.9	0.2	3.3	-0.1	3.0	7.7	-0.6	7.9	2.8	2.6
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	7.0	39.4	37.0	36.1	36.0	35.3	31.8	34.7	35.5	34.7
Government revenues (excluding grants, in percent of GDP)	27.0	26.3	25.6			26.2	22.1	22.1	22.1	22.6	23.5		24.9	24.5	24.5
Aid flows (in Billions of US dollars) 7/	0.6	0.6	0.6			0.8	0.9	0.6	0.6	0.5	0.4		0.6	0.8	
of which: Grants	0.5	0.4	0.4			0.6	0.6	0.5	0.5	0.4	0.3		0.5	0.8	
of which: Concessional loans	0.1	0.1	0.2			0.2	0.2	0.1	0.1	0.1	0.1		0.1	0.0	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			4.4	3.8	2.8	2.5	1.8	1.6		1.8	1.6	1.7
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			36.3	80.7	82.6	82.7	78.9	78.9		86.2	92.9	87.7
Memorandum items:															
Nominal GDP (Billions of US dollars)	12.9	15.4	15.4			16.1	20.3	21.1	22.0	23.0	24.3		31.4	50.7	
Nominal dollar GDP growth	32.5	19.6	0.1			4.4	26.3	3.7	4.2	4.7	5.8	8.2	4.9	4.9	5.0
PV of PPG external debt (in Billions of US dollars)			0.7			1.9	1.5	1.0	1.1	1.2	1.2		1.5	1.8	
(PVt-PVt-1)/GDPt-1 (in percent)						7.7	-2.6	-2.2	0.4	0.3	0.2	0.6	0.2	0.0	0.1
Gross workers' remittances (Billions of US dollars)	-0.2	-0.3	-0.2			-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		-0.2	-0.9	
PV of PPG external debt (in percent of GDP + remittances)	...	...	4.2			11.5	7.2	4.8	5.0	5.1	5.0		4.7	3.6	
PV of PPG external debt (in percent of exports + remittances)	...	...	11.1			28.1	11.4	8.1	8.7	9.2	9.4		10.5	11.0	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	1.5			2.1	5.5	5.2	0.7	0.8	1.0		0.8	1.0	

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as [r - g - ρ(1+g)]/(1+g+ρ+gρ) 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.

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 1b. Papua New Guinea: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2014–2034

(In percent)

	Projections							
	2014	2015	2016	2017	2018	2019	**2024**	2034
PV of debt-to GDP ratio								
Baseline	11	7	5	5	5	5	**5**	3
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2014-2034 1/	11	24	31	39	45	49	**54**	37
A2. New public sector loans on less favorable terms in 2014-2034 2/	11	8	6	7	7	7	**7**	7
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2015-2016	11	8	6	6	6	6	**5**	4
B2. Export value growth at historical average minus one standard deviation in 2015-2016 3/	11	30	50	50	50	49	**41**	21
B3. US dollar GDP deflator at historical average minus one standard deviation in 2015-2016	11	8	5	5	5	5	**5**	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2015-2016 4/	11	9	8	9	9	8	**8**	5
B5. Combination of B1-B4 using one-half standard deviation shocks	11	31	47	47	47	46	**39**	20
B6. One-time 30 percent nominal depreciation relative to the baseline in 2015 5/	11	10	7	7	7	7	**7**	5
PV of debt-to-exports ratio								
Baseline	27	11	8	9	9	9	**10**	10
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2014-2034 1/	27	38	52	67	82	93	**122**	110
A2. New public sector loans on less favorable terms in 2014-2034 2/	27	13	10	11	12	13	**16**	20
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2015-2016	27	11	8	9	9	9	**11**	11
B2. Export value growth at historical average minus one standard deviation in 2015-2016 3/	27	98	184	191	198	202	**205**	137
B3. US dollar GDP deflator at historical average minus one standard deviation in 2015-2016	27	11	8	9	9	9	**11**	11
B4. Net non-debt creating flows at historical average minus one standard deviation in 2015-2016 4/	27	14	14	15	15	16	**17**	15
B5. Combination of B1-B4 using one-half standard deviation shocks	27	81	130	135	140	143	**145**	98
B6. One-time 30 percent nominal depreciation relative to the baseline in 2015 5/	27	11	8	9	9	9	**11**	11
PV of debt-to-revenue ratio								
Baseline	44	32	22	22	22	21	**19**	14
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2014-2034 1/	44	107	140	176	201	210	**218**	150
A2. New public sector loans on less favorable terms in 2014-2034 2/	44	36	28	30	30	29	**28**	28
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2015-2016	44	38	25	26	26	25	**22**	17
B2. Export value growth at historical average minus one standard deviation in 2015-2016 3/	44	135	226	227	221	209	**167**	85
B3. US dollar GDP deflator at historical average minus one standard deviation in 2015-2016	44	34	23	24	23	22	**20**	15
B4. Net non-debt creating flows at historical average minus one standard deviation in 2015-2016 4/	44	41	38	38	38	36	**30**	20
B5. Combination of B1-B4 using one-half standard deviation shocks	44	142	211	212	206	195	**155**	80
B6. One-time 30 percent nominal depreciation relative to the baseline in 2015 5/	44	46	31	32	31	30	**26**	20

Table 1b. Papua New Guinea: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2014-2034 (concluded)

(In percent)

Debt service-to-exports ratio								
Baseline	2	5	5	1	1	1	**1**	1
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2014-2034 1/	2	6	6	2	2	3	**5**	6
A2. New public sector loans on less favorable terms in 2014-2034 2/	2	5	1	1	1	1	**1**	1
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2015-2016	2	5	5	1	1	1	**1**	1
B2. Export value growth at historical average minus one standard deviation in 2015-2016 3/	2	11	14	7	7	7	**17**	15
B3. US dollar GDP deflator at historical average minus one standard deviation in 2015-2016	2	5	5	1	1	1	**1**	1
B4. Net non-debt creating flows at historical average minus one standard deviation in 2015-2016 4/	2	5	5	1	1	1	**1**	1
B5. Combination of B1-B4 using one-half standard deviation shocks	2	10	11	5	5	5	**12**	11
B6. One-time 30 percent nominal depreciation relative to the baseline in 2015 5/	2	5	5	1	1	1	**1**	1
Debt service-to-revenue ratio								
Baseline	3	16	14	2	2	2	**1**	1
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2014-2034 1/	3	17	16	5	6	6	**10**	8
A2. New public sector loans on less favorable terms in 2014-2034 2/	3	15	3	3	3	3	**1**	1
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2015-2016	3	18	16	2	2	2	**2**	2
B2. Export value growth at historical average minus one standard deviation in 2015-2016 3/	3	15	17	8	8	8	**14**	10
B3. US dollar GDP deflator at historical average minus one standard deviation in 2015-2016	3	16	14	2	2	2	**2**	1
B4. Net non-debt creating flows at historical average minus one standard deviation in 2015-2016 4/	3	15	14	2	2	3	**2**	2
B5. Combination of B1-B4 using one-half standard deviation shocks	3	18	18	8	8	7	**13**	9
B6. One-time 30 percent nominal depreciation relative to the baseline in 2015 5/	3	21	19	2	3	3	**2**	2
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	31	31	31	31	31	31	**31**	31

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 assuming an offsetting adjustment in import levels).
4/ Includes official and private transfers and FDI.
5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.
6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Table 2a. Papua New Guinea: Public Sector Debt Sustainability Framework, Baseline Scenario, 2011–2034

(In percent of GDP, unless otherwise indicated)

	Actual					Estimate	Projections								
	2011	2012	2013	Average 5/	Standard Deviation 5/	2014	2015	2016	2017	2018	2019	2014-19 Average	2024	2034	2020-34 Average
Public sector debt 1/	23.0	26.7	34.0			45.3	35.2	31.6	30.1	28.9	28.9		30.6	22.7	
of which: foreign-currency denominated	8.3	7.3	8.1			15.5	10.8	8.4	8.5	8.5	8.4		6.9	4.6	
Change in public sector debt	-2.6	3.8	7.3			11.2	-10.1	-3.5	-1.5	-1.2	0.0		-1.3	-1.8	
Identified debt-creating flows	-7.9	-1.0	6.9			4.0	-7.2	0.2	-0.5	-0.3	-0.7		-1.1	0.0	
Primary deficit	-6.1	2.1	8.6	-2.6	6.6	5.1	0.4	0.0	-0.7	-1.0	-1.3	0.4	-1.0	-0.2	-0.5
Revenue and grants	33.6	28.9	26.1			29.4	25.0	24.2	24.0	23.9	24.8		26.5	26.0	
of which: grants	3.4	2.9	2.5			3.9	3.2	2.5	2.2	1.6	1.4		1.6	1.5	
Primary (noninterest) expenditure	27.6	31.0	34.7			34.4	25.4	24.2	23.3	23.0	23.5		25.5	25.9	
Automatic debt dynamics	-1.8	-3.1	-1.7			0.4	-7.6	0.2	0.2	0.7	0.6		-0.1	0.2	
Contribution from interest rate/growth differential	-1.0	-1.7	-1.7			-0.3	-7.2	0.1	0.1	0.6	0.6		-0.1	0.2	
of which: contribution from average real interest rate	1.5	0.0	-0.3			1.6	0.2	1.2	1.1	1.6	1.6		0.9	0.9	
of which: contribution from real GDP growth	-2.5	-1.7	-1.4			-1.9	-7.4	-1.1	-1.0	-1.0	-1.0		-0.9	-0.7	
Contribution from real exchange rate depreciation	-0.8	-1.3	0.0			0.7	-0.4	0.2	0.1	0.1	0.0		...	...	
Other identified debt-creating flows	0.0	0.0	0.0			-1.5	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	0.0			-1.5	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		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		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		0.0	0.0	
Residual, including asset changes	5.3	4.8	0.4			7.3	-2.9	-3.7	-1.0	-0.9	0.7		-0.2	-1.8	
Other Sustainability Indicators															
PV of public sector debt	...	...	27.0			40.4	31.1	28.0	26.6	25.4	25.5		28.3	21.6	
of which: foreign-currency denominated	...	...	4.2			11.4	7.1	4.8	4.9	5.0	5.0		4.6	3.5	
of which: external	...	...	4.2			11.4	7.1	4.8	4.9	5.0	5.0		4.6	3.5	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	6.3	12.1	18.5			20.4	17.1	16.0	12.0	11.4	10.9		9.8	8.6	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	103.6			137.7	124.5	115.8	110.7	106.3	102.7		106.8	82.9	
PV of public sector debt-to-revenue ratio (in percent)	...	...	114.7			158.7	142.9	129.0	121.9	113.8	108.9		113.9	87.9	
of which: external 3/	...	...	17.6			44.8	32.6	21.9	22.7	22.6	21.2		18.6	14.3	
Debt service-to-revenue and grants ratio (in percent) 4/	15.3	19.5	21.3			23.8	32.4	29.9	18.1	19.0	19.5		9.4	8.2	
Debt service-to-revenue ratio (in percent) 4/	17.2	21.7	23.4			27.3	37.2	33.3	20.0	20.3	20.7		10.0	8.7	
Primary deficit that stabilizes the debt-to-GDP ratio	-3.4	-1.7	1.3			-6.2	10.5	3.5	0.8	0.2	-1.3		0.3	1.6	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	10.7	8.1	5.5	5.9	2.9	5.8	19.6	3.3	3.4	3.5	3.5	6.5	3.0	3.0	3.0
Average nominal interest rate on forex debt (in percent)	1.6	1.5	1.3	2.2	0.7	3.9	3.5	1.5	0.3	0.8	1.4	1.9	0.0	1.5	0.6
Average real interest rate on domestic debt (in percent)	11.1	-0.1	-1.4	2.2	6.4	5.9	-0.2	5.2	5.7	8.0	8.3	5.5	4.1	4.8	4.3
Real exchange rate depreciation (in percent, + indicates depreciation)	-8.5	-17.6	0.1	-7.3	7.6	8.7	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	-2.9	8.5	9.3	5.7	5.7	3.2	8.9	3.4	3.8	3.3	3.3	4.3	5.0	5.0	5.1
Growth of real primary spending (deflated by GDP deflator, in percent)	21.9	9.1	10.2	4.2	7.4	11.0	-11.1	-0.1	-0.3	1.9	6.0	1.2	3.5	2.5	3.7
Grant element of new external borrowing (in percent)	...	...	...	...	...	7.0	39.4	37.0	36.1	36.0	35.3	31.8	34.7	35.5	...

Sources: Country authorities; and staff estimates and projections.

1/ Gross debt of general government.

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.

Table 2b. Papua New Guinea: Sensitivity Analysis for Key Indicators of Public Debt 2014–2034

	Projections							
	2014	2015	2016	2017	2018	2019	2024	2034
PV of Debt-to-GDP Ratio								
Baseline	40	31	28	27	25	25	28	22
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	40	32	26	22	20	18	13	-8
A2. Primary balance is unchanged from 2014	40	34	34	36	38	42	62	82
A3. Permanently lower GDP growth 1/	40	31	28	27	26	27	36	47
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2015-2016	40	38	37	38	39	42	59	75
B2. Primary balance is at historical average minus one standard deviations in 2015-2016	40	33	33	31	30	30	33	25
B3. Combination of B1-B2 using one half standard deviation shocks	40	35	32	32	33	36	50	63
B4. One-time 30 percent real depreciation in 2015	40	34	31	29	28	28	30	24
B5. 10 percent of GDP increase in other debt-creating flows in 2015	40	38	35	33	32	31	34	27
PV of Debt-to-Revenue Ratio 2/								
Baseline	138	124	116	111	106	103	107	83
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	138	128	105	92	82	74	50	-29
A2. Primary balance is unchanged from 2014	138	135	138	149	161	171	234	314
A3. Permanently lower GDP growth 1/	138	123	114	111	109	108	133	180
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2015-2016	138	150	150	156	163	168	221	287
B2. Primary balance is at historical average minus one standard deviations in 2015-2016	138	134	137	131	126	121	124	98
B3. Combination of B1-B2 using one half standard deviation shocks	138	139	129	132	138	142	188	238
B4. One-time 30 percent real depreciation in 2015	138	138	126	121	116	111	115	92
B5. 10 percent of GDP increase in other debt-creating flows in 2015	138	153	143	136	132	127	129	102
Debt Service-to-Revenue Ratio 2/								
Baseline	24	32	30	18	19	19	9	8
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	24	36	32	16	16	16	4	-3
A2. Primary balance is unchanged from 2014	24	33	31	24	26	29	23	32
A3. Permanently lower GDP growth 1/	24	33	30	19	20	21	13	18
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2015-2016	24	37	35	26	28	30	21	30
B2. Primary balance is at historical average minus one standard deviations in 2015-2016	24	33	31	24	25	22	11	10
B3. Combination of B1-B2 using one half standard deviation shocks	24	37	34	21	23	26	18	24
B4. One-time 30 percent real depreciation in 2015	24	35	35	20	21	21	11	10
B5. 10 percent of GDP increase in other debt-creating flows in 2015	24	33	32	31	21	24	11	11

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.

INTERNATIONAL MONETARY FUND

PAPUA NEW GUINEA

STAFF REPORT FOR THE 2014 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

November 10, 2014

Prepared By

The Asia and Pacific Department
(In Consultation with Other Departments)

CONTENTS

FUND RELATIONS

(As of September 30, 2014)

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	9.24	7.36

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 Fund[1]

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

	Forthcoming				
	2014	**2015**	**2016**	**2017**	**2018**
Principal					
Charges/interest	0.02	0.05	0.05	0.05	0.05
Total	**0.02**	**0.05**	**0.05**	**0.05**	**0.05**

[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 recommendations were made to alleviate identified weaknesses. Currently, the BPNG is not subject to the Safeguards Assessments policy.

Exchange Rate Arrangement

Papua New Guinea's de jure exchange rate arrangement is floating. From April 2014, the Kina has reduced its volatility and followed a trend within a 2 percent band against the U.S. dollar. Accordingly, the de facto exchange rate arrangement was reclassified to a crawl-like arrangement, effective April 11, 2014. Papua New Guinea has accepted the obligations of Article VIII, Sections 2, 3, and 4. Staff is currently assessing the trading band and tax clearance certificate regime in order to determine whether they are consistent with PNG's obligations under Article VIII of the IMF Articles of Agreement.

Article IV Consultations

The 2013 Article IV consultation discussions were held during August 20–September 3, 2013. It was concluded by the Executive Board on November 11, 2013 (IMF Country Report No. 13/339). 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 wealth fund management in May 2011. A mission in March 2013 provided advice on reform of the extractive industries fiscal regime.

LEG: 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: 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), monetary and forex operations (July–

August 2009, February 2010), macroprudential oversight and financial stability (September 2012), and the sovereign wealth fund (July 2013).

STA: 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. In 2012, three missions provided advice on GDDS metadata, government finance statistics, and the balance of payments. In May-June 2013 and February 2014, missions reviewed balance of payments and the international investment position. To support migration to GFSM 2001, three missions have provided training and assistance in May 2013, October 2013, and April–May 2014. A joint mission with the Australian Bureau of Statistics discussed statistical capacity building and in particular reform of the National Statistical Office in July-August 2014.

Resident Representative:

The Regional Resident Representative Office for Pacific Island Countries based in Suva, Fiji was opened on September 13, 2010 and the office covers Fiji, Kiribati, Marshall Islands, Micronesia, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. Mr. Tubagus Feridhanusetyawan is the current resident representative.

RELATIONS WITH THE PACIFIC FINANCIAL TECHNICAL ASSISTANCE CENTRE

(As of September 2014)

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, the European Union, 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, Timor-Leste, Tokelau, Tonga, Tuvalu, and Vanuatu.

A. Public Financial Management

The 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 U.S. Treasury study visit in September 2008. In May 2011, the PFTAC macroeconomic advisor participated in an FAD mission on advising PNG on the SWF. In July 2013, a PFTAC PFM Advisor visited PNG at the request of the Treasury Minister to review the budget preparation process, and discuss with authorities plans for training in the PEFA methodology. In May-June 2014, PFTAC provided information, communication, and technology (ICT) assessment mission and recommended comprehensive reform strategy to better support of operation of the Department of Finance.

B. Tax Administration and Policy

PNG is supported by the Australian Taxation Office (ATO) and has a number of long-term in-country ATO advisers. The Internal Revenue Commission (IRC) has additional support under the ATO / IRC twinning program and several other internationally and locally funded international advisers. IMF HQ has provided strategic advice to the IRC in the Natural Resources area and support will continue in this area should the authorities wish to undertake reform. PNG will be encouraged to take a stronger role in supporting regional tax reform and sharing training opportunities provided by the ATO with fellow PIC tax administrators.

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 the Bank of Papua New Guinea 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.

D. Economic and Financial Statistics

In February 2006, an Advisor briefly assessed the BOP compilation with a view to improving its quality, and to assessing progress with regard to recommendations made by previous missions. A multisector 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. In 2008 and 2009 the Advisor undertook BOP statistics missions to review statistics prerequisites, progress in improving compilation methods and source data, as well as to assist BPNG statistics staff in assessing the feasibility of electronic data collection. In 2013 and 2014, a PFTAC Advisor has provided assistance three times to the BPNG and the Department of Treasury to improve the methodologies and data sources used for the compilation of national accounts statistics.

E. Macroeconomic Analysis

Following a request by the BPNG for assistance in building up financial programming capacity, starting in 2011 a PFTAC work program together with BPNG staff created a number of tools such as empirical output gap measures and inflation models as inputs into a financial programming framework, followed by the development of a PNG-specific financial programming framework in 2012 and 2013. Training in the use and updating of the framework was provided to staffs of both BPNG and the Department of Treasury, most recently in August 2013. Staffs from both institutions also benefited from training in financial programming techniques provided jointly by PFTAC and the Singapore Regional Training Institute during a regional workshop in Fiji in December 2012. A separate work program with the Department of Treasury and BPNG developed in collaboration with the APD country team and the IMF's Research Department modeling tools for exploring the macroeconomic impact of the surge in natural resource revenues that is expected as the LNG project enters into production. Two workshops for rolling out the resulting model and providing training in its use were held in 2011 and 2012 respectively. Results were shared with a broader public through a seminar organized by a local research institute in 2013.

JOINT MATRIX OF BANK-FUND COLLABORATION

Papua New Guinea: JMAP Implementation Table			
Title	**Products**	**Provisional Timing of Missions**	**Delivery Date (tentative)**
A. Mutual Information on Relevant Work Programs			
Bank work program	Papua New Guinea Economic Briefing		Published online in Q2 2012, Q1 2013 and Q4 2013, next Briefing expected in Q4 2014.
	Papua New Guinea Economic Policy Notes		Ongoing irregular series of notes. Note presented to the PNG government December 2012.
	Support for analysis and dissemination of the 2009-2010 Papua New Guinea Household Income and Expenditure Survey	Ongoing	Statistical abstract disseminated August 2012. Ongoing series of notes and materials presented to GoPNG (June 2012, October 2012, May 2013, August 2013).
	Support for the development and implementation of the PNG Sovereign Wealth Fund	Ongoing	October 2012, January 2013.
	Social protection technical assistance	Ongoing	Policy Brief highlighting key considerations with regard to social pensions presented September 2013.
	Cost of crime and violence	Ongoing	Notes presented July 2012 and October 2013. Research and Dialogue Series on The Socio-Economic Costs of Crime and Violence (five policy notes) released August 2014.
	Education public expenditure review	Ongoing	Notes disseminated in December 2012 and August 2013. Final delivery expected November 2014.
	Health financing and resourcing analysis: (1) review of expenditure by provincial administrations on front line rural health; (2) analysis of health financing; 3) health facility efficiency survey	Ongoing	Dissemination of policy notes and report on expenditure by provincial administrations October 2013; dissemination of health financing paper expected in November 2014 during the Health Development Partner Summit; health facility efficiency survey expected to be completed by December 2015. .
	PNG BOOST analytical tool for the analysis of public expenditure data	Ongoing	Demonstration conducted in January 2014, delivery and training expected in November 2014.
	Report on Observance of Standards and Codes (ROSC) - Accounting & Audit	Ongoing	Report targeted for delivery by end 2014
IMF work program	2014 Staff Visit	June 2014	
	2014 Article IV mission	August 2014	Board discussion expected in November 2014
B. Request for Work Program Inputs			
Fund request to Bank	Information sharing	Semi-annual or more frequent	Ongoing
Bank request to Fund	Information sharing	Semi-annual or more frequent	Ongoing

RELATIONS WITH THE ASIAN DEVELOPMENT BANK

(As of August 31, 2014)

Papua New Guinea (PNG) joined the Asian Development Bank (AsDB) in 1971. The AsDB has approved 79 loans to PNG totaling $1,943.5 million for 56 projects, of which 35 loans ($1.030.1million) have been extended from Ordinary Capital Resources (OCR) and 49 loans ($890.3 million) from the Asian Development Fund (ADF). ADF resources were also used for one grant amounting to $15 million. In addition, $63.4 million has been provided for 149 technical assistance projects. AsDB lending to PNG has increased substantially since 2007, and ADB is now PNG's second-largest development partner. ADB's active portfolio totals $1.1 billion, including 22 ongoing loans for 11 projects; 8 grants, including 1 Asian Development Fund (ADF) grant project; 9 technical assistance projects; and2 private sector loan and equity operations.

In August 2010, the AsDB 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 2013, ADB approved a $109 million second tranche of funding for the $400 million Highlands Region Road Improvement Investment Program. AsDB is financing the reconstruction of 115 kilometers (km) of national roads in the highlands region, which is expected to reduce travel time by 25 percent from communities to service delivery points in PNG's most populous rural region. AsDB also approved $130 million in second tranche funding for the $480 million Civil Aviation Development Investment Program, which will support safe, reliable, sustainable, and affordable aviation services, and improve the mobility of communities.

The ongoing redevelopment of Lae Port will increase the efficiency of the port system and allow for an estimated 300 additional ship calls per year. The AsDB-funded Town Electrification Investment Program and Port Moresby Power Grid Development project will support development of clean, renewable energy through construction and rehabilitation of hydropower generation.

The AsDB's lending to PNG for 2015–2017 is expected to remain a blend of OCR and ADF resources. The AsDB's ADF allocation for PNG for 2015–2017 totals approximately $146 million and OCR lending is expected to be approximately $508 million. Indicative Nonlending assistance for 2013–2015 totals $3.2 million.

Creating a conducive environment for private sector development is also a strategic priority. The AsDB's Pacific Private Sector Development Initiative (PSDI) is currently working with the Government of PNG to (i) expand access to finance through branchless banking and the implementation of a secured transactions framework; (ii) increase the efficiency of services provided by state-owned enterprises through performance benchmarking, policy reforms, capacity building and advocacy; (iii) promote greater use of public private partnerships (PPPs) through the development of a legal framework and associated institutions; and (iv) support the assessment of PPP opportunities for major infrastructure projects. PSDI has recently been funded for a further six years of operation and will be expanding its work areas including business law reform, promotion of competition, and economic empowerment of women.

Table 1. Papua New Guinea: Public Sector Loan Approvals and Disbursements, 2004–2014

(In millions of U.S. dollars)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014[1]
Loan approvals	19.0	0.0	53.0	100.0	100.0	120.0	70.3	195.8	41.5	305.9	0.0
Loan disbursements	19.2	21.5	29.3	27.4	19.8	17.4	27.9	26.2	89.3	172.1	195.7

Source: Asian Development Bank

[1] 2014 disbursements are projections as at August 31, 2014.

STATISTICAL ISSUES

PAPUA NEW GUINEA — STATISTICAL ISSUES APPENDIX As of October 20, 2014
I. Assessment of Data Adequacy for Surveillance
General: Data provision has some shortcomings, but is broadly adequate for surveillance. Most affected areas are: national accounts, fiscal accounts, and balance of payments.
National Accounts: The accuracy and reliability of the statistics are affected by inadequate source data. The most recent official national accounts statistics were published by the National Statistical Office (NSO) for National Income, Expenditure and Product, for reference years 1993–98. These estimates were compiled using the *System of National Accounts 1968 (1968 SNA)*. Subsequently, a preliminary set of national accounts (NA) estimates using the *1993 SNA* for 1994–2004, rebased to 1998 prices, was compiled. However, as these estimates were still in need of substantial improvements, the 2006 STA multisector mission recommended against publication of the new GDP statistics until the needed revisions were made. No further data have been provided by the NSO to STA since that time. In an attempt to fill the vacuum, the Treasury Department began estimating the NA since reference year 2002. The Bank of Papua New Guinea also compiles, but does not publish, its own estimates of GDP. Since August 2013, technical assistance missions have been conducted by PFTAC to start reviewing the methodologies and the data sources used to compile the national accounts statistics. These missions identified some shortcomings. In the short term, PFTAC will provide technical assistance (TA) to strengthen capacities and improve cooperation between compiling organizations. Reforming the NSO will be necessary to resume regular data collection and compilation of national accounts statistics by the official agency.
Price Statistics: The NSO currently compiles a quarterly wholesale price index (WPI) (which it does not publish) and a quarterly consumer price index (CPI). In May 2014, the NSO began to publish a new CPI series based on the data from the 2009-10 Household Income Expenditure Survey, ending 35 years of the CPI using a consumption basket from the late 1970s.
Government Finance Statistics: Annual government finance statistics (GFS) have not been reported to STA since 2002. Data received to that point in time suffered from insufficient coverage and timeliness. Central government tax revenue, nontax revenue, and public expenditure data are deficient. 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. Tax revenues collected by authorities (extra-budgetary units) are generally not reflected in the central government's financial information; this includes the portion of value-added tax directly transferred to provinces by the revenue agency. While interest payment records are accurate, there are timing issues regarding the recording of interest on discounted securities. These weaknesses contribute to discrepancies in domestic financing between estimates from monetary and debt data and those derived from fiscal records. Currently the Papua New Guinea Government is preparing to migrate to *Government Finance Statistics Manual 2014* (*GFSM 2014)*, with a goal of using this methodology for budget estimate and outturn presentations in the future. For the migration, the authorities are participating in the Japan Administered Account (JSA)-funded three-year regional GFS capacity-building project since 2013.

Monetary and Financial Statistics: Monetary data are now being produced and reported to STA on a regular basis. Progress has been achieved by the Bank of Papua New Guinea (BPNG) in many areas in the collection, compilation, and dissemination of monetary and financial statistics (MFS), leading to the introduction of the standardized report form (SRF) for the central bank, other depository corporations (ODCs), and the other financial corporations (OFCs). The 2013 mission introduced general insurance companies in the institutional coverage of OFCs and an improved SRF for OFCs. Most of the monetary statistics published in *International Financial Statistics (IFS)* are currently aligned with the *Monetary and Financial Statistics Manual* (*MFSM*).

Financial sector surveillance: In the area of financial soundness indicators (FSIs), the BPNG has compiled selected FSIs for deposit takers to support the financial sector assessment. Papua New Guinea is participating in a three-year (FY2014–FY2016) TA project on FSIs for selected AFR and APD countries funded by the Government of Japan and is expected to submit FSI data and metadata to STA for posting on the IMF's FSI website well before the end of the project.

External Sector 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. Progress is being made in implementing the recommendations from the PFTAC's BOP missions in June 2008 and November 2009. PNG has been one of the beneficiaries of the JSA Project on the improvement of external sector statistics (ESS). Under this project, two TA missions were provided to improve BOP and international investment position (IIP) statistics in May-June 2013 and February 2014. These missions made recommendations to improve ESS compilation framework. The BPNG is largely under-equipped in terms of capacity and collection framework vis-à-vis the volumes and nature of transactions and positions with nonresidents. Little progress has been made regarding the implementation of the missions' recommendations; and overall improvements in the quality of ESS have been very modest.

II. Data Standards and Quality

Papua New Guinea began to participate in the General Data Dissemination System (GDDS) in 2012.	

III. Reporting to STA

Papua New Guinea last reported GFS for publication in *Government Finance Statistics Yearbook* and *IFS* for 1999–2002, covering only the budgetary central government. Monetary data are reported to STA for publication in *IFS* on a regular monthly basis. BOP data for 2010 were reported to STA for publication in *Balance of Payments Yearbook* and *IFS*. 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 September 17, 2014)

	Date of Latest Observation	Date Received	Frequency of Data[1]	Frequency of Reporting[1]	Frequency of Publication[1]
Exchange Rates	09/17/14	09/17/14	D	D	D
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[2]	09/10/14	09/10/14	W	W	Q
Reserve/Base Money	07/14	09/11/14	M	M	Q
Broad Money	07/14	09/11/14	M	M	Q
Central Bank Balance Sheet	07/14	09/11/14	M	M	Q
Consolidated Balance Sheet of the Banking System	07/14	09/11/14	M	M	Q
Interest Rates[3]	09/10/14	09/10/14	W	W	Q
Consumer Price Index	06/14	08/29/14	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	2013	07/31/14	A	A	A
Stocks of Central Government and Central Government-Guaranteed Debt[6]	03/14	08/13/14	Q	Q	Q
External Current Account Balance	03/14	08/13/14	Q	Q	Q
Exports and Imports of Goods and Services	03/14	08/13/14	Q	Q	Q
GDP/GNP	2013	07/31/14	A	A	A
Gross External Debt	03/14	08/13/14	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.

INTERNATIONAL MONETARY FUND

PAPUA NEW GUINEA

STAFF REPORT FOR THE 2014 ARTICLE IV CONSULTATION—SUPPLEMENTARY INFORMATION

November 19, 2014

Prepared By: Asia and Pacific Department

1. **On November 18, 2014, the Government of Papua New Guinea (PNG) tabled the 2015 National Budget and a 2014 supplementary budget in Parliament.** Highlights are as follows: The projected fiscal deficit in 2014, at 5.9 percent of GDP, is expected to be 1.3 percentage points of GDP lower than the staff's projection (Table 1). Government revenues have been buoyed by higher-than-expected growth stemming from new liquefied natural gas (LNG) production. The debt-to-GDP ratio is projected to breach slightly the 35 percent of GDP ceiling in 2014, but would be lower than staff's projection.

2. **Meanwhile, the proposed 2015 budget is more expansionary than expected, with an overall deficit at 4.4 percent of GDP, compared with the 2.5 percent of GDP in the staff report.** The debt to GDP ratio is projected to decline to 27.8 percent in 2015 (lower than the staff report's projection of 31 percent), with off-budget receipts from the sale of landowners' equity in the LNG project to be used to retire debt. This trajectory is consistent with the government's Medium-Term Fiscal Strategy, which aims to reduce government debt to below 30 percent of GDP over the medium term. The 2015 budget and the medium-term strategy continue to give priority to key development "enablers" including infrastructure, education, health, and law and order.

3. **The government envisages further fiscal consolidation beyond 2015,** with a deficit target of 2.5 percent of GDP for 2016 and a balanced budget for 2017-19. Underpinning this more ambitious consolidation than envisaged by staff are further expenditure prioritization and the planned strengthening of the tax regime.

4. **The proposed 2015 budget does not change the staff assessment as reported in the staff report.**

Table 1. Selected Budget Indicators

	2012	2013	2014 Staff Report	2014 2015 Budget	2015 Staff Report	2015 2015 Budget	2016 Staff Report	2016 2015 Budget	2017 Staff Report	2017 2015 Budget
					(Percentage change)					
GDP	8.1	5.5	5.8	8.4	19.6	15.5	3.3	5.0	3.4	2.3
Non-resource	9.2	5.4	0.5	1.4	4.0	4.0	4.5	3.9	4.5	3.7
CPI Inflation	4.5	5.0	5.3	5.9	5.0	5.5	5.0	5.0	5.0	5.0
					(In percent of GDP)					
Total Revenue	29.2	28.2	30.1	31.1	25.3	27.2	24.6	24.7	24.4	24.4
Expenditure	32.4	36.1	37.3	37.0	27.8	31.6	26.7	27.2	25.8	24.4
Deficit	-3.2	-8.0	-7.2	-5.9	-2.5	-4.4	-2.1	-2.5	-1.4	0.0
Debt	26.7	34.6	37.0	35.5	31.0	27.8	31.5	28.0	31.1	26.6

Press Release No. 14/547
FOR IMMEDIATE RELEASE
December 2, 2014

International Monetary Fund
700 19th Street, NW
Washington, D. C. 20431 USA

IMF Executive Board Concludes 2014 Article IV Consultation with Papua New Guinea

On November 21, 2014, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with Papua New Guinea, and considered and endorsed the staff appraisal without a meeting on lapse-of-time basis.[2]

Papua New Guinea's economy is experiencing an important transition, which presents major challenges in the near term to maintaining macro-financial stability, but also important opportunities if managed properly. In the face of a winding down of large liquefied natural gas (LNG) project construction, the government has embarked on a large fiscal expansion starting in 2013 to accelerate development and cushion the non-resource economy. However, this policy shift has significantly reduced the country's fiscal space and led to an increase in government debt, likely to exceed legislated targets by end 2014.

With LNG production and exports now starting, resource sector growth is projected to surge in 2015, but spillovers to the rest of the economy may be more limited. Inflation has moderated from its peaks during the construction boom and is likely to remain reasonably low given the global outlook for commodity prices. Meanwhile, the external current account deficit has fallen significantly since 2013, as imports related to the LNG project passed their peak. With LNG exports now coming on stream, the current account deficit is expected to narrow further in 2014 and turn into a surplus in 2015. Nevertheless, lower commodity prices, weaker mining output,

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[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.

[2] The Executive Board takes decisions under its lapse-of-time procedure when the Board agrees that a proposal can be considered without convening formal discussions.

and a reduction in LNG project-related capital inflows have led to depreciation pressure on the kina since mid-2013. In early June 2014 the Bank of PNG (BPNG) introduced measures to require authorized dealers to conduct transactions within a trading band of 150 basis points around the official (interbank) exchange rate. This move caused a large *de facto* currency appreciation. Since then, the Kina has been depreciating at the rate of 5-10 basis points per week.

Risks to economic growth are increasingly tilted toward the downside. Weaker-than-expected growth of the global economy could weigh on external demand and commodity prices. Over the longer term, LNG and shale gas developments around the world could reduce LNG prices and government revenue. This might also have implications for future inflows of foreign direct investment. Domestically, lower growth could weigh on property valuations. On the upside, potential exists for a second LNG project and new mining operations in the near to medium term.

The ongoing economic transition calls for adjustment of macroeconomic policies to safeguard macro-financial stability. Foremost, fiscal consolidation, anchored by government's existing debt targets, would help achieve this objective. Meanwhile, better expenditure prioritization could improve development outcomes. Greater exchange rate flexibility is needed to cushion the country's economy from shocks during the transition, while more complete withdrawal of banking system excess liquidity would help strengthen monetary policy transmission and alleviate the downward pressure on the kina. These macroeconomic policy measures should be supported by faster, deeper structural reforms to create an enabling environment for sustained, inclusive growth.

Executive Board Assessment

In concluding the 2014 Article IV consultation with Papua New Guinea, Executive Directors endorsed the staff's appraisal as follows:

Papua New Guinea's economy is undergoing an important transition. While the commencement of LNG production will boost overall GDP growth in 2014-15, the slow growth of the non-resource sector calls for a renewed policy focus on inclusive growth in the post-LNG construction era. Prudent macroeconomic policies are essential to maintaining debt sustainability and external and financial stability during the transition.

Following strong government expenditure growth over the past three years, steadfast fiscal consolidation is now needed to ensure debt sustainability. With modest LNG revenue expected over the medium term, expenditure restraint will be key to meeting existing government debt targets and provide an opportunity to align spending levels with absorptive capacity and improve spending quality.

Better expenditure prioritization and public financial management will be crucial for improving development outcomes. High priority should be given to implementing high-impact projects and improving the delivery of frontline health and education services, including through sufficient allocation of critical recurrent expenditure. Recent progress on strengthening public financial management (PFM) is welcomed, but greater efforts are needed in improving the management of trust accounts, cash flows, and public debt, notably transparency in contracting government and State Owned Enterprises (SOE) loans.

The sovereign wealth fund (SWF) should be put into operation as soon as practical. The authorities' intention to retain the essential features of the original SWF design is welcome, in particular the strong commitment to ensuring resource revenues are channeled through the budget to the greatest extent possible. This move would better enable the use of public resources to achieve development priorities and is consistent with the SWF's role in macroeconomic stabilization and wealth sharing.

Greater exchange rate flexibility is needed to safeguard external buffers and eliminate imbalances in the foreign exchange market. To these ends, the BPNG should allow the exchange rate to be more market-determined and move quickly to a market-clearing rate through competitive foreign exchange auctions. Over the medium term, Papua New Guinea's external position is expected to strengthen on account of its macroeconomic fundamentals. To improve monetary policy effectiveness, the BPNG should mop up excess liquidity more fully in the banking system, which would help reduce excess demand for foreign exchange as well as improve monetary policy transmission.

Structural reforms should be accelerated and deepened to create conducive conditions for broad-based growth. Continued efforts are needed to improve infrastructure, security, and health and education outcomes, attract more foreign direct investment, and accelerate SOE reforms in order to reduce business costs, create more jobs, and improve service delivery. A revival of agriculture and a strengthening of the small and medium sized enterprises (SME) sector supported by innovations in financial inclusion will also be vital for improving the livelihood of the majority of the population.

Notwithstanding the recent progress, determined action is needed to improve macroeconomic statistics. Some shortcomings in macroeconomic statistics continue to hamper surveillance and policy making. The authorities' commitment to reforming the National Statistics Office (NSO) is a strong step in this direction, with increased IMF technical assistance expected to assist reform efforts and to improve capacity.

Papua New Guinea: Selected Economic and Financial Indicators, 2010–15

Nominal GDP (2013):	US$15.4 billion 1/
Population (2013):	7.3 million
GDP per capita (2013):	US$2,098
Quota:	SDR 131.6 million

	2010	2011	2012	2013	2014	2015
				Est.	Proj.	
			(Percentage change)			
Real sector						
Real GDP growth	7.7	10.7	8.1	5.5	5.8	19.6
Resource 2/	-2.0	-11.8	-7.4	7.2	90.6	150.5
Nonresource	8.7	12.8	9.2	5.4	0.5	4.0
CPI (annual average)	6.0	4.4	4.5	5.0	5.3	5.0
CPI (end-period)	4.9	4.4	5.8	2.9	6.3	5.0
			(In percent of GDP)			
Central government operations						
Revenue and grants	31.3	30.4	29.2	28.2	30.1	25.3
Expenditure and net lending	28.2	28.7	32.4	36.1	37.3	27.8
Net lending(+)/borrowing(-) [Overall balance] (Revenue - expenditure)	3.1	1.7	-3.2	-8.0	-7.2	-2.5
Nonresource net lending(+)/borrowing(-)	-3.6	-5.7	-6.6	-9.9	-8.9	-5.8
			(Percentage change)			
Money and credit (percentage change)						
Domestic credit	4.9	-5.2	37.7	40.9	…	…
Credit to the private sector	18.1	7.9	12.1	17.5	…	…
Broad money	10.2	17.8	10.9	6.7	…	…
Interest rate (182-day Treasury bills; period average)	5.2	4.3	5.8	5.0	…	…
			(In billions of U.S. dollars)			
Balance of payments						
Exports, f.o.b.	5.9	6.9	6.3	5.6	6.3	12.4
Of which: Nonresource	4.4	4.9	4.5	4.1	4.3	10.1
Imports, c.i.f.	-4.3	-6.3	-7.7	-5.5	-4.4	-4.7
Current account (including grants)	-2.1	-3.0	-8.2	-4.7	-1.8	2.7
(In percent of GDP)	-21.5	-23.6	-53.6	-30.8	-11.4	13.5
Gross official international reserves	3.1	4.3	4.0	2.8	2.6	3.8
(In months of goods and services imports)	3.7	4.1	5.0	4.2	4.0	5.5
			(In percent of GDP)			
Government debt						
Government gross debt	25.6	23.0	26.7	34.0	37.0	31.0
External debt-to-GDP ratio (in percent) 3/	10.7	8.3	7.3	8.1	9.0	7.8
External debt-service ratio (percent of exports) 3/	1.5	1.3	1.5	1.5	1.8	0.7
Exchange rates						
US$/kina (end-period)	0.3785	0.4665	0.4755	0.4130	…	…
NEER (2005=100, end-period)	100.7	108.6	125.5	121.4	…	…
REER (2005=100, end-period)	112.7	122.5	144.3	143.0	…	…
Nominal GDP (in billions of kina)	26.4	30.5	32.1	34.6	39.8	52.2

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

1/ Based on period average exchange rate.

2/ Resource sector includes production of mineral, petroleum, and gas and directly related activities such as mining and quarrying, but excludes indirectly related activities such as transportation and construction.

3/ Public external debt includes external debt of the central government, the central bank, and statutory authorities.