INTERNATIONAL MONETARY FUND

IMF Country Report No. 18/352

PAPUA NEW GUINEA

2018 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR PAPUA NEW GUINEA

December 2018

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 2018 Article IV consultation with Papua New Guinea, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its November 26, 2018, consideration of the staff report that concluded the Article IV consultation with Papua New Guinea.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on November 26, 2018, following discussions that ended on September 28, 2018, 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 9, 2018.
- An **Informational Annex** prepared by the IMF staff.
- A **Debt Sustainability Analysis** prepared by the staffs of the IMF and the World Bank.
- A **Statement by the Executive Director** for Papua New Guinea.

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COMMUNICATIONS DEPARTMENT

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December 3, 2018

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IMF Executive Board Concludes 2018 Article IV Consultation with Papua New Guinea

On November 26, 2018, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with Papua New Guinea.

In 2018 growth of the Papua New Guinea (PNG) economy was adversely affected by a large earthquake, which temporarily halted production in much of the resource sector. Although APEC activities and good agricultural harvests have provided some offset, overall GDP growth for the year is estimated to be close to zero, but recover to 3.8 percent in 2019 as resource output returns to normal. Weak demand and improved agricultural supply have continued to contribute to an easing of inflation to around 4½ percent. PNG continues to face a shortage of foreign exchange, despite a large current account surplus. Large resource export revenues are almost entirely offset by resource project debt repayments and dividends. The shortage has led to rationing of foreign exchange, which has dampened growth. International reserves stood at $1.7 billion at end-2017, equivalent to 5 months of imports.

The main macroeconomic challenges for the government are to finish putting in place policies that will help promote economic stability, and to strengthen its long-term development framework. In 2017-18, the new government made important progress in narrowing the fiscal deficit, and adopted a medium-term revenue strategy. But progress on fiscal consolidation has stalled, and the debt-to-GDP ratio is well above the medium-term target. The monetary authorities have begun to address the foreign exchange problem by facilitating exchange rate adjustment, increasing the supply of foreign exchange, and strengthening the monetary framework.

Near-term risks to the outlook are roughly balanced. A weakening of global growth could lower commodity export prices, dampening growth and making fiscal adjustment more difficult, but reforms to exchange rate policy could have a more favorable impact on growth than expected.

[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.

Over the medium term, risks are more to the upside owing to the likelihood that new resource sector projects will begin to get underway.

Executive Board Assessment[2]

Executive Directors observed that growth in 2018 has continued to be sluggish, reflecting low commodity prices and the effects of a large earthquake that disrupted oil, gas, and mineral exports. They took positive note that economic growth is expected to be stronger in 2019. In this context, Directors agreed that strengthening macroeconomic policies and implementing structural reforms would help reduce risks and support inclusive longer-term economic growth.

Directors welcomed the confirmation of the government's long-term debt/GDP target of 30 percent and the adoption of a zero non-resource primary balance as a medium-term objective. The adoption of an expenditure rule consistent with the revenue target would help reconcile the fiscal targets and guide budget policy. Directors noted that the recent issuance of a debut sovereign bond is a positive development, and welcomed the authorities' intention to use the funds to improve the domestic public debt profile and help resolve foreign exchange shortages. Directors also welcomed the progress in strengthening public financial management.

Directors encouraged the government to continue to strengthen its fiscal framework, and noted that in the near term, additional fiscal consolidation is needed to reduce the risk of debt distress. This could be achieved through a combination of increases in revenue and reduction in spending, particularly on the government wage bill and grants. In this connection, Directors welcomed the government's strong commitment to strengthen domestic revenue mobilization through implementation of its Medium-Term Revenue Strategy, the significant increase in tax revenue through efforts to strengthen compliance, and tighter government payroll controls.

Directors agreed that the greater exchange rate flexibility that has been pursued in recent months should be continued in order to support growth in the non-resource sector. Eliminating the backlog of foreign exchange orders and strengthening liquidity management and foreign exchange operations would support the re-establishment of an interbank foreign exchange market. Carefully monitoring the impact of foreign exchange measures on the financial sector will be important.

Directors encouraged the authorities to seek better terms in negotiations for new resource projects and to develop a framework for managing resource revenues. The development of the non-resource sector should be fostered through provision of public services and infrastructure

[2] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

and be taken into account in revenue mobilization. Directors also supported the elimination of corruption and strengthening of governance as an important part of Papua New Guinea's development strategy, and commended recent progress in this area.

Directors welcomed improvements in macroeconomic statistics, but noted that further progress is needed to improve data completeness, timeliness, and accuracy, and supported provision of additional technical assistance in this area.

Table 1. Papua New Guinea: Selected Economic and Financial Indicators, 2014-19

Nominal GDP (2016):	US$21.1 billion 1/
Population (2016):	7.9 million
GDP per capita (2016):	US$2,353
Quota:	SDR 131.6 million (14th Review: SDR 263.2 million)

	2014	2015	2016	2017	2018	2019
			Est.	Est.	Proj.	
			(Percentage change)			
Real sector						
Real GDP growth	15.4	5.3	1.6	2.5	0.0	3.8
Resource 2/	69.2	39.0	6.3	4.3	-6.8	8.3
Non-resource	7.0	-3.1	-0.1	1.8	2.6	2.2
Agriculture, forestry and fishing (share)	17.8	18.4	18.5	18.2	18.7	18.6
Mining and quarrying (share)	9.1	7.7	8.0	8.0	7.6	7.7
Oil and gas extraction (share)	11.3	14.1	15.0	15.4	14.1	15.0
CPI (annual average)	5.2	6.0	6.7	5.4	4.8	4.7
CPI (end-period)	6.7	6.3	6.6	4.7	4.8	4.7
			(In percent of GDP)			
Central government operations						
Revenue and grants	20.9	19.3	17.6	17.6	17.9	16.7
Of which: Resource revenue	2.3	1.1	0.7	1.0	0.7	0.5
Expenditure and net lending	27.2	24.1	22.8	20.3	20.8	19.0
Net lending(+)/borrowing(-)	-6.3	-4.8	-5.2	-2.7	-2.9	-2.2
Non-resource net lending(+)/borrowing(-)	-6.3	-4.8	-5.2	-2.7	-2.9	-2.2
			(Percentage change)			
Money and credit (percentage change)						
Domestic credit	12.8	23.5	15.9	-1.0	10.5	-7.6
Credit to the private sector	3.5	3.4	7.2	-3.6	7.0	3.1
Broad money	3.4	8.0	10.9	0.9	16.5	-10.5
Interest rate (182-day T-bills; period average)	5.3	7.1	7.4	7.1	7.0	8.1
			(In billions of U.S. dollars)			
Balance of payments						
Exports, f.o.b.	8.8	7.8	8.7	9.7	9.6	10.5
Of which: Resource sector	7.1	6.6	7.1	8.1	8.3	9.1
Imports, c.i.f.	-4.5	-2.7	-2.0	-2.5	-2.7	-3.2
Current account (including grants)	0.3	2.4	4.5	4.9	4.9	5.1
(In percent of GDP)	1.3	11.8	23.7	23.9	22.8	23.0
Gross official international reserves	2.3	1.9	1.7	1.7	2.2	1.8
(In months of goods and services imports)	5.9	6.0	4.4	4.9	5.6	4.4
			(In percent of GDP)			
Government debt						
Government gross debt	27.1	32.3	37.8	37.5	36.8	36.2
External debt-to-GDP ratio (in percent) 3/	6.2	7.9	10.2	11.3	14.1	15.1
External debt-service ratio (percent of exports) 3/	1.1	1.1	1.3	1.4	1.8	2.5
Exchange rates						
US$/kina (end-period)	0.3855	0.3325	0.3150	0.3060	…	…
NEER (2005=100, end-period)	114.2	116.4	104.2	101.0	…	…
REER (2005=100, end-period)	123.6	131.4	123.6	124.0	…	…
Terms of trade (2010=100, end-period)	97.4	102.0	93.4	85.0	87.0	84.8
Nominal GDP (in billions of kina)	56.8	57.1	59.6	65.5	70.8	75.2
Non-resource nominal GDP (in billions of kina)	45.2	44.7	45.9	50.2	55.4	58.1

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.

INTERNATIONAL MONETARY FUND

PAPUA NEW GUINEA

STAFF REPORT FOR THE 2018 ARTICLE IV CONSULTATION

November 9, 2018

KEY ISSUES

Outlook and Risks

The Papua New Guinea (PNG) economy has grown sluggishly in recent years, reflecting a combination of domestic and external factors. External factors have included adverse terms of trade movements, a drought, and, in 2018, a large earthquake. Domestic factors have included a difficult fiscal consolidation and a shortage of foreign exchange, sustained by an overvalued exchange rate, leading to import compression and weak investment in the non-resource sector.

The main macroeconomic challenges for the government are to finish putting in place policies that will help promote economic stability, and to strengthen its long-term development framework. In 2017-18, the new government made important progress in narrowing the fiscal deficit, and adopted a medium-term revenue strategy. But progress on fiscal consolidation has stalled, and the debt-to-GDP ratio is well above the medium-term target. Monetary authorities have begun to facilitate exchange rate adjustment and strengthening of the monetary framework. Stronger economic policies, involving more ambitious fiscal consolidation coupled with faster exchange rate adjustment would yield favorable results.

Policy Recommendations

- Additional fiscal consolidation is needed to achieve the medium-term target of a zero non-resource fiscal balance and to reduce the debt-to-GDP ratio below 30 percent.

- Monetary policy should step up the pace of gradual exchange rate adjustment and elimination of the backlog of foreign exchange orders.

- The development strategy should include implementing a framework for managing future resource revenues and addressing governance and corruption issues.

Approved By
Odd Per Brekk (APD) and Maria Gonzalez (SPR)

Discussions were held in Port Moresby during September 16-28, 2018. The staff team comprised Scott Roger (Head), Geoffrey Bannister, Ryota Nakatani (all APD), and Leni Hunter and Jacinta Hesaie (RR-Fiji). The mission was accompanied by Sali David (OED). Medha Madhu Nair and Nadine Dubost assisted from HQ.

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ANNEXES

RECENT DEVELOPMENTS, OUTLOOK, AND RISKS

A. Economic Activity, Inflation, and Balance of Payments

1. In recent years the Papua New Guinea (PNG) economy has grown sluggishly, reflecting a combination of domestic and external factors. Low commodity prices, together with the end of large resource project investments, dampened growth in the main resource sectors. Additionally, a severe drought in 2015-16 pulled down growth in the mining and agricultural sectors. Policy developments have also contributed to slow growth in the non-resource sector. Fiscal consolidation, while essential to restoring fiscal sustainability, has unavoidably dampened aggregate demand. A shortage of foreign exchange (FX), sustained by an overvalued exchange rate, also led to severe import compression, inhibiting investment and production in the non-resource sector. Thus, aggregate growth averaged around 2 percent in 2016-17. With the fading impact of the 2015-16 drought on food and betelnut prices, inflation eased from 6.7 percent in 2016 to 4.7 percent in 2017.

2. Growth in 2018 has been adversely affected by a large (magnitude 7.5) earthquake, disrupting production and exports by the gas, oil, and mining industries. Although production in these industries has recovered well, output in the resource sector as a whole is still projected to be below 2017 levels. Activity in the rest of the economy has been supported by expenditure related to PNG's hosting of APEC, good agricultural harvests, and some improvement in the supply of FX to the non-resource sector. Consequently, overall GDP growth is projected to be close to zero percent in 2018.[1]

3. Inflation has continued to ease. CPI inflation continued to decline in the first half of 2018, against a background of weak domestic growth, low inflation in major trading partners, limited exchange rate depreciation, and favorable agricultural supply conditions. Inflation is projected to rise slightly, to 4.8 percent at end-2018, reflecting higher international energy prices and some depreciation of the Kina.

4. In 2019 a stronger macroeconomic performance is expected. In the resources sector, full recovery of production and exports from the earthquake is projected. In the non-resource sector, output, consumption and investment will benefit from further improvements in FX supply, reflecting higher commodity prices and intervention to reduce the FX orders backlog. Aggregate GDP growth is projected at 3.8 percent, while inflation is projected remain around 5 percent as the Kina is assumed to depreciate gradually through the year. Over the medium term, aggregate growth is projected to trend upwards towards the estimated sustainable rate of about 4 percent. If major new resource projects are initiated, growth could be substantially higher.

5. Despite a large current account surplus, PNG continues to face a shortage of FX. PNG's current account surplus for 2018 is estimated at around 23 percent of GDP, as higher commodity

[1] Fund staff estimates are based on the revised NSO national accounts data for 2014-15, released in March 2018. See Box 1.

prices offset the impact of the temporary cut in export volumes, while FX shortages continue to delay and compress imports. The current account surpluses have been almost entirely offset by capital and financial account outflows, mainly related to project debt repayments. PNG's international reserves have remained fairly stable, at around $1.7 billion, equivalent to 5 months of imports. Going forward, some improvement in FX inflows is projected, associated with higher commodity prices, a sovereign bond issue, and ADB and World Bank loans. This is expected to lead to an increase in imports as the FX backlog is shortened, and an increase in international reserves that diminishes gradually over the projection horizon.

B. Fiscal Policies and Financing

6. The budget deficit is projected at 2.9 percent of GDP this year. Tax collection so far this year is up substantially from last year and well above budget projections. This reflects efforts by both the Internal Revenue Commission (IRC) and Customs Service to strengthen tax compliance, as well as the impact of higher commodity prices on resource revenues. These gains, however, have been substantially offset by expenditure slippages, particularly on personnel emoluments. Consequently, fiscal consolidation has stalled, and the public debt/GDP ratio is projected at 36.8 percent of GDP this year, exceeding the government's debt ceiling target.[2]

7. Significant progress has been made in strengthening public financial management. An Integrated Financial Management Information System (IFMIS) was introduced with technical support by the European Union and its coverage is being extended from the central government to provincial governments, with the roll out due to be completed by end-2018. The government has also passed a National Procurement Act. These measures should facilitate improved accountability, monitoring, and control of fiscal operations and procurement processes.

8. The Government has recently issued a debut sovereign bond. The bond issue is for $500 million with a 10-year maturity and a yield of 8.375 percent. While issuance of a sovereign bond will raise PNG's external debt/GDP ratio, the government's intention to use the funds to improve the government's domestic debt profile, as well as to help resolve the FX and exchange rate conundrum, will be positive and important outcomes.

C. Monetary and Foreign Exchange Policies

9. PNG is seeking to restore exchange rate flexibility. While a flexible exchange rate is not a panacea, it has a valuable role to play in cushioning the economy from the impact of strong swings in commodity prices and resource project investment cycles. Although the kina depreciated significantly over 2012-2015, as commodity prices declined, there was much less depreciation in real terms, and from 2016 until recently, the Kina moved very little against the US dollar. The Bank of

[2] This figure significantly exceeds the government's projection partly because Fund staff's figure uses a lower nominal GDP denominator, based on the revised National Statistical Office (NSO) national accounts data as well as a stronger GDP impact of the earthquake, and partly because the level of external debt is converted to Kina at the current exchange rate.

Papua New Guinea (BPNG) has been reluctant to have the Kina depreciate, out of concern for the inflationary impact of depreciation and limited supply and demand responses to depreciation. However, stability in the Kina, supported by FX rationing, has led to sharp compression of imports and the buildup of a large backlog of FX orders at the overvalued exchange rate, and weak tax compliance in some export-oriented industries has also reduced FX inflows. The challenge now is for PNG to achieve an orderly adjustment in the exchange rate and restoration of exchange rate flexibility, and to strengthen policy implementation using interest rates.

10. The BPNG also needs to strengthen its capacity to implement monetary policy using interest rates. Interest rate transmission is currently weak and needs to be improved to provide BPNG with effective policy instruments to manage in a flexible exchange rate framework. The FX shortage has also contributed to a buildup of excess liquidity, as bank deposits have been bolstered by funds intended for dividend payments abroad, while credit growth has been weak, reflecting the slow growth of the economy. In such circumstances, the BPNG's ability to affect monetary conditions has remained very limited.

11. Against this background, the BPNG is adopting broad-ranging reforms to monetary and foreign exchange policies. The measures are intended to: (i) improve monetary policy communication; (ii) strengthen the monetary operations framework; (iii) restore functioning of the FX market and exchange rate flexibility; (iv) lengthen the maturity structure of public debt; and (v) strengthen the BPNG's formulation of monetary policy.[3]

12. Steps taken towards implementing this reform agenda include:

- An IMF technical assistance (TA) mission recently visited PNG to provide advice on implementing the reforms and additional TA is likely to be provided;
- The Pacific Financial Technical Assistance Center (PFTAC) has assisted BPNG staff with strengthening capacity in forecasting and policy analysis, including analysis of the impact of exchange rate adjustment;
- BPNG has notified banks that it will no longer provide direction on the allocation of FX to customers;
- Since July, BPNG has undertaken several interventions to increase FX supply, averaging about \$50 million per month, and has also overseen a gradual downward adjustment in the exchange rate against the US dollar of around 0.3 percent per month. Discussions with banks suggest that intervention plus some improvement in export earnings has begun to shorten the backlog of FX orders and delays in filling orders, particularly for trade in goods and service;

[3] These reforms have been proposed by the authorities in support of their request for a World Bank DPO loan which was approved by the Bank Board in October.

13. A baseline projection, based on current policies is summarized in Table 1.[4] In the baseline, further fiscal consolidation is projected, in line with announced policies. Ongoing efforts to strengthen revenue mobilization and expenditure control are projected to bring down the budget deficit to 2.2 percent of GDP in 2019, and to 0.8 percent of GDP by 2023. However, while the pace of fiscal consolidation does gradually bring the public debt/GDP ratio down over the medium term, it is still projected to be above the medium-term target range of 30-35 percent in 2021. The projection incorporates issuance of a sovereign bond and ADB and World Bank loans. These inflows will boost international reserves initially and then be used to reduce the FX orders backlog, while the current gradual pace of exchange rate adjustment is assumed to continue.

Text Table 1. Medium-term projection based on unchanged policies

Unadjusted Scenario	2017	2018	2019	2020	2021	2022	2023
GDP growth (%)	2.5	0.0	3.8	3.1	3.7	3.7	3.8
Inflation (%)	5.4	4.8	4.7	4.7	4.7	4.7	4.1
Net lending/borrowing (% of GDP)	-2.7	-2.9	-2.2	-1.7	-1.2	-0.9	-0.8
Government expenditure (% of GDP)	20.3	20.8	19.0	18.8	18.6	18.6	18.6
Government debt (% of GDP)	37.5	36.8	36.2	35.5	35.0	34.1	33.6
Current account (% of GDP)	23.9	22.8	23.0	21.4	20.3	19.2	18.4
Gross reserves (months of imports)	4.9	5.6	4.4	4.8	4.8	4.7	4.6

D. Risks

14. The main risks in the outlook include:

Upside:

- Liquefied Natural gas (LNG) and mining projects, which could begin in 2020, would boost investment inflows and growth, easing the fiscal crunch and the shortage of FX, but timing and values are too uncertain to include in the baseline projection.[5]

- Non-resource sector growth could be boosted by a stronger than expected response of activity and investment to easing of FX rationing and gradual exchange rate adjustment.

Downside:

- If the easing of FX shortages and adjustment in the exchange rate are delayed, growth would be adversely affected.

[4] This uses the NSO national accounts data released in March 2018. These show significantly lower nominal GDP growth in 2015 than the Treasury estimates (See Box 1).

[5] These include the Wafi-Golpu mining project; Papua LNG project, led by Total; Pynang LNG project, led by Exxon-Mobil; and Pasca LNG project, led by Twinza Oil and Gas.

- Weakening of global growth could lead to a reversal of recent increases in commodity prices. This would adversely affect government revenues, increasing pressure for fiscal consolidation. This plus an adverse impact on business confidence would cut growth prospects.

E. Macroeconomic Outlook with Recommended Policy Adjustments

15. Stronger economic policies, involving more ambitious fiscal consolidation coupled with exchange rate adjustment would yield favorable results (Table 2). In the adjustment scenario, public debt to GDP ratio is reduced to within the 30-35 percent medium-term target range by 2019, and monetary policy eliminates overvaluation of the Kina and the FX orders backlog over the same period. In this scenario, the growth and inflation trajectories would be broadly preserved, while the potential for debt distress as well as significant disruption in the FX market would be much lower than in the unchanged policies scenario. The following sections elaborate on policies under such an adjustment scenario.

Text Table 2. Medium-term projection based on Adjustment Scenario

Unadjusted Scenario	2017	2018	2019	2020	2021	2022	2023
GDP growth (%)	2.5	0.0	3.3	3.2	3.7	3.6	3.7
Inflation (%)	5.4	4.8	5.5	5.0	4.8	4.8	4.1
Net lending/borrowing (% of GDP)	-2.7	-2.9	-1.0	-0.7	-0.4	-0.1	-0.1
Government expenditure (% of GDP)	20.9	21.4	18.3	18.3	18.2	18.2	18.2
Government debt (% of GDP)	37.5	36.8	35.0	33.4	32.3	30.8	29.6
Current account (% of GDP)	23.9	22.8	24.7	23.5	22.3	20.9	19.9
Gross reserves (months of imports)	4.9	5.6	4.5	5.0	5.0	4.8	4.7

Authorities' Views

16. With regard to the economic outlook, the authorities believe that the post-earthquake recovery in production is somewhat stronger than estimated by Fund staff, involving growth of around 1 percent for the year. The authorities also noted that they are using their own estimates for GDP growth since 2014, as they have questions about the NSO figures (Box 1). The higher nominal GDP figures used by Treasury contribute to a much lower estimate for the debt/GDP ratio in 2018 and a quicker decline in the ratio to within the target range of 30-35 percent, as indicated in the Mid-Year Economic and Fiscal Outlook (MYEFO).

POLICIES FOR MACROECONOMIC STABILITY AND DEVELOPMENT

17. The main macroeconomic challenges for the government are to finish putting in place policies that will help promote economic stability, and to strengthen its long-term

development framework. Important measures have been adopted to promote macroeconomic stability, but further fiscal consolidation is needed. Additionally, monetary and exchange rate policies should be geared towards restoring exchange rate flexibility. From a longer-term perspective, the development policy framework emphasizes the need to promote the non-resource sector in order to achieve sustainable development goals. In this context the revenue strategy will play a critical role, as will a framework for managing future resource project revenues, and the strengthening of governance arrangements.

A. Fiscal Policy

18. The adoption of a zero non-resource primary balance as a medium-term fiscal target should help to provide fiscal stability and sustainability, as well as promote intergenerational sharing of benefits from natural resources. To further underpin fiscal adjustment, an annual expenditure rule would help reconcile the debt and revenue targets and focus attention on the level of revenues need to support development spending.

19. Additional fiscal consolidation measures are needed in 2019-22. To establish a sustainable and credible fiscal adjustment path, further steps should be taken to strengthen revenue and expenditure management as well as to achieve fiscal consolidation consistent with bringing the debt/GDP ratio down to the long-term target of 30 percent over the medium term. This will require cutting net spending by around K 1 billion (1.4 percent of GDP). As sustained revenue increases under the Medium Term Revenue Strategy (MTRS) may take time to be realized, the primary focus should be on spending restraint. Clearly, though, sustained increases in revenues would ease the task of adjustment. The degree to which the debt/GDP ratio exceeds the target is somewhat uncertain, suggesting that a gradual approach to fiscal consolidation is appropriate.[6]

20. To achieve further fiscal consolidation, staff recommend the following measures:

- ***Financial management controls over the Personnel Emoluments*** should be improved without delay, with a view to reducing personnel costs by about K 0.5 billion (10 percent or 0.7 percent of GDP):
    - Complete identifying public employees using head counts, national identification cards and appointment letters. Use IFMIS data to identify staff collecting more than one pay cheque;
    - Remove from the payroll names of persons not actually working;
    - Ensure budget allocations are based on accurate data;

[6] The Fund staff estimate of the current debt/GDP ratio is substantially higher than the authorities' estimate for two reasons: Fund staff use NSO nominal GDP figures, which are significantly lower than the Treasury estimates; and Fund staff estimates include valuation changes in external debt owing to depreciation of the Kina, raising the Kina value of external debt.

  - Ensure that the Organizational Staffing and Personnel Emolument Audit Committee (OSPEAC) meets regularly and takes action;

  - Reduce the expenditure ceiling on personnel emoluments costs from 40 to 35 percent of non-resource, non-grant revenue, to make the ceiling binding.

- ***District and Provincial Service Improvement Program (DSIP and PSIP) grants.*** These grants have been largely protected while goods and service expenditures have been cut substantially. It is recommended that these grants be scaled back by K 0.5 billion (50 percent, or 0.7 percent of GDP), at least until the debt target has been achieved. Moreover, to strengthen transparency and accountability, cuts should fall most heavily on programs providing the least accountability.[7]

- ***Expenditure arrears and payments delays***. Eliminating payments delays and arrears should be a priority in budget implementation. Uncertainty regarding timing of government payments is cited by the business sector as one of the most important factors dampening non-resource sector business activity. A clear policy of paying on time and eliminating arrears would significantly boost business confidence.

- ***Revenue expansion***. The government's strong commitment to strengthen domestic revenue mobilization through implementation of the MTRS is welcome. Recommendations to strengthen the revenue effort include:

- Ensuring that all members of the government negotiating teams for major new gas and mining projects are provided with the analysis and tools developed by recent IMF and World Bank TA teams focusing on extractive industries fiscal regimes. A well-informed team with a clearly agreed strategy and understanding of trade-offs is essential to getting the best deal for PNG;

- The MTRS is a very large and complex undertaking, and will require strong and focused management. Active governance by the MTRS Steering Committee (SC) is essential. Priorities should include:

  - The SC should hold regular governance meetings and require regular reports from Treasury and IRC management to monitor progress against MTRS deliverables; and dedicated resources should be allocated for the SC secretariat;

  - The large taxpayer office should be used to pilot modern tax administration procedures which can then be rolled out to other taxpayers;

  - IRC should quickly build a compliance risk management function to identify and address tax non-compliance, especially in high risk industries like logging, fisheries, and gold mining.

[7] The PSIPs and DSIPs are development grants administered at the provincial and electoral district level, respectively. Currently, total spending on the programs is K 1 billion, about 6.7 percent of government spending. Accountability for such spending is extremely weak, with very few constituencies or provinces providing any reporting on how funds are spent.

Appropriate resources should then be allocated to strengthen enforcement, ensuring that all taxpayers pay the tax properly owing. Tax audit specialists should be contracted in to IRC to address more complex risks in the natural resources sector.

21. Fund staff support the use of the sovereign bond and other government borrowing to lengthen the maturity profile of domestic public debt and resolve the FX orders backlog. The implementation of the government's debt management operations will need to be very closely coordinated with the interventions to reduce the FX orders backlog in order to minimize uncertainty and volatility in liquidity conditions.

Authorities' Views

22. The authorities agreed that additional fiscal consolidation is needed, although there is some uncertainty about the magnitude, and that a combination of revenue and expenditure measures is appropriate. Revenue efforts will focus on increasing compliance as well as strengthening non-tax revenue. On expenditure, it was noted that both payroll and grants are sensitive areas. On payroll, audits at the provincial level will be used to bring spending under better control, and at the national level savings are being achieved through some restructuring of departments. For PSIPs and DSIPs, the focus is on increasing transparency, as well as improving procurement practices, which may lead to savings.

B. Monetary and Foreign Exchange Policies

23. To address PNG's monetary and FX challenges, a carefully designed and implemented strategy is needed. Key objectives are to (i) restore exchange rate flexibility and a functioning FX market; (ii) strengthen BPNG capacity to use interest rates to manage monetary conditions; and (iii) reduce the government's dependence on short-term domestic debt. Elements of the strategy need to include:

- **Clearing the backlog of FX orders prior to floating the exchange rate.** This is needed to avoid a large, disruptive movement in the exchange rate. While the backlog may have been reduced this year, commercial bank estimates suggest that the overall figure is around US$1 billion. A well-communicated commitment to clear the backlog though regular FX interventions by BPNG over the next year or so could have a very favorable impact on business sentiment, with beneficial effects on investment. Easing of import compression should also favorably affect production, as the supply of intermediate imports increases, as well as putting some downward pressure on inflation. The magnitude of these effects is difficult to gauge, but could be substantial.

- **Gradual elimination of exchange rate overvaluation should precede floating.** A rapid adjustment of the exchange rate would significantly boost inflation, while real adjustment of imports and exports would likely take some time. Consequently, Fund staff agree with the authorities that a gradual approach toward eliminating the overvaluation is appropriate, but a somewhat faster pace of adjustment is recommended than that seen so far in 2018. The EBA analysis (Box 2) suggests that PNG's external position is moderately weaker than implied by fundamentals and desirable polices, and the Kina is overvalued by 10.7 percent. Private sector estimates suggest somewhat greater overvaluation. Overvaluation effectively acts as a subsidy for imports and dividends being paid abroad, while taxing exports. These effects run counter to the direction of the government's development strategy. Eliminating overvaluation will require a depreciation of 12-15 percent in nominal terms. Once the FX orders backlog has been largely eliminated, and exchange rate overvaluation reduced, conditions will be largely set for re-establishment of an interbank FX market without a sharp further adjustment of the exchange rate. BPNG should aim to complete this transition within two years.

- **Other measures to boost the net supply of FX to the market.** Exchange rate adjustment will work to boost export revenues and dampen imports without resort to rationing, but other policies can help. The focus needs to be on achieving sustainable rather than temporary increases in inflows. Measures to increase tax compliance by export earners, in particular, will not only increase government revenues but also increase FX inflows on a sustained basis.

- **Strengthened liquidity management**. Clearing the backlog of FX orders will withdraw substantial liquidity from the system. At the same time, using proceeds from government foreign borrowing to retire short-term debt will inject liquidity. Managing these operations in a way that achieves liquidity objectives will require strengthening liquidity forecasting, as well as ensuring excellent communications with market participants. It will also require strengthening the monetary policy operational framework so that BPNG is able to adjust liquidity conditions appropriately. Steps to strengthen the liquidity management framework should be pursued in the near term.

Authorities' Views

24. The authorities agreed with Fund staff on the general thrust of monetary and exchange rate policy reforms, especially the need to carefully manage the liquidity effects of the use of FX to clear the FX orders backlog and reduce short-term public debt. They agreed that good communication with stakeholders is essential. Planning of the reform implementation strategy is under way and TA will be requested as needed.

C. Financial Stability

25. The PNG financial system appears to be generally sound, but some developments will need careful monitoring. PNG banks are well-capitalized (average 29 percent tier 1 capital asset ratio), have low NPLs (average 1.3 percent), and a high return on equity (average 27.4 percent), so are generally in a good position to absorb shocks. Nonetheless, there are three areas of risk that will need careful monitoring by the BPNG:

- Kina Bank's proposed acquisition of ANZ retail and non-corporate commercial business may well be a healthy move not only for the banks themselves, but for the efficient functioning of the system as a whole.[8] Initially, however, Kina Bank will be absorbing a large number of customers that it does not know well, and its management team will face a large increase in the scale of its work. Both factors could challenge risk management, and will need to be monitored closely by BPNG;

- BPNG's reforms to monetary and FX operations, together with Treasury's intention to change the maturity structure of government debt, are bound to raise challenges for the commercial banks in managing liquidity, FX, and credit risks, as well as lead to changes in the functioning of markets. Clearly BPNG Financial Markets Department will need to work with the banks to ensure that changes are introduced in as smooth a fashion as possible, but BPNG Supervision Department will also need to be involved to ensure that risks are properly managed.

- The impact of reductions in systemic excess liquidity and exchange rate adjustment on financial stability could adversely affect some firms' balance sheets. Discussions with banks suggest that gradual exchange rate adjustment is unlikely to generate significant stresses among banks' customers, but this will bear careful monitoring.

26. Difficulties in the operation of the interbank market will need to be addressed. There is some evidence that the interbank market is not effectively redistributing liquidity between banks. Although interbank bilateral exposure limits may play a role, that the terms of access to central bank liquidity facilities may be inhibiting a market solution. A market-based solution should be sought, in which central bank liquidity provision is limited.

Authorities' Views

27. The authorities agreed that careful monitoring of Kina bank's expanded business will be needed for some time, and that the impact of changes in monetary and FX operations will also need to be monitored. The BPNG is currently considering options for dealing with maldistribution of liquidity between banks.

POLICIES FOR INCLUSIVE DEVELOPMENT

28. Achieving the government's development objectives will require better management of natural resource wealth, development of the non-resource sector, and addressing challenges in governance and corruption. Significant efforts are already underway, including under the new government's Alotau II Accord, the Vision 2050 development strategy, and the 2018 National Budget, underscoring the government's commitment to infrastructure investment, law and order, and education and health services. To further this agenda will require efforts in the following areas:

[8] Kina Bank announced the proposed acquisition on June 25, 2018: http://www.kina.com.pg/kina-banks-proposed-acquisition-of-anz-pngs-retail-and-commercial-sme-banking-business/

- **Better management of natural resource wealth**. The government recognizes the importance of harnessing PNG's considerable natural resource wealth, and has begun negotiating commercial agreements for major new LNG projects. Improvements in the terms of LNG agreements, in line with international best practice, will yield significant revenues. It will be important to develop a framework to manage and use these revenues, including a sovereign wealth fund, to safeguard resources for future development and growth, fiscal buffers to protect against macroeconomic shocks and natural disasters, and more transparent expenditure to ensure resources are used as efficiently as possible.

- **Development of the non-resource sector.** To achieve inclusive growth and poverty reduction, development policies need to focus on the non-resource sector. The strategy needs to provide incentives for private sector investment, supported by government provision of essential public goods, including infrastructure, education, healthcare, clean water and electricity and telecommunications. Financing these will require sustained increases in government revenue, as well as careful prioritization of projects, and hence putting together a consistent and efficient medium-term fiscal framework will be essential. Fund staff also strongly endorse the BPNG's efforts to promote financial inclusion, especially as it will tend to promote greater gender equity.

- **Addressing challenges in governance and corruption is essential to attain development objectives.** PNG has extensive governance and corruption weaknesses undermining the effectiveness and efficiency of government. Addressing these weaknesses effectively would substantially increase PNG's attractiveness as a destination for investment, raise the sustainable rate of growth, and promote economic inclusion. For these reasons, Fund staff strongly support the elimination of corruption and strengthening of governance as part of PNG's development strategy, and its effective implementation through actionable measures.

29. Recent measures that will serve to strengthen governance and reduce corruption are welcome, including:

- **Establishment of the Independent Commission Against Corruption (ICAC).** This is a welcome development, but much will depend on its precise mandate and powers. Fund staff recommend that ICAC's enabling legislation be passed and gazetted in the near term, and that ICAC be given a high degree of autonomy, particularly with regard to the selection of cases that it investigates, and its powers of prosecution.

- **Roll-out of the IFMIS budget monitoring system.** IFMIS is not only extremely helpful for management of government spending, but can also be used to promote a transparency and discipline in the use of public funds. Specifically, Fund staff recommend that IFMIS data be used to monitor implementation of DSIP and PSIP spending and compare such spending against guidelines for use of such funds. Publication of such information can help improve discipline in the use of the funds and increase public confidence that they are used well.

- **National Procurement Act.** The new Act, involving greater centralization of procurement, offers the potential for substantially increasing the transparency and integrity of the procurement process, with significant benefits in terms of efficiency. The National Procurement Commission should be established quickly, given considerable autonomy, provide clear guidelines for procurement at all levels of government, and monitor and report publicly on compliance.

- **Government payroll controls.** Since 2017, the Treasurer has been emphasizing the need to bring the public sector payroll under control, as this has been a consistent source of significant budget over-runs. In Fund staff's view, this is one of the costliest areas of weakness in public sector governance and needs to be addressed urgently. OSPEAC should be much more proactive in leading efforts to strengthen improvements in payroll monitoring and control, as well as eliminating over-payment to absent workers as well as people collecting multiple pay cheques, and so on.

- **AML/CTF compliance.** Since PNG was grey-listed in 2014 by the Financial Action Task Force (FATF) for failure to strengthen its AML/CTF supervision, there have been major improvements in governance arrangements. In 2015, PNG passed 5 major pieces of legislation to strengthen the AML/CFT regime, in line with FATF recommendations. In 2016 the BPNG took over AML/CTF supervision from the police Financial Intelligence Unit (FIU), establishing the Financial Analysis and Supervision Unit (FASU), and has expanded its staff from about 5 in the FIU to a planned 30-35. These actions led to PNG's removal from the grey-list in 2016. With ADB assistance, FASU conducted a National Risk Assessment (NRA) in 2017, awaiting clearance by the National Executive Council. This will guide FASU's AML/CFT strategy. Fund staff recommend immediate clearance of the NRA and strategy documents. In addition, Fund staff recommend that Memorandums of Understanding (MOUs) be pursued between FASU and its counterparts with important trade and financial partners in the region, including China, Malaysia, and Indonesia. FASU should also be a regular participant in meetings of the Bank South Pacific supervisory college.

Authorities' Views

30. The authorities broadly agreed with the staff on the importance of governance reforms. They noted that ICAC is still a work in progress, and that the NRA will be made public shortly. This will allow the FASU to publicize its work program. It was noted that logging and fishing are particularly challenging areas for AML.

STATISTICS AND OTHER ISSUES

31. Urgent action is needed to strengthen governance, management, and performance at the National Statistical Office (NSO). Timely production, compilation, and dissemination of macroeconomic statistics is essential to effective fiscal and monetary policy formulation. The management of NSO should be strengthened without delay. To this end, it is suggested that the NSO Reform Committee, including BPNG, Treasury, IRC, and Customs, be reactivated under the chairmanship of BPNG or Treasury. The Committee should:

- Overhaul the NSO management team and review NSO's budget;

- Establish a set of key economic statistics to be produced and published, including appropriate release timetables, for which NSO should be accountable;

- Ensure that changes in methodology, significant data revisions, and major new initiatives (e.g. the proposed 2019 HIES survey) are thoroughly reviewed by the Committee;

- Establish appropriate MOUs with government departments to make available administrative data (e.g. GST data) to NSO to use in improving the quality and lowering the cost of producing key macroeconomic series.

32. Recent TA recommendations to improve balance of payments data should be implemented. A recent IMF TA mission was able to obtain valuable information on the disposition of earnings from extractive industries, especially the LNG sector. Fund staff recommend incorporation of this information into the balance of payments compilation, as this makes a large difference to the picture of balance of payments developments, and their interpretation for policymakers.

33. Fund staff welcome the elimination of BPNG guidance to authorized FX dealers on the use of FX, and encourage elimination of remaining FX restrictions inconsistent with Article VIII of the IMF's Articles of Agreement:

- The requirement for a tax clearance certificate prior to making payments or transfers for current international transactions should be eliminated;

- Limits placed on spreads between the exchange rate on BPNG FX allocations and dealer rates with clients should be eliminated or modified to avoid inconsistency with Article VIII limits. This can be achieved by re-formulating the bands in terms of percentage points rather than basis points, with the bands explicitly limited to less than 2 percentage points.

Authorities' Views

34. The Authorities agreed on the need to improve governance and rebuild capacity in NSO, and agreed with the approach suggested by staff.

STAFF APPRAISAL

35. In recent years the Papua New Guinea (PNG) economy has grown sluggishly, reflecting a combination of domestic and external factors, and in 2018 was adversely affected by a large earthquake. In 2015-16, low commodity export prices as well as a severe drought dampened growth, but policy developments have also contributed to slow growth. Fiscal consolidation in response to weak revenues, while essential to restoring fiscal sustainability, has dampened aggregate demand, while an overvalued exchange rate has contributed to a shortage of FX and severe import compression, inhibiting activity in the non-resource sector. The earthquake in early 2018 disrupted oil, gas, and minerals exports for a period and, although production and exports have recovered, growth for the year is estimated at close to zero, while inflation has declined to 4 ½ percent.

36. Strengthened macroeconomic policies would help reduce risks while underpinning longer-term economic growth. In 2019, with full recovery from earthquake effects, growth is projected to pick up to 3.8 percent. Although new resource projects are beginning to be negotiated, significant investment and growth spillovers are unlikely until at least 2021. Until then, growth will continue to be held back by the need for fiscal consolidation to bring the public debt/GDP ratio down towards the long-term target ceiling of 30 percent. Monetary and exchange rate policies are moving in the direction of greater exchange rate flexibility, but at the present pace of adjustment, the Kina will remain significantly overvalued and FX shortages persist for a lengthy period. More ambitious fiscal adjustment, and additional flexibility and development of the monetary and exchange rate framework, coupled with structural policies for inclusive growth and better harnessing of PNG's natural resource wealth would have significant payoffs.

37. The government should build on its recent important measures to strengthen the fiscal framework. In addition to reconfirming a long-term debt/GDP target of 30 percent, with a temporary ceiling of 35 percent, the government adopted a zero non-resource primary balance as a medium-term fiscal target. Staff also recommend adoption of an expenditure rule (determined jointly with the revenue target) to reconcile the fiscal targets and guide budget policy. The government's strong commitment to strengthen domestic revenue mobilization through implementation of the Medium-Term Revenue Strategy is also welcome. The recent issue of a debut sovereign bond will raise PNG's external debt/GDP ratio, but the government's intention to use the funds to improve the domestic public debt profile, as well as to help resolve the FX and exchange rate conundrum, will be positive and important outcomes.

38. In the near term, additional fiscal consolidation is needed. Substantial progress in narrowing the fiscal deficit was made in 2017, but consolidation has stalled in 2018, and the public debt/GDP ratio is well above the long-term target. Although there is some uncertainty about the size of the gap to close (reflecting some uncertainty about the level of nominal GDP), staff recommends a faster pace of consolidation than is projected on current policies. This should be pursued through a combination of revenue increases and reductions in spending, particularly on the government wage bill and grants.

39. The pace of exchange rate adjustment should be stepped up somewhat, and the backlog of FX orders be cleared. Staff welcome the greater exchange rate flexibility seen in recent months, as well as the increase in supply of FX to market participants. But a faster pace of adjustment is recommended, and the FX proceeds of the bond issue and other inflows of FX can be used to eliminate the backlog of FX orders so that an interbank FX market can be re-established within two years. These steps should be complemented by other measures to boost the supply of FX to the market. Liquidity management will also need to be strengthened to manage the liquidity effects of the public debt management and FX operations will be needed, and the impact of such measures on financial stability carefully monitored.

40. Achieving the government's development objectives will require better management of natural resource wealth, development of the non-resource sector, and addressing challenges in governance and corruption. In this context, staff recommend that PNG seek better terms in negotiations for new resource projects and also develop a framework for management and use of resource revenues. Additionally, an assessment of the long-term cost of non-resource sector development should be taken into account in determining domestic revenue mobilization targets. Fund staff strongly support the elimination of corruption and strengthening of governance as part of PNG's development strategy.

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

Box 1. Papua New Guinea: National Accounts

In March 2018, the NSO released National Accounts data for 2014 and 2015. The data incorporate an improved methodology for calculating national accounts deflators, which seeks to take better account of differences between input and output prices. The single extrapolation method introduced improves on the previous single deflation method (where input and output prices were assumed to move identically), but falls short of the preferred double deflation method.[1] However, double deflation is more data demanding and so is often not feasible.

The NSO data show much lower nominal GDP growth in 2015 than estimated by Treasury. Treasury estimates nominal GDP growth in 2015 of 9.8 percent vs just 0.7 percent for NSO. The discrepancy reflects higher Treasury estimates for both real growth and the deflator in 2015. Treasury estimated real GDP growth of 10.5 percent and a decrease in the deflator of 0.7 percent vs. NSO's estimate of 5.3 percent growth and a decline of 4.4 percent in the deflator. These differences appear to reflect different information on activity and prices in sectors such as oil, gas, and construction. The change in deflator methodology may have had some effect, but is not the primary explanation for the difference between the Treasury and NSO figures.

The NSO figures are likely to be revised. Treasury has initiated meetings of key stakeholders, including NSO, BPNG, and IRC, to discuss differences between the NSO and Treasury estimates and to agree on appropriate revisions to the 2014-2015 data.

[1] See: Alexander and others "Measure up: A Better Way to Calculate GDP" SDN/17/02.

Box 2. Papua New Guinea: External Assessment

PNG's external position is moderately weaker than implied by fundamentals and desirable policies, given its weak gross foreign reserve position and overvalued real effective exchange rate.

The extended External Balance Assessment (EBA) methodology, EBA-lite tool, provides mixed results.[1,2] The EBA-lite current account balance (CAB) analysis implies a current account norm of –3.8 percent of GDP, compared to an estimated outcome of 23.9 percent of GDP, suggesting that the REER is undervalued by around 65 percent. The current account surplus in 2017, was supported by large LNG exports and continued import compression caused principally by restricted access to FX. However, this surplus has been largely offset by capital and financial account outflows associated with the LNG project – mainly servicing of the project debt.

The EBA-lite REER index model, on the other hand, suggests an overvaluation of 10.7 percent. This is consistent with relatively high inflation following the drought in 2015/16 and small exchange rate adjustments thus far to the terms of trade movements. In 2017, the real effective exchange rate (REER) appreciated marginally by 0.3 percent while the nominal effective exchange rate (NEER) depreciated by around 3 percent when compared to 2016 outcomes.

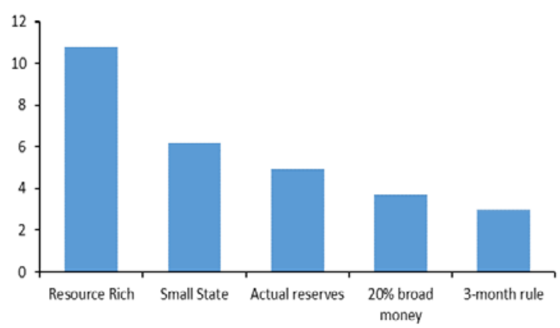
The EBA-lite REER index model result is used instead because the EBA-lite current account balance does not incorporate the effects of restricted FX.

Despite improvement in the current account, the reserves-to-import ratio is below the level implied by the reserve adequacy metric approach.[3] Reserves were around 5 months of imports at end-2017, lying below what the metric approach suggests as reserves levels for a resource rich country and above a 3-month import cover rule. While LNG exports have increased, the net FX inflow from these exports has been limited, as these are mostly held offshore and as mentioned earlier mostly for project debt servicing.

EBA-lite Results

Model	CA panel regression	REER index
2017 CA/GDP	23.9%	
CA Norm/GDP	-3.8%	
CA Gap/GDP	27.7%	
o/w Policy Gap	1.5%	
ln(REER) Actual		4.8
ln(REER) Norm		4.7
o/w Policy Gap		0.0
REER Gap	**-64.5%**	**10.7%**

Reserve Adequacy
(In Months of Imports)



Source: IMF staff estimates and projections.

[1] The EBA-lite tool does not incorporate the structural break caused by the LNG project in the economy.

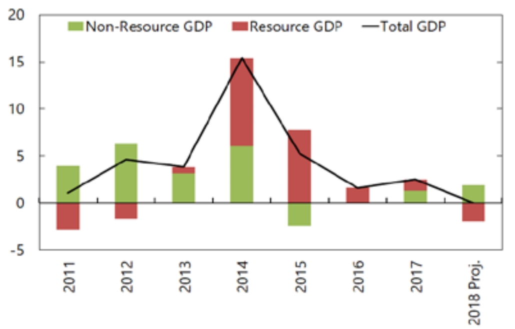
[2] Elasticities of exports (-0.43) and imports (0.98) are estimated in Nakatani, Ryota (2017) "External Adjustment in a Resource-Rich Economy: The Case of Papua New Guinea" *IMF Working Paper* No.17/267.

[3] Central government data are used owing to data limitations. The assessment is based on staff judgement because there is a wide range of adequate levels of reserves, depending on methods used.

Figure 1. Papua New Guinea: Real Sector

GDP is expected to be flat in 2018 due to an earthquake notably impacting resource GDP

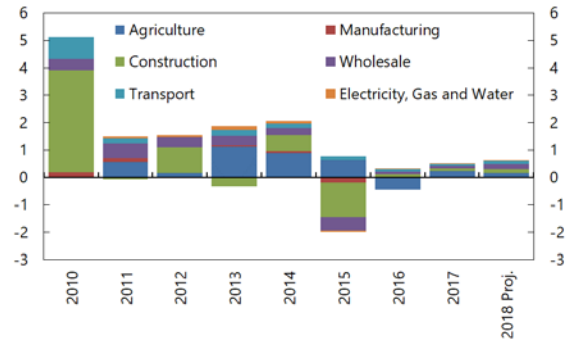
Real GDP Growth
(Contributions to Percent Change)



Sources: IMF Staff Estimates

....non-resource activity remains modest.

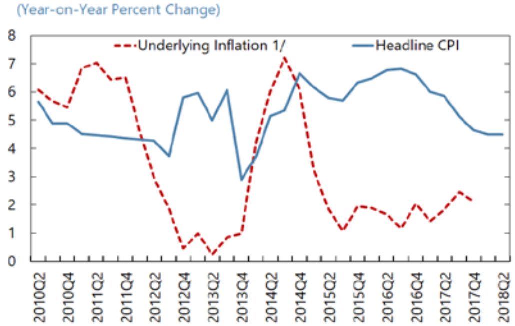
Contribution to Non-Resource GDP
(In Percent of GDP)



Sources: IMF Staff Calculations

Fading drought effects has moderated inflation

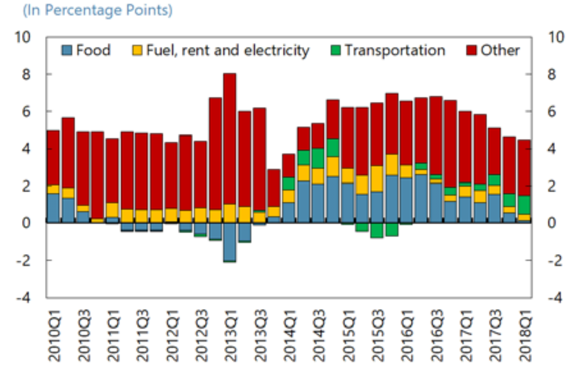
CPI Inflation
(Year-on-Year Percent Change)



Sources: BPNG and IMF Staff Estimates
1/ Trimmed Mean by BPNG

....underpinned by easing food inflation.

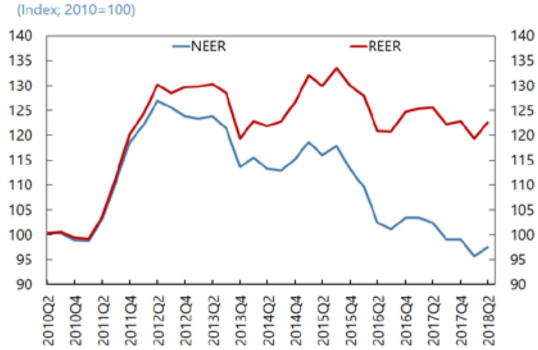
Contribution to CPI Inflation
(In Percentage Points)



Sources: IMF Staff Calculations

The real effective exchange rate has appreciated in recent months.

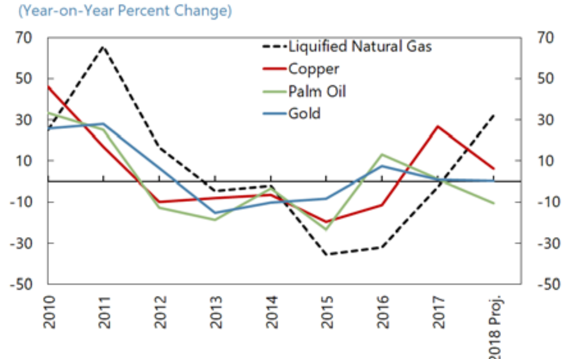
Exchange Rates
(Index; 2010=100)



Sources: IFS and IMF Staff Calculations

There has been a turnaround in some commodity prices particularly natural gas prices.

Commodity Prices
(Year-on-Year Percent Change)

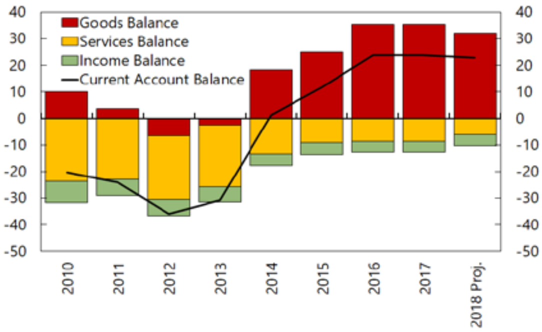


Sources: IMF Primary Commodity Price System

Figure 2. Papua New Guinea: Balance of Payments

The current account remains in surplus…

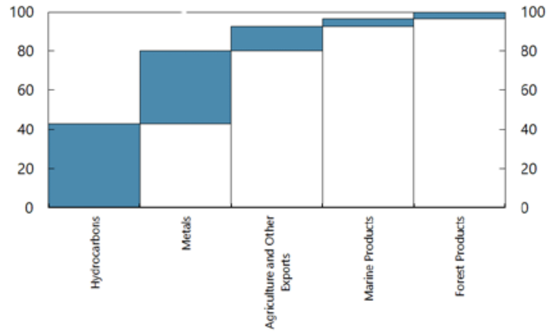
Current Account
(In Percent of GDP)



Sources: IMF Staff Calculations

…driven by commodity exports…

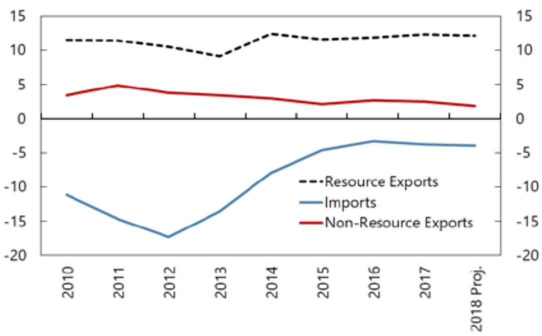
Export Product Share, 2017
(In Percent)



Sources: BPNG

…and import compression.

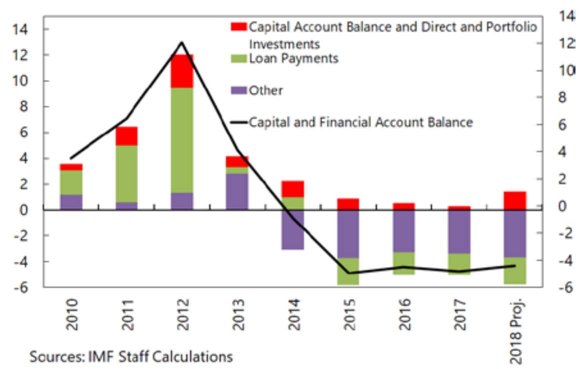
Exports and Imports
(In Percent of GDP)



Sources: IMF Staff Estimates

…which is offset by capital and financial account outflows

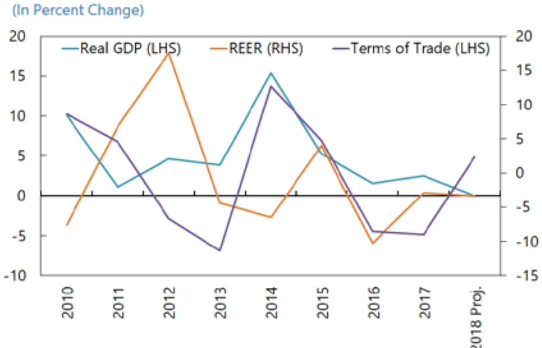
Capital and Financial Account
(In Billions of USD)



Sources: IMF Staff Calculations

Real exchange rate has been driven by the economic cycle.

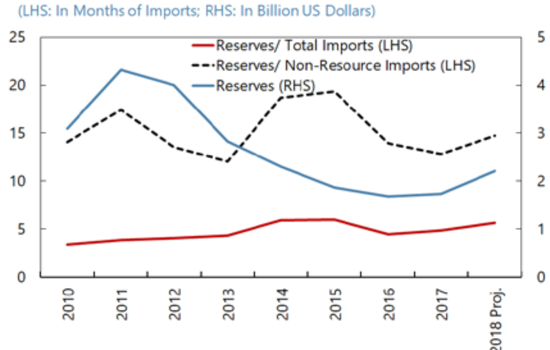
Drivers of Exchange Rate
(In Percent Change)



Sources: IMF Calculations

International reserves in 2018 is boosted by issuance of a sovereign bond and development partner loans.

Gross Reserves
(LHS: In Months of Imports; RHS: In Billion US Dollars)

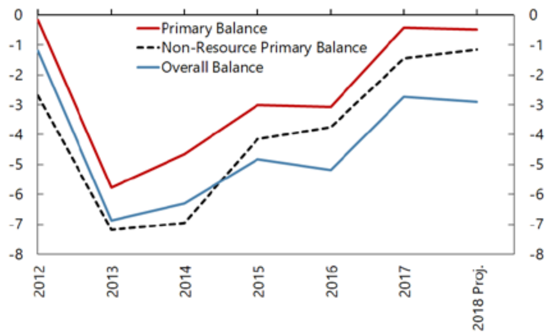


Sources: IMF Staff Estimation

Figure 3. Papua New Guinea: Fiscal Sector

The fiscal balances have improved, however remain in deficit…

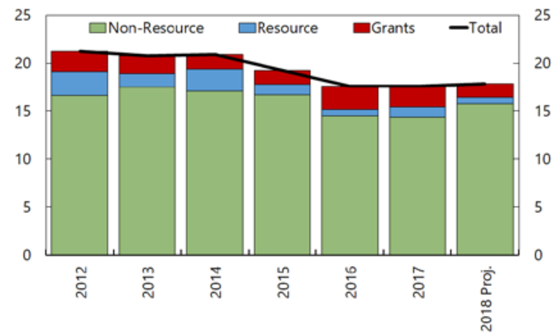
Fiscal Balance
(In Percent of GDP)



Sources: IMF Staff Calculations

…revenue increased slightly since 2016 but has been largely from the non-resource sector…

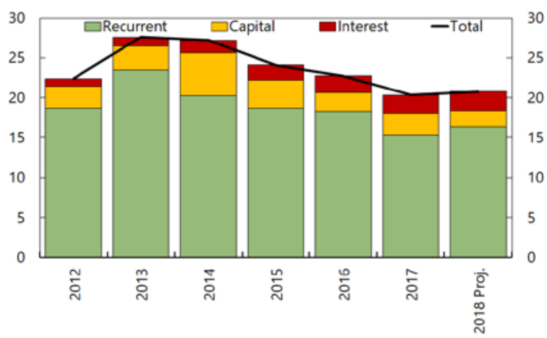
Revenue
(In Percent of GDP)



Sources: IMF Staff Estimates

…while expenditure has fallen since 2014, this is mainly on recurrent expenses.

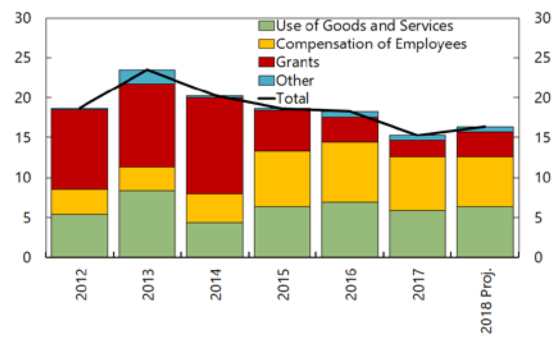
Expenditure
(In Percent of GDP)



Sources: IMF Staff Estimates

…of which the use of goods and services and compensation of employees account for a large portion…

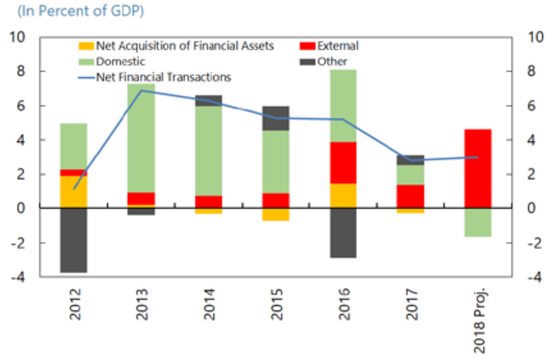
Recurrent Spending
(In Percent of GDP)



Sources: IMF Staff Estimates

Recently, deficit financing turned to external sources.

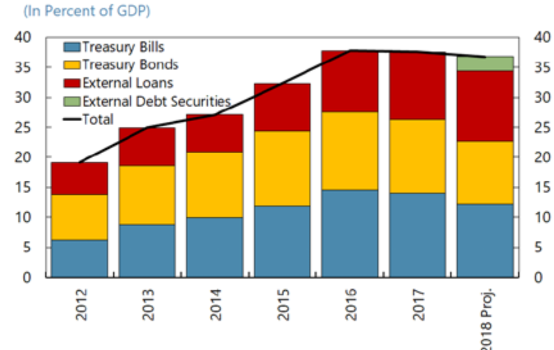
Financing
(In Percent of GDP)



Sources: IMF Staff Calculations

….lower domestic debt and higher external debt is projected in 2018

Public Debt
(In Percent of GDP)

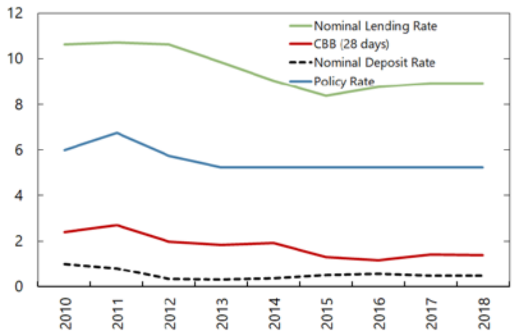


Sources: IMF Staff Estimates

Figure 4. Papua New Guinea: Monetary Sector

Policy rate has remained unchanged…

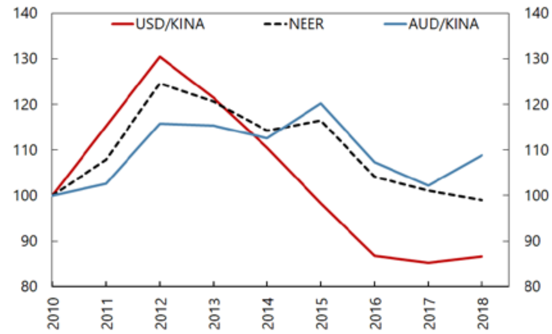
Policy Rate
(In Percent)



Sources: IMF Staff Calculations

…while the Kina has depreciated against the USD, it has appreciated against the AUD

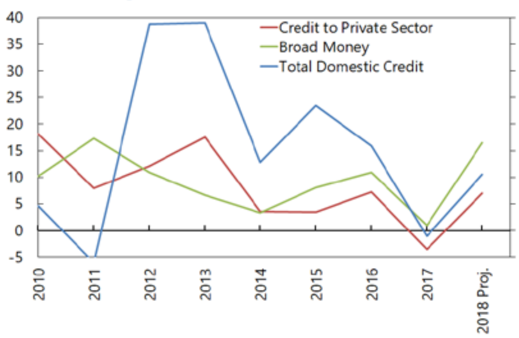
Exchange Rate
(Index; 2010=100)



Sources: IFS and IMF Staff Calculations

Private sector credit is weak in real terms…

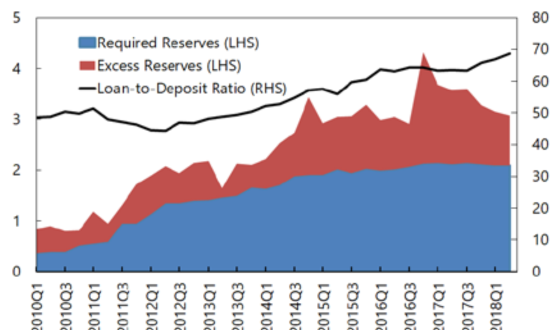
Money and Credit
(In Percent Change)



Sources: BPNG

…excess liquidity remains in the banking system

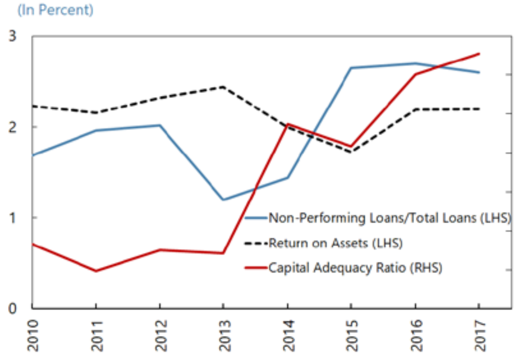
Liquidity
(LHS: Billions of Kina; RHS: Percent)



Sources: BPNG

Banks have solid capital buffers. Non-performing loans and return on assets ratios are low.

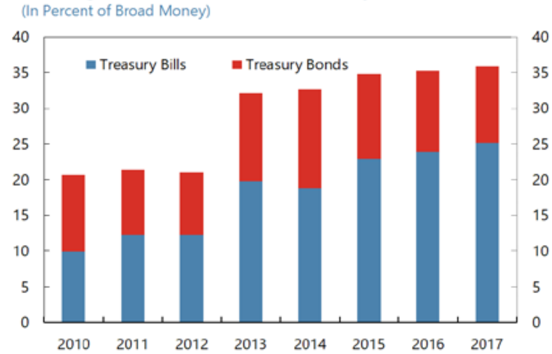
Financial Stability
(In Percent)



Sources: BPNG and IMF Staff Calculations

Commercial banks increased holding of government securities, especially short-term debt.

Holding of Government Securities by Commercial Banks
(In Percent of Broad Money)



Sources: IMF Staff Calculations

Table 1. Papua New Guinea: Selected Economic and Financial Indicators, 2014–19

Nominal GDP (2016):	US$21.1 billion 1/
Population (2016):	7.9 million
GDP per capita (2016):	US$2,353
Quota:	SDR 131.6 million (14th Review: SDR 263.2 million)

	2014	2015	2016 Est.	2017 Est.	2018 Proj.	2019
			(Percentage change)			
Real sector						
Real GDP growth	15.4	5.3	1.6	2.5	0.0	3.8
Resource 2/	69.2	39.0	6.3	4.3	-6.8	8.3
Non-resource	7.0	-3.1	-0.1	1.8	2.6	2.2
Agriculture, forestry and fishing (share)	17.8	18.4	18.5	18.2	18.7	18.6
Mining and quarrying (share)	9.1	7.7	8.0	8.0	7.6	7.7
Oil and gas extraction (share)	11.3	14.1	15.0	15.4	14.1	15.0
CPI (annual average)	5.2	6.0	6.7	5.4	4.8	4.7
CPI (end-period)	6.7	6.3	6.6	4.7	4.8	4.7
			(In percent of GDP)			
Central government operations						
Revenue and grants	20.9	19.3	17.6	17.6	17.9	16.7
Of which : Resource revenue	2.3	1.1	0.7	1.0	0.7	0.5
Expenditure and net lending	27.2	24.1	22.8	20.3	20.8	19.0
Net lending(+)/borrowing(-)	-6.3	-4.8	-5.2	-2.7	-2.9	-2.2
Non-resource net lending(+)/borrowing(-)	-6.3	-4.8	-5.2	-2.7	-2.9	-2.2
			(Percentage change)			
Money and credit (percentage change)						
Domestic credit	12.8	23.5	15.9	-1.0	10.5	-7.6
Credit to the private sector	3.5	3.4	7.2	-3.6	7.0	3.1
Broad money	3.4	8.0	10.9	0.9	16.5	-10.5
Interest rate (182-day T-bills; period average)	5.3	7.1	7.4	7.1	7.0	8.1
			(In billions of U.S. dollars)			
Balance of payments						
Exports, f.o.b.	8.8	7.8	8.7	9.7	9.6	10.5
Of which: Resource sector	7.1	6.6	7.1	8.1	8.3	9.1
Imports, c.i.f.	-4.5	-2.7	-2.0	-2.5	-2.7	-3.2
Current account (including grants)	0.3	2.4	4.5	4.9	4.9	5.1
(In percent of GDP)	1.3	11.8	23.7	23.9	22.8	23.0
Gross official international reserves	2.3	1.9	1.7	1.7	2.2	1.8
(In months of goods and services imports)	5.9	6.0	4.4	4.9	5.6	4.4
			(In percent of GDP)			
Government debt						
Government gross debt	27.1	32.3	37.8	37.5	36.8	36.2
External debt-to-GDP ratio (in percent) 3/	6.2	7.9	10.2	11.3	14.1	15.1
External debt-service ratio (percent of exports) 3/	1.1	1.1	1.3	1.4	1.8	2.5
Exchange rates						
US$/kina (end-period)	0.3855	0.3325	0.3150	0.3060	…	…
NEER (2005=100, end-period)	114.2	116.4	104.2	101.0	…	…
REER (2005=100, end-period)	123.6	131.4	123.6	124.0	…	…
Terms of trade (2010=100, end-period)	97.4	102.0	93.4	85.0	87.0	84.8
Nominal GDP (in billions of kina)	56.8	57.1	59.6	65.5	70.8	75.2
Non-resource nominal GDP (in billions of kina)	45.2	44.7	45.9	50.2	55.4	58.1

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 2a. Papua New Guinea: Summary Operations of the Central Government, 2014–19

(In millions of Kina)

	2014	2015	2016	2017	2018 Proj.	2019 Proj.
Revenue and Grants	**11,875**	**11,003**	**10,486**	**11,525**	**12,656**	**12,582**
Taxes	10,232	9,157	8,422	9,128	9,715	10,586
Taxes on income, profits, and capital gains	6,779	5,894	5,286	5,317	5,522	6,061
Taxes on payroll and workforce	15	18	14	11	0	0
Taxes on goods and services	2,884	2,680	2,584	3,242	3,567	3,876
Taxes on international trade and transactions	555	565	537	558	626	649
Grants	868	820	1,430	1,440	1,025	943
Other Revenue 1/	775	1,026	634	944	1,917	1,053
Resource revenue	1,301	652	396	676	476	396
Mining and Petroleum Taxes	794	195	92	114	86	96
Mining and Petroleum and Gas Dividends	507	456	301	562	350	300
Other Dividends	0	0	3	0	40	0
Grants from other general government units 2/	0	0	0	0	0	0
Non-resource revenue	10,573	10,351	10,090	10,849	12,180	12,187
Expenditure 3/	**15,454**	**13,759**	**13,572**	**13,320**	**14,718**	**14,258**
Expense	12,427	11,691	12,157	11,559	13,328	12,618
Compensation of employees	2,026	3,993	4,463	4,376	4,367	4,266
Use of goods and services	2,469	3,606	4,103	3,851	4,517	4,177
Interest	933	1,041	1,248	1,525	1,716	1,720
Grants 4/	6,862	2,924	1,897	1,370	2,249	1,952
Social benefits	0	0	0	0	61	60
Other expenses	137	128	446	437	418	444
Net acquisition of non-financial assets	3,027	2,068	1,415	1,761	1,390	1,640
Gross operating balance	-552	-688	-1,672	-33	-672	-36
Net lending (+)/borrowing (-)	**-3,579**	**-2,756**	**-3,087**	**-1,795**	**-2,062**	**-1,675**
Primary balance	-2,646	-1,715	-1,839	-270	-346	45
Non-resource net lending (+)/borrowing (-)	-4,881	-3,408	-3,483	-2,471	-2,538	-2,071
Non-resource primary balance	-3,948	-2,367	-2,235	-946	-822	-351
Net financial transactions 5/	**3,579**	**3,012**	**3,087**	**1,795**	**2,062**	**1,675**
Net acquisition of financial assets	-174	-411	857	-180	0	0
Net acquisition of financial liabilities	3,405	2,602	3,944	1,614	2,062	1,675
Domestic	2,983	2,081	2,495	736	-1,125	-156
Treasury bills	1,420	1,076	1,934	531	-585	-81
Treasury bonds	1,563	1,005	561	205	-540	-75
Other accounts payable	0	0	0	0	0	0
BPNG temporary advance	0	0	0	0	0	0
External	422	521	1,449	878	3,187	1,832
Debt securities	0	0	0	0	1,667	0
Loans	422	521	1,449	878	1,520	1,832
Unexplained Discrepancy 5/	0	256	0	0	0	0
Government deposits	4,338	3,490	2,793	2,793	2,793	2,793
Gross government debt	**15,379**	**18,457**	**22,525**	**24,583**	**26,017**	**27,225**
Domestic	11,828	13,942	16,437	17,173	16,048	15,892
Treasury bills	5,621	6,729	8,664	9,194	8,609	8,528
Treasury bonds	6,207	7,213	7,773	7,979	7,439	7,364
External	3,551	4,515	6,088	7,410	9,969	11,333
Debt securities	0	0	0	0	1,667	1,693
Loans	3,551	4,515	6,088	7,410	8,302	9,640
Memorandum items:						
Gross government debt, percentage of GDP	27.1	32.3	37.8	37.5	36.8	36.2
Contingent liabilities 6/	4,977	5,077	2,812	2,823	2,711	2,597
Future unfunded superannuation liabilities	2,100	2,100	2,431	2,431	2,311	2,191
SOE borrowing	2,877	2,977	381	392	400	406
Nonresource GDP at current prices	45,178	44,680	45,918	50,159	55,381	58,090
GDP at current prices	56,760	57,136	59,615	65,486	70,790	75,202

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

1/ The 2015 other revenue includes infrastructure tax credit, recoveries from former years (mainly fees and charges) and asset sale.

2/ Withdrawals from the Stabilization Fund (mining and petroleum taxes; mining, petroleum and gas dividends.)

3/ As the authorities integrated the recurrent and development budgets from 2014 there is a discontinuity in the classification.

4/ Grants include spending on wages and salaries, goods and services, and capital expenditure.

5/ Discrepancies between the overall balance and financing arise because of data coverage gaps in revenue and expenditure for extrabudgetary units, and payment arrears and cash withdrawals from trust accounts which are not fully accounted for due to data weaknesses.

6/ Contingent liabilities include future unfunded superannuation liabilities with Nambawan Super and SOE borrowing.

Table 2b. Papua New Guinea: Summary Operations of the Central Government, 2014–19
(In percent of GDP)

	2014	2015	2016	2017	2018 Proj.	2019 Proj.
Revenue and Grants	**20.9**	**19.3**	**17.6**	**17.6**	**17.9**	**16.7**
Taxes	18.0	16.0	14.1	13.9	13.7	14.1
Taxes on income, profits, and capital gains	11.9	10.3	8.9	8.1	7.8	8.1
Taxes on payroll and workforce	0.0	0.0	0.0	0.0	0.0	0.0
Taxes on goods and services	5.1	4.7	4.3	5.0	5.0	5.2
Taxes on international trade and transactions	1.0	1.0	0.9	0.9	0.9	0.9
Grants	1.5	1.4	2.4	2.2	1.4	1.3
Other Revenue 1/	1.4	1.8	1.1	1.4	2.7	1.4
Resource revenue	2.3	1.1	0.7	1.0	0.7	0.5
Mining and Petroleum Taxes	1.4	0.3	0.2	0.2	0.1	0.1
Mining and Petroleum and Gas Dividends	0.9	0.8	0.5	0.9	0.5	0.4
Other Dividends	0.0	0.0	0.0	0.0	0.1	0.0
Grants from other general government units 2/	0.0	0.0	0.0	0.0	0.0	0.0
Non-resource revenue	18.6	18.1	16.9	16.6	17.2	16.2
Expenditure 3/	**27.2**	**24.1**	**22.8**	**20.3**	**20.8**	**19.0**
Expense	21.9	20.5	20.4	17.7	18.8	16.8
Compensation of employees	3.6	7.0	7.5	6.7	6.2	5.7
Use of goods and services	4.4	6.3	6.9	5.9	6.4	5.6
Interest	1.6	1.8	2.1	2.3	2.4	2.3
Grants 4/	12.1	5.1	3.2	2.1	3.2	2.6
Social benefits	0.0	0.0	0.0	0.0	0.1	0.1
Other expenses	0.2	0.2	0.7	0.7	0.6	0.6
Net acquisition of non-financial assets	5.3	3.6	2.4	2.7	2.0	2.2
Gross operating balance	-1.0	-1.2	-2.8	-0.1	-0.9	0.0
Net lending (+)/borrowing (-)	**-6.3**	**-4.8**	**-5.2**	**-2.7**	**-2.9**	**-2.2**
Primary balance	-4.7	-3.0	-3.1	-0.4	-0.5	0.1
Non-resource net lending (+)/borrowing (-)	-8.6	-6.0	-5.8	-3.8	-3.6	-2.8
Non-resource primary balance	-7.0	-4.1	-3.7	-1.4	-1.2	-0.5
Net financial transactions 5/	**6.3**	**5.3**	**5.2**	**2.7**	**2.9**	**2.2**
Net acquisition of financial assets	-0.3	-0.7	1.4	-0.3	0.0	0.0
Net acquisition of financial liabilities	6.0	4.6	6.6	2.5	2.9	2.2
Domestic	5.3	3.6	4.2	1.1	-1.6	-0.2
Treasury bills	2.5	1.9	3.2	0.8	-0.8	-0.1
Treasury bonds	2.8	1.8	0.9	0.3	-0.8	-0.1
Other accounts payable	0.0	0.0	0.0	0.0	0.0	0.0
External	0.7	0.9	2.4	1.3	4.5	2.4
Debt securities	0.0	0.0	0.0	0.0	2.4	0.0
Loans	0.7	0.9	2.4	1.3	2.1	2.4
Unexplained Discrepancy 5/	0.0	0.4	0.0	0.0	0.0	0.0
Government deposits	7.6	6.1	4.7	4.3	3.9	3.7
Gross government debt	**27.1**	**32.3**	**37.8**	**37.5**	**36.8**	**36.2**
Domestic	20.8	24.4	27.6	26.2	22.7	21.1
Treasury bills	9.9	11.8	14.5	14.0	12.2	11.3
Treasury bonds	10.9	12.6	13.0	12.2	10.5	9.8
External	6.3	7.9	10.2	11.3	14.1	15.1
Debt securities	0.0	0.0	0.0	0.0	2.4	2.3
Loans	6.3	7.9	10.2	11.3	11.7	12.8
Memorandum items:						
Contingent liabilities 6/	8.8	8.9	4.7	4.3	3.8	3.5
Future unfunded superannuation liabilities	3.7	3.7	4.1	3.7	3.3	2.9
SOE borrowing	5.1	5.2	0.6	0.6	0.6	0.5
Nonresource GDP at current prices	45,178	44,680	45,918	50,159	55,381	58,090
GDP at current prices	56,760	57,136	59,615	65,486	70,790	75,202

Sources: Department of Treasury; and IMF staff estimates and projections.
1/ The 2015 other revenue includes infrastructure tax credit, recoveries from former years (mainly fees and charges) and asset sale.
2/ Withdrawals from the Stabilization Fund (mining and petroleum taxes; mining, petroleum and gas dividends.)
3/ As the authorities integrated the recurrent and development budgets from 2014 there is a discontinuity in the classification.
4/ Grants include spending on wages and salaries, goods and services, and capital expenditure.
5/ Discrepancies between the overall balance and financing arise because of data coverage gaps in revenue and expenditure for extrabudgetary units, and payment arrears and cash withdrawals from trust accounts which are not fully accounted for due to data weaknesses.
6/ Contingent liabilities include future unfunded superannuation liabilities with Nambawan Super and SOE borrowing.

Table 3. Papua New Guinea: Balance of Payments, 2014–23
(In millions of U.S. Dollars)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
				Est.			Proj.			
Current account balance 1/	303	2,426	4,517	4,851	4,867	5,097	4,870	4,767	4,657	4,573
Resource	3,223	4,194	5,029	5,734	6,479	7,215	7,330	7,341	7,334	7,344
Nonresource	-2,920	-1,768	-512	-883	-1,611	-2,119	-2,461	-2,574	-2,677	-2,772
Trade balance	4,248	5,150	6,715	7,203	6,837	7,294	7,220	7,220	7,217	7,243
Exports (f.o.b.)	8,758	7,800	8,683	9,710	9,576	10,460	10,584	10,674	10,775	10,898
Resource	7,073	6,617	7,103	8,087	8,323	9,052	9,121	9,222	9,320	9,440
Nonresource	1,685	1,183	1,580	1,623	1,253	1,408	1,464	1,451	1,455	1,458
Imports (f.o.b.)	-4,510	-2,650	-1,968	-2,507	-2,739	-3,166	-3,364	-3,454	-3,558	-3,655
Resource	-1,700	-1,168	-809	-1,061	-1,117	-1,182	-1,199	-1,216	-1,242	-1,269
Nonresource	-2,810	-1,483	-1,158	-1,447	-1,622	-1,983	-2,165	-2,238	-2,316	-2,385
Services	-3,104	-1,887	-1,648	-1,779	-1,293	-1,292	-1,303	-1,377	-1,453	-1,534
Income	-956	-944	-784	-820	-925	-1,041	-1,168	-1,221	-1,274	-1,328
Current Transfers	115	106	234	247	247	136	121	145	168	192
Capital and financial account balance	-883	-4941	-4485	-4797	-4390	-5498	-4665	-4689	-4630	-4527
Capital account balance	2	1	2	9	10	11	12	11	12	12
Direct investment	864	584	602	591	606	621	637	653	670	686
Portfolio investment	373	274	-70	-335	788	225	281	264	269	272
Other investment	-2,122	-5,800	-5,019	-5,062	-5,794	-6,356	-5,596	-5,618	-5,580	-5,497
Medium- and long-term loans	1,031	-2,069	-1,714	-1,681	-2,107	-1,051	-1,092	-1,252	-1,369	-1,843
Official (net)	113	132	417	349	223	356	85	148	223	-1
Private capital flows (net)	917	-2,202	-2,132	-2,029	-2,330	-1,407	-1,177	-1,400	-1,591	-1,842
Commercial banks	-47	-13	-22	-20	-20	-20	-20	-20	-20	-20
Other 2/	-3,105	-3,717	-3,283	-3,361	-3,667	-5,285	-4,483	-4,346	-4,191	-3,634
Net errors and omissions	0	0	0	0	0	0	0	0	0	0
Overall balance	-520	-440	31	54	478	-401	204	78	27	46
Financing	520	440	-31	-54	-478	401	-204	-78	-27	-46
Reserve assets	520	440	-31	-54	-478	401	-204	-78	-27	-46
Memorandum items:										
Current account (in percent of GDP)	1.3	11.8	23.7	23.9	22.8	23.0	21.4	20.3	19.2	18.4
Resource	14.0	20.3	26.4	28.2	30.3	32.6	32.2	31.3	30.3	29.5
Nonresource	-12.7	-8.6	-2.7	-4.3	-7.5	-9.6	-10.8	-11.0	-11.0	-11.1
Net international reserves (end-year)										
In millions of U.S. dollars	2,305	1,865	1,681	1,736	2,213	1,812	2,016	2,094	2,121	2,167
Gross official reserves (end-year)										
In millions of U.S. dollars	2,305	1,865	1,681	1,736	2,213	1,812	2,016	2,094	2,121	2,167
In months of imports of goods and services	5.9	6.0	4.4	4.9	5.6	4.4	4.7	4.8	4.7	4.6
Public external debt-service-exports ratio (in percent) 3/	1.1	1.1	1.3	1.4	1.8	2.5	4.7	4.7	2.7	3.0
Public external debt-GDP ratio (in percent) 3/	5.9	7.3	10.1	11.2	11.6	12.8	12.9	13.1	13.6	13.3

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/ Includes money transfer via offshore accounts.

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

Table 4. Papua New Guinea: Monetary Developments, 2014–19

	2014	2015	2016	2017	2018	2019
					Proj.	
Bank of Papua New Guinea	(In millions of kina; end of period)					
Net foreign assets	5,501	4,695	4,716	5,114	6,809	5,620
Foreign assets	5,980	5,226	5,258	5,672	7,379	6,204
Foreign liabilities	479	532	542	558	569	584
Net domestic assets	-218	476	1,716	1,915	3,419	3,049
Domestic credit	-992	-459	-555	-241	1,370	1,102
Net credit to government	-1,052	-791	-708	-395	1,216	948
Claims	0	0	0	314	1,925	1,657
Central government deposits	1,052	791	708	708	708	708
Credit to other sectors	60	332	154	154	154	154
Other items, net	773	936	2,270	2,157	2,049	1,946
Of which: Central bank securities	-2,312	-1,573	-1,361	-1,293	-1,228	-1,167
Reserve money	5,283	5,171	6,431	7,029	10,228	8,669
Currency in circulation	1,852	1,891	2,115	2,192	2,277	2,351
Deposits of other depository corporations	3,431	3,280	4,316	4,837	7,951	6,318
Required reserves	1,910	2,025	2,125	2,132	2,496	2,193
Excess reserves	1,521	1,255	2,191	2,705	5,455	4,125
Other deposits	0	0	0	0	0	0
Depository Corporations Survey	(In millions of kina; end of period)					
Net foreign assets	6,826	5,876	4,928	5,342	7,056	5,885
Net domestic assets	11,891	14,342	17,489	17,286	19,303	17,699
Domestic credit	13,535	16,710	19,362	19,159	21,176	19,572
Net credit to central government	1,811	3,655	5,442	5,624	6,858	4,866
Claims on other sectors	11,724	13,055	13,920	13,535	14,318	14,706
Claims on the private sector	10,264	10,612	11,379	10,973	11,736	12,101
Other items, net	-1,644	-2,368	-1,873	-1,873	-1,873	-1,873
Broad money	18,716	20,219	22,417	22,628	26,359	23,584
Narrow money	13,440	14,845	16,032	15,623	18,672	15,149
Currency outside other depository corporations	1,392	1,443	1,580	1,736	1,906	2,093
Demand deposits	12,048	13,402	14,452	13,887	16,767	13,056
Quasi-money	5,215	5,312	6,323	6,943	7,624	8,372
Securities other than shares	62	62	62	62	62	62
	(Annual percentage change)					
Net foreign assets	-17.5	-13.9	-16.1	8.4	32.1	-16.6
Net domestic assets	20.9	20.6	21.9	-1.2	11.7	-8.3
Net domestic credit	12.8	23.5	15.9	-1.0	10.5	-7.6
Of which: Private sector	3.5	3.4	7.2	-3.6	7.0	3.1
Broad money	3.4	8.0	10.9	0.9	16.5	-10.5
Memorandum items:						
Reserve money (percentage change)	37.1	-2.1	24.4	9.3	45.5	-15.2
Gross international reserves (in millions of U.S. dollars)	2,305	1,865	1,681	1,736	2,214	1,815
Nominal nonresource GDP/Broad money	2.4	2.2	2.1	2.2	2.1	2.5

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

Table 5. Papua New Guinea: Medium-Term Scenario, 2014–23

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
			Est.	Est.			Proj.			
Growth and prices (percentage change)										
Real GDP 1/	15.4	5.3	1.6	2.5	0.0	3.8	3.1	3.7	3.7	3.8
Resource	69.2	39.0	6.3	4.3	-6.8	8.3	5.0	5.0	5.0	5.0
Nonresource	7.0	-3.1	-0.1	1.8	2.6	2.2	2.5	3.2	3.3	3.3
CPI (period average)	5.2	6.0	6.7	5.4	4.8	4.7	4.7	4.7	4.7	4.1
CPI (end-period)	6.7	6.3	6.6	4.7	4.8	4.7	4.7	4.7	4.7	4.1
Central government operations (in percent of GDP)										
Total revenue and grants	20.9	19.3	17.6	17.6	17.9	16.7	17.1	17.4	17.7	17.8
Total revenue	19.4	17.8	15.2	15.4	16.4	15.5	15.9	16.2	16.6	16.7
Of which: Resource revenue	2.3	1.1	0.7	1.0	0.7	0.5	0.5	0.5	0.5	0.5
Grants	1.5	1.4	2.4	2.2	1.4	1.3	1.2	1.2	1.1	1.1
Total expenditure	27.2	24.1	22.8	20.3	20.8	19.0	18.8	18.6	18.6	18.6
Expense	21.9	20.5	20.4	18.6	18.6	16.8	16.4	16.0	15.8	15.8
Net acquisition of nonfinancial assets	5.3	3.6	2.4	1.8	2.2	2.2	2.4	2.6	2.8	2.8
Primary balance	-4.7	-3.0	-3.1	-0.4	-0.5	0.1	0.5	0.8	1.0	1.0
Nonresource net lending(+)/borrowing(-) (Revenue - expenditure)	-8.6	-6.0	-5.8	-3.8	-3.6	-2.8	-2.2	-1.7	-1.4	-1.4
Net lending(+)/borrowing(-) [Overall balance]	-6.3	-4.8	-5.2	-2.7	-2.9	-2.2	-1.7	-1.2	-0.9	-0.8
Nonresource primary balance (in percent of nonresource GDP)	-7.0	-4.1	-3.7	-1.4	-1.2	-0.5	-0.1	0.3	0.5	0.5
Gross public debt (in percent of GDP) 2/	27.1	32.3	37.8	37.5	36.8	36.2	35.5	35.0	34.1	33.6
Domestic	20.8	24.4	27.6	26.2	22.7	21.1	20.6	20.0	18.9	18.8
External	6.2	7.9	10.2	11.3	14.1	15.1	15.0	15.0	15.3	14.8
Balance of payments (in millions of U.S. dollars) 3/										
Exports, f.o.b.	8,758	7,800	8,683	9,710	9,576	10,460	10,584	10,674	10,775	10,898
Of which: Resource	7,073	6,617	7,103	8,087	8,323	9,052	9,121	9,222	9,320	9,440
Imports, c.i.f.	-4,510	-2,650	-1,968	-2,507	-2,739	-3,166	-3,364	-3,454	-3,558	-3,655
Current account	303	2,426	4,517	4,851	4,867	5,097	4,870	4,767	4,657	4,573
(In percent of GDP)	1.3	11.8	23.7	23.9	22.8	23.0	21.4	20.3	19.2	18.4
Overall balance (including exceptional financing)	-520	-440	31	54	478	-401	204	78	27	46
Gross official reserves (in millions of U.S. dollars)	2,305	1,865	1,681	1,736	2,213	1,812	2,016	2,094	2,121	2,167
(In months of goods and services imports, c.i.f.)	5.9	6.0	4.4	4.9	5.6	4.4	4.7	4.8	4.7	4.6
(In months of nonmining imports, c.i.f.)	11.2	11.3	8.0	9.5	10.4	7.9	8.5	8.6	8.5	8.5
Public external debt service-export ratio (in percent) 4/	1.1	1.1	1.3	1.4	1.8	2.5	4.7	4.7	2.7	3.0
Memorandum items:										
Nominal GDP (in millions of kina)	56,760	57,136	59,615	65,486	70,790	75,202	79,073	83,688	88,798	93,297
Nominal GDP (change in percent)	18.9	0.7	4.3	9.8	8.1	6.2	5.1	5.8	6.1	5.1
Nominal GDP (in millions of U.S. dollars)	23,060	20,639	19,028	20,334	21,390	22,165	22,731	23,442	24,233	24,884
Assumed commodity prices: 5/										
Gold (U.S. dollars per ounce)	1,266	1,160	1,248	1,257	1,261	1,218	1,255	1,304	1,343	1,382
Copper (U.S. dollars per ton)	6,863	5,510	4,868	6,170	6,542	6,208	6,279	6,318	6,326	6,326
Liquefied Natural Gas Price Index (2005=100)	242	156	106	103	136	136	136	136	136	136
Oil (U.S. dollars per barrel)	96.25	50.79	42.84	52.81	69.38	68.76	65.73	63.10	61.33	60.27

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/ IMF World Economic Outlook. Liquefied Natural Gas (LNG) price index is Indonesian LNG in Japan.

Table 6. Papua New Guinea: Financial Soundness Indicators, 2013–17 1/

(In percent)

	2013	2014	2015	2016	2017
Capital Adequacy					
Capital to risk-weighted assets 2/	27.9	34.5	33.4	37.0	38.1
Tier 1 capital to risk-weighted assets	21.0	27.2	27.6	29.8	30.8
Asset Quality					
Nonperforming loans to total loans	1.2	1.4	2.6	2.7	2.6
Past due loans to total loans	2.2	2.7	3.9	6.7	5.0
Provision for losses to NPL	288.0	240.9	143.8	164.5	183.2
Earnings and Profitability					
Return on assets	2.4	2.0	1.7	2.2	2.2
Return on equity 3/	21.2	26.2	21.4	16.7	24.3
Liquidity					
Liquid assets to total assets	55.2	51.5	49.0	46.9	46.1
Loan-to-deposit ratio	50.3	57.2	60.5	63.3	65.6
Other					
Capital to total assets 2/	15.2	16.1	15.4	16.3	17.9
Risk-weighted assets to total assets	54.5	46.8	46.2	43.9	47.0

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

Table 7. Papua New Guinea: Financial Millennium Development Goals, 2000-2017

	2000	2005	2009	2013	2014	2015	2016	2017
Goal 1: Eradicate extreme poverty and hunger								
Target 1.A: Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day								
Poverty gap at $1.90 a day (2011 PPP) (%)			14.8					
Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population)			38.0					
Income share held by lowest 20%			5.1					
Target 1.B: Achieve full and productive employment and decent work for all, including women and young people								
Employment-to-population ratio, 15+, total (%) (modeled ILO estimate)	70.1	71.0	70.4	68.7	68.5	68.6	68.6	68.1
Employment-to-population ratio, ages 15-24, total (%) (modeled ILO estimate)	56.1	57.2	55.1	51.3	50.7	50.9	51.0	50.7
Target 1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger								
Malnutrition prevalence, weight for age (% of children under 5)		18.1						
Goal 2: Achieve universal primary education								
Target 2.A: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling								
Literacy rate, youth female (% of females ages 15-24)	50.9			64.1	64.1			
Literacy rate, youth male (% of males ages 15-24)	69.1			69.1	69.1			
Primary completion rate, total (% of relevant age group)	55.1			78.6				
Goal 3: Promote gender equality and empower women								
Target 3.A: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015								
Proportion of seats held by women in national parliament (%)	1.8	0.9	0.9	2.7	2.7	2.7	2.7	0.0
School enrollment, primary, female (% gross)	65.6	53.3	56.9	109.3				
School enrollment, secondary, female (% gross)				34.6				
School enrollment, tertiary (gross), gender parity index (GPI)								
nonagricultural								
employment)	32.1							
Goal 4: Reduce child mortality								
Target 4.A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate								
Immunization, measles (% of children ages 12-23 months)	69.0	82.0	74.0	89.0	84.0	79.0	70.0	62.0
Mortality rate, infant (per 1,000 live births)	57.5	54.9	50.9	46.0	44.9	43.8	42.4	41.8
Mortality rate, under-5 (per 1,000 live births)	77.2	73.1	67.0	59.5	57.9	56.2	54.3	53.4
Goal 5: Improve maternal health								
Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio								
Maternal mortality ratio (modeled estimate, per 100,000 live births)	342	277	249	224	220	215		
Births attended by skilled health staff (% of total)	41.0	42.0						
Target 5.B: Achieve, by 2015, universal access to reproductive health care								
Contraceptive prevalence (% of women ages 15-49)								
Adolescent fertility rate (births per 1,000 women ages 15-19)	66.3	62.8	59.5	56.1	55.3	54.4		
Pregnant women receiving prenatal care (%)		78.8						
Goal 6: Combat HIV/AIDS, malaria, and other diseases								
Target 6.A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS								
Prevalence of HIV, female (% ages 15-24)	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3
Prevalence of HIV, male (% ages 15-24)	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.2
Prevalence of HIV, total (% of population ages 15-49)	0.7	1.0	1.0	0.9	0.9	0.9	0.9	0.9
Target 6.C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases								
Incidence of tuberculosis (per 100,000 people)	432	432	432	432	432	432	432	432
Tuberculosis case detection rate (%, all forms)	45.0	48.0	43.0	72.0	81.0	80.0	79.0	79.0

Table 7. Papua New Guinea: Financial Millennium Development Goals, 2000-2017 (concluded)

	2000	2005	2009	2013	2014	2015	2016	201
Goal 7: Ensure environmental sustainability								
Target 7.A: Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources								
Target 7.B: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss								
Forest area (% of land area)	74.2	74.2	74.1	74.1	74.1	74.1		
CO2 emissions (kg per 2011 PPP $ of GDP)	0.3	0.4	0.4	0.3	0.3			
CO2 emissions (metric tons per capita)	0.5	0.7	0.7	0.8	0.8			
Marine protected areas, (% of territorial waters)	0.4				0.4			
Terrestrial protected areas (% of total land area)	3.1				3.1			
Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation								
Improved sanitation facilities (% of population with access)	19.2	19.1	19.0	18.9	18.9	18.9		
Improved water source (% of population with access)	35.1	37.1	38.7	39.9	40.0	40.0		
Goal 8: Develop a global partnership for development								
Target 8: Various								
Net ODA received per capita (current US$)	49.4	42.2	57.8	86.7	74.8	74.5	65.3	
Debt service (% of exports of goods, services and primary income)	12.9	8.4	11.7	19.9	13.0	11.3	11.3	49.1
Internet users (per 100 people)	0.8	1.7	1.6	5.1	6.5	7.9	9.6	
Mobile cellular subscriptions (per 100 people)	0.2	1.2	21.1	41.0	44.9	46.6	46.8	
Telephone lines (per 100 people)	1.2	1.0	1.4	1.9	1.9	2.0	2.0	
Other								
Fertility rate, total (births per woman)	4.5	4.3	4.0	3.8	3.8	3.7	3.7	
GNI per capita, Atlas method (current US$)	600	670	1130	1970	2160	2780	2530	2410
GNI, Atlas method (current US$) (billions)	3.3	4.3	7.9	14.9	16.7	22.0	20.4	19.8
Gross capital formation (% of GDP)	21.9							
Life expectancy at birth, total (years)	61.9	63.4	64.5	65.1	65.2	65.4	65.5	
Literacy rate, adult total (% of people ages 15 and above)	57.3							
Population, total (millions)	5.6	6.3	6.9	7.6	7.8	7.9	8.1	8.3
Trade (% of GDP)	115.4							

Source: World Bank, World Development Indicators database, 2017.

Annex I. Risk Assessment Matrix[1]

Potential Deviations from Baseline Expectations

	Risk	Relative likelihood	Impact if realized	Potential impact	Staff advice on policy response
External risks	Weakening of global growth	Medium	H	↓ Declines in major commodity export prices. Adverse BOP impact; moderate budget impact	• Allow Kina to depreciate • Additional fiscal adjustment required
Domestic risks	Measures to increase supply of FX and eliminate backlog of FX orders	High	H	↓ If delayed, an adverse growth impact; ↑ If implemented, growth and investment response could be greater than expected	• If not implemented, additional fiscal adjustment needed. • If impact of implementation is greater than expected, fiscal adjustment will be easier than expected.
	Projects to increase LNG (or other minerals) export capacity begin sooner than assumed (early 2020s).	Medium	H	↑ Favorable impact on GDP, external balance and fiscal position. Could induce government to end consolidation	• Continue with fiscal consolidation in line with fiscal rule • Eliminate FX restrictions and restore floating exchange rate

[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 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 between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Nonmutually exclusive risks may interact and materialize jointly. "Short term" and "medium term" are meant to indicate that the risk could materialize within 1 year and 3 years, respectively.

Annex II. Authorities' Responses to Fund Advice

Fund Recommendation	Policy Actions
Monetary, Financial and Exchange Rate Policies	
• Remove excess liquidity to improve monetary policy effectiveness and reduce downside pressure on the kina exchange rate.	The BPNG is taking steps to overhaul its monetary operations framework, drawing on IMF TA. It is also increasing its FX interventions, which will drain liquidity. It is also setting up a framework for liquidity monitoring and forecasting as a precursor to reducing systemic liquidity.
• Allow greater exchange rate flexibility to clear the FX market.	Since mid-2018, BPNG has allowed an increased pace of Kina depreciation, at a rate of about 0.3% per month.
• Continue to implement AML/CFT legislation.	Authorities are taking steps to put in place a robust AML/CTF regime. FASU director and staff were appointed, and a first National Risk Assessment has been completed and is expected to be published in 2018.
Fiscal Policy	
• Adopt a fiscal policy stance consistent with putting public debt in line with the government's targets and ensuring debt sustainability.	The 2018 budget aimed to cut the deficit to 2.5 percent of GDP. The 2019 Budget Strategy Paper tries to balance the non-resource primary balance by 2021, targeting 30 percent of debt-to-GDP ratio by 2022.
• Streamline the government payroll, defer grants to provinces and districts, and strengthen revenue collection.	The 2018 MYEFO Report shows that GST collections continue to be above budget reflecting greater tax compliance efforts, and mining and petroleum taxes are higher than expected due to higher commodity prices. However, on the expenditure side, trends in government payroll are also running above the budget. Grants to provinces and districts are fully funded in the 2018 Budget.
Structural Reform	
• Continue investments in health and education and improve infrastructure and law and order for the better business environment. Strengthen the SME sector by financial inclusion.	Tuition fee free education, free primary healthcare, transport infrastructure, and law and order remain policy priorities of the Government. The Government published a 5-year medium term development plan in 2018 incorporating the UN Sustainable Development Goals and Government's Alotau Accord 2.
• Strengthen PFM by implementing further reforms identified in the PEFA assessment and SOE reform to enhance transparency and governance.	The Government intends to review a number of Acts and Bills such as the National Procurement Authority Bill and table this with audited accounts of SOEs in Parliament, as well as ensure that there are boards for public bodies.
• **Statistics**	
Improve macroeconomic statistics and move forward with the publication of new GDP estimates.	The authorities have made notable improvements in national accounts and fiscal data since 2014 and continue to make progress with TA. The NSO released new GDP estimates for 2015 in March 2018.

INTERNATIONAL MONETARY FUND

PAPUA NEW GUINEA

STAFF REPORT FOR THE 2018 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

November 9, 2018

Prepared By

Asia and Pacific Department
(In Consultation with Other Departments)

CONTENTS

FUND RELATIONS

(As of September 30, 2018)

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	99.66
Reserve position in Fund	0.45	0.34

SDR Department

	SDR Million	Percent Allocation
Net cumulative allocation	125.49	100.00
Holdings	7.84	6.24

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				
	2018	2019	2020	2021	2022
Principal					
Charges/interest	0.29	1.17	1.17	1.17	1.17
Total	**0.29**	**1.17**	**1.17**	**1.17**	**1.17**

[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. Since August 2017, the exchange rate has followed a depreciating trend within a 2-percent band against the U.S. dollar. Accordingly, the exchange rate arrangement has been reclassified to crawl-like from a stabilized arrangement, effective August 22, 2017.

Papua New Guinea maintains the following exchange restrictions subject to IMF approval under Article VIII, Section 2(a) of the IMF's Articles of Agreement arising from: (i) the requirement to obtain a tax clearance certificate evidencing the payment of all taxes prior to making payments or transfers for certain current international transactions; and (ii) the rationing of FX and its allocation by BPNG to certain priority items, which results in undue delays and arrears in current international payments. Papua New Guinea also maintains the following multiple currency practices (MCPs) subject to Fund approval under Article VIII, Section 3: (i) a MCP arising from the spread of more than 2 percent between the rates set by BPNG for its FX allocations to authorized FX dealers (AFEDs), and the rates used by AFEDs in transactions with their clients; and (ii) an MCP arising from the potential spread deviation of more than 2 percent between the rates set by BPNG for its FX transactions with the government and embassies, and the rates used by AFEDs in transactions with their clients.

Article IV Consultations

The 2017 Article IV consultation discussions were held during August 31-September 14, 2017. It was concluded by the Executive Board on December 1, 2017 (IMF Country Report No. 17/411). Papua New Guinea is on the standard 12–month consultation cycle.

TA from Headquarters

FAD: 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. A mission in October 2015 provided advice on Land and Property Tax and Non-Tax Revenue Reforms. A joint FAD/PFTAC mission visited PNG in August 2017 to help develop a medium-term revenue strategy (MTRS). An STX visited PNG from August to October to provide governance and capacity building advice on the MTRS implementation. Tax policy missions in September 2017 and August 2018 provided support for the design and implementation of tax policy reforms in the MTRS.

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. A mission in September 2018 assisted in planning legislative reforms for the MTRS.

MFD/MCM: TA through peripatetic visits was delivered on bank regulation and supervision (February–March 2007, July–August 2009, 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, March 2015), macroprudential oversight and financial stability (September 2012), and the sovereign wealth fund (July 2013). A mission in August 2018 delivered technical assistance in liquidity forecasting and management, and foreign exchange operations. Missions in December 2017 and February 2018 delivered TA on banking supervision.

STA: A multisector statistics mission occurred in September 2006 followed by a high-level STA visit in December 2007, in collaboration with the ABS. TA was provided on monetary and financial statistics (April 2005, May 2006, April 2008, November 2009 May 2010, and February 2013); balance of payments and the international investment position (June 2008, November 2009, May-June 2013, February 2014, and July 2015); government finance statistics (2012, May and October 2013, April- May and October 2014, April 2015, September 2015, March 2016, February and October 2017); national accounts and price statistics (February and November 2014; October 2015; February 2016; February 2017; February 2018 and June 2018); and GDDS metadata (January 2012). A joint mission with the ABS discussed statistical capacity building and in particular reform of the National Statistical Office in July-August 2014. A mission to assist with the compilation of external sector statistics occurred in May 2018.

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, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. Ms. Leni Hunter is the current resident representative.

RELATIONS WITH THE PACIFIC FINANCIAL TECHNICAL ASSISTANCE CENTRE

(As of October 2018)

The Pacific Financial Technical Assistance Centre (PFTAC) in Suva, Fiji, is a regional TA institution operated by the IMF with financial support of the Asian Development Bank, Australia, the European Union, Korea, 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

PFTAC assisted PNG to implement the Integrated Financial Management System (IFMS) originally purchased in 2005, but by early 2014, only three ministries (Finance, Treasury, and Planning) had been connected to the system. A series of PFTAC missions from 2014 to 2016 saw IFMS deployed to 30 central government departments by July 2016.

A FAD Mission conducted a PEFA assessment in March 2015 leading to the development of a PFM Reform Roadmap in September 2015. The roadmap emphasizes the completion of the IFMS roll-out as a priority, recognizing many accounting, financial management, and reporting weaknesses could be overcome with full implementation of IFMS.

The Roadmap's tight prioritization of objectives under the leadership of the Finance Secretary played a significant role with expanded commitments from DFAT and the EU to provide greater TA support to the Department of Finance to ensure a sustainable roll-out and continued business process reforms.

PFTAC assistance in 2015 and 2016 led to the adoption of an improved cash management strategy and the development of standard procedures on bank reconciliation, creation of a Cash Management Unit (CMU), and coordinated planning among the Department of Finance, Department of Treasury, Internal Revenue Commission, and Bank of PNG for the adoption of a cash pooling/sweeping scheme.

In 2017 PFTAC provided training to DoF internal auditors on risk-based and systems auditing; and advice on improving current processes and reports in line with international standards.

PFTAC is currently finalizing advice on the transition to PNG for adopting IPSAS cash standards over a two-year time frame.

B. Tax Administration and Policy

The Department of the Treasury, with FAD assistance, has developed a Medium-Term Revenue Strategy (MTRS) of which a comprehensive Revenue Mobilization Framework is a key element. FAD missions[1] provided advice on the MTRS framework and content. PFTAC missions[2] facilitated the design of a new corporate plan, design and monitoring unit, taxpayer services unit and a large taxpayer office. Funding to support PNG's MTRS implementation has been sourced through the multi-lateral Revenue Mobilization Trust Fund (RMTF) and includes the placement of an IMF resident advisor in Port Moresby with effect from mid-late August 2018.

C. Financial Sector Regulation and Supervision.

In early 2017, PFTAC initiated a medium term strategic approach to assisting PFTAC member countries to enhance the structure and operational effectiveness of their Financial Sector Supervision (FSS) frameworks. Initial diagnostic missions and the establishment of enhancement strategies and TA plans were completed in 2017 for several countries, including PNG. To establish a medium-term supervision framework enhancement strategy and TA plan with PNG, PFTAC and the Bank of Papua New Guinea assessed the structure and operation of their supervision framework, in relation to the size and complexity of the financial sector, and against international supervision standards and practices. The strategy and TA plan focused on banking supervision, with the enhancement of supervision frameworks of other sectors (primarily insurance, pension, and credit union) to be based on the banking supervision work, and applied across industries where appropriate.

In implementing the strategy and plan with Bank PNG, PFTAC provided assistance to develop a risk rating and supervisory action planning framework; provided training on the assessment of IT risk, assisted in the development of an IT Risk On-site Examination framework; provided training on the assessment of market and liquidity risk, and assisted in the development of a Market and Liquidity Risk On-site Examination framework. Further work is to be undertaken to imbed the risk rating and supervisory action planning framework; finalize the on-site examination frameworks; and assist Bank PNG to develop an enhanced regulatory framework for banks and effective off-site supervision.

D. Economic and Financial Statistics

In February 2006, an advisor briefly assessed BOP compilation with a view to improving its quality, and to assess progress with the implementation of recommendations made by previous missions. A multi-sector statistics mission in September 2006 assessed the statistical systems (ESS, 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 statistical prerequisites, progress in improving

[1] Cotton (August 2017) and Baunsgaard (September 2017) provided advice on the MTRS framework and content.

[2] PFTAC missions in July 2017, December 2017, and September 2018 (STX McNeil) facilitated the design of a new corporate plan, design and monitoring unit, taxpayer services unit and a large taxpayer office.

compilation methods and source data, as well as to assist BPNG statistics staff in assessing the feasibility of electronic data collection.

Since 2013, PFTAC has conducted eight TA missions to assist the National Statistical Office (NSO), BPNG, and Department of Treasury with improving national accounts statistics. PFTAC has increasingly focused its TA on improving capacities at the NSO in the broader context of the NSO reform process initiated by the authorities in 2014. Two PFTAC national accounts missions were scheduled in FY18 (November 2017; February 2018) while an ESS mission funded by the Technical Assistance Office Lao and Myanmar (TAOLAM) was scheduled for November 2017.

Support has been provided in close collaboration with the Australian Bureau of Statistics (ABS), which has provided statistical leadership and management advice as well as TA on data collection issues including business and household surveys with the secondment of two ABS staff to the PNG NSO from June 2015 to May 2016. PNG NSO staff have also benefited from attending four annual sub-regional statistics workshops since 2013, centered around estimating GDP by expenditure, the use of household income and expenditure surveys, and their linkage to consumer price indices. One mission is scheduled for 2019 pending NSO's implementation of the reforms recommended by APD. From ABS and PFTAC input, the NSO was able to resume publication of estimates of GDP by production in May 2016. The latest release (January 2017) covers 2007-2014; estimates up 2015 are due out end-November 2017.

Through February 2017, PNG received GFS TA under the Japan Administered Account (JSA2). The PFTAC funded GFS TA mission during October 2017 and September 2018 focused on improving GFS data for the national budget volumes I and II and further investigated source data for developing the financial balance sheet of the general government.

PNG has been one of the beneficiaries of the JSA Project (ended March 2016) on the improvement of external sector statistics (ESS). Commitment to participate in this project was low, and thus improvements were limited Under this project, four TA missions were provided.Currently PNG is a beneficiary of STA's new three-year JSA project to improve ESS in the Asia-Pacific Region. One mission was conducted.

E. Macroeconomic Analysis

Following a request by BPNG for assistance in building financial programming capacity, the development of a PNG-specific financial programming framework started in 2011. Training in the use and updating of the framework was provided to staff of both the BPNG and Department of Treasury. A work program with the Department of Treasury and BPNG, in collaboration with the APD country team and the IMF's Research Department, developed modeling tools for exploring the macroeconomic impact of natural resource revenues. In 2014, work was undertaken to simplify and streamline the financial programming framework with a view to easing operational burden; these efforts resulted in weaknesses in capturing the relevant and complex inter-sectoral linkages of the PNG economy. In May 2017, an upgrade of the original financial programming framework to alleviate identified weaknesses commenced and the core structure of the new PNG Monetary and

Fiscal Forecasting (MFF) Model was completed in July 2017. In August 2017 PFTAC and the BPNG hosted a workshop on practical applications of the PNG MFF Model with participants from the BPNG, the Department of Finance, the Department of Treasury, and the Internal Revenue Commission. The model was enhanced further in 2018 for scenario analysis and to incorporate public debt. In 2014 and 2015 work was also undertaken to improve the BPNG's inflation forecasting methodology following major revisions to the consumer price index (CPI) by the NSO.

INFORMATION ON THE ACTIVITIES OF OTHER IFIS

Information on the activities of other IFIs in Papua New Guinea can be found at:

- World Bank: https://www.worldbank.org/en/country/png
- Asian Development Bank: https://www.adb.org/countries/papua-new-guinea/main

STATISTICAL ISSUES

(As of October 2018)

I. Assessment of Data Adequacy for Surveillance
General: Data provision has some shortcomings, but data are 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 and lagged release dates. The most recent official national accounts statistics were published by the NSO in 2018, at which time revised nominal GDP estimates for 2014 and 2015 were released. New estimates for 2016 were drafted but not published. Major improvements in methodology as well as inclusion of new sectors were reflected in this new data. Source data remain a challenge, with significant gaps in extractive and financial industries data. While CPI weights are from 2010 HIES, these data are not useable for expenditure estimates of GDP. The NSO's resumption of GDP compilation in 2016 was heavily dependent on PFTAC and ABS TA, with the ABS also driving CPI improvements. However, the ABS recently suspended its program due to increasingly uncertain NSO leadership and management, which threaten its current operations.
Price Statistics: The NSO currently compiles an unpublished quarterly wholesale price index (WPI) and a quarterly CPI. In May 2014, the NSO began to publish a new CPI series based on data from the 2009–2010 Household Income Expenditure Survey, ending a 35-year period during which the CPI used a consumption basket from the late 1970s.
Government Finance Statistics (GFS): GFS data were reported to STA in 2016 after a 14-year absence. Data suffers 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. 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. Papua New Guinea officials have benefitted from STA GFS technical assistance since June 2012 and as a result, volume 1 of the 2016 national budget was presented in the *Government Finance Statistics Manual 2014* (*GFSM 2014)* format. The authorities also prepared an accompanying 5-year historical time series of GFS data. Further work is required to enhance both institutional and instrument coverage, as well as presenting the entire budget on a *GFSM 2014 basis*. For the migration, the authorities continue to participate 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 BPNG in many areas of 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). A 2013 TA mission introduced general insurance companies into the institutional coverage of OFCs and an improved SRF for OFCs. Depository Corporations Survey and Survey of OFCs both have data coverage issues. Most of the monetary statistics published in *International Financial Statistics (IFS)* are currently aligned with the *Monetary and Financial Statistics Manual and Compilation Guide* (*MFSMCG*).
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. PNG participated in a three-year (FY2014–FY2016) TA project on FSIs for selected AFR and APD countries funded by the Government of Japan. As a result of the project, in December 2016, BPNG started reporting all core financial soundness and twelve additional encouraged indicators to STA in a timely fashion, with quarterly data availability starting in 2008Q4.
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. The financial accounts data are of poor quality because of major deficiencies in data collection, especially in the area of non-bank private sector external debt and direct investment. Quarterly data are also published by the BPNG. PNG has been one of the beneficiaries of the JSA Project on the improvement of external sector statistics (ESS). Commitment to participate in this project (ended March 2016) was low, and thus improvements were limited Under this project, TA missions were provided in May-June 2013, February 2014, July 2015, and February 2017. Currently PNG is a beneficiary of STA's new three-year JSA project to improve ESS in the Asia-Pacific Region. In May 2018, a TA mission under the new JSA project was conducted and assisted the BPNG to incorporate cross-border transactions related to the LNG project and sending out the international investment survey (IIS) for selected sample. The mission recommended immediate priorities to fill data gaps through the full implementation of the IIS, improvements to ITRS, and streamlining cross-border transactions/positions data of liquefied natural gas, other energy and mineral companies' activities.

II. Data Standards and Quality	
PNG began to participate in the General Data Dissemination System (eGDDS) in 2012.	

III. Reporting to STA
PNG last reported GFS for publication in *Government Finance Statistics Yearbook* and *IFS* for 2016, covering only the budgetary central government. Monetary data are reported to STA for publication in *IFS* on a regular monthly basis. BOP data for 2017 were reported to STA for publication in *Balance of Payments Yearbook* and *IFS*. National accounts data for 2006-13 were reported to STA for publication in *IFS*.

Papua New Guinea: Table of Common Indicators Required for Surveillance
(As of October 24, 2018)

	Date of Latest Observation	Date Received	Frequency of Data[1]	Frequency of Reporting[1]	Frequency of Publication[1]
Exchange Rates	09/2018	10/18/2018	D	D	D
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[2]	08/2018	10/18/2018	W	W	Q
Reserve/Base Money	06/2018	08/09/2018	M	M	Q
Broad Money	06/2018	08/09/2018	M	M	Q
Central Bank Balance Sheet	06/2018	08/09/2018	M	M	Q
Consolidated Balance Sheet of the Banking System	06/2018	08/09/2018	M		Q
Interest Rates[3]	07/2018	08/09/2018	W	W	
Consumer Price Index	Q2/2018	10/25/2018	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	2017	03/14/2018	A	A	A
Stocks of Central Government and Central Government-Guaranteed Debt[6]	12/2017	03/14/2018	Q	A	
External Current Account Balance	2017	10/08/2018	Q	Q	Q
Exports and Imports of Goods and Services	2017	10/08/2018	Q	Q	Q
GDP/GNP	2015	03/09/2018	A	A	I
Gross External Debt	2017	03/20/2018	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 2018 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITY ANALYSIS

November 9, 2018

Approved By
Odd Per Brekk and Maria Gonzalez (IMF) and John Panzer (IDA)

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

Risk of external debt distress	*Moderate*	
Overall risk of debt distress	*Moderate*	
Granularity in the risk rating	*Limited space to absorb shocks*	
Application of judgment	Yes:	A single short-lived breach of debt service-to-revenue ratio is discounted.

The Debt Sustainability Analysis (DSA) indicates that Papua New Guinea (PNG) faces a moderate risk of debt distress based on an assessment of public external debt, with limited space to absorb shocks; and moderate overall risk of public debt distress. A single short-lived breach of debt service-to-revenue ratio is discounted because PNG has large revenue buffers from resource projects. This assessment, an improvement of overall public debt distress from that of December 2017, is based on PNG's upgraded debt-carrying capacity, and it continues to underscore the importance of strengthening the fiscal position – including through more cost-effective and longer-term financing – to improve debt dynamics.

[1] This DSA was prepared jointly with the World Bank, in accordance with the revised Debt Sustainability Framework for low-income countries approved by the Executive Boards of the IMF and the IDA in December 2017. The PNG's Composite Indicator score based on the October World Economic Outlook and 2017 CPIA measure indicates that the debt-carrying capacity is 'medium'. Thresholds for external debt-burden indicators are set at levels compatible with the new framework: PV PPG debt/exports (180), PV PPG debt/GDP (40), debt service/exports (15) and debt service to revenue (18). Note that the PNG is classified as an IDA blend economy.

PUBLIC DEBT COVERAGE

1. **The Papua New Guinea (PNG)'s coverage of public sector debt is the central government and local government debt.** The debt figure does not capture government guaranteed debts of state-owned enterprises (SOEs). The authorities are reviewing government guarantees on SOEs, which are currently estimated at 1.4 billion Kina, equivalent to about 2 percent of GDP, although the magnitude of the overall stock of SOE debt is uncertain due to lack of data. Thus, the contingent liability shock equivalent to 2 percent of GDP is included in this analysis to account for government guaranteed debt.

	Subsectors of the public sector	Sub-sectors covered
1	Central government	X
2	State and local government	X
3	Other elements in the general government	
4	o/w: Social security fund	
5	o/w: Extra budgetary funds (EBFs)	
6	Guarantees (to other entities in the public and private sector, including to SOEs)	
7	Central bank (borrowed on behalf of the government)	
8	Non-guaranteed SOE debt	

	The country's coverage of public debt	The central, state, and local governments			
		Default		Used for the analysis	Reasons for deviations from the default settings
2	Other elements of the general government not captured in 1.	0	percent of GDP	0.0	
3	SoE's debt (guaranteed and not guaranteed by the government) 1/	2	percent of GDP	2.0	
4	PPP	35	percent of PPP stock	0.0	
5	Financial market (the default value of 5 percent of GDP is the minimum value)	5	percent of GDP	5.0	
	Total (2+3+4+5) (in percent of GDP)			7.0	

1/ The default shock of 2% of GDP will be triggered for countries whose government-guaranteed debt is not fully captured under the country's public debt definition (1.). If it is already included in the government debt (1.) and risks associated with SoE's debt not guaranteed by the government is assessed to be negligible, a country team may reduce this to 0%.

BACKGROUND ON DEBT

2. **PNG's public and external debt burdens remain moderate relative to peer countries, but debt and potential risks are increasing.** Unanticipated revenue declines due to commodity price falls and difficulties in controlling government expenditure, especially the teachers' payrolls, in recent years have led to larger budget deficits and higher public debt. While the ratio of total public debt to GDP stands at relatively moderate levels, at 37.5 percent as of end-2017, government debt has almost doubled from 19 percent of GDP in 2012, and interest payments have tripled. Furthermore, liquidity risks are increasing as Treasury bills (less than 1 year to maturity) increased as a share of total domestic financing, from 45 percent in 2012, to 54 percent in 2017. In addition, the budget remains exposed to unfunded superannuation liabilities, relating to pensions, estimated at around 2 billion Kina (3 percent of 2017 GDP). The budget deficit financing turned to external sources as commercial banks and superannuation funds are nearing internal limits for holding government securities. The recent increase in external debt is mainly due to accelerated borrowing from non-Paris Club bilateral and commercial creditors (Text Table 1). The share of Chinese loans (the sum of loans by the Bank of China and the Export-Import Bank of China) has increased sharply from 1.2 percent of total public external debt in 2010 to 23.5 percent in 2017. The syndicated loans from Credit Suisse have also increased the public external debt since 2016. Two large creditors for external public debt at end-2017 were the Asian Development Bank and the Export-Import Bank of China (Chart 1). In addition, liquidity risks remain high as the maturity of government domestic financing has shortened. Private external debt has declined continuously since the liquified natural

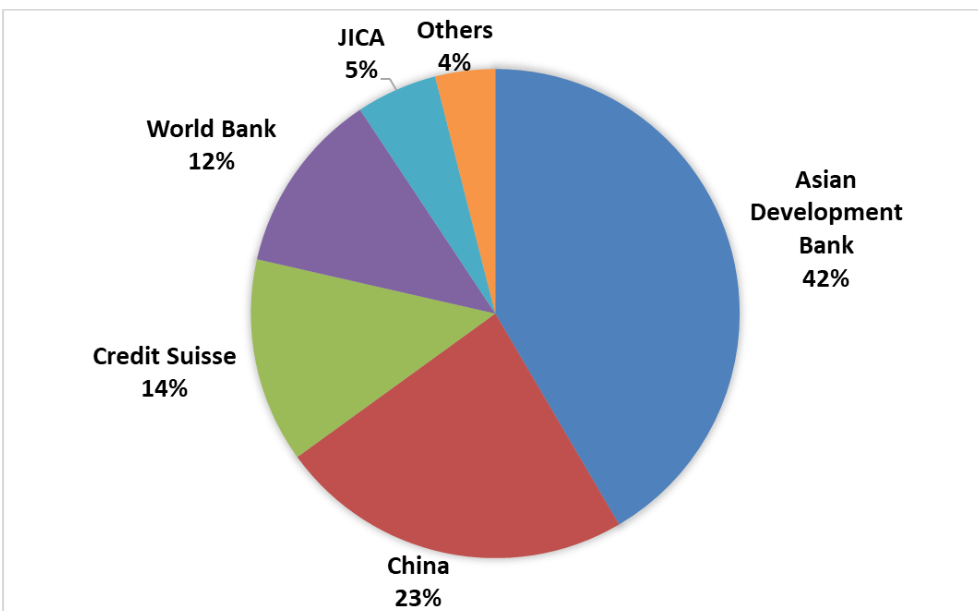
gas (LNG) sector started to repay its debt, while public and publicly-guaranteed (PPG) external debt risk remains moderate. Since a large current account surplus, which reflects LNG exports, does not bring enough foreign exchange (FX) to the country due to the project agreement, increased PPG external debt poses a risk to debt service. Namely, a significant residual on external financial flows is the money transfer via offshore accounts by resource companies.

Text Table 1: External Public Debt by Creditor Groups
(In millions of U.S. dollars)

	2015	2016	2017
Multilateral	1,086	1,164	1,272
Bilateral Paris Club	113	126	131
Bilateral Non-Paris Club	299	408	538
Commercial	0	229	348
Total	1,498	1,928	2,289

Source: Papua New Guinea Department of Treasury

Chart 1: External Public Debt by Creditors in 2017



BACKGROUND ON MACRO FORECASTS

3. **Over the medium term, PNG's growth prospects and current account developments will be heavily influenced by its extractive sector and the commodity price outlook.** Box 1 summarizes the medium-term macroeconomic framework underlying this Debt Sustainability Analysis (DSA) update, and Text Table 2 compares previous and current DSAs. The debt to GDP ratio differs from the authorities' numbers in the Mid-Year Economic and Fiscal Outlook Report and the Medium Term Fiscal Strategy (MTFS) because (1) new lower official 2015 GDP estimates published by the National Statistical Office and (2) effects of change in exchange rate on public external debt are incorporated in this DSA. Real GDP growth is expected to be zero in 2018, following an earthquake early in the year, but long-term growth has been revised up by 0.8 percentage points annually, reflecting a view for higher commodity prices than that which characterized the 2017 DSA. The current account surplus is boosted by steady commodity export growth. Nonetheless, the current account surplus is projected to decline as imports recover. The primary fiscal balance is projected to improve from a deficit of 0.5 percent of GDP in 2018 to a surplus of 0.8 percent by the end of the forecast period assuming the implementation of the Medium Term Revenue Strategy. Tax collection so far this year is up substantially from last year and well above budget projections. This reflects strong tax compliance efforts as well as the impact of higher commodity prices on resource revenues. We assume that this revenue mobilization efforts continue over time. Also, a new expenditure ceiling on personnel emoluments costs in the MTFS is assumed to avoid expenditure slippages throughout the projection period. The realism tool in Figure 4 shows that this assumption on fiscal adjustment is realistic. The baseline includes the issuance of a US$500 million 10-year sovereign bond with a yield of 8.375 percent. The funds are intended to be used to finance the deficit, reduce the government's short-term domestic debt, and reduce the large backlog of unfilled FX orders by the private sector. The possibility of significant capacity expansion in the resource sector poses an important upside risk to the baseline.

Text Table 2: Macroeconomic Forecast and Assumptions

	Real GDP Growth (percent)		GDP Deflator Inflation (percent)		Current Account (percent of GDP)		Primary Balance (percent of GDP)	
Year	Previous	Current	Previous	Current	Previous	Current	Previous	Current
2015	8.0	5.3	4.0	-4.4	13.3	11.8	-2.2	-3.0
2016	2.4	1.6	3.4	2.7	15.2	23.7	-2.6	-3.1
2017	2.2	2.5	2.0	7.1	13.9	23.9	-0.7	-0.4
2018	2.5	0.0	1.8	8.1	14.4	22.8	-0.5	-0.5
2019	2.3	3.8	2.3	2.4	13.8	23.0	-0.7	0.2
2020	2.9	3.1	2.4	2.0	12.8	21.4	-0.1	0.8
2021	3.2	3.4	2.4	2.4	12.3	20.3	-0.1	1.3
2022	3.1	3.5	2.4	2.5	11.8	19.2	-0.3	1.4
2023	3.1	3.8	2.4	1.2	11.3	18.4	-0.2	1.4

COUNTRY CLASSIFICATION AND DETERMINATION OF SCENARIO STRESS TESTS

4. PNG's composite indicator index as calculated under the revised LIC-DSF has improved with PNG's debt-carrying capacity now classified as medium. Prior to this update, initial settings for debt-carrying capacity in the revised framework were set at that of the previous DSA vintage, where PNG was classified as 'weak'. The current composite indicator is calculated based on the October 2018 World Economic Outlook and 2017 CPIA index. The medium classification implies that the threshold for the present value of total public debt has increased from 35 percent to 55 percent of GDP. Since PNG is a resource-rich economy relying on commodity exports, commodity price shocks are included in the tailored stress tests.

EXTERNAL DSA

5. The PPG external debt ratios stay below the indicative thresholds under the baseline scenario, whilst stress tests support moderate risk of external debt distress. The baseline scenario is affected by planned increases in public external debt from 11.3 percent of GDP in 2017 to 15.3 percent in 2018. Although the historical shock scenario (Figure 1) shows substantial threshold breaches, as has been the case in past DSAs, this scenario is not considered indicative of future risks. This is because the historical scenario is grounded in large current account deficits recorded in the past associated with the construction phase for PNG LNG project. The PNG LNG-related debt was largely backed by expected cash flows from the LNG project. In contrast, the PPG external debt service-to-revenue ratio shows a breach in the baseline scenario, reflecting the servicing of PPG external debt. However, this is a 1-year and minimal breach and is discounted from the analysis (according to DSA guidelines). This assessment is also supported by PNG's large revenue buffers from future resource projects. In addition, the most extreme shock scenario, which corresponds to a case with shocks to export growth, shows a breach for the ratio of the present value of PPG external debt-to-GDP, while a shock to the PNG exchange rate also illicit a beach of threshold for debt-service to revenue. These outturns support the moderate-risk assessment. The relatively weak non-resource sector makes the economy more vulnerable to external shocks. But there is an upside risk that imports recover faster than the baseline scenario if a new resource project starts and triggers a boost to the economy, as the historical shock scenario of PNG LNG construction phase indicates.

OVERALL RISK OF PUBLIC DEBT DISTRESS

6. PNG's total public debt-to-GDP ratio is projected to remain below the benchmark, while it breaches the threshold under the stress test, indicating moderate risk. In the baseline, the PV of public debt-to-GDP ratio decreases towards 34 percent of GDP over the medium term, below the benchmark (Figure 2). However, since PNG is a commodity exporter, in the alternative scenarios with shocks to exports or shocks to commodity price, the public debt-to-GDP ratio will breach the benchmark in the medium term (Table 4). In addition, the most extreme shock for the debt service-to-revenue ratio is the commodity price shock (Figure 2 and Table 4). The negative commodity price shock could reduce commodity export revenues, resulting in lower mining taxes and dividends to the government. Furthermore, liquidity risks are increasing as elaborated in the background of debt section, and unfunded superannuation liabilities represent an implicit fiscal risk for PNG.

RISK RATING AND VULNERABILITIES

7. PNG's risk of external public debt distress remains moderate and debt distress of overall public debt is also moderate. The moderate risk of overall public debt distress reflects in part the upgrade of debt-carrying capacity from weak to medium, supported by recent macroeconomic and policy performance. The moderate PPG external debt distress is based on the assumption of primary fiscal surpluses generated from fiscal consolidation efforts by the government. Granular analysis in Figure 5 shows that PNG has limited space to absorb shocks as the debt service-to-revenue ratio almost reaches the respective threshold even if the short-lived breach in 2020 is discounted. Against this background, implementation of a sound debt management strategy, to better capture existing government liabilities and guarantees grows in importance.

AUTHORITIES' VIEWS

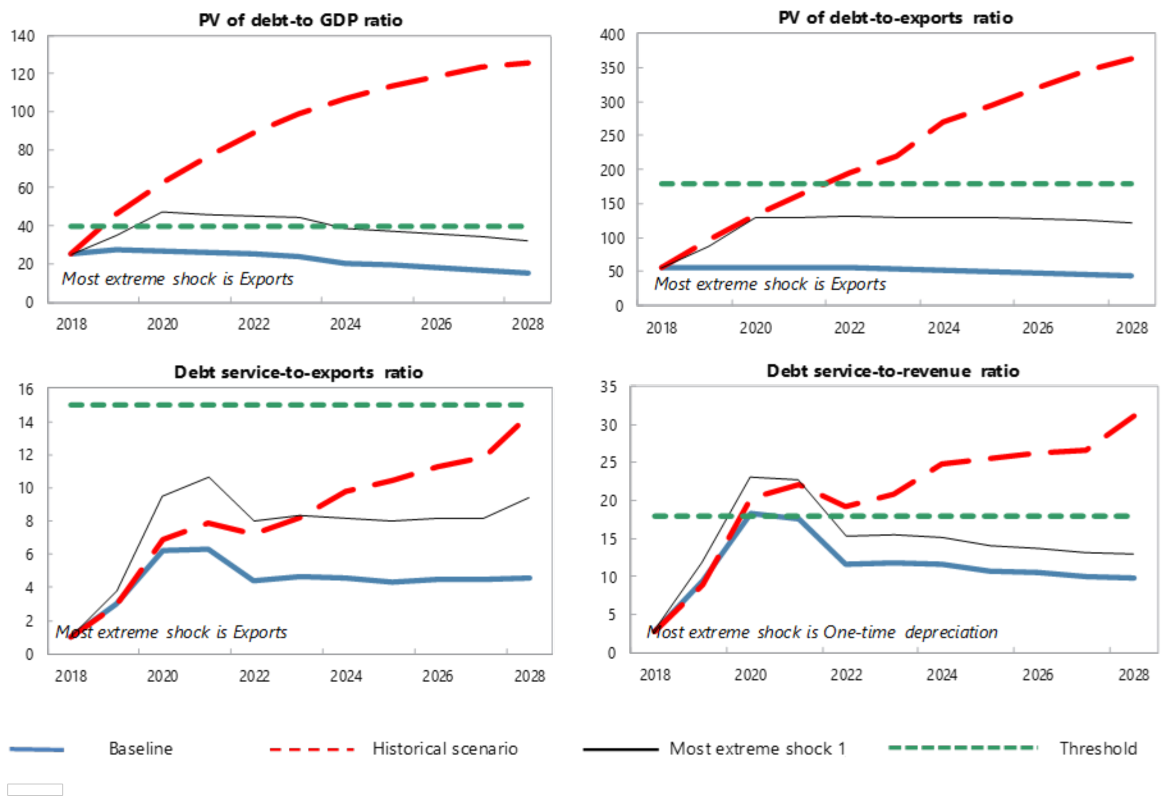
8. The authorities took note of an increasing risks to debt sustainability. They also recognized three statistical issues. First, it is important to agree on the new official GDP numbers among the National Statistical Office, the government, and the central bank to precisely measure the debt-to-GDP ratio. Second, they recognized that it is also important to include the change in exchange rates when calculating the external debt stock in domestic currency. Third, the calculating exercise for government guarantees on SOEs is critical to know the contingent liabilities. Current bond issue and other external financing will give the government flexibility to address domestic FX imbalances and problems in securities markets by retiring short-term government securities.

Box 1. Macroeconomic Assumptions Underlying the DSA Update

The macroeconomic assumptions underpinning this DSA are largely unchanged contrasted with the 2017 DSA, except for inclusion of a sovereign bond issuance and recent high commodity prices.

Macro Indicators	Last Historic Year	First Forecast Year	Medium- and Long-Term Averages
GDP growth	Newly published lower 2015 nominal GDP series are reflected. The downward revision from previous estimates arose from sectoral real growths and their deflators, which incorporated an improved methodology to take better account of differences between input and output prices. The single extrapolation method introduced improved on the previous single deflation method (where input and output prices were assumed to move identically).	The impact of earthquakes occurred in early 2018 is incorporated in to the framework. This lowered the real growth rate from 2.5 percent in the 2017 DSA to 0 percent in this DSA.	Real GDP growth is projected to average 3.9 percent in the medium/long run, an increase from the 3.1 percent long term average growth rate used for the 2017 DSA. This upward revision was mainly based on better sentiment for the mining, petroleum and gas sectors coupled with an improvement in commodity prices (e.g. gold, copper, silver, and nickel).
Inflation (GDP deflator)	The actual inflation rate (7.1 percent) in 2017 was substantially higher than the projection in the 2017 DSA (1.4 percent) due to higher commodity prices.	Inflation is projected at around 8 percent in 2018 reflecting high fuel and commodity prices (revised from 0.6 percent in the 2017 DSA).	Inflation is expected to converge to core inflation (3 percent) in the long term, assuming a relatively stable exchange rate.
Current Account	The estimated current account to GDP ratio in 2017 is revised upwards from 13.9 percent in the 2017 DSA to 23.9 percent, reflecting higher resource exports and lower GDP.	High fuel and commodity prices will lead to steady resource exports, albeit the earthquake impact.	Gradual erosion of the current account surplus is projected as FX backlog will be cleared mainly in 2019, and imports recover.
Fiscal Position	The primary deficit in 2017 was 0.4 percent of GDP, a bit smaller than 0.7 percent estimated in the 2017 DSA.	The primary fiscal deficit is estimated to be 0.5 percent of GDP in 2018. Sovereign bond issuance is included in 2018, and its redemption will take place in 2028. The interest rate is assumed to be 8.375 percent.	The primary deficit will gradually improve to 0.8 percent of surplus in the long run, assuming fiscal consolidation by improving tax compliance and controlling government expenditures better.

Figure 1. Papua New Guinea: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2018-2028



Customization of Default Settings	Size	Interactions
Tailored Tests		
Combined CLs	No	
Natural Disasters	n.a.	n.a.
Commodity Prices 2/	No	No
Market Financing	n.a.	n.a.

Note: "Yes" indicates any change to the size or interactions of the default settings for the stress tests. "n.a." indicates that the stress test does not apply.

Borrowing Assumptions for Stress Tests*	Default	User defined
Shares of marginal debt		
External PPG MLT debt	100%	
Terms of marginal debt		
Avg. nominal interest rate on new borrowing in USD	2.3%	2.3%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	30	30
Avg. grace period	8	8

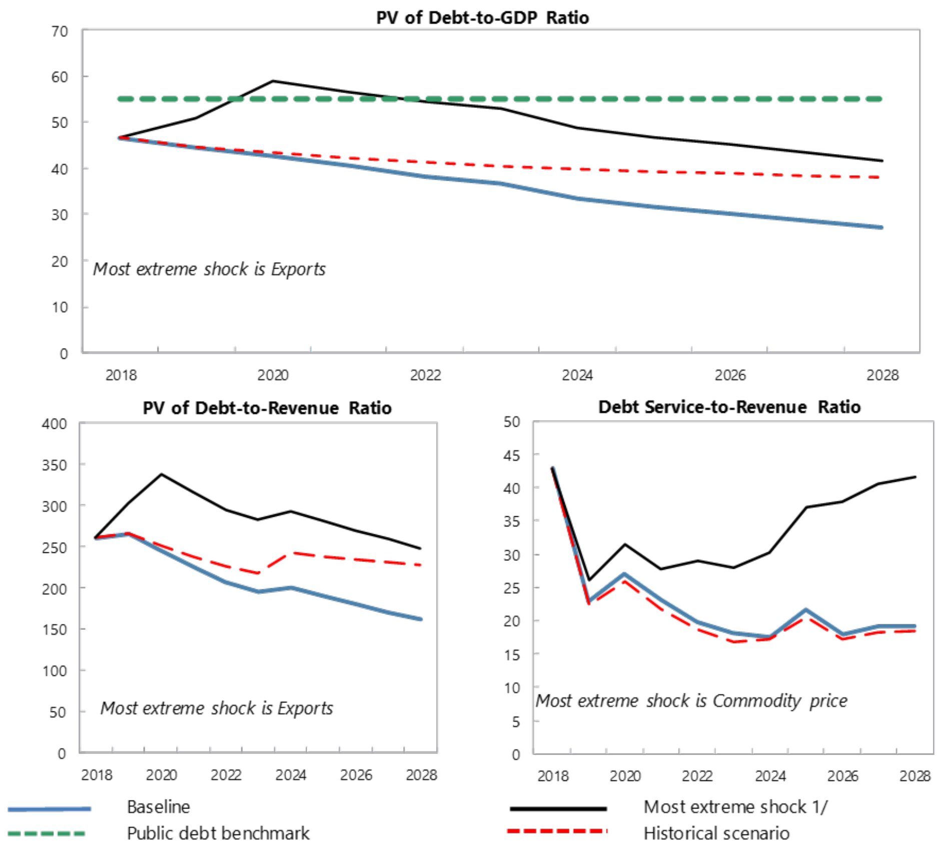
* Note: All the additional financing needs generated by the shocks under the stress tests are assumed to be covered by PPG external MLT debt in the external DSA. Default terms of marginal debt are based on baseline 10-year projections.

Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in or before 2028. Stress tests with one-off breaches are also presented (if any), while these one-off breaches are deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most exterme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.

2/ The magnitude of shocks used for the commodity price shock stress test are based on the commodity prices outlook prepared by the IMF research department.

Figure 2. Papua New Guinea: Indicators of Public Debt Under Alternative Scenarios, 2018-2028



Borrowing Assumptions for Stress Tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	47%	47%
Domestic medium and long-term	37%	37%
Domestic short-term	16%	16%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	2.3%	2.3%
Avg. maturity (incl. grace period)	30	30
Avg. grace period	8	8
Domestic MLT debt		
Avg. real interest rate on new borrowing	7.2%	7.2%
Avg. maturity (incl. grace period)	5	5
Avg. grace period	3	3
Domestic short-term debt		
Avg. real interest rate	4%	4.0%

* Note: The public DSA allows for domestic financing to cover the additional financing needs generated by the shocks under the stress tests in the public DSA. Default terms of marginal debt are based on baseline 10-year projections.

Sources: Country authorities; and staff estimates and projections.

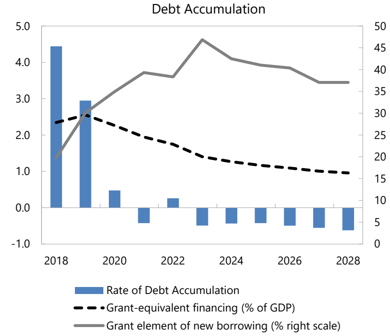
1/ The most extreme stress test is the test that yields the highest ratio in or before 2028. The stress test with a one-off breach is also presented (if any), while the one-off breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most exterme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.

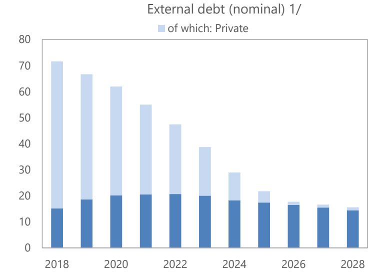
Table 1. Papua New Guinea: External Debt Sustainability Framework, Baseline Scenario, 2015-2038

(In percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 8/	
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2028	2038	Historical	Projections
External debt (nominal) 1/	**97.8**	**96.6**	**82.1**	**71.6**	**66.7**	**61.9**	**55.0**	**47.4**	**38.7**	**15.6**	**6.0**	**70.7**	**40.2**
of which: public and publicly guaranteed (PPG)	**7.9**	**10.2**	**11.3**	**15.2**	**18.6**	**20.2**	**20.5**	**20.6**	**20.0**	**14.5**	**5.3**	**7.8**	**17.9**
Change in external debt	1.5	-1.3	-14.4	-10.5	-4.9	-4.7	-7.0	-7.6	-8.7	-1.1	-0.8		
Identified net debt-creating flows	**-1.8**	**-15.1**	**-28.4**	**-26.4**	**-26.6**	**-24.7**	**-23.5**	**-22.2**	**-21.2**	**-11.1**	**-5.6**	**2.0**	**-19.8**
Non-interest current account deficit	**-14.5**	**-27.2**	**-27.2**	**-25.7**	**-26.4**	**-25.4**	**-24.0**	**-22.0**	**-20.8**	**-12.2**	**-5.3**	**3.5**	**-19.7**
Deficit in balance of goods and services	-15.8	-26.6	-26.7	-25.9	-27.1	-26.0	-24.9	-23.8	-22.9	-15.7	-8.3	**0.9**	**-21.7**
Exports	38.5	46.3	49.0	46.0	48.4	47.7	46.7	45.6	44.9	34.5	24.5		
Imports	22.7	19.7	22.3	20.0	21.3	21.7	21.8	21.8	22.0	18.8	16.3		
Net current transfers (negative = inflow)	-0.8	-1.5	-0.8	-1.2	-0.6	-0.5	-0.6	-0.7	-0.8	-0.1	0.2	**-1.0**	**-0.5**
of which: official	-1.5	-1.7	-1.0	-1.0	-0.9	-0.8	-0.9	-0.9	-0.9	-0.8	-0.7		
Other current account flows (negative = net inflow)	2.1	1.0	0.2	1.4	1.3	1.1	1.5	2.5	2.9	3.6	2.7	**3.6**	**2.6**
Net FDI (negative = inflow)	**-1.3**	**0.4**	**1.6**	**-3.7**	**-1.0**	**-1.2**	**-1.1**	**-1.1**	**-1.1**	**0.7**	**-0.5**	**-0.8**	**-1.1**
Endogenous debt dynamics 2/	**14.1**	**11.7**	**-2.8**	**3.0**	**0.8**	**2.0**	**1.7**	**0.9**	**0.7**	**0.4**	**0.1**		
Contribution from nominal interest rate	2.8	3.4	3.4	3.0	3.4	4.0	3.7	2.7	2.5	1.0	0.4		
Contribution from real GDP growth	-5.7	-1.7	-2.3	0.0	-2.6	-2.0	-2.0	-1.8	-1.7	-0.6	-0.3		
Contribution from price and exchange rate changes	17.0	10.0	-3.9	...	...	...	...	...	...	...	...		
Residual 3/	**3.3**	**13.8**	**14.0**	**15.9**	**21.7**	**19.9**	**16.5**	**14.6**	**12.5**	**10.1**	**4.8**	**4.2**	**13.8**
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		
Sustainability indicators													
PV of PPG external debt-to-GDP ratio	**...**	**...**	**22.0**	**25.1**	**27.1**	**26.9**	**25.7**	**25.1**	**23.9**	**15.0**	**4.4**		
PV of PPG external debt-to-exports ratio	**...**	**...**	**44.9**	**54.7**	**56.0**	**56.3**	**55.0**	**55.0**	**53.3**	**43.5**	**17.7**		
PPG debt service-to-exports ratio	**1.0**	**1.3**	**1.4**	**1.0**	**3.0**	**6.2**	**6.3**	**4.4**	**4.6**	**4.6**	**3.4**		
PPG debt service-to-revenue ratio	**2.3**	**4.0**	**4.3**	**2.8**	**9.4**	**18.2**	**17.6**	**11.6**	**11.8**	**9.9**	**4.9**		
Gross external financing need (Million of U.S. dollars)	-887.6	-1100.2	-2349.2	-2874.8	-3557.3	-3783.8	-3435.7	-3201.0	-2860.0	-3443.8	-2782.7		
Key macroeconomic assumptions													
Real GDP growth (in percent)	5.3	1.6	2.5	0.0	3.8	3.1	3.4	3.5	3.8	3.8	3.9	**5.1**	**3.3**
GDP deflator in US dollar terms (change in percent)	-15.0	-9.2	4.2	5.2	-0.2	-0.5	-0.2	-0.1	-1.0	1.2	1.2	**3.5**	**1.6**
Effective interest rate (percent) 4/	2.6	3.2	3.8	3.8	4.9	6.2	6.2	5.2	5.3	6.3	5.5	**3.4**	**5.4**
Growth of exports of G&S (US dollar terms, in percent)	-11.4	10.8	13.1	-1.3	9.0	1.2	0.9	1.0	1.2	1.7	0.1	**8.7**	**1.7**
Growth of imports of G&S (US dollar terms, in percent)	-40.1	-20.1	21.2	-5.5	10.1	4.6	3.4	3.7	3.5	3.5	3.7	**4.5**	**3.4**
Grant element of new public sector borrowing (in percent)	...	...	...	19.8	30.1	34.9	39.3	38.3	46.9	37.1	#DIV/0!	**...**	**37.0**
Government revenues (excluding grants, in percent of GDP)	17.8	15.2	15.4	16.4	15.6	16.2	16.7	17.3	17.6	16.0	17.1	**10.6**	**16.2**
Aid flows (in Million of US dollars) 5/	490.4	946.6	879.0	492.7	404.2	486.2	509.9	464.0	392.2	337.4	298.2		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	2.3	2.6	2.3	1.9	1.7	1.4	1.0	...	**...**	**1.6**
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	39.2	45.8	52.9	62.7	64.6	81.3	83.4	...	**...**	**68.6**
Nominal GDP (Million of US dollars)	20,639	19,028	20,334	21,390	22,165	22,731	23,442	24,233	24,884	34,597	56,889		
Nominal dollar GDP growth	-10.5	-7.8	6.9	5.2	3.6	2.6	3.1	3.4	2.7	5.0	5.2	**8.6**	**5.0**
Memorandum items:													
PV of external debt 7/	...	...	92.8	81.6	75.2	68.6	60.1	51.9	42.6	16.1	5.0		
In percent of exports	...	...	189.5	177.5	155.5	143.8	128.9	113.8	94.9	46.8	20.6		
Total external debt service-to-exports ratio	30.0	45.4	28.7	34.7	23.5	21.0	22.5	21.6	23.2	4.6	3.4		
PV of PPG external debt (in Million of US dollars)			4472.8	5376.1	6006.9	6112.2	6015.5	6076.5	5957.6	5199.7	2477.1		
(PVt-PVt-1)/GDPt-1 (in percent)				4.4	2.9	0.5	-0.4	0.3	-0.5	-0.6	-0.6		
Non-interest current account deficit that stabilizes debt ratio	-16.1	-25.9	-12.8	-15.2	-21.5	-20.7	-17.1	-14.4	-12.1	-11.1	-4.4		

Definition of external/domestic debt	Residency-based
Is there a material difference between the two criteria?	No





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) + Ɛα (1+r)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, ρ = growth rate of GDP deflator in U.S. dollar terms, Ɛ=nominal appreciation of the local currency, and α= share of local currency-denominated external debt in total external debt.

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

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

6/ 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).

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

8/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

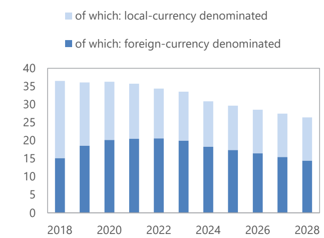
Table 2. Papua New Guinea: Public Sector Debt Sustainability Framework, Baseline Scenario, 2015-2038

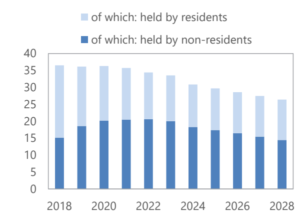
(In percent of GDP unless otherwise indicated)

	Actual			Projections								Average 6/	
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2028	2038	Historical	Projections
Public sector debt 1/	32.2	37.7	37.5	36.5	36.1	36.3	35.7	34.4	33.5	26.4	17.5	20.9	32.3
of which: external debt	7.9	10.2	11.3	15.2	18.6	20.2	20.5	20.6	20.0	14.5	5.3	7.8	17.9
Change in public sector debt	5.2	5.5	-0.2	-1.0	-0.4	0.2	-0.6	-1.3	-0.9	-1.1	-0.7		
Identified debt-creating flows	5.7	4.4	-0.4	-1.0	-0.4	0.2	-0.6	-1.3	-0.9	-1.0	-0.7	1.4	-1.0
Primary deficit	3.0	3.1	0.4	0.5	-0.2	-0.8	-1.3	-1.4	-1.4	-1.0	-0.8	1.7	-0.9
Revenue and grants	19.3	17.6	17.6	17.9	16.8	17.4	17.9	18.4	18.7	16.8	17.6	11.7	17.3
of which: grants	1.4	2.4	2.2	1.4	1.3	1.2	1.2	1.2	1.1	0.8	0.5		
Primary (noninterest) expenditure	22.3	20.7	18.0	18.4	16.7	16.6	16.6	17.0	17.4	15.8	16.8	13.4	16.4
Automatic debt dynamics	2.6	1.3	-0.8	-1.5	-0.2	0.9	0.7	0.1	0.5	0.0	0.1		
Contribution from interest rate/growth differential	1.3	0.9	-0.6	-1.1	-0.4	0.6	0.4	-0.2	-0.1	-0.1	0.1		
of which: contribution from average real interest rate	2.7	1.4	0.4	-1.1	0.9	1.7	1.6	1.0	1.2	0.9	0.8		
of which: contribution from real GDP growth	-1.4	-0.5	-0.9	0.0	-1.3	-1.1	-1.2	-1.2	-1.3	-1.0	-0.7		
Contribution from real exchange rate depreciation	1.3	0.3	-0.2	...	...	...	...	...	...	...	...		
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Privatization receipts (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Recognition of contingent liabilities (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		
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 debt creating or reducing flow (please specify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Residual	-0.5	1.1	0.1	-0.4	0.2	0.3	0.3	0.3	0.6	0.1	0.0	1.2	0.1
Sustainability indicators													
PV of public debt-to-GDP ratio 2/	...	...	48.5	46.7	44.6	42.7	40.5	38.2	36.7	27.1	16.6		
PV of public debt-to-revenue and grants ratio	...	...	275.5	261.0	265.0	245.5	225.5	207.2	195.9	161.3	94.3		
Debt service-to-revenue and grants ratio 3/	91.8	125.4	117.9	42.9	22.9	27.1	23.2	19.9	18.2	19.2	21.3		
Gross financing need 4/	20.7	25.2	21.2	8.2	3.7	4.0	2.9	2.3	2.0	2.2	2.9		
Key macroeconomic and fiscal assumptions													
Real GDP growth (in percent)	5.3	1.6	2.5	0.0	3.8	3.1	3.4	3.5	3.8	3.8	3.9	5.1	3.3
Average nominal interest rate on external debt (in percent)	1.5	2.7	2.7	3.5	8.5	11.7	10.6	7.2	7.3	6.9	6.2	1.9	7.6
Average real interest rate on domestic debt (in percent)	13.3	5.6	1.1	-4.8	-0.2	-0.2	-0.4	-0.1	1.2	1.5	4.5	3.6	-0.5
Real exchange rate depreciation (in percent, + indicates depreciation)	22.6	4.1	-2.1	...	...	...	...	...	...	...	...	0.3	...
Inflation rate (GDP deflator, in percent)	-4.4	2.7	7.1	8.1	2.4	2.0	2.4	2.5	1.2	3.0	3.0	3.7	3.5
Growth of real primary spending (deflated by GDP deflator, in percent)	-8.4	-5.7	-10.7	2.0	-5.8	2.9	3.4	5.8	5.9	4.3	4.6	3.1	2.2
Primary deficit that stabilizes the debt-to-GDP ratio 5/	-2.1	-2.4	0.7	1.5	0.2	-0.9	-0.7	-0.1	-0.5	0.0	-0.1	-1.3	0.1
PV of contingent liabilities (not included in public sector debt)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Definition of external/domestic debt	**Residency-based**
Is there a material difference between the two criteria?	**No**

Public sector debt 1/





Sources: Country authorities; and staff estimates and projections.
1/ Coverage of debt: The central, state, and local governments. Definition of external debt is Residency-based.
2/ The underlying PV of external debt-to-GDP ratio under the public DSA differs from the external DSA with the size of differences depending on exchange rates projections.
3/ Debt service is defined as the sum of interest and amortization of medium and long-term, and short-term debt.
4/ 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 and other debt creating/reducing flows.
5/ Defined as a primary deficit minus a change in the public debt-to-GDP ratio ((-): a primary surplus), which would stabilizes the debt ratio only in the year in question.
6/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

Table 3. Papua New Guinea: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2018-2028

(In percent)

	Projections 1/										
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
PV of debt-to GDP ratio											
Baseline	25	27	27	26	25	24	21	19	18	16	15
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2018-2028 2/	25	**46**	**63**	**77**	**89**	**99**	**107**	**113**	**118**	**123**	**126**
B. Bound Tests											
B1. Real GDP growth	25	29	31	30	29	28	24	22	21	19	17
B2. Primary balance	25	28	30	29	29	28	25	24	23	21	20
B3. Exports	25	35	**47**	**46**	**45**	**44**	39	37	36	34	32
B4. Other flows 3/	25	29	30	29	28	27	23	22	21	19	18
B5. One-time 30 percent nominal depreciation	25	34	37	35	35	33	29	27	25	23	22
B6. Combination of B1-B5	25	34	37	36	35	34	29	28	26	24	23
C. Tailored Tests											
C1. Combined contingent liabilities	25	29	30	28	28	27	24	23	22	20	19
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	25	33	39	39	40	40	36	35	34	33	31
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	40	40	40	40	40	40	40	40	40	40	40
PV of debt-to-exports ratio											
Baseline	55	56	56	55	55	53	52	50	48	46	44
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2018-2028 2/	55	95	132	164	**195**	**220**	**269**	**295**	**321**	**346**	**364**
B. Bound Tests											
B1. Real GDP growth	55	56	56	55	55	53	52	50	48	46	44
B2. Primary balance	55	59	63	62	63	62	62	62	61	60	58
B3. Exports	55	86	130	130	131	130	129	129	128	126	122
B4. Other flows 3/	55	59	63	62	62	60	59	58	56	54	51
B5. One-time 30 percent nominal depreciation	55	56	61	60	60	58	57	55	54	52	49
B6. Combination of B1-B5	55	72	69	78	78	77	75	74	72	70	67
C. Tailored Tests											
C1. Combined contingent liabilities	55	61	62	61	61	61	61	60	59	57	55
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	55	84	96	95	96	94	93	94	95	95	94
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	180	180	180	180	180	180	180	180	180	180	180
Debt service-to-exports ratio											
Baseline	1	3	6	6	4	5	5	4	4	4	5
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2018-2028 2/	1	3	7	8	7	8	10	10	11	12	14
B. Bound Tests											
B1. Real GDP growth	1	3	6	6	4	5	5	4	4	4	5
B2. Primary balance	1	3	6	7	5	5	5	5	5	5	5
B3. Exports	1	4	10	11	8	8	8	8	8	8	9
B4. Other flows 3/	1	3	6	7	5	5	5	5	5	5	5
B5. One-time 30 percent nominal depreciation	1	3	6	6	5	5	5	5	5	5	5
B6. Combination of B1-B5	1	3	7	8	6	6	6	5	6	6	6
C. Tailored Tests											
C1. Combined contingent liabilities	1	3	6	6	5	5	5	5	5	5	5
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	1	4	8	8	6	6	6	6	6	6	7
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	15	15	15	15	15	15	15	15	15	15	15
Debt service-to-revenue ratio											
Baseline	3	9	**18**	18	12	12	12	11	10	10	10
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2018-2028 2/	3	9	**20**	**22**	**19**	**21**	**25**	**25**	**26**	**27**	**31**
B. Bound Tests											
B1. Real GDP growth	3	10	**21**	**20**	14	14	13	12	12	12	11
B2. Primary balance	3	9	**18**	**18**	12	12	12	11	11	11	11
B3. Exports	3	10	**21**	**23**	16	16	16	15	14	14	15
B4. Other flows 3/	3	9	**18**	**18**	12	12	12	11	11	11	11
B5. One-time 30 percent nominal depreciation	3	12	**23**	**23**	15	15	15	14	14	13	13
B6. Combination of B1-B5	3	10	**21**	**21**	14	14	14	13	13	12	13
C. Tailored Tests											
C1. Combined contingent liabilities	3	9	**19**	**18**	12	12	12	11	11	11	11
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	3	11	**22**	**23**	16	16	15	14	14	13	15
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	18	18	18	18	18	18	18	18	18	18	18

Sources: Country authorities; and staff estimates and projections.

1/ A bold value indicates a breach of the threshold.

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

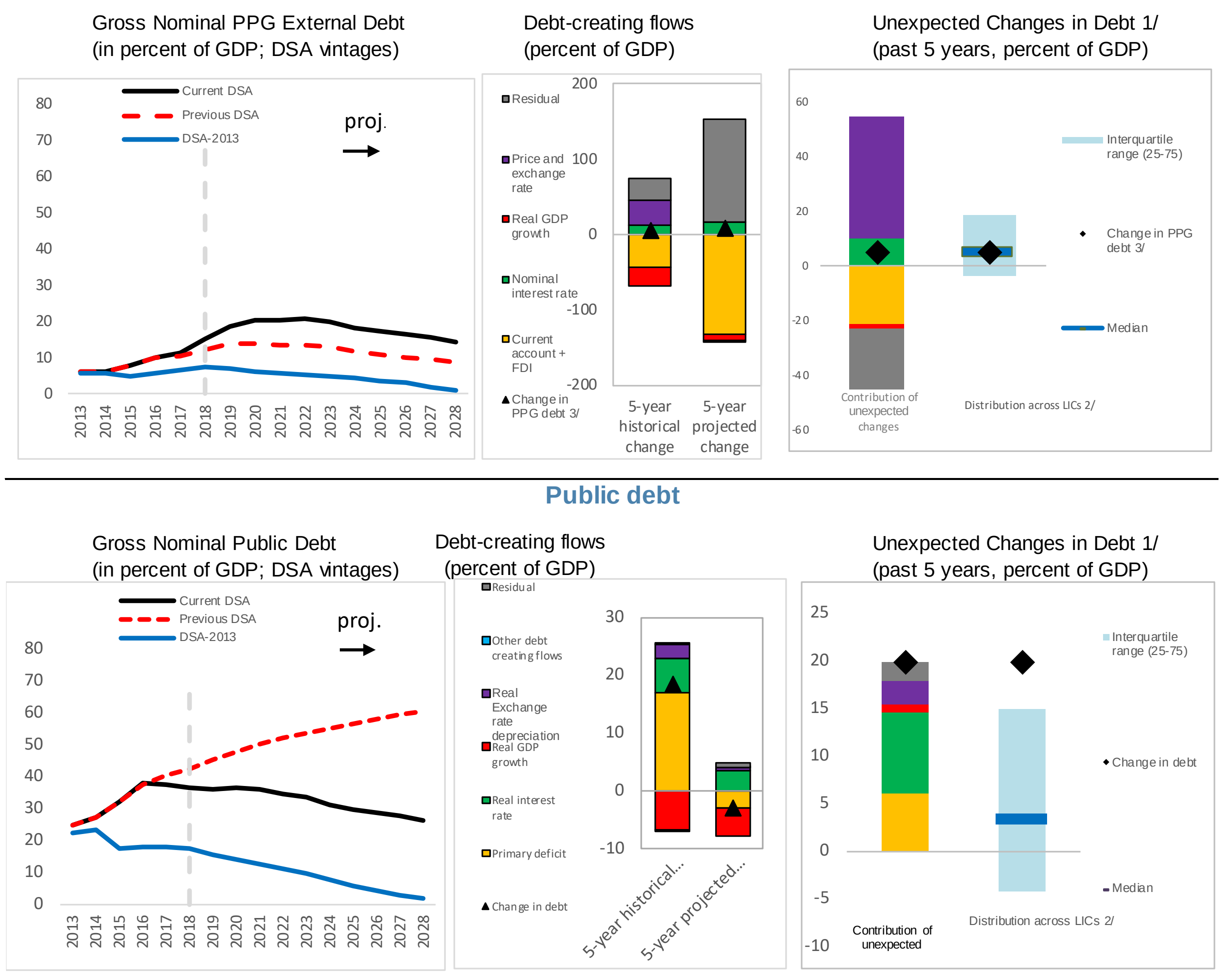
3/ Includes official and private transfers and FDI.

Table 4. Papua New Guinea: Sensitivity Analysis for Key Indicators of Public Debt, 2018-2028
(In percent)

	Projections 1/										
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
PV of Debt-to-GDP Ratio											
Baseline	47	45	43	40	38	37	33	32	30	29	27
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2018-2028 2/	47	45	43	42	41	40	39	39	38	38	38
B. Bound Tests											
B1. Real GDP growth	47	49	53	53	52	53	51	51	51	51	51
B2. Primary balance	47	48	50	48	46	44	40	39	37	35	34
B3. Exports	47	51	**59**	**57**	54	53	49	47	45	43	42
B4. Other flows 3/	47	46	46	44	41	40	36	34	33	31	30
B5. One-time 30 percent nominal depreciation	47	50	46	43	40	37	33	31	28	26	24
B6. Combination of B1-B5	47	47	46	41	39	37	34	32	30	29	27
C. Tailored Tests											
C1. Combined contingent liabilities	47	51	49	46	44	43	39	37	36	34	32
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	47	47	49	51	53	54	53	53	53	54	54
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Public debt benchmark	55	55	55	55	55	55	55	55	55	55	55
PV of Debt-to-Revenue Ratio											
Baseline	261	265	246	226	207	196	201	190	180	171	161
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2018-2028 2/	261	266	248	234	222	215	238	234	231	228	225
B. Bound Tests											
B1. Real GDP growth	261	290	301	290	281	280	303	303	303	303	304
B2. Primary balance	261	286	288	267	248	236	244	232	222	212	202
B3. Exports	261	303	338	316	295	282	293	281	270	260	248
B4. Other flows 3/	261	274	263	243	224	212	218	207	197	187	178
B5. One-time 30 percent nominal depreciation	261	296	268	241	217	201	201	186	171	157	144
B6. Combination of B1-B5	261	278	267	231	212	200	205	193	183	173	163
C. Tailored Tests											
C1. Combined contingent liabilities	261	300	279	259	240	227	234	223	213	203	193
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	261	315	314	315	307	304	327	319	319	320	321
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Debt Service-to-Revenue Ratio											
Baseline	43	23	27	23	20	18	18	22	18	19	19
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2018-2028 2/	43	22	26	22	19	17	17	21	17	18	19
B. Bound Tests											
B1. Real GDP growth	43	25	33	30	27	27	32	39	36	38	40
B2. Primary balance	43	23	32	31	24	25	30	32	23	24	25
B3. Exports	43	23	28	26	23	21	20	24	21	22	23
B4. Other flows 3/	43	23	27	24	20	19	18	22	18	20	20
B5. One-time 30 percent nominal depreciation	43	23	31	27	22	20	20	23	19	20	20
B6. Combination of B1-B5	43	22	27	25	20	19	19	23	19	19	20
C. Tailored Tests											
C1. Combined contingent liabilities	43	23	35	26	22	26	28	27	21	23	24
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	43	26	31	28	29	28	30	37	38	41	42
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Sources: Country authorities; and staff estimates and projections.
1/ A bold value indicates a breach of the threshold.
2/ Variables include real GDP growth, GDP deflator and primary deficit in percent of GDP.
3/ Includes official and private transfers and FDI.

Figure 3. Papua New Guinea: Drivers of Debt Dynamics – Baseline Scenario External Debt



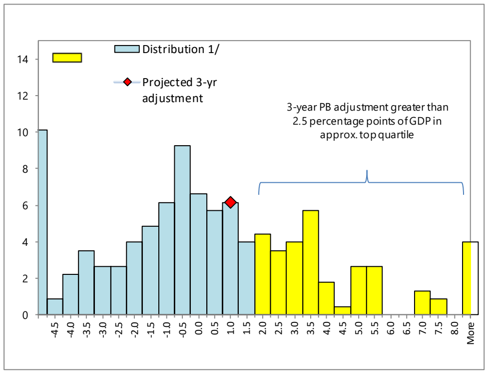
1/ Difference between anticipated and actual contributions on debt ratios.

2/ Distribution across LICs for which LIC DSAs were produced.

3/ Given the relatively low private external debt for average low-income countries, a ppt change in PPG external debt should be largely explained by the drivers of the external debt dynamics equation.

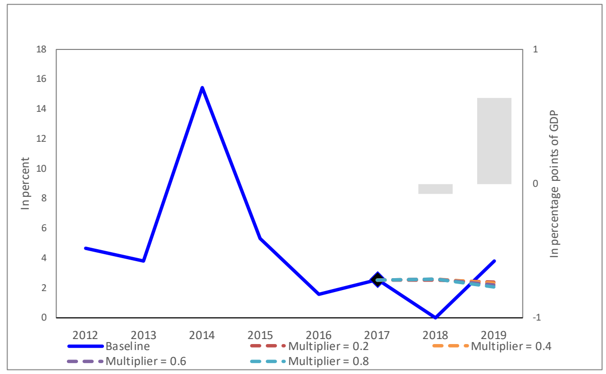
Figure 4. Papua New Guinea: Realism Tools

3-Year Adjustment in Primary Balance
(Percentage points of GDP)



1/ Data cover Fund-supported programs for LICs (excluding emergency financing) approved since 1990. The size of 3-year adjustment from program inception is found on the horizontal axis; the percent of sample is found on the vertical axis.

Fiscal Adjustment and Possible Growth Paths 1/



1/ Bars refer to annual projected fiscal adjustment (right-hand side scale) and lines show possible real GDP growth paths under different fiscal multipliers (left-hand side scale).

Public and Private Investment Rates
(% of GDP)

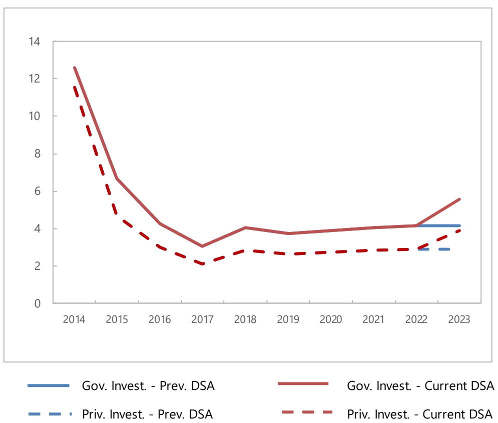
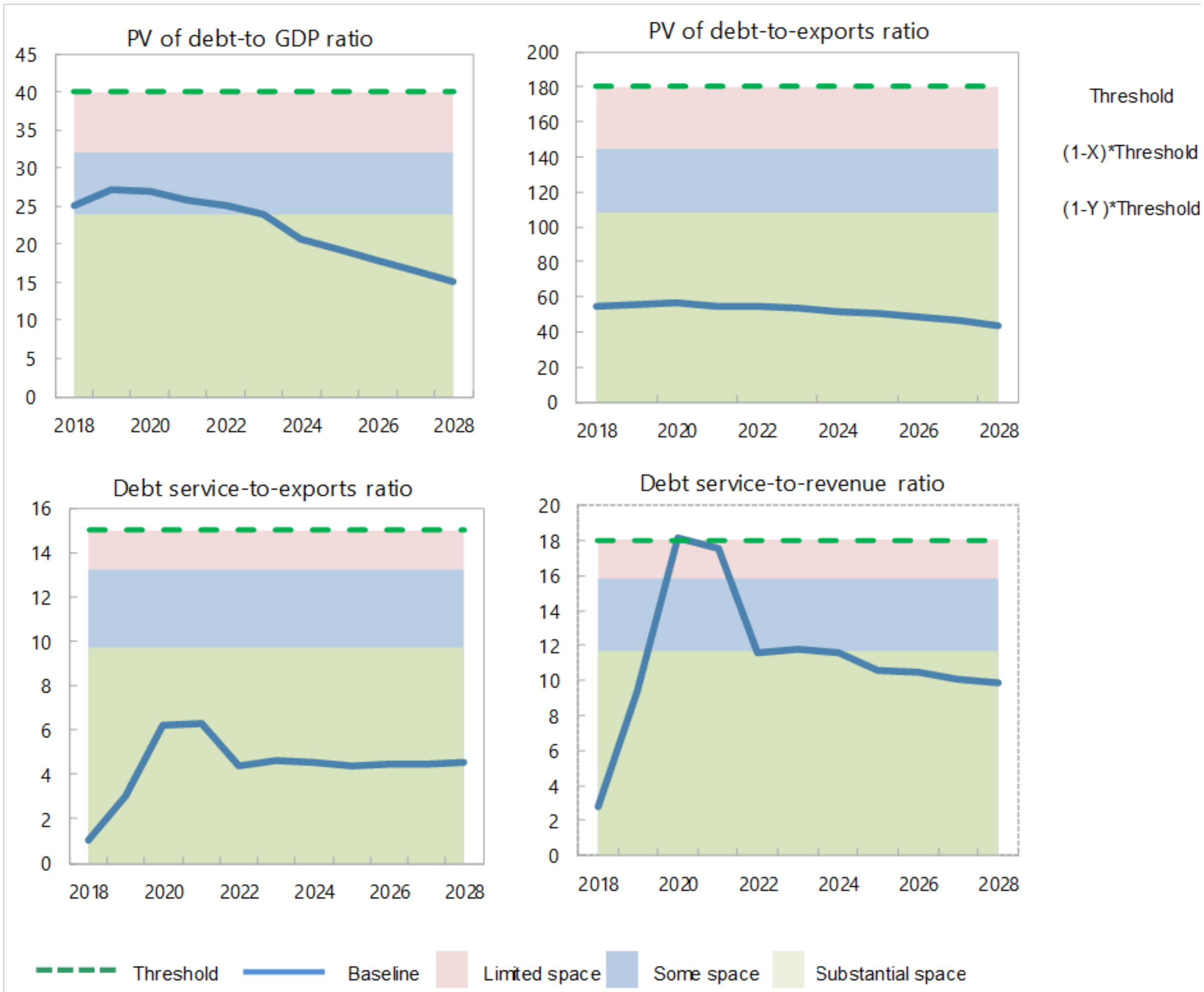


Figure 5. Papua New Guinea: Qualification of the Moderate Category, 2018-2028 1/



Sources: Country authorities; and staff estimates and projections.

1/ For the PV debt/GDP and PV debt/exports thresholds, x is 20 percent and y is 40 percent. For debt service/Exports and debt service/revenue thresholds, x is 12 percent and y is 35 percent.

Statement by Nigel Ray, Executive Director for Papua New Guinea, Grant Johnston, Alternate Executive Director, and Sali David, Advisor to Executive Director

November 26, 2018

Papua New Guinea is the largest Pacific island country and one of the most culturally diverse nations in the world, with over 800 different ethnic languages. Around 85 percent of the population lives in rural and remote areas, where government services are difficult to access. Almost all land is in customary ownership. Much of it, however, comprises swamps, steep mountains, dense forests, rivers and rugged terrain, and PNG suffers frequently from natural disasters. The physical and climatic conditions create logistical and infrastructure challenges and many development indicators remain low. The country is richly endowed with natural resources, and the oil, gas and mining industries make up a significant part of the economy. While this exposes PNG to commodity-driven cycles, the country has a sound financial system and a stable political environment, and the Government is committed to sound macroeconomic management.

Developments and outlook

The 2018 Supplementary Budget and the 2019 Budget were presented to Parliament in mid-November. These show the budget deficit and debt-to-GDP ratios on declining paths, in compliance with the Fiscal Responsibility Act and the Medium Term Fiscal Strategy. Revenue in 2018 has been higher than expected but so has expenditure, with spending increases primarily due to higher employment in the Government's priority areas of education, health and law and order. The expected Budget outturn in 2018 has improved, despite a large earthquake that cost many lives and disrupted operations at oil and gas fields and at a gold mine. The PNG authorities expect 0.3 percent growth in 2018, compared to staff's zero percent, due to a faster-than-anticipated recovery from the earthquake, improved commodity prices and APEC-related activities. They agree the economy will pick up substantially next year, boosted by a recovery in the oil and gas sector and by activity associated with large mining and petroleum projects.

PNG issued its first sovereign bond in October, raising US$500 million for a 10-year maturity that was heavily over-subscribed. In addition, budget support loans were secured from the ADB and World Bank, with the first tranches of US$100 million and US$150 million, respectively, occurring in 2018. Other external financing efforts in 2018 include the final, US$190 million, disbursement of a Credit Suisse commercial loan.

Fiscal policy

The authorities are committed to prudent financial management. Although fiscal consolidation has been challenging, the authorities have made good progress on tax collection and public financial management. Resident TA from the Fund has helped implement a five-year Medium-Term Revenue Strategy aimed at mobilizing domestic revenue. A large taxpayer office was opened in September to improve service and compliance.

On the expenditure side, the authorities note staff's suggestions for spending cuts but recognise that these are in difficult and sensitive areas. As part of the 2019 Budget, the Government is establishing tighter controls in the payroll system to ensure salaries are linked to budget warrants, as is the case for goods and services. It is also instituting tighter controls on the in-take of teachers, health workers, police and the military, but their impact will be gradual because of programmed throughput from training colleges. Provincial and district grants, while opaque, have brought direct benefits to areas and regions that have not previously experienced much in terms of government services and are part of the Government's decentralization strategy.

The Government's Medium Term Fiscal Strategy 2018-22, incorporating requirements of the Fiscal Responsibility Act, limits public debt to within a band of 30 to 35 percent of GDP, trending towards the lower limit in the medium term. Successive Budgets have been designed around this requirement, with the 2019 Budget showing debt falling below 30 percent of GDP in 2021. Earlier this year, new National Accounts data for 2014 and 2015 was released that incorporated a change in deflator methodology. This indicated a significantly lower nominal GDP level than previously reported and therefore a considerably higher debt-to-GDP ratio, threatening a breach of the Fiscal Responsibility Act. The new numbers took the authorities by surprise, with no opportunity for a transition strategy and associated communications strategy. The Budget, the Government's fiscal strategy and its public communications have been based around the previous methodology, so this abrupt change has been the source of some frustration to the authorities, who are now focusing on the best way forward.

Monetary and financial sector policies

The Bank of Papua New Guinea (BPNG) has maintained its neutral monetary policy stance given the easing in inflation, relative stability of the kina exchange rate and moderate global economic growth. While liquidity levels remain high, lending to the private sector has been relatively weak, although it is expected to pick up with increased economic activity. BPNG is refining its monetary policy framework to improve the transmission of monetary policy and liquidity management. This includes introducing quantitative targets for the reserve money framework, a new overdraft facility (the Intra-day Liquidity Facility), and a collateralized repo facility with an interest rate corridor. The authorities are grateful for the Fund's policy advice and technical assistance in this area.

The authorities agree with staff on exchange rate flexibility and the need for orderly adjustment. But they consider a more gradual depreciation to be appropriate, especially given structural issues with a shallow domestic market and few dealers. The government's foreign borrowing, including the bond issue, has helped clear most of the back log of foreign exchange orders. The kina equivalent is being used to restructure and reduce short-term domestic debt. This will reduce high domestic interest costs, reduce refinancing risks and extend the maturity of the government's debt portfolio. BPNG and Treasury will work together to coordinate their actions and manage liquidity.

PNG's financial system is sound, and dominated by commercial banks which are well-capitalized, profitable and have low NPL ratios. The authorities agree they should remain vigilant on financial stability in light of the proposed monetary and FX reforms, liquidity management challenges and the proposal to change the Government's domestic debt maturity structure. In addition, the proposed take-over of ANZ's retail and SME business operations by Kina bank will require careful monitoring by BPNG.

Structural policies

In the medium term, growth in PNG could be boosted by several major resources projects currently being developed, including expansion of the existing PNG LNG project, development of another LNG project and the Wafi-Golpu gold project. The authorities consider that, subject to overall investment risks, the government's involvement in future resource projects should be tilted more towards higher payments earlier in the project cycle, to reduce fiscal risk and ensure that revenue is derived from production rather than profitability.

A sovereign wealth fund is currently being established, to invest proceeds from the non-renewable resources sector. A board will be appointed shortly, to start the process of operationalizing the fund. While the resources sector is likely to drive growth in the future, the authorities also recognize the need to diversify the economy into sectors such as agriculture, tourism and services, and have assisted these sectors in the 2019 Budget. The Government is supporting, for example, production of locally-grown rice, vegetables, meat and dairy product. PNG hosted APEC this year and the authorities considered this an important opportunity to showcase the country and promote investment.

The authorities are committed to addressing governance issues, recognizing the important role good governance plays in development. Substantial progress has been made in this area, including enhancing the AML/CFT framework, undertaking a national risk assessment and getting a National Procurement Act and revised Public Finance Management Act approved by Cabinet. Legislation on an Independent Commission Against Corruption (ICAC) is awaiting approval. Civil society organizations in PNG also welcome the new focus of the IMF in addressing governance issues.