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PAPUA NEW GUINEA ECONOMIC UPDATE JANUARY 2019

Slower Growth, Better Prospects



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January 2019



Preface and Acknowledgements

This publication is the second in a new series of Papua New Guinea Economic Updates (*PNG EU*). It has two principle aims. First, it analyzes the key recent developments in Papua New Guinea's economy and places these in a longer-term and global context. Based on these developments, and recent policy changes, the *PNG EU* updates the outlook for Papua New Guinea's economy and the welfare of its citizens. Second, the *PNG EU* provides a more in-depth examination of a selected development issue and evaluates the implications of recent trends and policy reforms in terms of the government's stated development objectives. It is intended for a wide audience, including policymakers, business leaders, and the community of analysts and professionals engaged in Papua New Guinea's evolving economy.

The *PNG EU* is compiled by the Macroeconomics, Trade and Investment Global Practice, under the guidance of Michel Kerf (Country Director), John Panzer (Practice Director), Ndiame Diop (Practice Manager), and Patricia Veevers-Carter (Country Manager). The core project team comprises Ilyas Sarsenov, Andrew Blackman, and Anthony Obeyesekere. The special focus section is based on the Papua New Guinea Systematic Country Diagnostic prepared by Chandana Kularatne, Manohar Sharma, Daniel Street, and Anthony Obeyesekere. Administrative support is provided by Michelle Lee, Rachel Leka, and Angela Oswyn. Bronwen Brown edited the text. Dissemination is organized by Tom Perry, Benjamin Brighthouse, and Amanda Donigi.

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Abbreviations and Acronyms

ADB	Asian Development Bank	NEER	Nominal Effective Exchange Rate
APEC	Asia Pacific Economic Cooperation	NRPB	Non-resource primary balance
bbbl	Barrels	OECD	Organisation for Economic Cooperation and Development
BPNG	Bank of Papua New Guinea	PNG	Papua New Guinea
CPI	Consumer price index	PNG DMT	PNG Highlands Earthquake Disaster Management Team
CRF	Consolidated Revenue Fund	PNG EU	Papua New Guinea Economic Update
DSA	Debt sustainability analysis	PNG LNG	Papua New Guinea Liquefied Natural Gas Project
FDI	Foreign direct investment	PPAP	Productive Partnerships in Agriculture Project
FSV	Family and sexual violence	RAL	Reserved Activity List
FX	Foreign currency	SME	Small and medium enterprise
ILG	Incorporated Land Group	SOE	State-owned enterprises
INA	Institute of National Affairs	SWF	Sovereign Wealth Fund
IMF	International Monetary Fund	T-bills	Treasury bills
K	Kina	TVET	Technical and Vocational Education and Training
KFR	Kina facility rate	USD	United States Dollars
LNG	Liquefied natural gas	WTTC	World Travel and Tourism Council
MTDS	Medium-Term Debt Management Strategy		
MTFS	Medium-Term Fiscal Strategy		
MTRS	Medium-Term Revenue Strategy		

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Executive summary



Actions have been taken to address the challenges facing the PNG economy, and to rebuild communities and recover livelihoods following a devastating earthquake. Photo: David Kirkland.

A. Economic Update: Slower Growth, Better Prospects

The February 2018 earthquake had a devastating impact on the economy and the population of Papua New Guinea (PNG). The 7.5 magnitude earthquake led to a temporary disruption in the production of liquefied natural gas (LNG) and other mining activities concentrated in the highlands area, leading to a contraction in the extractive sector which almost fully offset the expansion of the non-extractive economy.¹ Preliminary estimates suggest that real GDP growth slowed from 2.8 percent in 2017 to 0.3 percent in 2018. This latest estimate stands in contrast with a pre-earthquake growth projection of 2.5 percent for 2018. The earthquake also had far-reaching effects on many communities in the highlands area. The disaster is estimated to have claimed over 100 lives, affected over half a million people, and caused extensive damage to basic infrastructure. In the immediate aftermath of the earthquake, the government established the Emergency Controller to oversee relief supplies and the restoration of services in the affected provinces, and international donors and the private sector mobilized financial resources and humanitarian aid to support the affected communities. However, recovery efforts have been hampered by the delay in establishing a dedicated Restoration Authority to oversee the disaster recovery and reconstruction, despite parliament having passed legislation to create the authority in March 2018.

¹ Due to limitations of national accounts data, our economic analysis rests on describing trends and composition of the extractive sector (comprising oil and gas extraction, mining, and quarrying) and the non-extractive economy. As national statistics improve, the analysis should be extended to a broader definition of the resource sector (beyond the extractive sector to include resource-related construction, trade, transportation, and exploration services). This will help to identify the size and composition of the non-resource economy, which would constitute a proper measure of diversification efforts by the authorities.

Recognizing the economy's dependence on the resource sector, the government has refocused its development vision on broad-based growth. The PNG economy has become increasingly concentrated in petroleum-and-gas-related activities since 2014, raising its vulnerability to external shocks, including commodity-price shocks and natural disasters. In recent months, however, the authorities have taken decisive action to promote greater diversification of the economy. First, in October 2018 the government adopted its new five-year Medium-Term Development Plan for 2018–22 (MTDP III), focusing on inclusive and sustainable growth and envisaging higher public investment in physical infrastructure, which is required to facilitate private sector development outside the resource sector. Second, in November 2018 the government announced the 2019 National Budget with a focus on supporting the implementation of MTDP III and building a broader-based economy. Although the 2019 National Budget represents a deviation from the earlier-adopted fiscal consolidation path (as the 2019 non-resource primary deficit is estimated to be higher than initially projected), the 2020–23 indicative budget remains consistent with the Medium-Term Fiscal Strategy for 2018–22 (MTFS) which targets a substantial reduction of the fiscal deficit.² The government has also committed to renewing its focus on revenue mobilization to narrow the fiscal deficit, as was defined in the Medium-Term Revenue Strategy for 2018–22 (MTRS).

The government successfully tapped the international bond market to address the shortage of foreign exchange and finance its new development vision under the MTDP III. Following a roadshow to promote its debut sovereign bond, PNG raised a ten-year USD500 million sovereign bond (which was oversubscribed by seven times) in September 2018.³ Due to high demand, the bond interest rate was set at 8.375 percent, closer to the lower bound of a targeted range. The bond will be used partially to lengthen the public debt profile which became more concentrated around expensive short-term domestic debt, leading to an increased risk of debt distress (raised from low to moderate, as assessed by the joint IMF-World Bank Debt Sustainability Analysis). To address the refinancing and interest-rate risks the government adopted the Medium-Term Debt Management Strategy for 2018–22 (MTDS), which aims to extend the maturity profile of public debt by replacing short-term domestic debt with longer-term and concessional external debt. However, this substitution will increase the foreign-exchange (FX) risk, which should be managed carefully. The bond is also being used to finance new initiatives of the MTDP III and address the FX orders backlog which emerged due to the FX rationing strategy pursued by the authorities in recent years.

Ongoing reforms to strengthen the monetary and exchange rate policy and framework are expected to improve business confidence and increase private investment and growth in the non-resource economy. Measures include addressing the FX shortage, managing the liquidity effects of the use of FX to clear the FX orders backlog, working on greater exchange rate flexibility, considering options for strengthening the interest-rate transmission mechanism, and enhancing modeling capacity in the Bank of Papua New Guinea (BPNG). In this context, the government and the BPNG will need to ensure regular, transparent, and consistent communication with all stakeholders to minimize the risk of confusion and market disruption.

Papua New Guinea's medium-term economic outlook is relatively sanguine, underpinned by further large-scale resource projects. Real GDP growth is forecast to rebound to about 5 percent in 2019, primarily driven by a return to full annual production in the extractive sector. In the years after, growth is estimated to ease to its current potential of 3-4 percent a year, until planned investments in LNG and mining projects kick in. Future large-scale investment in the resource sector appears likely, with plans to double LNG production and develop new gold, copper, and silver reserves. With increased FX inflows into the economy, the current pressure on the exchange rate may reverse, adversely affecting the competitiveness of the non-resource economy. To facilitate broad-based, inclusive, and sustainable development, the government will need to focus

² In the MTFS, the government adopted the non-resource primary balance as a fiscal anchor and targets it to reach a zero balance on average over the medium term.

³ The bond was rated a sub-investment grade B by Standard and Poor's and B2 negative by Moody's.

more on investing in human capital and strengthening the business environment to spur private sector development, as elaborated in the World Bank's Systematic Country Diagnostic and summarized in the special focus section of this report.

B. Special Focus: Catalyzing the Private Sector for Inclusive Development

Boosting the development of the private sector will be essential to meet the employment needs of the growing working-age population and ensure more inclusive economic growth. Dominated by foreign firms, the resource sector—which comprises the bulk of the country's exports and has attracted crucial foreign direct investment (FDI)—has been a strong performer since independence. However, owing to the high capital intensity of these activities, their prospects for significant job creation are limited. In contrast, performance in the non-resource economy—where the majority of businesses operate and where most people earn their living—has been less impressive. These enterprises tend to be small in size, informal, and inward-looking. Once subsistence and smallholder agricultural producers and the self-employed are included, over 90 percent of firms in the non-resource economy are micro-sized and informal. Even amongst those firms that are administratively licensed in some way, data suggest that over 70 percent of firms have less than ten employees and about 25 percent of firms are informal. Firms are also overwhelmingly domestically-oriented, with only around 6 percent of small and medium enterprises (SMEs) active in export markets. Setting the non-resource economy on a more robust growth trajectory will be essential to create enough good jobs to absorb the large number of youth who will enter the labor force in the coming decades. However, catalyzing business growth and expansion will require addressing impediments to the business environment. Specific efforts should be focused on agriculture, fisheries, and tourism—sectors that are labor intensive, leverage PNG's geographic and cultural advantages, and present ample employment opportunities for women and youth.

Doing business in PNG is particularly challenging, with a weak institutional setup, poor infrastructure, and a skills shortage. The country ranked 108 of 190 economies in the World Bank Group's 2019 Doing Business survey, placing it about midway among lower-middle-income and peer economies, though broader business conditions in PNG might be considerably worse than suggested by this largely *de jure*-based review of conditions in Port Moresby, the capital of PNG. Historically, firm-level surveys have identified the following major constraints to business, investment, and growth: corruption; political uncertainty and the stability of rules; infrastructure and related services; access to finance; access to land; law and order; and skills shortages. Most recently, access to foreign exchange and the value of the Kina have weighed most heavily on businesses, while corruption and the state of public infrastructure remain key issues. The shortages of foreign currency and the exchange rate are reported as severe constraints across all industries. However, corruption disproportionately affects manufacturing firms, while construction firms struggle much more with poor access and quality of public infrastructure than firms in other sectors.

Agriculture is the bedrock of the economy and holds the most potential for generating private-sector-led, balanced, and inclusive growth. Agriculture, which is highly labor intensive, supports the livelihoods of the majority of households and provides significant economic opportunities for women and youth. It has the potential to promote key linkages between rural and urban economies and plays a crucial role in supporting food security in local communities. However, in recent decades the sector has experienced only moderate growth and its international competitiveness has waned. The key constraints PNG's agriculture sector faces include: poor access to markets; low productivity due to limited uptake in improved techniques and technologies; and limited access to land and credit. Several approaches can improve productivity and growth. Among the most critical will be addressing the country's inadequate transport and logistical service infrastructure. Improving infrastructure would reduce the amount of produce wasted on the long, often-unrefrigerated journey to market from difficult-to-access rural locations. Agricultural extension services need to be deployed in innovative and cost-effective ways to assist producers by increasing their knowledge of agronomy, upgrading their techniques in practice, and introducing modern inputs—including improved

fertilizers and pest controls. Improvement in land registration is also crucial to improve access to credit, along with improving financial literacy and extending the availability of credit information.

Fisheries are an important source of coastal livelihoods and can be better leveraged to boost job creation and inclusive growth. Most fisheries production is undertaken by foreign-owned fleets operating in PNG's offshore fisheries, generating public revenues through access licensing fees, and some employment through onshore processing. However, coastal and inland fisheries and associated small-scale economic activities are more important direct contributors to local livelihoods. Among the key constraints to the onshore fisheries industry is that the small size of production volumes in most coastal communities does not financially justify investment in processing and other facilities that are crucial to supporting commercial activities and promoting greater SME involvement. Furthermore, coastal resource management is constrained by skills and capacity shortfalls in, and limited accountability of, provincial and local administrations. To address these constraints, small market players need access to viable processing facilities and appropriate marketing and distribution networks for their output. Where this requires new investment, it should only proceed where it jointly leverages business from larger operators in offshore and coastal fisheries, so as to reach production volumes that can significantly improve efficiency and cost competitiveness. Stronger regional cooperation around offshore tuna fisheries is also necessary, as are enhancements in the flexibility and value of tuna fishery access rights, upskilling of fishery managers, better branding and marketing of local tuna, and support for regional processing clusters.

A high-performing sustainable tourism sector has the potential to create considerable employment—especially among women and youth—and to drive economic activity in remote parts of the country.

The sector's skills profile is well-suited to PNG's relatively unskilled and semi-skilled labor force. Despite steady growth in visitor arrivals, tourism's contribution to the PNG economy and employment is well below its potential, and small when compared to other Pacific island economies. High prices, limited product offerings, and low-quality services combine with personal safety concerns to hinder the country's attractiveness to potential tourists. Going forward, efforts should focus on leveraging the country's substantial geographic, ecological, and ethnographic endowments to promote niche experiences for special interest tourists (for example, adventure tourism, cultural tourism, and, potentially, ecotourism). PNG should also seek to exploit the increasing popularity of cruise tourism in the region, while monitoring developments in the small but rapidly growing Chinese visitor market. Transforming the tourism sector will also require: (i) improving actual and perceived safety and security; (ii) improving access to, and within, PNG; (iii) improving infrastructure, products, and experiences to allow for entry of both tourism-related services and other ancillary businesses; (v) increasing supply-side participation of local communities; and (iv) strengthening the institutional and policy frameworks for tourism development across all tiers of government.

Coordinated, cross-sectoral solutions that improve access to infrastructure, foreign exchange, finance, land, and skilled labor are required to ease the constraints on private sector development. Such actions could have substantial payoffs in terms of inclusive growth, economic diversification and job creation—especially in the agriculture, fisheries, and tourism sectors that are also highly inclusive of women and youth. However, authorities should be cautious of solutions designed simply to improve *de jure* assessments of the business environment that may—in isolation—have limited impact upon on-the-ground realities. Attention should focus on alleviating key constraints to higher productivity and investment, including through regulatory reforms that remove real impediments to business activity. Care also needs to be taken to avoid reforms that inadvertently raise policy uncertainty and risks for investors.⁴ Close collaboration with local and foreign firms (as well as potential new entrants) will be crucial in helping authorities identify the most significant constraints and opportunities, and thus where reform efforts should be targeted to achieve the greatest impact.

⁴ For instance, reforms to the foreign investment regime—foreshadowed in recent draft legislation for a specialized Foreign Investment Regulatory Authority—have increased the perceived level of business environment risk and may deter foreign capital.

A. Economic Update: Slower Growth, Better Prospects



The February 2018 earthquake adversely affected production in the extractive sector, dragging down economic growth in 2018. Photo: Shutterstock/Angela N Perryman.

1. Recent economic developments

1.1. Economic growth

1. While global growth remained robust in the first half of 2018, global trade and industrial activity are now moderating in a context of intensifying trade tensions and heightened policy uncertainty. Following a synchronized global upturn which saw global real GDP growth register 3 percent in 2017 and 2018, worldwide economic activity is now decelerating. Global goods trade has stagnated since the second quarter of 2018, as demand for imports has softened across advanced economies—with the notable exception of the United States—and exports from Asia have faltered. The global Purchasing Managers' Index for new export orders has fallen from a seven-year high of 53.8 in January to below 50 in September—the first contraction since June 2016—suggesting that global trade is continuing to soften. The slowdown is occurring in an environment of rising trade barriers, elevated policy uncertainty, and heightened financial market turbulence in some emerging market and developing economies. Softening economic momentum is also evident across PNG's major trading partners, with GDP growth in 2018 estimated to have decelerated year on year in nine of PNG's top ten export markets, affecting external demand for PNG produce.

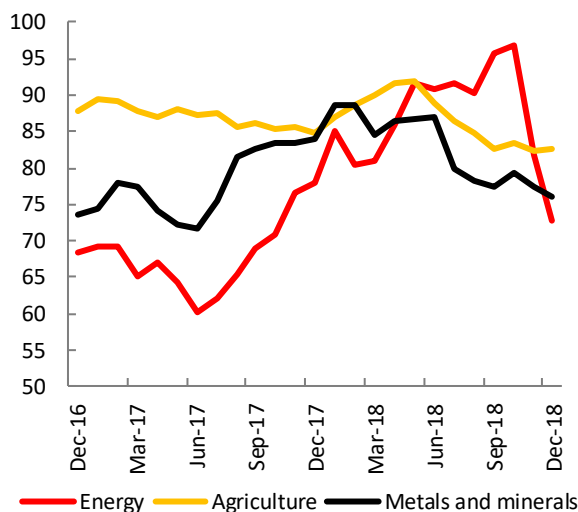
2. Slowing economic growth and heightened uncertainty has also weighed on commodity prices in recent months. Strong global momentum underpinned a surge in most commodity prices through the first half of 2018. However, rising trade tensions and market concerns about a global economic slowdown saw non-energy commodity prices recede since mid-year (Figure 1). In December 2018, agriculture and metal prices were around 10 and 14 percent lower than their mid-2018 peaks, respectively. In contrast, energy prices continued to rise through the year to October, before a sharp correction in November and December. Average oil prices rose to over USD76/barrel (bbl) in October—their highest level since 2014—on the back of the

collapse in Venezuelan production, the reintroduction of U.S. sanctions on Iran, and persistently robust demand despite global trade tensions. However, in November and December concerns about oversupply and the slowing global economy began to weigh on the market, with oil prices dropping 30 percent to USD54/bbl. In October-November, Japanese liquefied natural gas (LNG) prices (the reference price for PNG natural gas exports) also rose to their highest level since 2015, but a price correction is expected by the market in early 2019. Notwithstanding recent volatility, prices for LNG remain 26 percent lower than their averages over the period 2011–14, while prices for crude oil are nearly 50 percent lower than their average over the same period.

3. **Real GDP growth in the PNG economy is estimated to have slowed to 0.3 percent in 2018, adversely affected by a 7.5 magnitude earthquake that struck the country in the beginning of the year and unfavorable terms of trade in recent months.** Prior to the earthquake, the PNG economy was projected to expand by 2.5 percent in 2018, driven by a moderate strengthening of growth in both the extractive and non-extractive sectors. However, the disaster caused severe disruptions in three major mining and petroleum projects (PNG LNG, Ok Tedi, and Porgera mine; see Box 1 for a description of the earthquake and its impacts) and must have affected direct and indirect suppliers and customers of disaster-stricken firms, and thus amplifying the effects of the initial shock. Consequently, output in the oil and gas sector is estimated to have fallen by around 15 percent year on year in 2018, despite production recommencing much faster than initially expected, and monthly production averaging around 30 percent above nameplate capacity during the third quarter.⁵ The mining sector is also estimated to have contracted (by 2.6 percent) in 2018 although post-earthquake monthly production has significantly outperformed pre-earthquake projections, helping to offset some of the lost output during the forced shutdown. Overall, the extractive sector is estimated to have contracted by 9.2 percent year on year, shaving almost 2 percentage points off real GDP growth in 2018 (Figure 2).⁶

Figure 1: Global commodity prices have softened since mid-2018

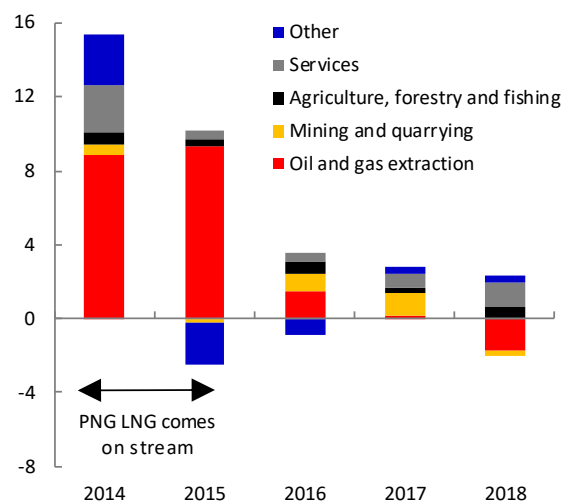
Price index, 2010=100



Source: World Bank 2018a.

Figure 2: Strengthening growth in the non-extractive sector in 2018 more than offset the contraction in the extractive sector due to the earthquake

Sectoral contributions to aggregate annual real GDP growth, percent



Source: World Bank staff estimates.

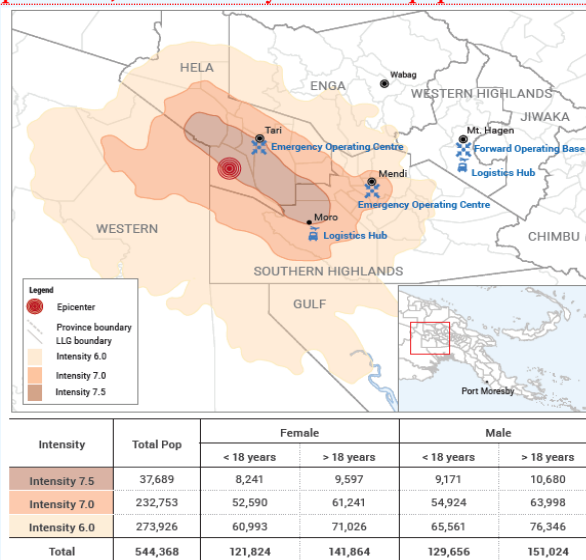
⁵ The actual forced shutdown of LNG production was about eight weeks.

⁶ Nevertheless, given that PNG LNG utilized the shutdown period to undertake maintenance previously scheduled for later in the year, the rebound in production over the remainder of 2018 may be stronger than currently projected, posing an upside risk to the growth outlook for this year.

Box 1: The 2018 highlands earthquake
A devastating event that highlights PNG's vulnerability to natural disasters

A 7.5 magnitude earthquake struck the Highlands region of PNG on February 26, 2018, leading to significant damage and loss of life. The earthquake's epicenter was located in the province of Hela, with the most severe impacts suffered in the Hela and Southern Highlands provinces. The Enga, Western and Gulf provinces also sustained extensive damage (Figure 3). The devastating impacts of the principal earthquake were further compounded by a series of strong aftershocks and landslides. More than 100 people were killed, and widespread damage was reported to schools, health clinics, crops and gardens, roads, airports, and district administration buildings. Around 8,000 homes were destroyed or severely damaged, and another 46,000 homes damaged to some degree, forcing over 43,000 displaced people to seek emergency shelter in care centers and with host families.^a Overall, the disaster is estimated to have affected more than half a million people across the five most affected provinces, with over 270,000 people requiring humanitarian assistance, including 125,000 children.^b

Figure 3: The earthquake epicenter, most affected provinces, and summary of affected population



Source: PNG DMT 2018a.

The disaster caused severe disruptions to three major mining and petroleum projects, shaving 2 percentage points off national GDP growth in 2018. The impacted projects were PNG LNG Hides gas conditioning plant and Hides Well Pad in Hela province, the Porgera gold and silver mine, and Ok Tedi (a copper, gold, and silver mine). PNG LNG accounts for 40 percent of PNG's goods exports and 16 percent of GDP. As a result, an eight-week shutdown of two LNG trains (owing to the temporary production suspension at the Hides facility) had a significant negative impact on growth. The production disruption at the Porgera mine—caused by damage to gas and electricity infrastructure—is estimated to have reduced annual output by around 15 percent in 2018.^c At the Ok Tedi mine, which is one of the country's largest sources of foreign exchange, landslides cut the copper slurry pipeline and blocked the access road to the mine, resulting in a two-week closure. Elsewhere, oil production was suspended for between two to four months, depending on the field. Despite the faster-than-expected resumption of production following the disaster—and the fact that many sites have significantly ramped up production in the months since the earthquake—these disruptions are nevertheless estimated to have resulted in a 14.8 percent year-on-year decline in annual oil and gas output and a 2.6 percent decline in annual mining output, thereby reducing 2018 national GDP growth by around 2 percentage points.

Initial estimates are that the reconstruction and recovery effort will cost at least K640 million (USD200 million, or 1 percent of 2017 GDP).^d In the weeks following the earthquake, the government undertook three assessments in coordination with development partners to determine the expected costs of disaster response, reconstruction, and recovery. Development partners have formed the PNG Highlands Earthquake Disaster Management Team (PNG DMT) to facilitate the coordination and partnership with the government, subnational authorities and non-state actors.^e The first study estimated the costs associated with the provision of humanitarian assistance to the 544,000 Papua New Guineans affected by the earthquake during the first six months following the disaster (known as the immediate response phase). The assessment estimated that around K200 million (USD62 million) would be required to support action in seven areas: food security; health and nutrition; water, sanitation and hygiene; shelter; protection; education; and logistics coordination.^f A second study estimated the cost of rehabilitating damaged social infrastructure—primarily health and education facilities in the most affected provinces—at around K340 million (USD105 million). The final assessment estimated that road infrastructure rehabilitation would cost an additional K100 million (USD31 million).

Despite passing legislation to establish a dedicated Restoration Authority to oversee the disaster recovery and reconstruction, the authority is yet to be constituted, hampering recovery efforts. On March 1, the prime minister, Peter O'Neill, announced a State of Emergency in the Enga, Hela, Southern Highlands, and Western provinces^g and pledged K450 million for the recovery and reconstruction effort.^h In March, Parliament passed an act establishing the Western, Enga, Southern Highlands, and Hela Restoration Authorityⁱ for a four-year period with an initial budget of K450 million (USD138 million, 0.7 percent of GDP)^j to manage the implementation of the long-term reconstruction and recovery of economic and social infrastructure and services in the affected provinces, as well as the resettling of people displaced by the earthquake.^k The Prime Minister indicated that K100 million would be released immediately and the remaining K350 million allocated over the next three years.^l However, the Restoration Authority was yet to be established in January 2019. Instead, the Emergency Controller, established with the Emergency (General Powers) Act of 2018 to oversee relief supplies and the restoration of services in the affected provinces, has continued to lead the recovery effort; by end-August 2018 the Emergency Controller had spent K67 million of the K124 million in public funds allocated to the body. Additionally, more than K200 million (USD62 million) was mobilized from the private sector and international donors for earthquake response and recovery.^m

Ensuring food security and restoring basic public infrastructure and services remain critical challenges. Landslides caused by the earthquake destroyed many staple food crops and family vegetable plots, rendering around 153,000 people food-insecure, while damaged roads continue to hinder access to markets and public services. The restoration of livelihoods through the provision of seeds/cuttings and tools, as well as road repairs, is therefore essential. Efforts to reestablish schooling and health services are also ongoing, although the rugged terrain and security concerns have stymied progress in the most difficult-to-reach locations. Access to schooling was affected for over 15,000 students in 105 assessed schools, with five of the affected schools completely damaged and 100 partially damaged. In response, 60 schools-in-a-box have been distributed, accompanied by training for teachers on their use.ⁿ The earthquake damaged around 80 percent of health facilities in the Hela and Southern Highlands provinces. By early October, 90 percent had been repaired and were receiving patients. Nevertheless, 70 percent of clinics still are yet to receive support to repair or install a safe water source. Across the affected provinces, access to safe water and sanitation facilities remains a critical concern due to contamination of natural water sources and destruction of water collection and sanitation infrastructure. Restoration of rainwater collection and storage systems, water treatment units, and sanitation facilities is, therefore, a critical priority.^p

a. PNG DMT 2018c.

b. PNG DMT 2018c.

c. Authors' calculations based on Barrick (2018).

d. The assessments that underpin this estimate excluded a range of key economic infrastructure sectors, did not incorporate damages to private property, and excluded around 15 facilities in Hela that could not be accessed due to security issues. Consequently, the total needs for recovery and reconstruction are expected to be somewhat higher than the figure quoted here.

e. The PNG DMT is being led by the United Nations Resident Coordinator's Office and the Coordination and Assessment Team.

f. PNG DMT 2018b.

g. In addition to the four provinces under a state of emergency, Gulf province was also found to be seriously affected.

h. On June 1, 2018, the State of Emergency was extended for another two months (PNG Post-Courier 2018d).

i. The authority will also cover parts of West Sepik and Gulf provinces.

j. PNG Post-Courier 2018a.

k. PNG DMT 2018b.

l. During the announcement of the extension of the State of Emergency, Prime Minister O'Neill stated that K2 million (USD614,000) would be provided to each of the most affected districts and K1 million (USD307,000) to the less affected districts in the earthquake zone (PNG Post-Courier 2018d).

m. The majority of contributions have come from the private sector (approximately USD43 million), with large commitments from Bank South Pacific Group, ExxonMobil, Kumul Petroleum Holdings, Oil Search, Ok Tedi Mining Limited, and Porgera Joint Venture. A further USD18 million has been received from Australia, Canada, China, France, Israel, Japan, New Zealand, the United States and the European Union (PNG DMT 2018d).

n. PNG DMT 2018d.

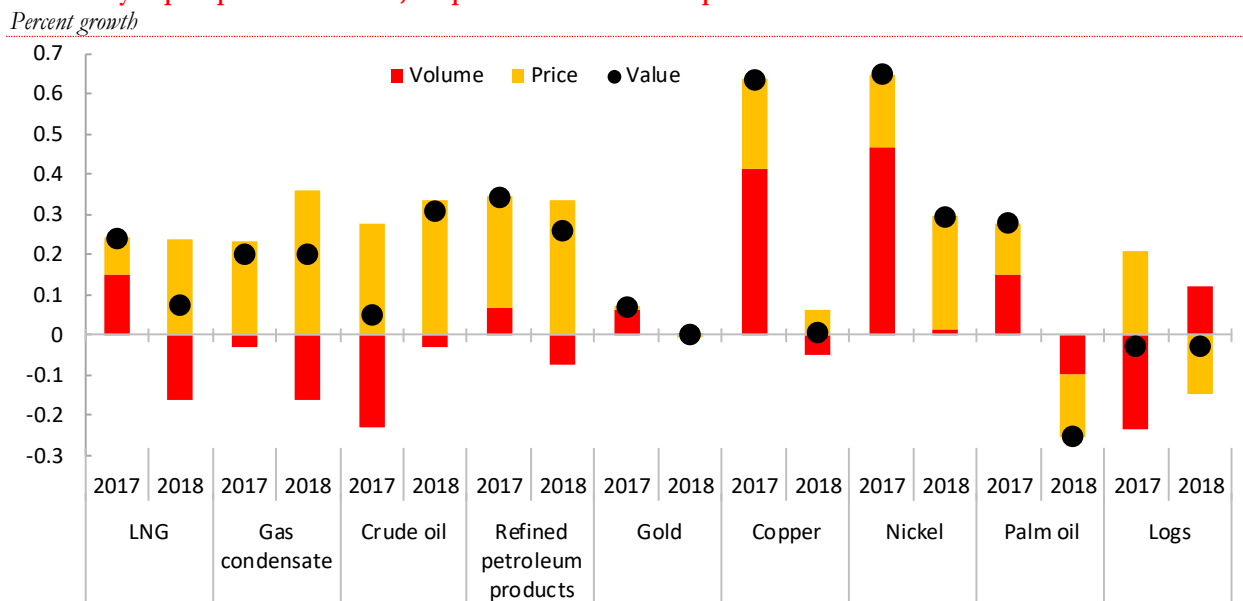
o. Of the 86 health facilities in Hela and Southern Highlands provinces, 67 were damaged by the disaster (PNG DMT 2018c).

p. PNG DMT 2018a.

4. **Despite the annual output contraction in the extractive sector, export revenue increased thanks to higher oil and gas annual-average prices in 2018, compared to 2017.**

- i. For the *petroleum and gas sector*, continued increases in global energy prices supported the faster-than-expected recovery in production and helped to cushion the negative impacts of the earthquake on export values (Figure 4). The average realized gas price for PNG LNG for the first three quarters of 2018 increased by nearly 24 percent year on year, to an average of USD10.45 per million British Thermal Units in the third quarter of 2018, the highest quarterly average price since the first quarter of 2015. Oil Search—a PNG LNG consortium partner—reported stable, low unit production costs of USD8.50 per barrel of oil equivalent (boe) in 2016 and USD8.67/boe in 2017, and an operating margin of 69 percent and 73 percent, respectively. As a result of the earthquake, production costs during the first half of 2018 increased to USD14.04/boe—still 25 percent below their original operating costs in 2013—while the operating margin remained healthy, at 65 percent. Unit production costs are estimated to have recovered to pre-earthquake levels by the end of 2018. In the petroleum sector, oil production is expected to have continued its long-term decline as many key oil fields continue to mature, with 2018 volumes down by around 17 percent year on year.
- ii. The *mining sector* is estimated to have contracted by 2.6 percent year on year in 2018. Despite the strong recovery in production following the shutdown, the disruption is expected to have dragged down annual copper production by around 5 percent in 2018, while gold, nickel and cobalt output is estimated to have been roughly the same as in 2017. The run-up in global metals and minerals prices during the first half of 2018 also helped to cushion the impacts of the earthquake on export earnings, although the price correction since mid-2018 partially negated the strong rebound in export volumes in recent months.

Figure 4: Higher global energy prices helped to cushion the negative impacts of the earthquake on many of PNG’s key export products in 2018, despite contractions in export volumes



Source: World Bank staff calculations.

Note: These products comprised almost 90 percent of PNG’s exports by value in 2017.

5. **Growth in the non-extractive economy is expected to have accelerated to 3 percent in 2018 from 1.8 percent in 2017, as improvements in the supply of foreign exchange and higher spending by the public sector boosted domestic demand.** Growth in the non-extractive economy accelerated in 2018 as some of the constraints inhibiting its performance in recent years continued to ease. These constraints include

(i) a shortage of foreign exchange;⁷ (ii) a deceleration in government spending; (iii) delays in the payment of government bills to the private sector; (iv) and long-term structural constraints faced by non-extractive sectors.⁸ The shortage of foreign exchange, which first arose following the collapse in global commodity prices in 2014–15 and a FX rationing strategy adopted by the authorities, led to a severe import compression, inhibiting investment and production in the non-resource economy.⁹ In response, authorities implemented a series of reforms to monetary and FX policies in 2018.¹⁰ Crucially, the BPNG ceased to provide direction on the allocation of FX to customers and, since July, the BPNG has undertaken several interventions to increase FX supply while also allowing for a gradual downward adjustment in the nominal Kina/USD exchange rate. In addition, the issuance of a USD500 million sovereign bond in September—together with the drawing down of the final tranche of the Credit Suisse loan, the disbursement of budget support loans from the Asian Development Bank (ADB) and the World Bank, and some improvements in export earnings—appear sufficient to ease the outstanding FX backlog and to allow for FX orders to be filled more quickly—which can help to facilitate international trade in goods and services. PNG’s hosting of the Asia Pacific Economic Cooperation (APEC) summit and multiple senior-level events preceding it also boosted non-extractive economy growth in 2018, particularly in the construction sector and services such as retail, accommodation, transport, and security. Increased government spending in 2018 also boosted demand for non-extractive goods and services, although public sector arrears remain sizeable, and delays in the payment of government bills to the private sector remains an important factor dampening economic activity in the non-extractive economy. A clear plan to resolve these arrears and avoid future build-ups would significantly boost business confidence. Finally, the direct and indirect impacts of the earthquake on 2018 non-extractive production have been limited, given the relative remoteness of the most-affected areas, and the enclave-nature of the extractive sector.

6. **The agriculture, forestry and fisheries sector is estimated to have expanded by 3.3 percent in 2018, up from 1.8 percent growth in 2017, as a recovery in timber, coffee, and cocoa production more than offset lower palm oil production.** Strong demand from China, the destination for almost 90 percent of PNG’s timber exports, has underpinned a recovery in timber production following two years of declining output. Coffee and cocoa production also rebounded in 2018—following 2017 output declines of 30 percent and 20 percent, respectively—as the sector recovered to full production following the impacts of adverse weather conditions in 2017, including a prolonged dry spell in the highlands. However, lower palm oil prices and output weighed on sectoral growth. Despite falling by 10 percent year on year in 2018, palm oil export volumes remained well above their long-term average, primarily due to a substantial increase in production capacity during 2017 at one of New Britain Palm Oil Ltd’s subsidiaries, Ramu Agri Industries Limited.

7. **Despite strengthening growth momentum in the non-extractive economy in 2018, BPNG data suggests that formal sector job creation remained lackluster.** Overall, total formal sector employment contracted by 2.7 percent in 2017,¹¹ underpinned by a 23.8 percent decline in the construction sector and about a 5 percent fall in each of the retail, wholesale, transport, and manufacturing sectors, as the most severe periods of FX shortages and public-sector expenditure compression translated into lower business activity and investment, and the freezing of some public-sector capital projects. Despite improving growth in the non-extractive sectors in 2018, BPNG data (based on a quarterly private sector business survey) indicate that formal sector employment continued to decline in 2018, down by over 3 percent from a year earlier, and that

⁷ The causes of the shortage in foreign currency are discussed in detail in the December 2017 edition of the *PNG Economic Update* (World Bank 2017a).

⁸ See Part B for a discussion of the structural constraints faced by the private sector.

⁹ In a survey conducted in late 2017, the Institute of National Affairs (INA 2018) highlighted that access to foreign currency and uncertainty regarding future exchange rate policy were two of the key concerns for both large firms and SMEs.

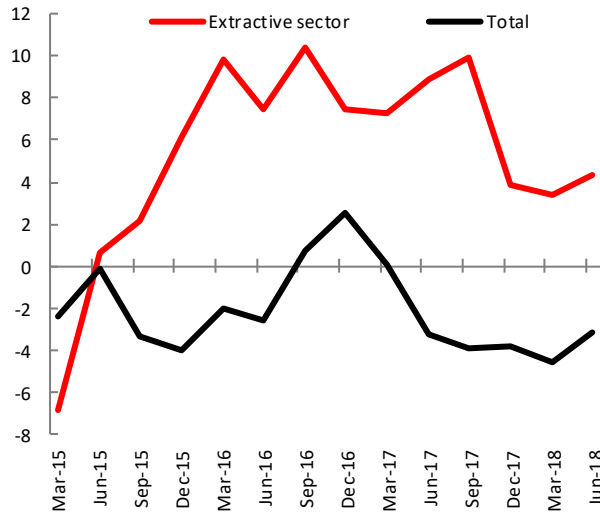
¹⁰ See sub-section 1.3 for a detailed discussion of these policy measures.

¹¹ Formal sector employment accounts for around 16 percent of all employment (Jones and McGavin 2015); data on developments in informal employment are not available.

retrenchments were broad-based across non-extractive sectors (Figure 5). There was one ‘green shoot’ in the non-extractive formal sector employment story, however, with the wholesale services sector adding jobs for the first time since 2014 (Figure 6). Extractive-sector employment growth remained positive in the first half of 2018, but this had little impact on overall employment given that—despite their sizeable contribution to output and exports—the mineral and petroleum sectors are estimated to account for a minute fraction of national employment.

Figure 5: The non-extractive sectors continue to struggle to create formal jobs...

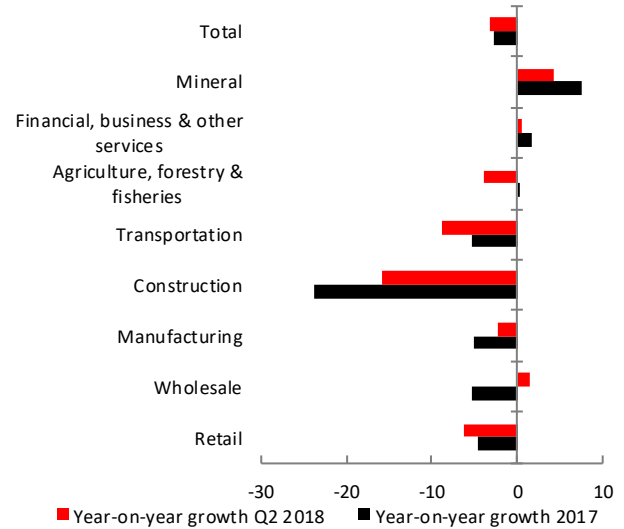
Year-on-year percent change



Source: Bank of Papua New Guinea.

Figure 6: ...although there were some ‘green shoots’ of recovery in wholesale services in Q2 2018 and business services and the extractive sector continued to add jobs.

Year-on-year percent change, 2017 compared to Q2 2018



Source: Bank of Papua New Guinea.



The new Medium-Term Development Plan III envisages higher public investment in productive physical capital to facilitate broad-based and inclusive growth. Photo: Natalia Li.

1.2. Fiscal developments

8. In early 2018, the government adopted a new fiscal framework aimed at achieving medium-term fiscal and debt sustainability through fiscal consolidation. This new fiscal framework, known as the Medium-Term Fiscal Strategy for 2018–22 (MTFS), brings together a range of fiscal rules related to revenue, spending and debt under one unifying framework (Table 1). As part of the MTFS framework, the fiscal rules were specified in the Medium-Term Revenue Strategy for 2018–22 (MTRS) and the Medium-Term Debt Management Strategy for 2018–22 (MTDS). These fiscal rules are built around a new fiscal anchor, the non-resource primary balance (NRPB), which the government targets to bring to a zero-average balance over the medium term.¹² The full implementation of these strategies, and the adherence to the associated fiscal anchor, can help to deliver fiscal consolidation and macroeconomic stability over the medium term. This goal can be achieved by: (i) mobilizing non-resource revenue via addressing the erosion of the tax base and strengthening the capacity of revenue administration institutions; and (ii) improving expenditure controls over large spending items and streamlining inefficient spending. On the debt management side, the government is implementing sustainable debt and liability management by re-orientating the public debt portfolio to reduce interest costs, lengthen average maturities, and lower foreign exchange risks, all in the context of lowering the overall debt burden over the medium term.

9. The government also laid out important measures to strengthen public financial management. The MTFS includes a series of actions to strengthen the effectiveness of the allocation, control, accountability, and transparency in the use of public funds. Key measures include: (i) the rollout of the Integrated Financial

¹² The NRPB is calculated as non-resource revenue minus primary expenditure. In this concept, resource revenue is considered as a deficit-financing item with potential fiscal savings set aside for future generations. Moreover, the NRPB calculation uses primary expenditure as this excludes interest payments which are essentially a result of fiscal policy stances and NRPB outcomes in preceding periods.

Management System to all national government departments for the recording of all public expenditures; (ii) strengthening of cash management by requiring the transfer of public revenues and trust fund balances to the Consolidated Revenue Fund (CRF);¹³ and (iii) improving the coordination and efficiency of the budget process by strengthening the budgeting approach in determining spending priorities, ceilings, and trade-offs.

Table 1: Operationalizing the Medium-Term Fiscal Strategy 2018–22¹⁴

Key fiscal rules embedded in the MTFS

Revenue	
1.	Revenue (excluding grants) to be raised to 14 percent of GDP by broadening the revenue base
2.	Implement the Sovereign Wealth Fund (SWF) deposit rule: 50 percent of all mining and petroleum taxes are deposited into the SWF
Expenditure	
3.	Two-thirds of primary expenditure (that is, expenditure excluding debt servicing) allocated to ‘key enabler’ sectors
4.	Personnel costs to be reduced to less than 40 percent of total non-resource non-grant revenue and should not increase more than 5 percent yearly (arrears payments excluded)
5.	Expenditure managed as per the SWF rule—withdrawals from the Stabilization Fund shall be made through the National Budget and shall not exceed the five-year moving average of mineral and petroleum receipts as a share of non-mineral and non-petroleum receipts
6.	Capital expenditure to increase and be maintained between 5 and 6 percent of GDP a year
Deficit and Debt Ceilings	
7.	Target a zero-average annual non-resource primary balance over the medium term
8.	Retain the debt ceiling of up to 35 percent of GDP, but compel the government to target a lower level of 30 percent of GDP over the medium term

Source: PNG Treasury 2018b.

10. **The renewed focus on fiscal consolidation resulted in a sharp contraction in the fiscal deficit in 2017. However, this drove an increase in arrears, which necessitated a correction in the 2018 Budget.** Initially, the new O’Neill-Abel government—formed following elections in June and July 2017—introduced a supplementary budget in August 2017 which included a series of critical measures to correct an underperformance in revenue and an overshoot in expenditure during the first six months of 2017. Expenditure measures mainly focused on improving efficiency in the procurement of goods and services and the allocation of personal emoluments. As a result, the non-resource primary deficit was cut from about 4.5 percent of non-resource GDP in 2015–16 to 1.6 percent in 2017 (and was projected to fall further to 1.0 percent of GDP in the 2018 Budget), which was considered a very positive contribution to the fiscal consolidation strategy.¹⁵ However, at the same time, as spending controls remained weak substantial budget arrears appeared. By end-October 2018, the government estimated that budget arrears accounted for K948.1 million (about 1.3 percent of GDP).¹⁶ Consequently, the government introduced a 2018 Supplementary Budget that almost doubled the fiscal deficit (compared to 2017), with the non-resource primary deficit estimated to reach 2.8 percent of non-resource primary GDP in 2018. This fiscal outturn was a necessary fiscal adjustment to address budget arrears, even though it represents a deviation from the fiscal consolidation path initially identified by the government.

¹³ Under this action, revenue collecting agencies will be required to transfer unused funds to the CRF, while non-tax-revenue-collecting agencies will be required to remit 90 percent of their revenues to the CRF. This is part of the revenue mobilization exercise announced in the Government’s 100-day plan and is established in legislation by the Public Money Management Regularisation Bill 2017.

¹⁴ Consistent with international experience, the fiscal rules should be interpreted as targets to be met over the medium term, rather than limits that must be complied with each year.

¹⁵ PNG Treasury 2018a.

¹⁶ PNG Treasury 2018b.

11. **In 2017–18, Papua New Guinea’s hosting of the November 2018 APEC Summit and a series of preceding events occupied the government’s agenda.** According to the authorities, public spending for hosting all APEC events accounted for about K715 million during 2016–18, of which K45 million was budgeted in 2016, K250 million in 2017, and K300 million in 2018, while there was also a K120 million tax credit provided to Oil Search for the construction of the APEC Haus, the main venue for the summit. Taking into account assistance from bilateral partners in the form of car and bus fleets and security support, the total cost for hosting the APEC events is estimated to be about K1 billion (USD300 million).¹⁷ As mentioned in sub-section 1.1 above, the hosting of the APEC events had a positive impact on domestic demand (mainly in Port-Moresby, the capital city), boosting construction and non-resource services in 2017–18.

12. **The 2019 National Budget builds on the 2018 fiscal outturns and refocuses on supporting diversified economic development.** In October 2018, the government adopted a new Medium-Term Development Plan for 2018–22 (MTDP III), aiming to facilitate the inclusive and sustainable development of PNG by investing in productive economic sectors (Box 2). Following the MTDP III adoption, the government aligned its 2019 Budget with new development priorities and identified broad-based development as a priority going forward. In particular, the government plans to increase its capital budget on domestic and international connectivity by investing more in productive physical infrastructure (roads, bridges, and ports) and high-speed internet (a domestic grid linked to a submarine internet cable from Australia). The government also plans to receive bilateral support to increase electricity supply, particularly in rural areas. The recently-held APEC Summit identified potential partners in expanding access to electricity from the current 15 percent of the population (mainly in urban areas) to 70 percent country-wide by 2030. At the same time, the government plans to institute better spending controls over personal emoluments and warrants permits issued for purchasing of goods and services, which are designed to reduce overall public spending as a percent of GDP (Figure 7).

Figure 7: The expenditure pattern remains broadly in line with the fiscal consolidation strategy...

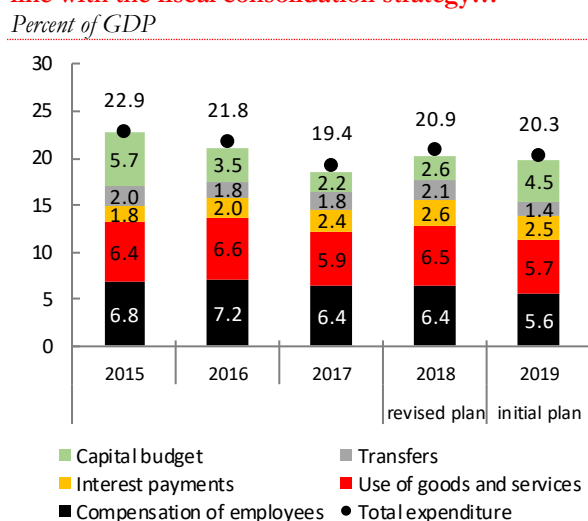
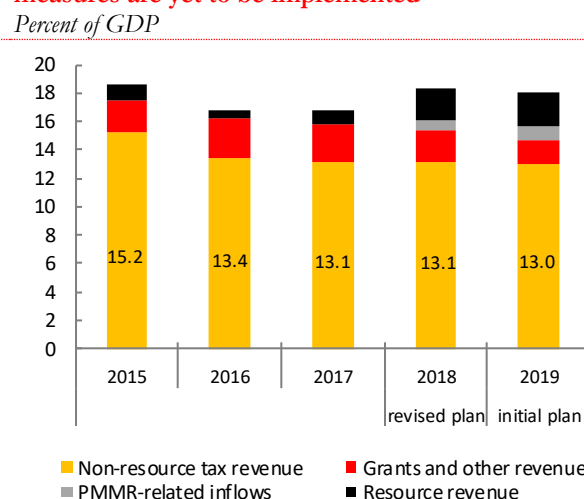


Figure 8: ...while non-resource revenue mobilization measures are yet to be implemented



Sources: PNG Treasury 2018b; World Bank staff estimates.

13. **The government renewed its focus on revenue mobilization to achieve the fiscal consolidation targets.** The government will establish a dedicated MTRS Program Management Office that will focus on the implementation side of the MTRS, designed to strengthen the revenue collection agencies, increase compliance, broaden the tax base, and introduce new measures to adjust the tax mix. Developed with technical assistance from the IMF, the MTRS draws heavily on the government’s 2015 comprehensive Tax Review. Key initiatives

¹⁷ PNG Post-Courier (2018e).

implemented in 2018 include: (i) the establishment of a large taxpayers’ office to improve compliance and tax services; (ii) additional funding support for both the Internal Revenue Commission and the Customs Authority to boost their capacity and effectiveness; (iii) the abolishment of the training levy and double deduction for employee training expenses; (iv) increased tariffs on refined petroleum products and other imported products;¹⁸ (v) increased diesel excise to align the rate with petrol excise; (vi) preparation of a new Tax Administration Act to modernize and simplify tax administration; and (vii) preparation of the tax expenditure statement as part of a broader objective of reviewing, rationalizing, and streamlining tax incentives. The renewed MTRS efforts should contribute to raising the level of non-resource tax revenue, currently estimated at about 13 percent of GDP (Figure 8). As part of the 2019 Budget package, the government identified two measures to help to address the erosion of the tax base—the reduction of loss-carry-forward time to seven years for non-resource companies and 20 years for resource and primary production, and the removal of zero-rating for goods and services tax for suppliers of resource companies.

14. **Despite a policy deviation in 2018–19 from the original fiscal consolidation path, the non-resource primary balance (NRPB) remains in line with the fiscal consolidation trajectory.** The non-resource primary deficit reached a high of 6.6 percent of non-resource GDP in 2014 but fell to about 4.5 percent in 2015–16. The sharp expenditure consolidation in the 2017 Budget (as described above) led to an unprecedented drop in the NRPB, to a deficit of 1.6 percent of non-resource GDP. In 2018–19, the non-resource primary deficit is estimated to widen to 2.7–2.8 percent of non-resource GDP. This fiscal expansion represents a deviation from the initial fiscal consolidation path, within which the government was planning to cut the NRPB to -1 percent of non-resource GDP in 2018–19. Despite this deviation, the NRPB remains on a downward (fiscal-consolidation) trajectory (Figure 9). The indicative medium-term budget framework for 2020–23 indicates that the government is committed to its MTFS targets of bringing the NRPB to a zero-average level.¹⁹

Figure 9: The NRPB deficit is narrowing...

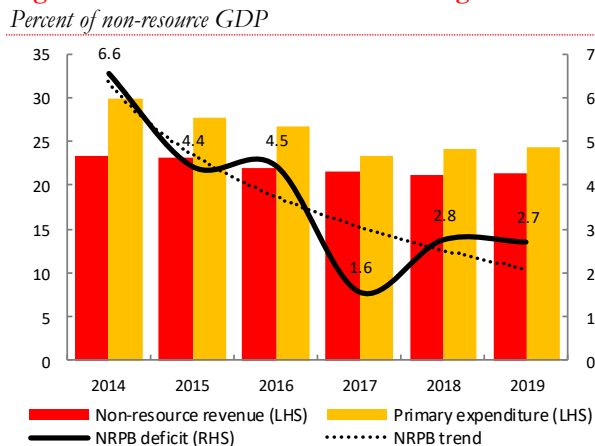
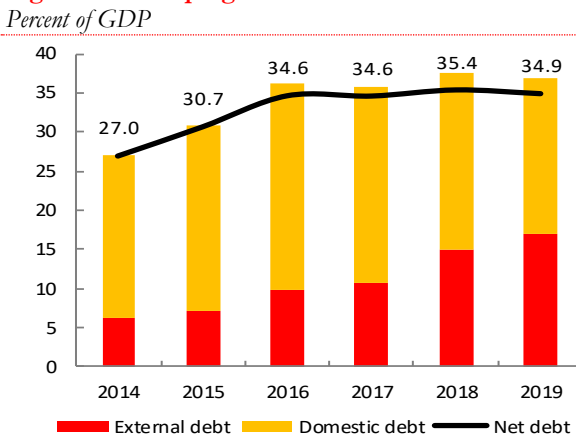


Figure 10: ...helping to stabilize the debt-to-GDP ratio



Sources: PNG Treasury 2018b; World Bank staff estimates.

15. **Fiscal consolidation efforts have stabilized the public debt level, which has already reached its legislated limit.**²⁰ As the fiscal deficit has narrowed, it has helped to stabilize public debt at about 35 percent of GDP, which is the legislated threshold set in the MTDS. Since 2014, there has been a shift in the composition of government debt towards external debt (Figure 10). The latter was driven in large part by the authorities

¹⁸ These products include eggs, meats (beef, pork, and poultry), and cooking oil. This adjustment is designed to support domestic manufacturers who are competing with imported goods.

¹⁹ PNG Treasury 2018b.

²⁰ The government holds the view that the debt-to-GDP ratio will remain below the 35 percent limit over the forward forecasts to 2022. The discrepancy is due to the different estimates of nominal GDP since 2015 and the different approach to external debt revaluation.

resorting to external commercial borrowing from Credit Suisse and a recent debut issuance of a USD-denominated sovereign bond. According to the MTDS, the government plans to rely more on concessional financing from bilateral and multilateral partners, including budget-support operations provided by the ADB and the World Bank. As part of development-focused budget support to PNG, the ADB provided its first tranche (out of three) of USD100 million in August 2018, and the World Bank disbursed its first development policy credit (out of two) of USD150 million in December 2018. As part of the MTDS implementation, the government intends to use a portion of external borrowing proceeds to retire most outstanding expensive short-term domestic debt.

16. **The risk of public debt distress remains moderate.** The 2017 IMF-World Bank Debt Sustainability Analysis (DSA) raised the risk of public debt distress from low to moderate. The 2018 DSA left the debt distress risk unchanged. This elevation in the debt distress classification derived from the increasingly short-term profile of government debt, which raises rollover risks. However, this assessment crucially depends on whether public finances can be brought under control. Furthermore, the current level of public debt is underestimated as it does not capture government guarantees provided to statutory authorities and state-owned enterprises. The accumulation of budget arrears also adds to the stock of public debt and can create serious fiscal costs if left unchecked.²¹ In this context, it remains important for the government to develop an adequate framework for capturing all sorts of explicit and implicit contingent liabilities, as they constitute fiscal risks to the budget.

Box 2:

Securing a better future through inclusive and sustainable economic growth
The Medium-Term Development Plan III

In October 2018, the government launched its long-awaited Medium-Term Development Plan III 2018–22 (MTDP III), laying out a comprehensive strategy for delivering on the country’s development aspirations over the next half-decade. Its overall objective is to “secure the future through inclusive and sustainable economic growth.” Following on from the earlier MTDP I (2011–15) and MTDP II (2016–17), the plan draws lessons from these previous efforts, identifies the key development challenges facing the country, and responds to these in a way that is aligned with priorities under the government’s Alotau Accord II, Vision 2050, the Strategy for Responsible Sustainable Development, and the United Nation’s Sustainable Development Goals.

The plan has been carefully structured to translate its high-level goal into a comprehensive set of targets, timeframes, and tangible deliverables at the sector level. The following eight key result areas are outlined: (i) increased revenue and wealth creation; (ii) quality infrastructure and utilities; (iii) sustainable social development; (iv) improved law and justice and national security; (v) improved service delivery; (vi) improved governance; (vii) responsible sustainable development; and (viii) sustainable population. Each result area has a number of goals and, specified against each of these, a number of strategies, indicators, baselines, and end-of-plan targets. The plan then specifies 49 thematic sectors ranging from agriculture, fisheries and tourism, to health, education, and sports; also included are transport, energy development, law and justice, the national statistical system, youth, gender, and a broad provincial sector. For each sector, the plan presents a high-level goal and outlines a set of sector-specific strategies, deliverables, and investments. Annual targets to 2022 are specified for all indicators, as are key deliverables and required investments. Furthermore, a comprehensive monitoring and evaluation framework is articulated, comprising quarterly progress reports, annual reviews, a mid-term evaluation, and a final evaluation. Linkages between the monitoring and evaluation requirements and the government’s annual budget process are documented, with Ministerial responsibilities identified at each stage.

The MTDP III attempts to tackle all major development challenges that have been highlighted in recent years. The implementation plan of deliverables, strategies, and investments reads like a compendium of to-do lists from previous government, think tank, and development partner reports. For example, the plan rightly focuses on key economic enablers and transport connectivity, while emphasizing the importance of the non-resource sector for

²¹ See Box 6 from the December 2017 *PNG Economic Update* for a discussion of the risks and remedies to arrears accumulation.

inclusive and sustainable growth. Crucial areas of institutional reform are also targeted such as governance, public sector management, and land.

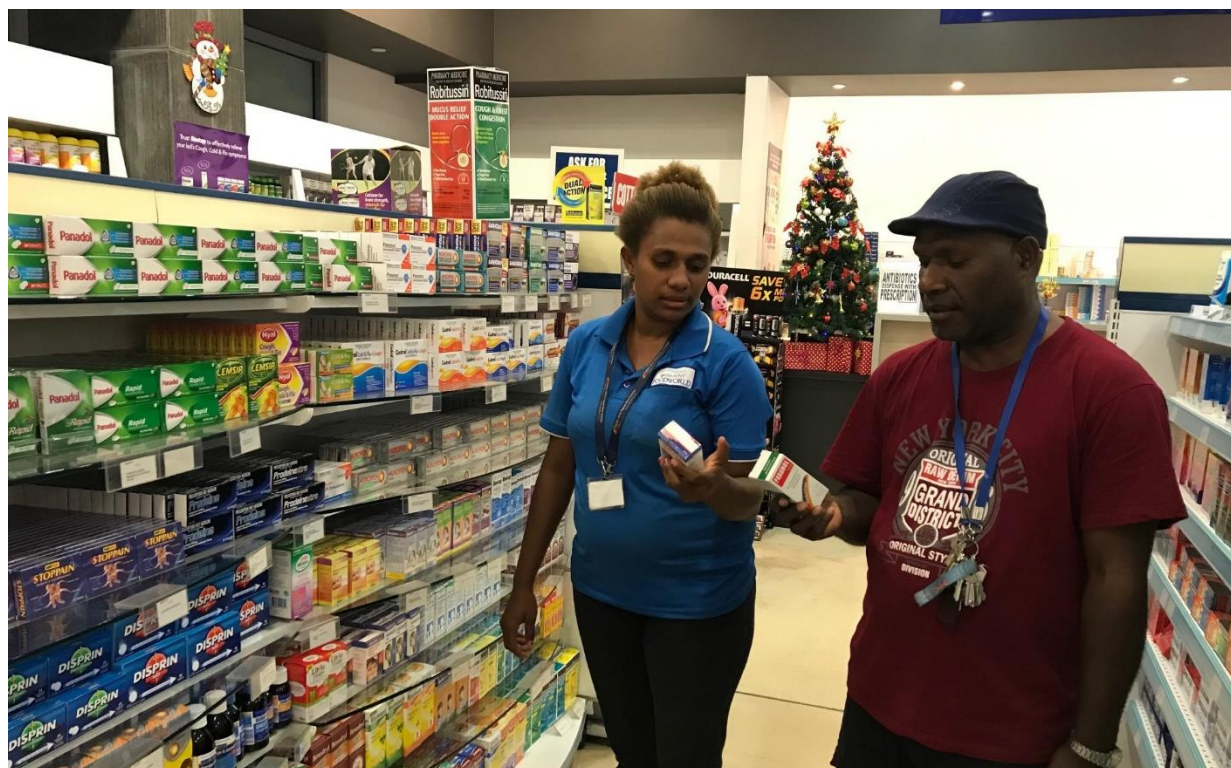
The total cost of activities outlined under MTDP III is estimated at K27.2 billion and the Minister for National Planning has stated that the government is committed to financing it. Over the five years to end-2022, the plan suggest that 23 percent of these costs will be financed by concessional loans, a further 18 percent covered by grants, and the remainder financed through government revenues. Using a high-level sectoral decomposition of expenditure (into nine categories), the largest areas of spending over the life of the plan are in provinces (29 percent), transport (19 percent), economic (12 percent), and administration (10 percent). Health (9 percent), education (8 percent), and utilities (8 percent) are close behind.

Despite the multi-billion Kina headline price tag, it is critical to note that the activities and expenses outlined in the MTDP III are not necessarily new to the government's agenda. Some of these will represent business-as-usual activities, ongoing reforms, or other projects that are already underway and programmed into budget estimates. For example, the government's District and Provincial Service Improvement Programs represent the bulk of MTDP III expenditure in the provinces sector and account for over 20 percent of total expenditure under the plan. These figures are estimated to remain fixed at their usual annual rates of K10 million per district and province through 2022.

There is limited clarity regarding the full fiscal impacts of the MTDP III. The government faces challenges on the fiscal front in seeking to meet its commitments under the MTFs, MTRS, and MTDS. These require ongoing fiscal consolidation and hard work on revenue initiatives, even after taking into account recent rebounds in resource-sector revenue streams. Any additional MTDP-related spending will add to these challenges. However, it is unclear what impact the MTDP III has had, at the margin, on the budget numbers. For example, did it drive up spending, or was it absorbed entirely through reprioritizations of existing expenditure? In fact, it is not clear that the budget estimates have completely accounted for all the MTDP's commitments. If the government is relying on significant expenditure reprioritization to implement the MTDP, this could prove a challenge that has significant financing implications, since it is common for legacy spending arrangements to have institutional inertia that makes it difficult to withdraw and re-designate funds. Consequently, activities expected to be funded via a reprogramming of funds within the budget may ultimately require wholly new financing sources. To the extent that new non-debt financing is needed, the MTDP refers to the possibility of more public-private partnerships, a recommencement of the infrastructure tax credit scheme, and faster revenue growth from a broadening of the tax base.

Finally, while the government should be commended for the extensive time and effort that has gone into the preparation of the MTDP, its ambitiousness, comprehensiveness, and high specificity raise questions about the ability of a capacity-constrained public sector to deliver on it. Delivering MTDP results would require a substantial enhancement in implementing capacity. In recent times, effective public administration has been hampered by office lockouts, failing information technology infrastructure, complex public financial management shortcomings, and coordination difficulties between central and subnational levels of government. In this context, the MTDP implementation plan may be set for disappointing results from the outset, if it is too ambitious and over-engineered, requiring all cogs in the system to move smoothly and on time.

Nonetheless, the MTDP III provides a well-structured, clear strategy for moving forward with PNG's development on all fronts. In those areas where capacity and funding permit, there is real scope for success and, elsewhere, the MTDP still presents utility by setting goals, providing stakeholders with clear line of sight from specific deliverables and investments to the bigger development picture, and demonstrating how all parts of PNG's development strategy fit together over the medium term.



Rising prices for imported medical supplies were among the main contributors to inflation in 2018.
Photo: Khusrav Sharifov.

1.3. Monetary policy and price developments

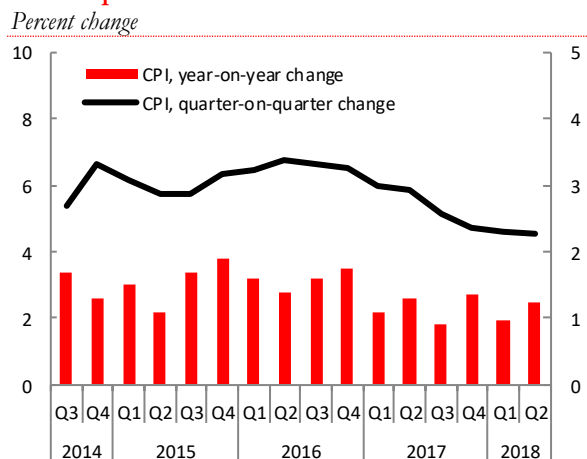
17. **Headline inflation increased slightly in the second half of 2018, driven by currency depreciation.** After easing throughout 2017 and in the first half of 2018, year-on-year growth in the consumer price index (CPI) was 4.8 percent in the third quarter of 2018, up from 4.5 percent in the second quarter (Figure 11). The increase in the inflation rate was driven mainly by a pass-through effect from currency depreciation during the second half of 2018. Headline inflation is estimated to have increased further to about 5 percent year on year in the fourth quarter of 2018, which was still in line with the initial BPNG forecast of 5 percent in 2018. The drivers of annual headline inflation were broad-based, including imported medical supplies, clothing and footwear, and household equipment. By contrast, food and non-alcoholic beverages—which account for about 30 percent of the CPI basket—exhibited a price decline of 0.2 percent. Notably, while betel nut²² price increases were a significant driver of inflation in 2017, and remain evident in the most recent annual result, they appear to have stabilized in 2018 and have fallen by 1.8 percent over the past three quarters for which data are available.

18. **The authorities are moving toward greater exchange rate flexibility and addressing the FX orders backlog.** Recognizing the economic distortions that were being generated by the restrained exchange rate regime, and as part of a broader reform of its monetary and exchange rate policy, the authorities began taking steps to clear the backlog of FX orders in the second half of 2018 (Figure 12). Following the additional inflow of FX funds that became available through the sovereign debt issuance and development partner concessional loans, the central bank started injecting about USD50 million into the market each month. The backlog was estimated to have fallen from over USD1 billion at end-2017 to about USD500 million by end-

²² Betel nut, a palm seed with narcotic properties like tobacco, is widely consumed in PNG and over recent years has experienced both high volatility and a steep increase in price. Despite representing only 2.7 percent of household spending in the 2009–10 Household Income and Expenditure Survey, the dramatic increase in price has meant that betel nut now represents 10.7 percent of the total Consumer Price Index (in the third quarter of 2018, betel nut represented 15.2 index points out of the total 135.1 index points).

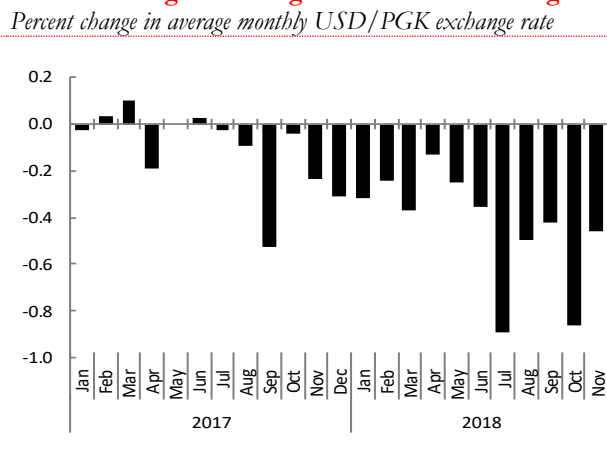
2018, also supported by stronger foreign exchange inflows from a rebound in resource sector export performance. The authorities are expected to unwind most of the backlog by mid-2019. In this context, it remains important for the BPNG to continue their efforts to restore the functioning of the FX market and pursue greater exchange rate flexibility.

Figure 11: Inflation remains relatively low despite a recent uptick in the annual rate



Source: National Statistical Office.

Figure 12: Depreciation sped up in 2018:H2, as the authorities began clearing the FX orders backlog



Source: Bank of Papua New Guinea.

19. **The nominal effective exchange rate (NEER)²³ depreciated for the sixth consecutive year in 2018.** Following the peak of the commodity cycle, PNG experienced a significant terms of trade deterioration that underpinned a substantial depreciation in the Kina. However, the exchange rate was not allowed to fully adjust to prevailing market forces, with the authorities—citing concerns about the impact of higher import prices on inflation—intervening significantly from mid-2016 onwards to ensure that further depreciation occurred only at a very gradual pace. While the Kina depreciated against the U.S. dollar only negligibly in 2017, the pace of depreciation accelerated in 2018. A host of currencies have shown a depreciating trend relative to the U.S. dollar in recent times, mainly owing to the strong U.S. economy and rising U.S. interest rates. As such, a more holistic perspective on the Kina exchange rate is given by the NEER, which depreciated by about 2.4 percent in 2018, largely owing to a stronger Japanese yen.²⁴ This decline is predominantly due to a particularly weak first quarter, since which time the NEER has increased by more than 4 percent. Analysis by the IMF suggests that a further 10-11 percent nominal depreciation will be required to eliminate the overvaluation completely.²⁵

20. **Authorities are enacting measures to boost foreign exchange market liquidity.** First, the central bank has directed commercial banks to cease trade financing, which was being used to avoid bringing foreign exchange into the spot market and was facilitating both hoarding and allocation to preferred customers. Second, consistent with standard international practice, the BPNG has taken full control of the approval of onshore foreign currency accounts (FCAs), withdrawing this power from commercial banks. Doing so will reduce the build-up of foreign assets in individual and company accounts, increase transactions in the foreign exchange

²³ The nominal effective exchange rate is a measure of the value of a currency against a weighted average of several foreign currencies, often weighted by their share of that country's exports.

²⁴ Japan accounts for about 20 percent of PNG's exports, and thus its bilateral exchange rate has a material influence on the NEER. Other key trading partners are Australia and China, both of which saw their currencies appreciate very slightly relative to the Kina.

²⁵ IMF 2018a.

spot market, and facilitate greater monitoring of foreign exchange flows and balances in the banking system.²⁶ Third, the central bank has withdrawn a directive that compelled authorized foreign exchange dealers to prioritize foreign currency for firms involved in strategic sectors such as fuel, food, transportation, and telecommunications. Fourth, the BPNG also began using SWIFT Scope reporting software, a data management application that will improve its monitoring of banks' international transactions and improve the transparency of foreign currency transactions. Additionally, as discussed above, there have been direct interventions in the spot market to inject foreign currency and a recent gradual pick-up in the rate of exchange rate depreciation.

21. **The central bank plans a number of other key initiatives to improve the monitoring and operation of the foreign exchange market.**²⁷ For example, the BPNG intends to increase the number of authorized dealers in the foreign exchange interbank market. It will also conduct a review of market regulations, including the Foreign Exchange and Gold Regulations. Furthermore, steps will be taken to improve the automation of reporting and recording of trade flow data, significantly improving their reliability and timeliness, and supporting the use of these data in the monitoring and analysis of developments in the foreign exchange market. The central bank will also seek to be involved in the auditing of mining, oil, logging, and fishing companies' international transactions to ensure that their FCA practices are in compliance with their obligations and to cross-check their transactions data against that reported to the PNG Customs Service. Measures to increase tax compliance by exporters could potentially generate a structural increase in foreign exchange inflows. With a focus on exporters in the minerals and petroleum sectors, BPNG plans to review future major resource development contracts to ensure that they are consistent with government policies and regulations including, notably, foreign exchange requirements.

22. **The financial sector is characterized by high levels of liquidity.** The BPNG Cash Reserve Requirement stipulates the minimum level of assets that banks must hold in a highly liquid form (typically as cash or account balances with the central bank). Under ideal circumstances, the reserve requirement can act as an effective constraint on credit creation by banks, and therefore may be employed as an instrument of monetary policy. In PNG, however, banks hold significantly more cash than required, such that the reserve requirement has remained too low to be a material constraint on the sector for well over a decade. Moreover, by holding extra funds in unremunerated exchange settlement accounts or other short-term highly liquid financial vehicles, financial institutions are revealing that despite the low returns there are nonetheless good commercial justifications for doing so. Excess liquidity may be attributed to a confluence of factors, including low levels of competition among financial intermediaries, central bank financing of the budget deficit, the banking of public sector (trust) accounts with commercial banks, the previous accumulation of large inflows of partially unsterilized foreign exchange, challenges in accessing liquidity through the interbank money market, limited risk-adjusted domestic lending opportunities, and restrictions on the repatriation of profits overseas due to foreign exchange controls.

²⁶ In many economies, rules and procedures exist that govern who can open a foreign currency account. Such accounts are typically available to market participants who have sizeable inflows of foreign currency and, consequently, supply foreign exchange to the spot market. These accounts aim to help the market participant avoid double fees on currency conversion when making cross-border currency transactions. Such accounts often include a condition whereby the foreign exchange deposits must be put into the market within three months of receipt. Given the special implications of these accounts for foreign exchange market operations, in many cases the approval process for opening a foreign currency account is conducted by the central bank, which also monitors the flows and balances of these accounts at an aggregate level. Historically, BPNG has not performed this function, thereby foregoing a practical method for the central bank to monitor conditions in the foreign exchange market. Under the new directive, new applications for foreign currency accounts are assessed and approved by BPNG, and banks and foreign exchange dealers are required to provide monthly reports of actual and three-months-forward commitments to BPNG. In the second phase, banks and foreign exchange dealers will also be required to provide the purpose of the foreign currency transactions in their monthly reporting.

²⁷ These anticipated future measures have been outlined by Prime Minister Peter O'Neill in a letter to the World Bank dated June 20, 2018. The full text is publicly available in the annexes to the program document for the World Bank's recent Development Policy Loan (World Bank 2018e).

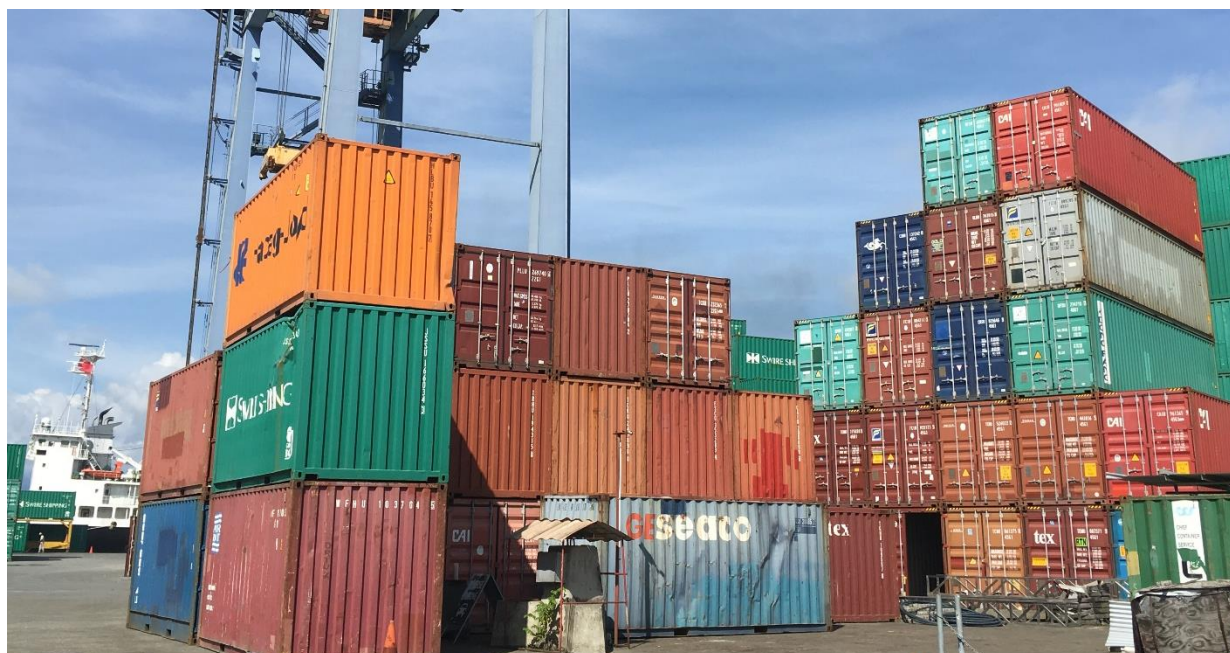
23. **Excess liquidity, together with other underdeveloped elements of the monetary regime, render the Kina facility rate (KFR)²⁸ ineffective in managing monetary policy.** While the BPNG refers to the KFR as its official instrument of monetary policy, and frequently declares its intention to adjust this rate in response to economic conditions, in practice it has had little choice but to resort to exchange rate management to keep a handle on inflation. If markets are operating efficiently with scarce liquidity being allocated to its most profitable uses, the KFR could be actively maneuvered to inject or absorb liquidity in the money markets, with the central bank standing ready to complete any and all market trades at an official policy rate. However, in the presence of excess liquidity, market participants have the flexibility to bypass the interbank money market altogether when managing intra-day and overnight liquidity needs, thereby making the KFR defunct.²⁹

24. **To strengthen the country's monetary policy framework the central bank has indicated its intention to: (i) address excess liquidity in the banking system; (ii) re-establish the effective transmission of monetary policy; and (iii) enhance communication with market players.** A number of reforms are planned or already underway. The central bank is strengthening the repurchasing agreement facility that is used for liquidity management, and market participants have been consulted on the proposed changes. Consideration is being given to a higher cash reserve requirement rate on either total deposits or public-sector deposits, which would have the effect of automatically reducing excess liquidity parked in exchange settlement accounts. The possibility of linking the KFR to a market-based interest rate, so that it reflects prevailing liquidity conditions and therefore can be taken by market participants to be a signal of the monetary policy stance, is being explored. The central bank's financial programming model is also being reviewed with technical assistance from the IMF. In addition to these reforms to the monetary regime, the government's recent Public Money Management Regularisation Act has reduced banking sector liquidity by forcing a consolidation of public monies that were previously being held by statutory authorities in separate trust funds across the banking sector. Moreover, successful implementation of the government's MTFs and MTRS over the medium term would largely eliminate the practice of central bank financing of the budget deficit and therefore reduce injections of new liquidity associated with the fiscal position.

25. **It will be essential to carefully coordinate this reform agenda with other key government initiatives bearing liquidity management implications.** As outlined earlier, the government has been making efforts to reduce the FX backlog rapidly. It will also be drawing upon its new debt (both sovereign and concessional) to fund key expenditures and re-profile the maturity of its debt portfolio. Importantly, the associated injections of foreign currency into the domestic market will entail a major withdrawal of Kina liquidity and would likely require corresponding sterilization activities. The liquidity impacts of these activities, combined with those of the various reform efforts discussed above, will need to be considered and managed holistically. In this context, the government and the BPNG will need to ensure regular, transparent and consistent communication with all stakeholders to minimize the risk of confusion and market disruption.

²⁸ The KFR is a benchmark rate for lending and borrowing in the interbank money market.

²⁹ Despite varied developments in prices and growth in recent years, the KFR has remained unchanged and largely out of step with other key market interest rates.



Strong commodity exports continued bolstering the current account surplus.
Photo: Isabel Neto.

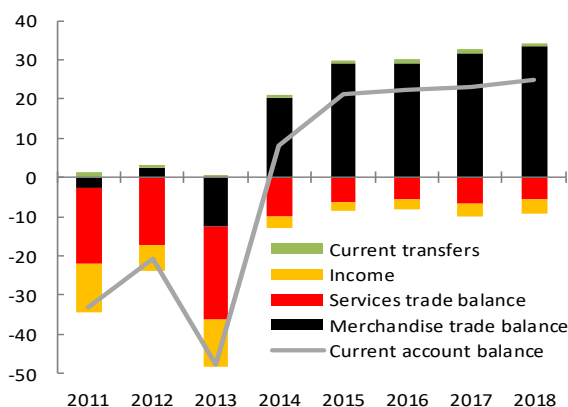
1.4. External sector

26. **The current account surplus expanded in 2017 and 2018, underpinned by strong performance in international trade.** In each of the past two years, a recovery in global commodity prices has driven double-digit growth in PNG's terms of trade, boosting the net surplus in merchandise trade (Figure 13). Larger deficits in net primary income over the same period had only a moderately offsetting effect, while overall movements in services trade and current transfers were negligible. The current account surplus is estimated to have reached a record high of K18.3 billion (24.9 percent of GDP) in 2018. On the surface, this looks very healthy for PNG with the country's income and current transfers from the rest of the world significantly exceeding what it spends. However, the strong current account surplus also partly reflects an artificial constraint on spending and a corresponding welfare loss, with businesses and consumers often unable to access foreign exchange to import the goods and services that they need, even if they have the local currency to purchase it.

27. **The trade balance is estimated to have recorded its largest surplus in over a decade in 2018.** Earnings from merchandise exports—the chief component of the trade balance—were down in the first half of 2018 compared with a year earlier but rebounded strongly in the second half of the year. The initial decline was only partly attributable to earthquake-related disruptions which were responsible for lower export volumes of resource commodities such as LNG, condensate, copper, and crude oil, but which had little to do with declines in the agricultural sector (palm oil, cocoa, coffee, rubber, and tea). With a subsequent ramping up of production in those sectors impacted by the earthquake, export volumes of goods are estimated to have fully recovered by year-end, rising by an estimated 6.4 percent overall year on year. Notably, export earnings also benefitted significantly from a synchronized upswing in global commodity prices, with prices increasing across almost all major commodities (and especially for energy commodities). On the imports side, merchandise imports are estimated to have fallen by 14.1 percent year on year in 2018, following a surprise jump in 2017 (Figure 14).

Figure 13: Larger merchandise trade surpluses propel the current account further into positive territory...

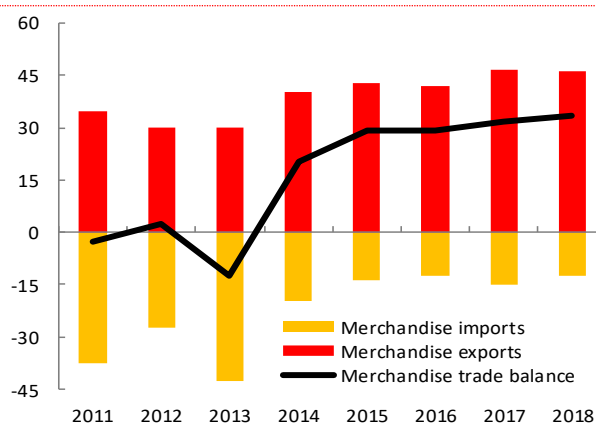
Components of current account (percent of GDP) and terms of trade (percent change)



Source: World Bank staff estimates.

Figure 14: Stronger exports and compressed imports have led to large merchandise trade surpluses

Percent of GDP

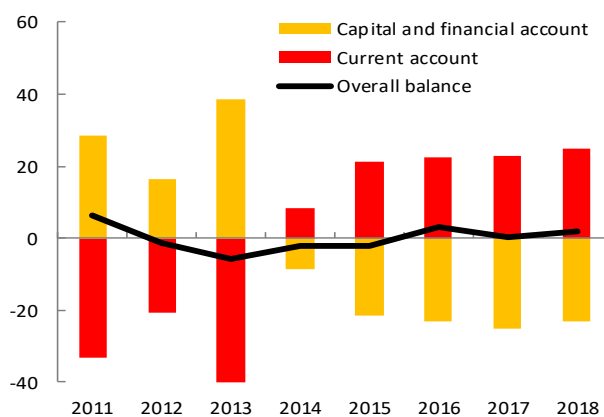


Source: World Bank staff estimates.

28. **Foreign currency inflows from the current account surplus continue to be largely offset by outflows associated with capital and financial account deficits.** As discussed in detail in the December 2017 edition of the *PNG Economic Update*, the commencement of production at PNG LNG caused a structural change in the nation’s balance of payments, with the current account shifting strongly into surplus as LNG exports came on-line and equipment imports for the LNG plant ended, while the financial account swung into deficit as the foreign owners of the project used earnings for repaying debts they incurred in financing the project. This trend continued through 2017 and 2018, with record current account surpluses being matched by record capital and financial account deficits (Figure 15). In principle, there is nothing unreasonable about PNG LNG’s financing flows. However, the project (like many others in the sector) is authorized to hold its foreign currency earnings in offshore accounts without first having to pass it through PNG’s domestic spot market. Together with generous tax concessions, this suggests that without a large rebound in LNG prices, the project is unlikely to be a major source of foreign currency inflows for at least the first ten years of production.³⁰

Figure 15: The high current account surplus was offset by a widening financial account deficit

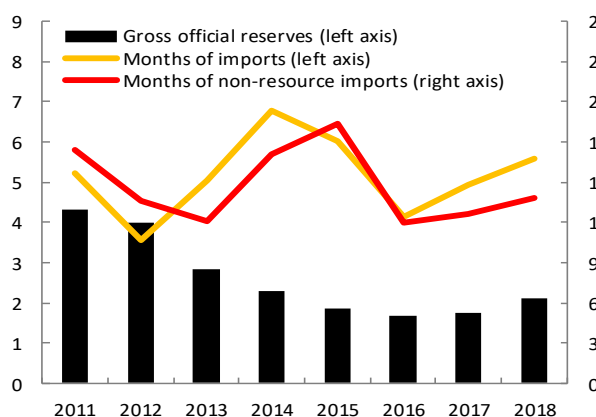
Percent of GDP



Source: World Bank staff estimates.

Figure 16: The gross official reserves of foreign exchange picked up notably in 2018

Gross international reserves (USD, billions) and months’ import cover



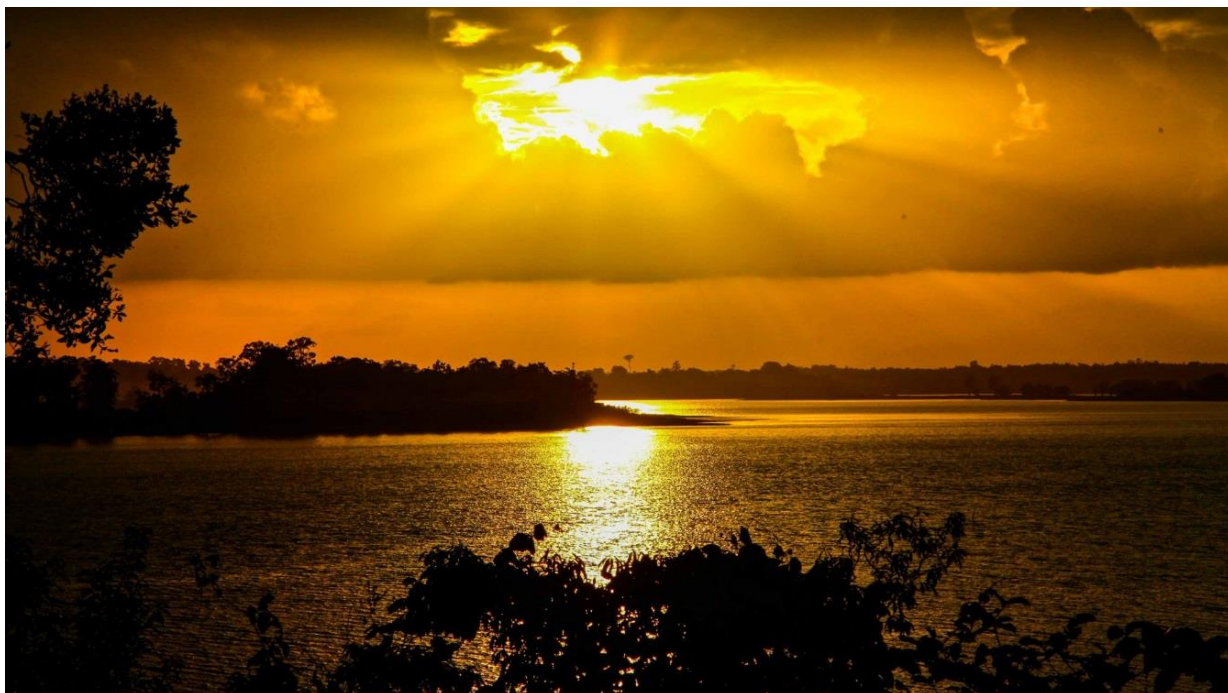
Source: World Bank staff estimates.

³⁰ See box 7 and box 8 from the December edition of the *PNG EU* (World Bank 2017a) for a discussion of the PNG LNG project, its royalty calculations, and the implications for government revenues.

29. **Foreign exchange reserves rose substantially in 2018, supported by FX inflows from concessional budget support and the sovereign bond issuance.** In US dollar terms, reserves grew by 3.2 percent in 2017 and are estimated to have risen a further 22.2 percent over 2018, reaching about USD2.1 billion by end-2018. While this is less than half the level reached during the highs of the commodities boom, the improved reserves position will promote confidence in the authorities' ability to navigate challenges in its external balances, including its continued support for slow crawling-peg adjustments to the exchange rate. The government's new sovereign and concessional debt, as well as the commodity-price fueled improvement in the current account, has bolstered the reserves position. The authorities are now in a more comfortable position to expand domestic access to foreign exchange. The combination of greater foreign exchange availability and weaker imports has pushed the ratio of reserves to months of expected total imports to almost 5.6 months, from 4.9 months in 2017 and 4.1 months in 2016 (Figure 16).³¹ This level is above the typical benchmark of three months' import cover for economies with a floating exchange rate, but may be below the level appropriate for PNG given the highly-managed character of the Kina and the need for added reserve buffers in commodity-intensive economies. An alternative measure of reserve adequacy is months' cover of non-resource sector imports—an indicator that BPNG intends to target in the future.³² Non-resource imports coverage rose to 13.8 months in 2018, up from 12.6 months in 2017.

³¹ Months of import cover is calculated by dividing current international reserves by projected average monthly imports for the following year. Thus, if imports are projected to contract in the future, then the same value of reserves will cover more months of imports.

³² Given that resource companies keep the proceeds of their exports outside the country, and thus would not be expected to rely on central bank support to cover their import bill in the event of a shock to PNG's external accounts, the ratio of reserves to non-resource sector imports may be a more accurate representation of the size of the buffer available to authorities in the event of balance of payments distress.



Despite near-term challenges, PNG's medium-term economic outlook is relatively sanguine.
Photo: Ian Neubauer.

2. Outlook and risks

30. **In the post-earthquake period, economic growth is expected to bounce back in 2019 and then converge to its potential growth rate.** Real GDP growth is expected to near 5 percent in 2019, primarily due to the return to full production in the extractive sector (Table 2). Non-extractive sector activity is expected to continue expanding, with better investor confidence supported by improved access to foreign exchange. While agricultural production is projected to increase in 2019, contributing to higher economic growth and exports, this will depend upon the materialization of favorable weather conditions, including sufficient rain in the highlands. Trade and transportation services will benefit from higher production in the extractive sector in 2019. In the years after, GDP growth is expected to edge towards its potential rate, estimated at 3-4 percent per year.

31. **Inflationary pressures are expected to be subdued over the medium term.** Overall, period-average inflation in 2019 is expected to be only marginally higher than in 2018, although the inflation rate is expected to pick up in the first half of 2019 due to pass-through effects from currency depreciation, before easing somewhat during the second half of the year as the rate of depreciation slows. Meanwhile, the impact of fiscal policy on domestic prices will be neutral in 2019. Although public spending will rise in nominal terms, it will be constrained as a share of GDP. If the government resumes fiscal consolidation in 2020 onward, the inflation rate will fall in line with decreased domestic demand. A potential currency appreciation may also contribute to lower inflation over the medium term.

32. **The external balance is also projected to improve, driven by higher exports.** Following disruptions to production arising from the 2018 earthquake, a return to a full year of oil, gas, and mining production will support a rebound in export volumes in 2019. As the non-resource economy continues to recover, imports are also expected to increase. A relatively favorable terms of trade outlook suggests that PNG will be able to sustain a substantial current account surplus (of over 20 percent of GDP) over the medium term. This sizeable surplus should be sufficient to cover obligations in the capital and financial account, easing

pressure on the nominal exchange rate. Meanwhile, the real exchange rate of the Kina against the U.S. dollar is expected to start appreciating. Consequently, gross official reserves should stabilize at over USD2 billion or about five months of goods and services import cover.

Table 2: Selected Economic Indicators

	2014	2015	2016	2017	2018	2019	2020	2021
				Est.	Est.	Projections		
National income and prices <i>(In percent, unless otherwise indicated)</i>								
Real GDP growth, <i>of which:</i>	15.4	7.7	2.6	2.8	0.3	5.1	3.1	3.4
Extractive sector (percentage-point contribution)	9.4	9.1	2.4	1.4	-2.0	2.7	0.3	0.7
Non-extractive (percentage-point contribution)	6.0	-1.4	0.2	1.4	2.3	2.4	2.8	2.7
Consumer price inflation, period average	5.2	6.0	6.7	5.4	4.7	4.8	4.0	4.0
Real exchange rate change, USD/PGK*	-5.6	-5.9	-6.9	1.4	-0.6	2.5	1.8	5.0
Fiscal accounts <i>(In percent of GDP, unless otherwise indicated)</i>								
Revenue and grants	20.9	18.6	16.8	16.8	18.3	18.0	17.3	17.0
Expenditure and net lending	25.5	22.9	21.8	19.4	20.9	20.3	19.1	18.5
Overall fiscal balance	-4.6	-4.2	-5.0	-2.6	-2.6	-2.3	-1.8	-1.5
Non-resource primary balance (% non-extractive GDP)	-6.6	-4.4	-4.5	-1.6	-2.8	-2.7	-1.0	-0.6
Net public debt	27.0	30.7	34.6	34.6	35.4	34.9	34.7	33.8
External accounts <i>(In millions of U.S. dollars, unless otherwise indicated)</i>								
Exports, f.o.b., <i>of which:</i>	8,794	8,425	8,202	9,952	10,253	11,315	11,427	11,742
Extractive sector	7,349	7,199	6,730	8,335	8,746	9,764	9,769	10,026
Imports, c.i.f.	-4,322	-2,687	-2,478	-3,219	-2,764	-3,029	-2,999	-3,356
Current account	1,796	4,140	4,380	4,892	5,549	5,949	6,281	5,918
Current account (percent of GDP)	7.8	19.4	22.0	22.7	24.9	24.7	24.6	21.2
Gross official reserves	2,305	1,865	1,681	1,736	2,236	2,095	2,058	2,233

Sources: Official data; World Bank staff estimates and projections.

Note: * An increase represents appreciation and a decrease is depreciation.

33. **Downside risks to macroeconomic outcomes stem from both external and domestic sources.**

The main external risks include a softening of commodity prices—which would dampen exports and GDP growth and increase pressure on the exchange rate—and another natural disaster. Natural disasters, which are frequent in PNG, can devastate the local economy, disrupt the extraction and processing of natural resources, and create considerable fiscal pressures. Domestic risks include a failure to deliver macroeconomic stability via fiscal and monetary policy implementation and any civil unrest or disturbances, which could adversely affect production in the extractive sector, with potential negative spillovers to the rest of the economy. While not all of these risks can be fully mitigated (as they remain largely outside authorities' control), the government's ongoing fiscal consolidation efforts—aiming to boost revenue collection and streamline inefficient expenditure—will act as a stabilizing factor. To strengthen fiscal and debt sustainability the government should adhere to the adopted non-resource primary fiscal balance as a fiscal anchor and operationalize the established sovereign wealth fund. These measures, along with the implementation of the Public Expenditure and Financial Accountability Road Map 2015–18, constitute important efforts to strengthen fiscal resilience.

34. **PNG's medium-term economic outlook, underpinned by further large-scale resource projects, is relatively sanguine.**

PNG is proving itself an efficient and low-cost natural gas producer. Given the low costs of domestic production, PNG is well positioned to take advantage of growing regional demand and rising global prices. Future large-scale investment in the sector appears likely, with Oil Search—a PNG LNG consortium partner—announcing plans in 2018 to double the LNG production capacity by adding three new trains to existing fields.³³ This extension will support gas from a new P'nyang project to be operated by ExxonMobil. During the 15th PNG Mining and Petroleum Investment Conference in December 2018, Total,

³³ As experienced with the first LNG project, the construction phase of these types of projects (4-6 years before actual production) is characterized with massive inflows of foreign direct investment and currency appreciation pressures.

a potential operator of the upcoming Papua LNG project, announced plans to make a final investment decision before 2020 and, if the project gets the final go-ahead, launch commercial LNG production in 2024. Outside of LNG, the Wafi Golpu project, which boasts substantial gold, copper, and silver reserves, is slated for construction in 2020.

35. **The anticipated increase in economic growth and further concentration of exports in the resource sector raises the importance of the government's economic diversification agenda.** The government has already adopted the MTDP III, which focuses on facilitating inclusive and sustainable growth and the new medium-term budget with the central theme of building a broader-based economy. As the long-term development vision has already been developed and adopted, it will be critically important for implementation to follow in due course. While the government has identified certain sectors to be targeted, it will also be vital to focus on broad-based structural reforms that will benefit all economic sectors. Substantial potential exists for the non-resource economy to serve as an engine of growth and job creation. Unleashing this potential requires specific sectoral policy responses to remove key impediments to private sector development, ranging from improving the productivity of physical and human capital to strengthening institutional capacity and addressing governance and corruption, as discussed in detail in Part B below.

B. Special Focus: Catalyzing the Private Sector for Inclusive Development



Agriculture is the bedrock of the PNG economy and one of the best hopes for generating private-sector-led balanced and inclusive growth. Photo: Ian Neubauer.

1. The non-resource private sector as an engine of growth and job creation

36. **Boosting development of the non-resource private sector will be essential to expanding employment opportunities for all Papua New Guineans, meeting the demands of a growing working-age population, and ensuring inclusive growth.** In an interview in May 2018, Prime Minister Peter O’Neill stated “We can only create jobs by promoting the private sector. That’s what we are doing—encouraging more investment in the country.”³⁴ Consistent with that message, an improved enabling environment for private enterprise will help deliver crucial improvements in productivity outside the resource sector, supporting the government’s economic diversification objectives and establishing broader-based foundations for future economic prosperity. It would also reduce fiscal dependence on resource rents, boost resource sector spillovers through expanded availability of local supply chain linkages, and support economic activity in rural and remote areas where state capacity and employment is limited. In this context, this special focus section summarizes some of the key constraints to private sector development (sub-section 2) and then outlines potential policy responses that can help to spur private-sector-led growth in three key non-resource sectors: agriculture, fisheries, and tourism (sub-section 3). While this chapter highlights important inclusive growth prospects in these three sectors, it does not preclude the possibility of growth opportunities in other sectors of the economy. Moreover, given its relatively large land

“We can only create jobs by promoting the private sector. That’s what we are doing – encouraging more investment in the country.”

--- Prime Minister Peter O’Neill, 25 May 2018

³⁴ Prime Minister Peter O’Neill, quoted in Kero (2018).

size, population, and natural endowments, Papua New Guinea can be reasonably expected to have a broader set of viable economic sectors than most other Pacific island economies.

37. **In considering PNG's private sector development, it is helpful to distinguish between the resource and non-resource sectors.** The former has been a strong performer since independence, is dominated by relatively large foreign firms, is the source of the bulk of the country's exports, and has attracted crucial FDI into the economy. However, the high capital intensity of these activities means that their prospects for significant job creation are limited. In contrast, performance in the non-resource economy, where the majority of businesses operate and where most Papuans earn their living, has been less impressive. Businesses in PNG's non-resource sector tend to be characterized by small size and high levels of informality. The challenges of generating business growth and expansion, particularly for smaller firms, have led to a paucity of medium-sized businesses—a so-called 'missing middle'.³⁵ Over 90 percent of private enterprises are micro-sized and informal, once subsistence and smallholder agricultural producers and the self-employed are counted. Even amongst those firms that are administratively licensed in some way, estimates suggest that over 70 percent have under ten employees and about 25 percent are informal.³⁶

38. **Given this economic landscape, if PNG is to reduce poverty and boost shared prosperity through jobs-laden, inclusive growth, private sector development efforts will need to be focused on the non-resource economy.** Setting the non-resource economy on a more robust growth trajectory will require addressing impediments to the business environment that have kept PNG firms small and have long starved much of the economy of foreign direct investment (FDI). Key sectors with considerable untapped potential for private sector driven inclusive growth include agriculture, fisheries, and tourism, and in each of these, the government has a role to play in establishing the appropriate enabling environment, including through the provision of sound institutions, essential services and other key public goods.³⁷ Attention also needs to be afforded to the large informal economy—an important source of livelihoods for the poor and vulnerable, and yet a context where market participants face many of the same business environment challenges with greater severity, owing to their limited firm-level capacity and uncertain legitimacy.

³⁵ Grice and Manoka 2017.

³⁶ Tebbutt 2008, 2014.

³⁷ Relatedly, the maintenance of a strong macroeconomic policy framework that can support economic stability and help manage cyclical swings in the resource sector is also crucial to support the development of the non-resource sector (see Part B of the December 2017 edition of the *PNG Economic Update*).



Improvements in the business environment have the potential to attract stronger investment inflows and boost growth of the non-resource economy. Photo: International Financial Corporation.

2. Removing constraints in the business environment to boost private sector growth

39. **Doing business in PNG is particularly challenging.** Firms must learn to navigate a complex operating environment, often on the basis of little more than personal contacts and word-of-mouth advice, and contend with a raft of other obstacles that are the consequence of, among other things, weak institutions, limited public sector capacity, and adverse economic geography. These have the effect of restricting entrepreneurship, amplifying the costs and risks of conducting business, and blunting the incentives for growth and investment. While wholesale improvements in the business environment are likely to require a medium-to-long-run horizon, swift government action aimed at addressing the most immediate and tractable challenges would be an important start and may help boost investor confidence in the country's private sector prospects.

40. **Persistently low net inflows of FDI indicate a largely unfavorable business environment.** In six of the ten most recent years for which data is available, net FDI was negative (that is, divestments were greater than inflows), and over this decade (2008–17), PNG's performance has been much poorer than in other regions (Figure 17). Recent policy³⁸ barring activities by foreign-owned small and medium-sized enterprises across large segments of the economy, if implemented, will further erode the country's image to foreign investors and curtail the pace at which foreign technologies and know-how are brought ashore. Such actions coupled with the elevated costs and risks of engaging in private enterprise have diminished PNG's international standing as a destination for FDI, leading to PNG's private sector remaining relatively underdeveloped.

³⁸ For more details, see box 3.

**Box 3: The 2016 SME Policy and a reserved activity list
Imposing local ownership upon SMEs, but at what cost?**

In 2016, the government launched its SME Policy 2016 and SME Master Plan 2016-2030, aimed at generating sustainable growth and employment through targeted support for small and medium enterprises. The plan included ambitious targets such as a ten-fold increase in the number of SMEs and over 1.5 million additional jobs by 2030. A controversial pillar of the policy platform has been a reserved activity list (RAL) which proposes to significantly expand the set of business activities subject to foreign ownership restrictions. Based on firm-specific and skill-specific criteria, requirements of 100 percent or 51 percent local ownership would be imposed on SMEs across an extensive list of sectors.^a Such restrictions on foreign firm participation in the domestic economy have the potential to deter foreign investment, job creation, and the flow of new technologies and techniques into PNG. They can result in higher prices and a reduction in the range of goods and services that are available to households and businesses, while protecting inefficient domestic firms and local special interests.

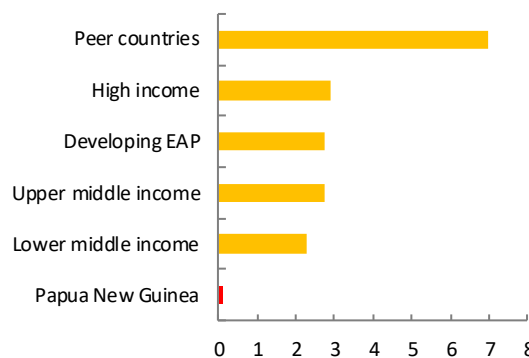
With these and other changes now set out in draft legislation to replace the existing foreign investment legislation, the level of business environment risk has been dramatically increased. This risk extends not only to firms expecting to be affected by the new ownership restrictions—which may be forced to abandon majority ownership or sell out entirely—but also to other small- to medium-size firms with any degree of foreign ownership, which may now be concerned about similar policy changes that may apply to them in the future. Foreign participation restrictions should be carefully evaluated to ensure that they are not ultimately counterproductive to the government’s development and poverty reduction objectives.

a. PricewaterhouseCoopers 2016.

41. **The World Bank Group’s *Doing Business* indicators suggest that although there are specific areas where PNG trails its international peers, its business environment, on average, ranks at around midway among these peers.** PNG was placed 108 among 190 countries in the World Bank’s 2019 *Doing Business* rankings, up from 109 and 119 in the 2018 and 2017 *Doing Business* rankings, respectively.³⁹ PNG was thus situated midway among its lower middle-income resource-rich peers,⁴⁰ midway among the Pacific island states, but worse than the average of Developing East Asia and the Pacific (Figure 18 and Figure 19). Weaker areas of performance were in enforcing contracts, starting a business, and resolving insolvency, while getting credit rated very favorably, mostly on account of a personal property security register that has been established in recent years. The *Doing Business* indicators are primarily based on the prevailing laws and regulations⁴¹—a *de jure* assessment of conditions. They are also designed to reflect circumstances faced by firms situated in an economy’s largest business city. In PNG, with one of the lowest urbanization rates in the world, and where enforcement of laws and regulations is relatively lax, the *Doing Business* indicators are therefore unlikely to paint

Figure 17: Net FDI inflows have been low relative to comparator countries and income groups

Foreign direct investment, net inflows (% of GDP, 2008–17 average)



Source: World Development Indicators.

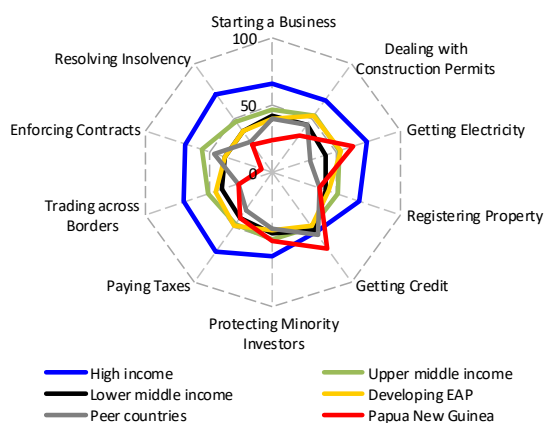
³⁹ Note that the comparability of rankings across different years is affected by year-to-year changes in the number of economies, number of indicators, and methodology.

⁴⁰ These peers comprise: Bolivia (BOL), the Republic of Congo (COG), Ghana (GHA), the Lao People’s Democratic Republic (LAO), Mauritania (MRT), Mongolia (MNG), Nigeria (NGA), Uzbekistan (UZB), and Zambia (ZMB). They were selected based on their similarities to PNG in terms of GNI per capita and the size of their mineral and/or petroleum resources relative to GDP. See Box 1 from the December 2017 edition of the *PNG Economic Update* for a detailed discussion.

⁴¹ Approximately two-thirds of data used in constructing the indicators are based on a reading of the law.

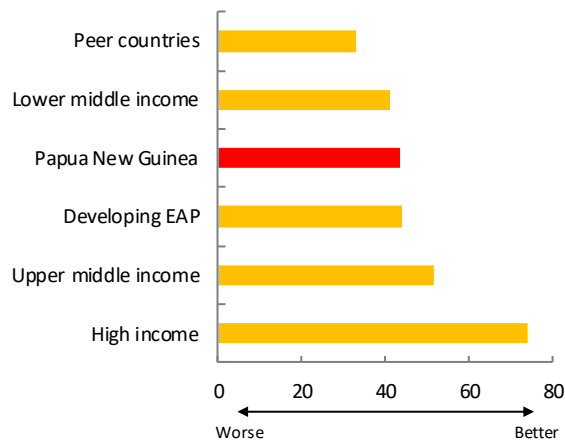
an accurate picture of the business environment. Direct surveys of the pain points faced by firms provide a more practical alternative.

Figure 18: PNG underperforms on some business environment indicators, but outperforms on others
Doing Business sub-indices, percentile rank, 2019



Sources: World Bank 2018d; World Bank staff calculations.

Figure 19: Overall, PNG's business environment ranks around the middle of comparator countries
Doing Business, overall, percentile rank, 2019



Sources: World Bank 2018d; World Bank staff calculations.

42. **Business surveys draw attention to the following key themes where efforts to improve the business environment should be focused: (i) foreign exchange and the exchange rate; (ii) infrastructure and related services; (iii) access to finance; (iv) access to land; (v) law and order; (vi) corruption; (vii) skills shortages; and (viii) political uncertainty and the stability of rules (Table 3).** The most widely reported results on business constraints are drawn from the Institute of National Affairs (INA) and Asian Development Bank (ADB) 2012 Business Environment Survey, which ranks law and order as the most binding constraint for formal sector firms of all sizes. Results from the World Bank’s Enterprise Survey⁴² reinforce the findings on the prominence of concerns about corruption, law and order, and political uncertainty. Concerns about transport, electricity, and telecommunications infrastructure are also raised, with the first of these also reported in two surveys by Tebbutt Research. One of these surveys, which included over 1,000 formal sector SMEs, identified entrepreneurs’ chief concerns as limited access to land and finance, as well as government corruption.⁴³ The other survey provides a spotlight on informal sector constraints, again highlighting business concerns about law and order, transport, and access to finance.⁴⁴ The number one concern identified by informal firms was a lack of market access, which might relate to both their exclusion from markets owing to their informality as well as to vendor access fees. In the most recent survey by the INA, conducted in late 2017, foreign exchange rationing and uncertainty regarding the exchange rate policy loomed large as constraints on businesses, while corruption and the state of public infrastructure remained key issues.⁴⁵

⁴² World Bank 2015a.

⁴³ Tebbutt Research 2014.

⁴⁴ Tebbutt Research 2008.

⁴⁵ INA 2018.

Table 3: Summary results of surveys on the challenges faced by business

Constraints in each survey are ordered in descending priority

INA (2018)	World Bank (2015a)	Tebbutt Research (2014)	INA & ADB (2012)	Tebbutt Research (2008)
Highest-rated constraints to business and investment:	Biggest obstacle to business:	Major obstacles for business operations and growth:	Highest-rated constraints to business and investment:	Most serious obstacles facing local businesses:
Formal, all sizes: - Foreign exchange access - Political uncertainty - Exchange rate - Corruption - State of electricity infrastructure - State of transport infrastructure - State of telecommunications	Formal small firms: - Crime, theft, and disorder - Corruption - Political instability Formal medium firms: - Access to land - Political instability - Crime, theft, and disorder Formal large firms: - Corruption - Practices of informal sector - Access to finance	Formal SMEs: - Difficulty leasing or buying land - Access to finance, loans, capital - Government corruption - Tax rates - Difficulty dealing with banks - Difficulty transporting/moving goods across country	Formal, all sizes: - Law and order - Corruption - State of transport infrastructure - State of electricity infrastructure - Skilled labor - State of telecommunications - Political uncertainty, stability of rules	Informal sector firms: - Access to market - Transportation - Access to loans - Crime, theft, and disorder - Water availability and cost

Sources: World Bank 2015a; INA 2018; INA and ADB 2012; Tebbutt Research 2014; Tebbutt Research 2008.

43. **However, these constraints impact businesses of different sizes unequally.** In 2017, foreign currency shortages were the most severe hindrance to business operations and investment by large firms (Table 4). The value of the Kina, while important, was less of a restriction to these companies than political uncertainty, corruption, and electricity infrastructure. In comparison, SMEs reported that the misaligned exchange rate was their most pressing concern, while access to foreign currency was not as important—perhaps reflecting their low competitiveness vis-à-vis imported goods due to the exchange rate, and their limited integration into global value chains, which limits their need for foreign exchange. The unequal impact of inflation is also noteworthy, with SMEs identifying it as the fourth most severe constraint to their operations, despite inflation having softened gradually since mid-2016.

Table 4: In 2017, foreign exchange shortages and the exchange rate were identified as key constraints, although there were differences by firm size

Ranking of constraints to business activity and investment, by firm size, 2017

Constraint	Overall	Large	SME
Access to foreign exchange	1	1	9
Political uncertainty	2	2	5
Exchange rate	3	5	1
Corruption	4	3	2
State of electricity infrastructure	5	4	3
State of transport infrastructure	6	7	5
State of telecommunication infrastructure	7	6	8
Law and order	8	8	9
Inflation	9	11	4
Availability of skilled labor	10	9	15

Source: INA 2018.

(i) Infrastructure and related services

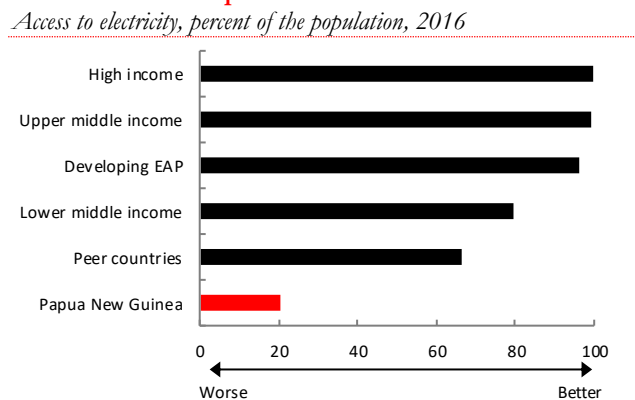
44. **Improvements in service delivery with respect to infrastructure and related services would enhance the business climate and make a significant difference to many firms.** The World Bank’s Logistics Performance Index ranks the quality of trade and transport-related infrastructure in PNG at 148 out of 160 economies.⁴⁶ Service delivery areas where businesses have raised the loudest concerns are in transportation, electricity, and telecommunications. Transportation was rated among the top three constraints by a broad spectrum of firms in 2012 and remained a key issue in 2017. It was also identified by 32 percent of formal SMEs as a major obstacle to operations and growth in 2014 and, among informal sector firms in 2008, was voted the second most serious obstacle to doing business. Electricity was also identified as a critical

⁴⁶ This indicator considers the quality of ports, railroads, roads, and information technology (World Bank 2018c).

constraint in both 2012 and 2017 and was the fourth-greatest obstacle for remotely-located formal SMEs, according to Tebbutt Research (2014). Telecommunications has also consistently rated among the major constraints in INA surveys, but access has improved markedly in recent years following Digicel’s market entry.

45. **Despite significant energy resources, access to electricity remains limited (Figure 20), impacting business development.** PNG has abundant (and significantly underutilized) hydropower potential (more than 15,000 megawatts) as well as solar, natural gas, geothermal, and other resources.⁴⁷ At the same time, the country has one of the lowest per capita consumption levels of electricity in the world. It is estimated that only about 13 percent of the population has access to on-grid electricity with another 8 percent having access to off-grid sources. Grid access is concentrated around the main urban centers with very limited access in rural areas. Electricity is expensive, and power blackouts are experienced in all local grids and are frequent throughout the year.⁴⁸ Consequently, the lack of access to an affordable and reliable power supply is limiting business development and investment.⁴⁹

Figure 20: Coverage of the electricity grid remains very low relative to comparator countries



Source: World Development Indicators.
 Note: See Footnote 40 for a list of peer countries.

46. **Although there has been an improvement in the standard of national priority roads, the road network remains highly fragmented and relatively poorly maintained.** The share of national roads that are sealed increased from 23 percent in 1998 to 36 percent in 2010, while the share of the national priority road network that is in good condition has increased from 33 percent in 2007 to about 48 percent in 2017. Despite these improvements, more than 75 percent of national, provincial, and district roads become impassable at some point during the year. These poor conditions raise transport and logistics costs and reduce the safety of PNG’s roads.

47. **The provision and use of information and communications technology have been improving, but the country still lags much of the region.** Mobile telecommunications have transformed rapidly since the introduction of competition reforms and the entry of Digicel in 2005–06.⁵⁰ Competition has led to increased network coverage, significantly lower prices, and an estimated GDP dividend of about 2.5 percentage points.⁵¹ Nonetheless, PNG still compares poorly with its international peers (Figure 21, Figure 22). The coverage of telecommunications and internet services is relatively low, and the unit cost for accessing some services is relatively high.

⁴⁷ PNG has about 580 megawatts (MW) of installed generation capacity, including hydropower (230 MW), diesel (217 MW), gas fired (82 MW), and geothermal (53 MW).

⁴⁸ The highest tariff rate in PNG is USD0.30/kWh, more than double that in Fiji and Lao PDR. Power losses via the transmission and distribution network between 2004 and 2013 in the Port Moresby Power System averaged 18 percent, compared to less than 7 percent for the East Asia and Pacific region (excluding high-income economies) over the same period.

⁴⁹ The recently-held APEC Summit identified potential partners in expanding access to electricity from the current 15 percent of the population (mainly in urban areas) to 70 percent country-wide by 2030.

⁵⁰ Digicel’s market entry in 2006 saw access to, efficiency of, and reliability of mobile phone services improve significantly.

⁵¹ See PNG Treasury 2009.

Figure 21: Internet usage still trails that of comparator countries and regional groups...

Internet users per 100 people, 2016

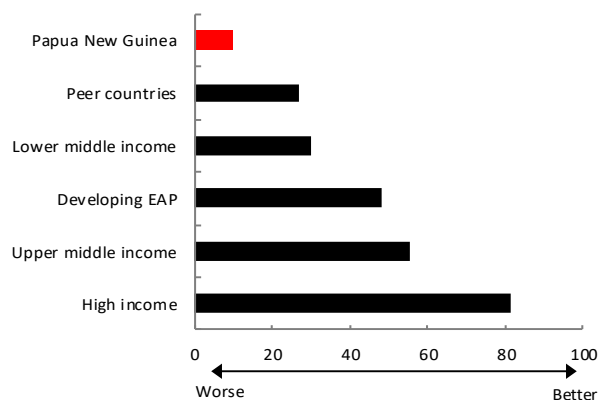
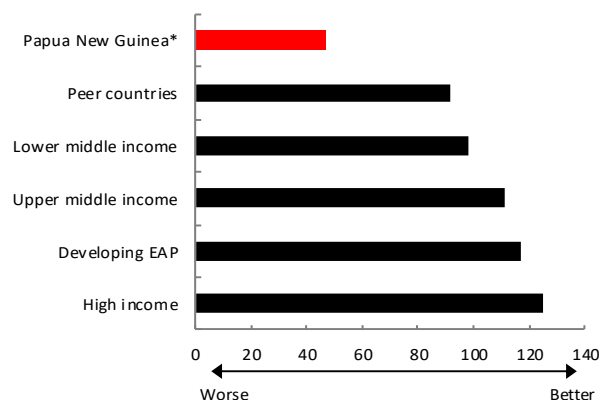


Figure 22: ...as does mobile phone ownership

Mobile cellular subscriptions (per 100 people), 2017



Source: World Development Indicators.

Note: See Footnote 40 for a list of peer countries. *PNG data in Figure 22 are for 2016; 2017 data are not available.

(ii) Access to finance

48. **Although access to finance for businesses has improved in recent years, there is considerable room for further progress.** Since 2006, domestic credit to the private sector has nearly doubled as a share of GDP. Recent advances in mobile banking have been transformative, particularly for those outside urban centers who lack access to financial sector infrastructure. Despite these improvements, finance continues to be relatively difficult to obtain for businesses in PNG and the country performs below average when compared to other lower middle-income economies and developing economies in the East Asia and Pacific region (Figure 23, Figure 24). According to research published by Tebbutt Research in 2014, 52 percent of SMEs report that improved access to finance would be the most helpful way to expand their business.⁵² Furthermore, in a 2008 study, nearly 50 percent of informal sector businesses viewed better access to finance as the best way to stimulate entrepreneurs to start new businesses.⁵³ By 2017, however, firms responding to the 2018 INA survey identified access to foreign exchange as the most severe obstacle to firms (access to finance was not identified as a severe constraint).⁵⁴ Given the current practices of credit rationing, it is possible that businesses subsumed all concerns regarding access to finance (both domestic and foreign currency) in this category. Financial sector liquidity, particularly among banks and savings and loan societies, has remained well above the minimum levels required by regulators, indicating that other constraints are suppressing the appetite for domestic lending.

49. **Poor credit availability is attributable to a range of factors, including high informality, limited eligibility of customary land as collateral, poor financial literacy, and an absence of centrally-collected credit information.** As noted, there is a high incidence of informality in PNG's private sector and, given uncertainties surrounding their legitimacy to operate and their limited association with formal institutions, informal sector operators struggle to receive finance from the formal sector. The vast majority of agricultural producers operate on customarily-held land which, owing to uncertainty around the land tenure regime and constitutional restrictions on land ownership, is often deemed ineligible to meet the collateral requirements for agricultural loans. The recent establishment of a personal property securities register constitutes a positive step toward addressing some of the challenges firms face in putting up collateral. Financial literacy is inadequate across the country, leaving many unable to understand the most basic financial contract terms, as well as elevating the inherent risks in lending to businesses. Moreover, the availability of credit information is limited

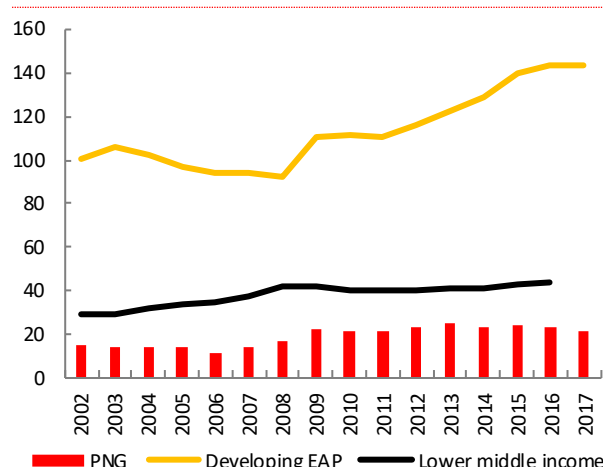
⁵² Tebbutt Research 2014.

⁵³ Tebbutt Research 2008.

⁵⁴ INA 2018.

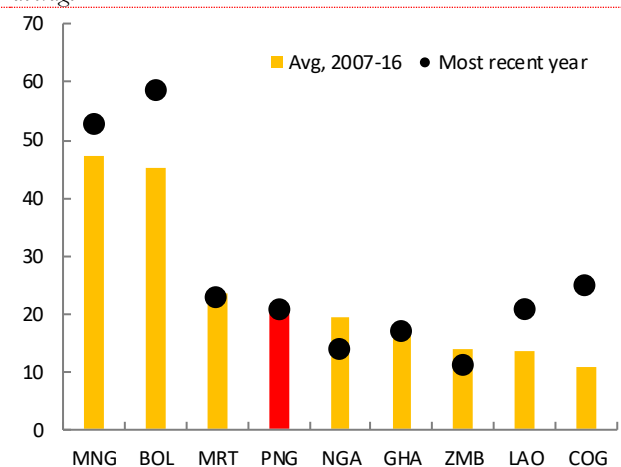
in the country, presenting challenges in the assessment of borrowers’ creditworthiness and making it difficult for borrowers to establish a credit history.

Figure 23: Less finance is available in PNG as a share of GDP than in similar income and regional groups
Domestic credit to private sector, percent of GDP



Source: World Development Indicators.
Note: Lower middle-income data for 2017 is not available.

Figure 24: The volume of financing in PNG is similar to comparator countries
Domestic credit to private sector, percent of GDP, latest and 2007–16 average



Source: World Development Indicators.
Note: See Footnote 40 for a list of peer countries.

50. **Greater efforts are required to address the lack of competition in the banking system and among non-bank financial institutions.** Three large banks in PNG (two Australian banks and one domestic bank) play a dominant role in providing credit to the economy. PNG’s wide interest rate spreads (between deposit and lending rates) underscore the oligopolistic nature of the banking system and the costs and risks of doing business. A lack of competition has led to relatively high levels of bank profitability,⁵⁵ which can limit incentives for banks to innovate and expand their customer base. In this context, the IMF’s 2015 Article IV staff report argues that the priority should be to “facilitate financial deepening by reducing entry barriers, including for microfinance institutions, and encouraging the development and adoption of new technologies such as mobile banking and microfinance products.”⁵⁶

(iii) Access to land

51. **Firms face difficulties in accessing commercially-viable and affordable land, imposing considerable constraints upon business expansion and investment plans.** Across firms of all sizes in 2012, 58 percent reported that difficulties in accessing land had significantly hindered their expansion plans—up from just 38 percent a decade earlier.⁵⁷ In 2017, access to land was not identified as one of the most severe constraints to business and investment, although that may reflect the fact that issues regarding the availability of foreign exchange, public infrastructure, and security had become more acute, as opposed to an improvement in land issues specifically.⁵⁸ Among SMEs in 2014, ‘difficulty leasing or buying land’ was the constraint to operations and growth that the largest share (38 percent) of firms were concerned about. Urban-based SMEs were the most impacted (41 percent), with rural (30 percent) and remote (25 percent) firms less so. After years of stalled progress on land reform, land scarcity has intensified, with local residents and businesses increasingly

⁵⁵ Of the 185 economies for which 2016 data is available, PNG’s banking sector was the twelfth most profitable as measured by return on equity.
⁵⁶ IMF 2015.
⁵⁷ INA and ADB 2012.
⁵⁸ INA 2018.

forced out into the peripheries of urban towns.⁵⁹ Land constraints are also a major problem for rural firms; those in the rural informal sector often identify land constraints as obstacles to farm production.⁶⁰ In projects requiring a major land acquisition, the costs of making land assessments and identifying and compensating relevant landowners can be substantial in terms of both time and money. This can be due to a lack of landowner registration, the need for social mapping and subsequent public notice, and extortionary compensation claims by customary owners who are well aware of PNG's land supply constraints.⁶¹ Even when agreement on a new lease is obtained, firms must contend with issues such as poor contract enforcement and weak property rights, mistakes in the issuances of leases, document loss, inconsistent duplicates, and fraud.

52. PNG's customary land regime accommodates diversity in cultural practices and may prove a sound basis for availing land without compromising traditional ownership, but numerous challenges exist. PNG's system of customary land administration enables customary landowners to voluntarily form special incorporated entities—called incorporated land groups (ILGs)—that can enter into legally binding contracts with those who wish to lease their lands. This arrangement has the potential to assuage fears by outside parties regarding the legal recognition of land agreements and potential forfeiture of land-use rights. The registration of an ILG involves codification of: various customs that will pertain to the land; processes for collective decision making by the customary owners; and processes for the management of disputes. Despite the inherent potential to accommodate significant diversity of cultural practices, the success of ILGs has been hindered by limited training and administrative capacity, low public awareness of the voluntary registration system, poor community literacy, and principal-agent conflicts between ILG management and landowners.^{62,63} The land registration process is also complex, requiring 17 steps and the involvement of seven government agencies, and sometimes taking as long as four years to complete.⁶⁴ Overall, this system has not been successful in opening up PNG's customary lands for the mutual benefit of owners outside commercial interests and the broader economy.

53. Opportunities exist to improve the performance of the customary land regime so that it better promotes private sector development.⁶⁵ Registration processes for customary land need to be simplified, consolidating numerous steps and allowing some flexibility in the information requirements (which can be challenging for some to meet). Public awareness of the registration system, especially of the rights it confers to landowners and lessees, should be expanded among all stakeholders to overcome unjustified fears and misconceptions. Land administration within the public sector needs to be supported, including through capacity development for better processes for record keeping and customer service, and improvements in transparency and accountability. Finally, better boundary demarcation of registered lands, possibly supported by maps or updated mapping technologies, would help reduce the incidence of disputes over conflicting claims to land.

(iv) Law and order

54. Shortcomings in the provision of law and order have significantly increased the cost of operating in PNG. A survey of mostly formal urban firms suggests that businesses incur average losses of about USD33,000 in stolen property each year. Furthermore, 38 percent of businesses report closing early due to the fear or threat of crime, resulting in losses of over USD30,000 per year.⁶⁶ In 2012, break-ins were reported

⁵⁹ Andrews 2016; In extreme cases, such as in prime locales of Port Moresby, apartment rental prices have been comparable to those in Manhattan, New York.

⁶⁰ Manning 2007.

⁶¹ ADB 2008.

⁶² Weiner and Glaskin 2007.

⁶³ Koyama 2004.

⁶⁴ Wangi and Ezebilo 2017.

⁶⁵ Wangi and Ezebilo 2017.

⁶⁶ Lakhani and Willman 2014.

to have affected over 70 percent of businesses, while more than 50 percent were also affected by each of vehicle theft, assault of employees off-site, vandalism, and property theft without force. By 2017, the situation had improved only marginally, with 64 percent of respondents indicating that the law and order situation negatively influenced their investment decisions (down from 80 percent in 2012). The cost burden of PNG's poor security environment is large, with businesses reporting having spent on average 10 percent of their total costs on security in 2017.⁶⁷ Criminal targeting of key logistics routes such as the Highlands Highway impedes the transport of goods and leads to lost business, stocks, and inventories. Family and sexual violence (FSV) is widespread, with almost all surveyed firms indicating that they had employees who were victims.⁶⁸ FSV affects more than just the productivity of victims in the workplace—employees' physical safety is also being compromised with firms reporting many cases of perpetrators arriving at work sites and committing violence against their workers.

55. **The failure of state institutions to provide adequate security has led businesses to increasingly engage the services of private security firms.** Over 80 percent of companies report paying for some form of security service. More than two-thirds employ private security staff, adding another layer of costs, with security expenses and losses due to crime on average amounting to about 10 percent of annual business costs. Other costs include the foregone business activity when crimes (such as vandalism, or theft of key assets such as a crucial computer or motor vehicle) lead to a temporary business shutdown.⁶⁹ The proliferation of private security services further erodes public confidence in the government's ability to provide law and order, weakens the government's monopoly on the use of force, and leads to conflicts of interest when police personnel moonlight as private security guards.

(v) Corruption

56. **Corruption places a considerable burden on the private sector.** In 2015, over 30 percent of large firms and about 17 percent of small firms identified corruption as the single biggest obstacle to their business.⁷⁰ In a separate 2014 survey, 37 percent of formal sector SMEs identified it as a major obstacle.⁷¹ The 2018 INA survey indicates that corruption remains a key constraint, with respondents ranking it the fourth most important hindrance to business and investment. In 2017, 61 percent of firms reported that they had been either 'fairly', 'highly', or 'very highly' affected by instances of government corruption involving irregular payments to officials, up from 57 percent of firms in 2012.⁷² However, making payments did not necessarily lead to positive outcomes. In 2017, only 40 percent of firms that made 'irregular payments' reported that this led to public service delivery on a regular basis. In 2012, only 30 percent reported actual service delivery without further demands for payments. Businesses also have little recourse when government officials demand irregular payments. In 2017, less than one-third of firms reported that they could 'mostly' or 'always' seek recourse when they had been requested to make irregular payments by public servants.

57. **Focused attention on several key areas could reduce the adverse impact of corrupt practices on businesses.** Around 44 percent of businesses report experiencing unscrupulous practices by public servants in government land administration. Other problem areas include finance, tax, and customs.⁷³ Among SMEs, there is a perception that practices for the allocation of government contracts are uncompetitive and opaque,

⁶⁷ INA 2018. 'Cost of security' comprises the cost of protecting their businesses plus losses from crime. It is thus not directly comparable with the results from the 2012 survey, which only recorded the percentage of annual costs spent on protecting the business.

⁶⁸ Lakhani and Willman 2014.

⁶⁹ Lakhani and Willman 2014.

⁷⁰ World Bank 2015a.

⁷¹ Tebbutt Research 2014.

⁷² INA 2018; INA and ADB 2012.

⁷³ INA and ADB 2012.

manifesting in favoritism toward family members and *wantoks*.^{74,75} SME business owners report concerns about the diversion of public funds, with the belief that only a fraction of funds earmarked for public works is being spent as intended, exacerbating the infrastructure shortages that have hurt private sector prospects.⁷⁶

(vi) Skills shortages and informality

58. **Firms have highlighted the existence of major skills gaps in the local labor market.** The higher-level skills generally required to fill formal private sector jobs are poorly matched with the relatively lower skill levels held by locals. Recent evidence suggests that for 83 percent of (mostly urban, medium- to large-size, formal sector) firms, local skill shortages are a barrier to growing employment.⁷⁷ For the wholesale, hospitality, and retail sectors, skills shortages are the number one factor holding back recruitment. Unsurprisingly, the most severe shortages were reported at the high-end of the skills ladder, in jobs requiring competence in management, followed by professional services.⁷⁸ In addition to skills shortages, 71 percent of businesses identified human factors such as staff productivity, attendance, and punctuality as barriers to hiring more staff. The situation has resulted in a high incidence of foreign worker recruitment in the formal sector, increasing labor costs as well as the difficulty faced by locals in securing good quality jobs. The government and the private sector have a shared interest to work together to ensure that Papua New Guineans are getting the right education and training that will prepare them for the demands—both in terms of skills and attitude—of today’s workplace.

59. **The presence of a burgeoning cohort of youth, many of whom are underemployed or engaged in relatively low-productivity informal sector activities, presents an opportunity for delivering on the country’s low-to-mid-tier skills needs.** Appropriate provision of in-demand, industry-relevant education and vocational training can prepare youth for productive engagement as employees or in a self-employed capacity. However, to date, PNG’s Technical and Vocational Education and Training (TVET) system has not been as successful as hoped. One reason has been limited coordination between the curricular offerings of TVET institutions and the skills being demanded in the PNG labor market. The government has a role to play in resolving such coordination failures by bringing together training providers, employers, and policymakers to ensure information sharing and the identification of practical solutions.⁷⁹ Better collaboration between educators and employers could ensure job-market-relevant curricula, improved quality assurance of courses, and the expanded use of work placements. Similarly, improved collaboration between policymakers and employers can ensure officially accredited qualifications are of an appropriate standard.⁸⁰

60. **Widespread informality in PNG’s private sector is not surprising given the perceived barriers to, and limited benefits of, formalizing.** Surveys conducted in 2008 and 2014 give insight into the formalization plans of informal firms (Table 5, Table 6). In 2008, 6.8 percent of informal firms indicated they would ‘probably’ become formal within two years while a further 2.7 percent said they were certain of it. Then, in 2014, 29 percent of informal sector SMEs said they were very likely to formalize within 12 months. Although

⁷⁴ Tebbutt Research 2014.

⁷⁵ Wantok is a person with whom one has a strong social bond, usually based on shared language. In Tok Pisin, wantok means “one talk” – meaning the language of a tribe or a clan that a person belongs to. The Wantok system and Wantokism is the traditional welfare system that evolved around that tribe.

⁷⁶ Tebbutt Research 2014.

⁷⁷ Deloitte Touche Tohmatsu and UNDP 2017. The report is based on a survey of over 230 businesses in Port Moresby, Madang, Mt Hagan and Lae in late 2016.

⁷⁸ Even within certain sectors, some subsectors may experience a quicker labor supply response relative to others.

⁷⁹ For instance, education and training providers could also be provided with access to data permitting analysis of specific skill demands that are not being met by the local labor force. Such data will be available from the government’s processing of foreign work permits as well as from the monthly reporting requirements of employment agents (ADB 2017).

⁸⁰ Examples of such collaboration do already exist. For instance, private sector representatives sit on the National Apprenticeships and Trade Testing Board (NATTB) of the Department of Industrial Relations (PNG Post-Courier 2018b). The NATTB is responsible for developing the National Occupational Skills Standards which are part of the much broader PNG National Qualifications Framework.

this may suggest an improvement in the sentiments towards formalization between 2008 and 2014,⁸¹ a large number of informal operators in both years nonetheless planned to remain informal. As reasons for remaining informal, firms in 2008 pointed to: a lack of information about what to do (54.4 percent); no apparent benefits from formalizing (49.2 percent); high financial and time costs (39.4 percent); and high tax expenses and administrative burden (36 percent).⁸² Almost 18 percent of firms had investigated or attempted formalizing previously but were held back by compliance difficulties, the complexity of the process, and an inability to find the necessary information.⁸³ In 2014, the barriers to formalizing that were most frequently reported by informal SMEs included not knowing how to register (44 percent), high cost of registration (22 percent), the business being too small to justify it (10 percent), and the absence of a government office nearby (9 percent).⁸⁴

Table 5: In 2008, the majority of informal firms did not plan to formalize in the short term

Intention to become formal in next 2 years

Response Category	Percent
Absolutely no chance	40.3
Not very probable	18.9
Maybe	29.5
Probable	6.8
Almost certain	2.7
Don't know	1.8

Source: Tebbutt Research 2008, p60.

Table 6: In 2014, again a large number of informal firms did not plan to formalize in the near term

Intention to formalize in next 12 months

Response Category	Percent			
	Urban	Rural	Remote	Total
Very likely	29	35	31	29
Somewhat likely	32	33	33	32
Not very likely	26	25	22	26
Not at all likely	10	6	11	10
Refused/Don't know	3	2	4	3

Source: Tebbutt Research 2014, p175.

61. **Firms largely appear to be self-selecting into informal or formal status based on whichever they believe is more advantageous to them.** A majority of firms in each status do not believe that firms in the other status are in a relatively better situation: only 29 percent of informal firms believed that formal businesses were in a relatively better situation and only 10.4 percent of formal firms believed that informal businesses were in a relatively better situation.⁸⁵ One explanation is that when firms believe that changing status (that is, from formal to informal, or vice versa) is more advantageous, they typically go ahead and make this change.

62. **Reducing barriers, lowering costs, and broadening awareness of the formalization process is unlikely to eliminate the existence of an informal economy.** International experience suggests that such interventions may not bring about major change.⁸⁶ Even when policies are tailored to the local context, the experience of advanced countries clearly demonstrates that informal activities will always remain some part of the economy. For the smallest enterprises, semi-subsistence agricultural producers, and other occasional market participants, it may never make financial sense to take on the added burdens of formalizing. Similarly, for firms that are far from the reach of the state and that have limited access to public service provision, formalization might never offer many benefits. For the government, there may be little rationale in pursuing the compliance of firms that are either too small to impact public revenues or which are engaged in activities that have no notable externalities. However, in those circumstances where greater formalization is justified, a more effective enforcement regime alongside interventions that boost the ‘pull’ factors from the formal sector, may prove important parts of the strategy.

63. **One such ‘pull factor’ that would support greater formalization of the economy would be an improvement in the policy environment for the private sector.** Policies that improve the ease of doing

⁸¹ This is not a straightforward conclusion, since the response options were framed differently across the two surveys.

⁸² Tebbutt Research 2008.

⁸³ Tebbutt Research 2008.

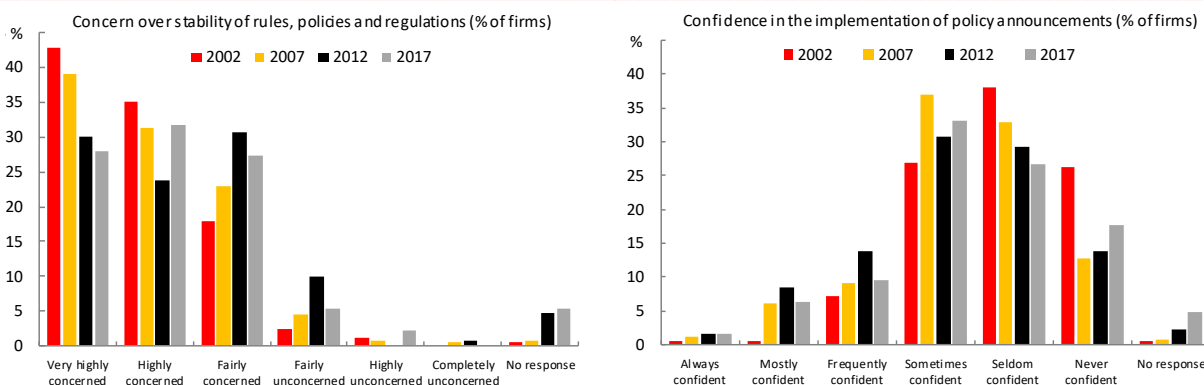
⁸⁴ Tebbutt Research 2014.

⁸⁵ Tebbutt Research 2008.

⁸⁶ IFC 2013; De Mel and others 2012; Galiani and others 2015.

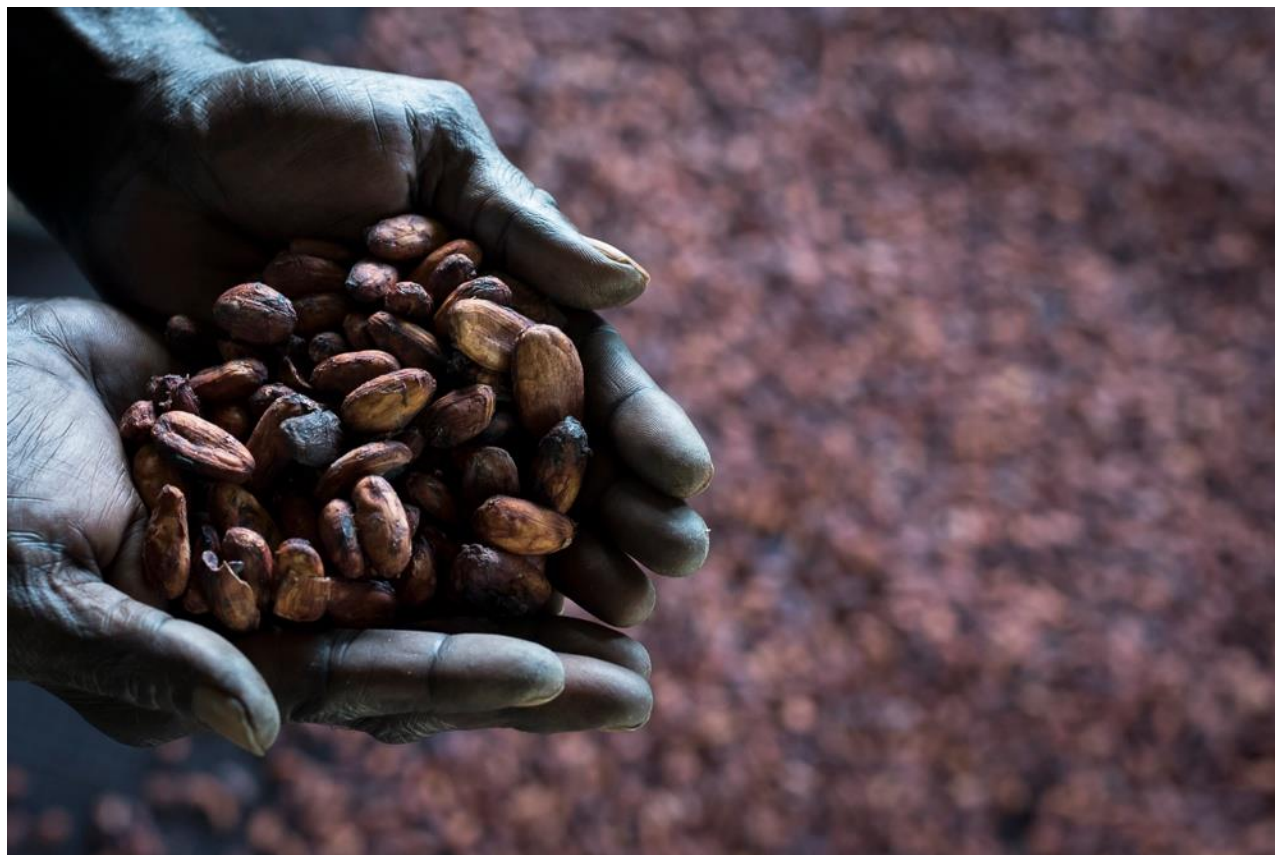
business should go together with a stable, transparent regulatory environment. Additionally, policy certainty is necessary to encourage the development of a formal private sector. Currently, sudden policy changes which impose new requirements upon businesses with little forewarning, are not uncommon in PNG. Reasons for this state of affairs include periodic changes in ministers and senior public servants who have considerable discretionary authority, and the inadequate community and stakeholder consultation processes that are employed (if and when at all) by the public service. Three-quarters of businesses surveyed in 2017 indicated that they had been either a ‘great deal’ or ‘somewhat’ affected by the instability of government policies and regulations. Two in every three businesses expect that their business will be damaged by major policy changes whenever a change of government takes place.⁸⁷ A lack of confidence in the implementation of announced government policy can also create uncertainty and hinder business activity and investment decisions. In 2017, almost 80 percent of businesses reported being never, seldom or only sometimes confident that policies would be implemented as announced (Figure 25).

Figure 25: In 2017, the majority of firms were concerned about the stability of policies, rules and regulations, and confidence in policy implementation had fallen since 2012



Source: INA and ADB 2008, 2012; INA 2017.

⁸⁷ INA and ADB 2012.



Efforts to enhance the development of labor-intensive sectors—such as agriculture, fisheries, and tourism—will generate employment opportunities for women and youth. Photo: Alana Holmberg.

3. Opportunities for inclusive, private-sector led growth in the non-resource sector

64. **Considerable untapped potential exists in PNG for inclusive, private sector-led growth in the non-resource sector, including in agriculture, fisheries, and tourism.**⁸⁸ The vast majority of Papua New Guineans engage in traditional subsistence and semi-subsistence agriculture in rural areas. As such, agriculture can play a significant role in providing broad-based income and employment opportunities across the country. Similarly, the development of the fisheries sector will create important opportunities for PNG's many coastal communities. As PNG has a relatively unskilled and semi-skilled labor force, and a geographic diversity that provides for one of the most diverse visitor experiences in the world, tourism development may prove an ideal fit and hold enormous potential. Furthermore, support for linkages between tourism hospitality services and local agricultural food production (where the majority of women and youth are engaged), would boost creation of more and better jobs for women and the burgeoning youth cohort.

(i) Agriculture sector

65. **Agriculture is the bedrock of the Papua New Guinean economy and one of the best hopes for generating private sector-led, balanced, and inclusive growth.** Combined with forestry and fisheries, the sector is the largest behind the resource sector (as a share of GDP), generates a concomitant share of the country's exports, and supports the livelihoods of the majority of the population. According to the 2011 Census,

⁸⁸ This statement does not preclude the possibility of growth opportunities in other sectors of the economy, for example in specific niche industries in agro-processing, light manufacturing, and downstream value addition to PNG's abundant natural resources.

around 74 percent of all households are engaged in growing food crops, vegetables and root crops, and 58.2 percent of the total employed population (that is, aged ten years and over) were employed in subsistence agriculture. The production of major export cash crops generates income for millions of rural residents. Income derived from coffee cultivation is estimated to benefit around 2.43 million people, while income from cocoa supports around 1.93 million people, and oil palm activities support an estimated 220,000.⁸⁹ Other agricultural activities that provide cash incomes which support more than or close to a million people include betel nut and betel pepper, firewood, tobacco, Irish potato, and copra. With the exception of palm oil, the majority of this production is undertaken within a traditional village environment on customarily owned land and remains far beyond the purview of any public or private agricultural institutions until the produce departs the village for markets or commodity boards.⁹⁰ The sector is a key host to the informal economy and an important contributor in the supply chain of the retail and hospitality industries. Where transport infrastructure and logistics services allow, agriculture promotes key linkages between the country's rural and urban economies.

66. **Improved performance in the sector is crucial for bolstering food security.** Households in PNG are vulnerable to food shortages and corresponding price hikes that emerge due to adverse climatic events. Given the considerable reliance by poor rural households on subsistence agriculture (including small-scale gardening) for their food needs, such circumstances can lead to severe hardship if the local agriculture sector (including markets and distribution infrastructure) is not dynamic enough to adjust quickly or if it lacks the productive capacity to do so. Climate-driven shortages in 2015 and 2016 left over 300,000 people in need of food aid and fed into sharp increases in some staple food prices in urban centers, placing considerable pressure on the household budgets of the poorest and most vulnerable. Residents of urban settlements can be particularly impacted by food price shocks, given their lack of access to cultivable land. A higher performing agricultural sector will also promote greater food availability across PNG with potential favorable flow-on effects for undernutrition rates.

67. **The government recognizes the importance of the agriculture sector.** The government has pursued a high-level sectoral development strategy over the last decade to improve the sector's productivity. In the recent past, the ambitious National Agricultural Development Plan 2007–16 was adopted, backed by substantial long-run funding commitments, but it faced implementation challenges relating to governance, capacity issues, and monitoring of sector outcomes. Policy in the sector has primarily focused on the four major export crops—cocoa, coffee, oil palm, and copra—but agriculture in PNG extends well beyond these cash crops, with food for domestic consumption also important. Hence, future support should be more broad-based. More recently, the government's Medium-Term Development Plan III also emphasizes the importance of agriculture to the country's prospects. Export crops are once more a key focus, but attention also extends to the local production of rice and livestock, as well as food security objectives.

68. **However, over the last three decades, the sector has experienced only moderate growth and its international competitiveness has waned.**⁹¹ Aside from oil palm, growth in exported agricultural commodities has been underwhelming with cocoa and coffee export volumes trending lower for at least a decade. Food production is estimated to have kept pace with population growth, but this is a far cry from the enormous potential of the sector and the growth rates achieved in other developing economies. Much of the country's fertile agricultural land is not employed in commercial production and too much national produce wastes away in either difficult-to-access rural locations or on the long, poorly refrigerated journey to market. Furthermore, while an internal robust fresh produce and livestock market exists, value chains are

⁸⁹ These figures are not mutually exclusive. In other words, many individuals/households earn an income from more than one crop.

⁹⁰ Allen 2009.

⁹¹ New Zealand Institute of Economic Research 2006.

underdeveloped.

69. **Many factors contribute to the relatively low productivity in the agriculture sector.** The sector is characterized by smallholder producers employing poor crop management techniques with limited use of manufactured fertilizers, pesticides, improved seed varieties, and farm machinery.^{92,93} Agricultural extension services—the principal policy tool for farmer education—have been long underfunded, leading to deteriorating service quality and increasingly limited nationwide coverage.^{94,95} Factors such as these have rendered low average yields for most crops, well below their genetic potential (Box 4). Agricultural producers, from subsistence and semi-subsistence producers to firms and operators across the rest of the value chain, must also contend with the same impediments to business that constrain development in other parts of the private sector. Among the most critical to agriculture are inadequate transport infrastructure and the challenge of accessing markets, access to credit, and land tenure. Additionally, the sector's once-reputed institutions have suffered from poor management and oversight, with key leadership positions being filled by candidates with limited sectoral experience, leading to poor decision-making and political capture.

70. **At the same time, examples exist of businesses that are taking risks and innovating to succeed in this difficult environment.** Mainland Holdings, an agribusiness in PNG, recently moved into sorghum production, with the planting of about 800 hectares in Morobe. Sorghum could prove a cheaper substitute to wheat imported for stock feed production. The crop is expected to be the first substantial harvest of sorghum since 1981. Another example is South Pacific (SP) Brewery's recent foray into the use of cassava flour in its beverage production process. Cassava is grown all over the country. SP Brewery has been investing in research and development of cassava starch to expand its local-sourcing footprint (substituting for imported malt barley). The International Finance Corporation is assisting the country with its first cassava flour processing plant. Hundreds of smallholder farmers will initially benefit from the project, with the impact expected to grow over time.

71. **Various pathways exist to support broad-based improvements in productivity and growth in the agriculture sector, with the potential for significant employment generation.** These relate to improving: (i) access to markets and information by improving transport, refrigeration, storage, and logistics services, including internet connectivity; (ii) crop, land, and water management; (iii) knowledge of agronomy; (iv) pest control (such as cocoa pod borer); (v) access to land to support economies of scale; (vi) access to finance; (vii) delivery of extension services; (viii) the use of locally-adapted technologies; and (ix) government institutional support structures within agriculture.

72. **Focusing on the productivity of women in agriculture would support poverty reduction and shared prosperity.** Given that women play a significant role in PNG's agriculture sector—growing both cash and non-cash crops—focusing on the constraints facing women in this sector would increase the returns to investment in agriculture. A good start would involve improving women's skills and capabilities and increasing their access to extension services and finance. Also, giving women a larger share of the benefits (that is, having a larger and more equitable share of income from farming activities) would incentivize increased productivity among women.⁹⁶

⁹² FAO and World Bank 2017.

⁹³ New Zealand Institute of Economic Research 2006.

⁹⁴ Sitapai 2012.

⁹⁵ The capacity of public extension services to cater to the sector are increasingly limited: whereas in 1980 there were around 1,000 rural residents per extension officer, this figure was closer to 7,000 in 2015.

⁹⁶ See World Bank 2015b. Related to this, Australia Department of Foreign Affairs and Trade (2017) refers to an Australian Centre for International Agricultural Research pilot program in PNG—the Family Teams project—which works with the family as a business unit, addresses the issue of time availability of women, gender relations and finds the best way to increase women's involvement in a way

Box 4: Reaching potential in agriculture
Boosting smallholder coffee, cocoa and vanilla productivity

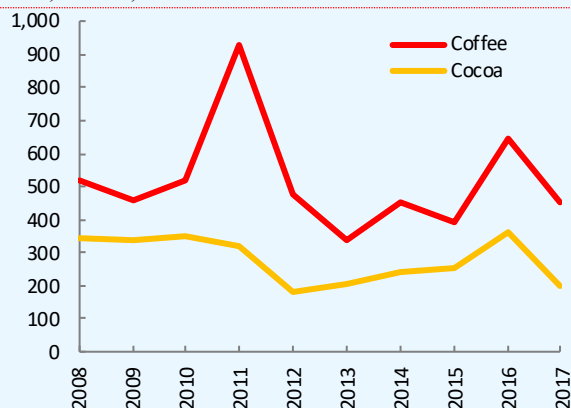
In terms of exports, coffee and cocoa are among the main commercial crops in PNG, second only to palm oil. Following a particularly sharp decline in 2012, combined coffee and cocoa export earnings started to recover in 2013 and rose to over K1 billion in 2016 before falling back to K652 million in 2017 (Figure 26) due to lower volumes of both crops, along with lower international cocoa prices. Coffee and cocoa are important crops for PNG also because they provide a significant source of cash income for a large proportion of the almost 7 million people living in rural areas. Coffee (arabica) generates the largest proportion of cash income for the rural population of PNG, providing 33 percent of the total cash income from agriculture activities, followed by fresh food (22 percent) and cocoa (11 percent).

Despite their importance, coffee and cocoa yields, especially those of smallholders, are low in PNG compared with their genetic potential. Coffee (arabica, green bean) yields average around 947 kilograms per hectare (kg/ha), which is less than half its genetic potential yield (of 2,000 kg/ha). Even more acute, cocoa yields average 284 kg/ha, a fraction of its genetic potential yield (3,000 kg/ha). The performance of PNG plantations demonstrates the potential for increasing smallholder yields—coffee and cocoa plantation yields average 1,685 kg/ha and 535 kg/ha, respectively. The challenge for PNG has been to provide the right package of support to smallholder coffee and cocoa farmers to achieve these higher yields.

The Productive Partnerships in Agriculture Project (PPAP) has been providing support to smallholder coffee and cocoa farmers since 2011. Funded by the government of PNG, along with the World Bank and other donors, PPAP aims to improve the livelihoods of smallholder cocoa and coffee farmers. A core feature of the project is support for the development of productive partnerships between smallholders and the private sector. The initiative combines material and monetary support and has shown early signs of achieving major yield improvements. PPAP’s support to smallholders is increasingly relevant for PNG especially with the emergence of disease. Cocoa pod borer (a mosquito-sized moth) had a major impact on production, from which smallholders are only starting to recover, and the emergence of coffee berry borer (a beetle) is similarly threatening to impact on production.

Figure 26: PNG exports of cocoa and coffee

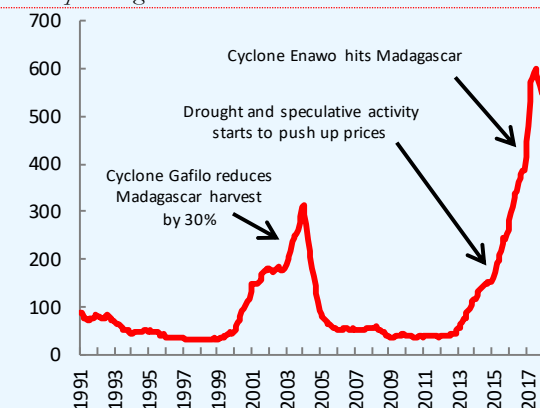
Kina, millions, 2008-17



Sources: BPNG; commodity boards.

Figure 27: Vanilla prices are still booming

USD per kilogram



Source: Financial Times 2017.

Natural vanilla is the world’s second-most expensive spice (after saffron) and in 2018, PNG was on track to be the world’s second-largest producer. Despite strong competition from synthetic vanilla, shifts in consumer preferences have strengthened the demand for vanilla beans over the past decade. While the high price has traditionally reflected the significant labor intensity of cultivation, more recent years have seen steep increases owing

that considers her time constraints, and has a positive impact on gender relations within the family and community. The model recognizes varied family structures (no set definition, works with single-headed households, widows, multiple wives, and so on). It also works with local community and technical organizations that have existing relationships and interests in the community; provides training and services in a model that is suitable to family teams.

to market speculation and weather-related supply-side disruptions in the world's largest producer, Madagascar. Global prices have been over 1,000 percent higher than just 5 years prior (Figure 27), with the commodity soaring to over USD600 per kilogram (kg) for the first time in history in 2017. Prices eased slightly to around USD550/kg at the end of 2017 on hopes of a good crop in Madagascar in 2018 before rebounding to near USD600/kg in early 2018 amid uncertainty over production levels. As of mid-2018, prices had returned to the lower end of the USD500-600/kg range and were expected to decline gradually over the remainder of the year.

The vanilla shortage presents a short-term windfall for PNG farmers and a longer-term opportunity to increase global market share. For example, while the global standard for vanilla prices is in reference to premium Madagascan bourbon vanilla, the price point for PNG's Tahitensis vanilla is generally around USD150 lower than the Madagascan variety. This lower price has helped PNG to develop a dominant position in the increasingly important food service and retail sectors. With global prices averaging around USD500 per kg during 2017—which would place average prices for PNG vanilla at around USD350/kg—this might have translated into exports of up to USD100 million, compared to just USD5 million in 2015.^a Returns to cultivated land can be very high, exceeding K10,000/ha for good quality vanilla. In terms of land use, vanilla production currently has the largest land utilization for a crop in PNG outside of coffee and cocoa. The leading provinces producing vanilla are East Sepik, Manus, Madang, Morobe, and East New Britain.

The future of the vanilla industry looks very promising largely due to the discovery of carcinogenic substances in the substitute artificial vanilla essence. However, opportunities for a quick profit—including early harvesting and 'bulking out' shipments to increase weight—particularly in response to recent shortages, should be resisted. Instead, efforts to build a reputation for quality, so that when Madagascan supplies return to normal levels buyers will still value the Papuan crop, will help to grow long-term markets for Papuan vanilla. Industry reporting indicates that recent government actions to reduce smuggling to Indonesia and to increase awareness with local farmers on the importance of quality in harvesting is paying off, with PNG estimated to have produced nearly 250 metric tons of cured vanilla beans in 2018.^b

a. At the time of writing, however, the exact value of vanilla exports was not yet available.

b. PNG Post-Courier 2018c, based on a report released in May 2018 by a Canadian global vanilla buyer, Aust & Hachmann.

(ii) Fisheries sector

73. **The fisheries sector, which plays a significant role in the traditional way of life in coastal communities, is an important part of the PNG economy.** The nature of these activities varies significantly given the high geographic and ecological diversity of the country's fishing areas. It ranges from reef flat harvesting, spearfishing and invertebrate collection, to net fisheries for barramundi and catfish, to lobster fisheries, prawn trawling, sea cucumber (bech-de-mer) harvesting and tuna harvesting via longline and purse seine.⁹⁷ Fishing is a core activity among coastal communities, but its significance for inland communities should also not be underestimated. Although the majority of fisheries production takes place in offshore fisheries,^{98,99} coastal and inland fisheries have been the most directly important for supporting the livelihoods of Papua New Guineans through their subsistence, semi-subsistence, or small-scale-commercial activities. Moreover, fish constitute an important source of protein in local diets (a deficiency of which is associated with child malnutrition and stunting).

⁹⁷ Purse seine is a type of fishing net used in the open ocean to target dense schools of fish like tuna and mackerel.

⁹⁸ PNG's Exclusive Economic Zone comprises part of the Western and Central Pacific Ocean tuna fishery, the source of about 50 percent of the world's tuna catch.

⁹⁹ FAO 2010.

74. **Locally-based and foreign-based (as well as locally-flagged and foreign-flagged)¹⁰⁰ vessels operate in PNG's offshore fisheries and land their catch onshore.** Among the incentives for the high foreign fleet participation in PNG's offshore fisheries and the local-basing of operations have been the significant concessional fishery access terms provided to vessels that partner with local canning facilities, as well as the preferential access to European markets conferred to fish exports processed in PNG.^{101,102} These incentives are aimed at supporting the industrial development of the fisheries sector by improving the viability of processing operations in PNG relative to major regional competitors such as the Philippines, Thailand, and Vietnam. As a result, PNG has five canneries in operation across Lae, Madang, and Wewak, and another four facilities are in development. While these facilities have the potential to support many thousands of jobs, capacity utilization is very low due to high utilities and shipping costs, low labor productivity, and other challenges associated with the broader business environment. A key challenge has been the large number of fishing vessels that register their association with local canneries—and therefore benefit from subsidized fishery access fees—but land their fish overseas. In an attempt to re-align vessel incentives, the government has suspended these access fee subsidies since January 1, 2018, and implemented a rebate scheme of USD400 per metric ton of fish that is landed and processed in PNG.

75. **The fisheries sector suffers from many of the same business environment impediments as elsewhere in the economy.** Infrastructure is poor, access to electricity is minimal and unreliable, business credit is limited, and so on. Provincial and local administrations are largely responsible for coastal resource management, but as discussed in sub-section 2 of Part B, major skills and capacity shortfalls and poor accountability mechanisms impede effective delivery of those services. Furthermore, the small size of many of the coastal communities at different locations results in lower total production volumes that weaken the financial case for investment in processing and other facilities that are crucial to supporting small-scale commercial activities and greater SME involvement.

76. **Despite international competitiveness challenges, development of the sector has the potential to promote much needed economic diversification, support coastal community livelihoods, generate jobs, and increase food security.** Smaller market players need support to access processing facilities and appropriate marketing and distribution networks for their output.¹⁰³ While investment will be required and both private and public options should be explored, these options will need to leverage business from the larger operators in offshore and coastal fisheries to reach production volumes that can lower average costs and improve efficiency. Efforts should also be aimed at supporting viable and sustainable aquaculture development in the highlands regions. Going forward, sustainable management of fishery resources will be essential as population and other pressures place increasing stress on fishery ecosystems. Monitoring is necessary to prevent ecosystem destruction as, for instance, practices such as dynamite fishing are still believed to be widespread.¹⁰⁴ Ecosystem collapse or overfishing would prove a disaster for many communities. Consequently, training and capacity building is required at the provincial and local government level, as are interventions aimed at strengthening: (i) sector governance; (ii) public sector institutional capacity; and (iii) sectoral public-finance management conditions, structures, and accountability. Improvements in food security for coastal communities will also be achievable via the allocation of a share of offshore fishery access rights to coastal communities,

¹⁰⁰ A vessel's 'home location' and its flag are not necessarily synonymous. International law requires that every vessel which crosses international borders is required to be registered in a country, called its flag state. However, a vessel can be registered (flagged) in one nation, while being based on another.

¹⁰¹ World Bank 2017c.

¹⁰² Other incentives including tax holidays, accelerated depreciation and double deductions are also offered by the government for investments and activities in the sector (Oxford Business Group, 2015).

¹⁰³ For example, small-scale fisheries need to be linked up better with the major Madang Industrial Center (formerly known as the Pacific Maritime Industrial Zone).

¹⁰⁴ Naime 2016.

trialing of efforts to retain and better distribute locally landed by-catch from these offshore fisheries, and investment in onshore fish aggregation devices near these communities.¹⁰⁵

77. **Success should also entail making the most out of PNG’s offshore fishery resources.** Recent World Bank research, which focuses on the prospects for tuna fisheries between now and 2040, notes that PNG has the potential to realize expanded public revenues and job creation. However, this will require efforts aimed at better regional cooperation around fisheries, improvements in the sustainable management of fish stocks, enhancements in the flexibility and value of fishery access rights, upskilling of fishery managers, better branding and marketing of local tuna, and support for regional processing clusters.¹⁰⁶

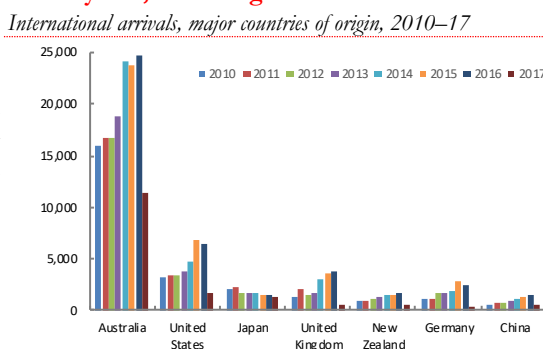
(iii) Tourism sector

78. **The development of a sustainable tourism sector has the potential to engender more inclusive growth that can benefit low- and middle-income households and be gender inclusive.** PNG’s incredible natural and cultural assets make for an attractive tourist destination,¹⁰⁷ with diverse visitor experiences that include world-class diving, surfing, major walking tracks, bird watching, cultural exposure, adventure products, and World War II historical sites. The sector is labor intensive, generating a wide range of jobs, especially for women and youth, together with economic opportunities for local communities, including those in the primary and artisan sectors, which are the most likely to live in extreme poverty. When properly managed, tourism can enable the preservation of natural and cultural heritage—some of PNG’s most valuable assets—which are critical foundations of resilience and social cohesion for communities.

79. **Despite a short-term contraction in 2017 due to concerns over election-related violence, there has been steady growth in visitor arrivals in recent years.** Between 2006 and 2016, international arrivals grew by an annual average of 9.8 percent, reaching 198,000 arrivals in 2016. Most of this increase was attributable to an influx of business travelers and workers associated with the economy’s strong expansion during this period, as opposed to a substantial increase in the number of holidaymakers. In 2017, a spate of source-country-issued travel warnings related to potential election-time violence led to a dramatic decrease in arrival numbers. Arrivals in 2018 are estimated to have rebounded significantly, with elections out of the way and APEC placing PNG in the international spotlight.

80. **While the leisure segment of international arrivals remains relatively small, it has been trending up and is becoming increasingly important.** Holidaymakers grew from 22.7 percent of total arrivals in 2010 to almost 29 percent by 2016 (though, unsurprisingly, it fell below 25 percent in 2017).¹⁰⁸ The majority of holiday arrivals in 2016 were from Australia (24,700), followed by the United States (6,500) and United Kingdom (3,800) (Figure 28).¹⁰⁹ In Asia, China represents a potential growth segment for PNG with 6 percent of total arrivals in 2016 and an average annual growth rate of 16 percent over the decade to that year. To fully capitalize on this opportunity and continue to increase Chinese visitor numbers, the

Figure 28: Visitor numbers have grown strongly in recent years, including from China



Source: PNGTPA 2017.

sector will need to recognize key differences in tourism preferences between Chinese visitors and visitors

¹⁰⁵ World Bank 2017c.

¹⁰⁶ World Bank 2017c.

¹⁰⁷ In 2017, Papua New Guinea was selected as one of National Geographic Traveler’s 21 “Best of World Destinations”.

¹⁰⁸ PNGTPA 2017. This compares to 35 percent on business and 23 percent arriving for employment in 2016.

¹⁰⁹ PNGTPA 2017.

from PNG's traditional source markets, and tailor tourism offerings accordingly.

81. **Niche market tourism and the cruise market will continue to be the two main growth areas in the sector.** The country's geographic, ecological, and ethnographic endowments, which provide many opportunities for the development of higher-yielding niche experiences for special interest tourists, have contributed to robust growth in arrivals. About 32,000 holidaymakers flew to PNG in 2016 for cultural tourism, birdwatching, soft adventure tourism, historical tourism, and diving. With appropriate investments in infrastructure, product development, regulatory areas, capacity, and marketing, it is estimated that this market segment could attract over 85,000 annual air arrivals by 2027.^{110,111} PNG has also become a popular destination for cruise tourism—the fastest growing tourism channel in the world—which accounted for nearly USD4.5 million in visitor expenditure in 2015. Visitor arrivals by cruise ship are reported to have seen even stronger growth due to the increasing size and number of cruises, accounting for one-third of all holiday visitors in 2016.¹¹² Of the local economic impact, 54 percent was generated from spending by cruise operators (mainly through port fees), 43 percent was generated by passengers, and 3 percent by crew members purchasing goods and services from local businesses. Opportunities for ecotourism may also be significant, but these remain relatively unexplored to date.

82. **The tourism sector's contribution to the economy and employment is currently below its potential.** The low relative contribution of travel and tourism to the economy places PNG at 184 of 185 economies in the World Travel and Tourism Council's (WTTC) rankings.¹¹³ WTTC (2018) estimates that the travel and tourism sector directly contributed 0.7 percent of GDP and 0.5 percent of total employment in 2017. When adding the induced and indirect effects, the total contribution¹¹⁴ of travel and tourism reached 1.8 percent of GDP and 1.6 percent of total employment.

83. **High prices, limited product offerings, and low-quality services combined with personal safety concerns hamper the country's attractiveness to potential tourists.** Despite substantial untapped potential for niche tourism experiences (including culture, world war heritage, trekking, bird watching, diving, surfing, fishing, sailing, and river cruising), the high cost of air travel vis-à-vis competing destinations (such as Bali, Fiji, and Vanuatu)—combined with inadequate domestic transport infrastructure (that is, dilapidated roads and jetties)—limits visitor access to PNG's tourism destinations. Connectivity challenges are compounded by a limited supply and generally low quality of tourism products and services, which affects the tourism experience. Safety and security remains a significant concern, and continues to affect outsiders' views of the country adversely.¹¹⁵ Finally, weak provincial and tourism institutions—which lead to the preparation of unrealistic provincial tourism strategies, limited knowledge about market demand, poor marketing, and insufficient workforce development—hamper private sector development.

84. **Tourism can also provide opportunities for income generation and economic empowerment for women and youth which, in turn, would support poverty reduction and inclusive growth.** The labor-intensive nature of the tourism sector can generate a wide range of jobs from highly-skilled to entry-level and is highly inclusive of women, youth, and under-represented groups in the labor market. Women have a proportionally higher share of the workforce in tourism (at 50 percent) compared to other sectors and are almost twice as likely to be owners of small- and medium-size tourism enterprises.¹¹⁶ The sector also employs

¹¹⁰ Compared with a business-as-usual projection of 41,000 air arrivals in 2027.

¹¹¹ IFC 2018.

¹¹² However, actual passenger disembarkation numbers are not available.

¹¹³ This poor ranking was unchanged from 2016 and therefore cannot be attributed to the election-related travel warnings in 2017.

¹¹⁴ The total contribution adds the indirect (e.g. purchases of food and cleaning services by hotels) and induced (e.g. spending of those directly or indirectly employed by the industry) effects.

¹¹⁵ Overseas Security Advisory Council 2017; Dinnen 2017.

¹¹⁶ Stacey 2015.

young people at almost twice the rate of other industries.¹¹⁷ Workforce development for tourism, especially for women and youth, could boost opportunities in roles such as tour guides and hotel staff.¹¹⁸ Enhancing the returns on women's participation in SMEs which service the tourism sector, such as in the provision of agriculture produce and handicrafts, would also strengthen women's economic empowerment.

85. **An integrated multi-sectoral approach is necessary to improve PNG's attractiveness as a tourism destination.** Such an approach should aim to: (i) improve safety and security; (ii) improve access to, and reduce cost of travel to and within, PNG; (iii) improve or rehabilitate infrastructure, products, and experiences to allow for entry of both tourism-related services and other ancillary businesses which support the sector, to engender competition that will reduce costs and raise service quality; (iv) increase the participation of local communities in providing ancillary services to the sector; and (v) strengthen the institutional and policy frameworks for tourism development across national, provincial and local levels. The sustainable management of PNG's natural environments and the preservation of its unique and extensive biodiversity will also be essential.

86. **The government recognizes sustainable tourism as a priority sector that can lead to more inclusive growth and is taking action.** PNG's Medium-Term Development Plan III (2018–22)¹¹⁹ highlights the importance of the tourism sector, featuring as one of its goals to “increase the overall economic value of tourism to the nation by doubling the number of tourists on holiday in PNG every five years and maximizing sustainable tourism growth for the social and environmental benefit of all Papua New Guineans.” The plan outlines annual targets for the number of business travelers, number of bona fide tourists, and annual tourist expenditure, alongside sector strategies and key investments. The government is currently also in the process of preparing a new Tourism Master Plan. The previous Tourism Master Plan for 2007–2017 had among its key strategic themes: destination marketing and branding, investment incentives and product development, transport and infrastructure, human resource development, and institutional and industry partnerships.

87. **The Prime Minister recently announced plans to establish Kokopo as Papua New Guinea's tourism hub, drawing parallels to Bali in Indonesia and Nadi in Fiji.** As a start, the government has set its sights on local airport expansion, road improvements, new power infrastructure, and increases in hotel capacity. Just one month after the announcement, a memorandum of understanding (MoU) was signed between Kokopo's provincial government, the national government, and several Chinese organizations—the Asia Pacific Tourism Organisation, the China Railway International Group, and Wonders Travel Services. The MoU appears to be an initial step in bringing together key parties that intend to be involved in hub development, while also making headway in targeting the market for Chinese tourists. Tourism development in Kokopo (and the tourist hotspot of Alotau in Milne Bay) is also being supported by a K63 million World Bank facility aimed at strengthening key institutions and policy frameworks, supporting small-scale and site-specific upgrades to infrastructure, and making improvements to existing tourism offerings that are located nearby. It is worth noting that ‘tourism hubs’ in Rabaul and Kokopo—both located on East New Britain (ENB) island—have been envisaged since at least 2013, when ENB was designated as a ‘tourism center’ as part of a government scheme that focused development on a small number of special zones across the country. It remains to be seen if the latest efforts will be enough to transform this locale and harness PNG's tourism potential.

¹¹⁷ Stacey 2015.

¹¹⁸ United Nations World Tourism Organization and United Nation Women 2010; World Bank internal communications on PNG's tourism project, July 2016.

¹¹⁹ For a discussion of the Medium-Term Development Plan III, refer to box 2.

4. A call to action

88. **Coordinated, cross-sectoral solutions are required to ease the constraints on private sector development.** Extensive survey evidence reveals that government facilitation in access to infrastructure, foreign exchange, finance, land, law enforcement, and skilled labor have a great potential for improving prospects of non-resource sectors in PNG. Structural reforms in these areas may drastically improve the business environment, with substantial payoffs in terms of sustained inclusive growth, economic diversification, and job creation—especially in the agriculture, fisheries, and tourism sectors that are also highly inclusive of women and youth. Private sector development would also support the government’s fiscal objectives by reducing the reliance of government revenues on the volatile and non-renewable resource sector. At the same time, concerted efforts by public authorities and the private sector will be required to both shoulder the substantive costs and find innovative solutions for delivery of expanded infrastructure and services, especially in rural areas.

89. **Improving the business environment will require closer and more frequent consultation with all stakeholders.** The authorities should be cautious of solutions designed simply to improve *de jure* assessments of the business environment that may, in isolation, have limited impacts in terms of practically improving the operating environment for private enterprise. Instead, attention should focus on alleviating key constraints to higher productivity and investment at the sectoral level, incorporating adjustments to laws, rules, and regulations as a means to remove impediments to business activity, rather than as ends in themselves. Care also needs to be taken to avoid reforms that inadvertently raise policy uncertainty and risks for investors.¹²⁰ The vast majority of PNG firms hold concerns over regulatory instability and report limited confidence in policy implementation—these represent important areas where quick wins can be secured by the government. Close collaboration with both local and foreign firms (as well as potential new entrants) will be crucial in helping authorities identify the most significant constraints and opportunities, and thus where reform efforts should be targeted to achieve the greatest impact.

¹²⁰ For instance, reforms to the foreign investment regime—foreshadowed in recent draft legislation for a specialized Foreign Investment Regulatory Authority—have increased the perceived level of business environment risk and may deter foreign capital.

Annex 1. Selected Economic and Social Indicators

	2014	2015	2016	2017	2018	2019	2020	2021
				Est.	Est.	Projections		
National income and prices <i>(In percent, unless otherwise indicated)</i>								
Nominal GDP (USD billions)	23.1	21.3	19.9	21.6	22.3	24.1	25.6	27.9
Real GDP growth, <i>of which:</i>	15.4	7.7	2.6	2.8	0.3	5.1	3.1	3.4
Extractive sector (percentage-point contribution)	9.4	9.1	2.4	1.4	-2.0	2.7	0.3	0.7
Non-extractive (percentage-point contribution)	6.0	-1.4	0.2	1.4	2.3	2.4	2.8	2.7
Consumer price inflation, period average	5.2	6.0	6.7	5.4	4.7	4.8	4.0	4.0
GDP deflator	3.1	-3.4	2.9	7.4	6.3	3.3	3.1	2.5
Real exchange rate change, USD/PGK*	-5.6	-5.9	-6.9	1.4	-0.6	2.5	1.8	5.0
Fiscal accounts <i>(In percent of GDP, unless otherwise indicated)</i>								
Revenue and grants	20.9	18.6	16.8	16.8	18.3	18.0	17.3	17.0
Non-resource tax revenue	16.6	15.2	13.4	13.1	13.1	13.0	13.3	13.2
Resource revenue	2.3	1.1	0.6	1.0	2.2	2.3	1.4	1.3
Grants and other revenue	2.0	2.4	2.8	2.6	3.0	2.7	2.6	2.5
Expenditure and net lending	25.5	22.9	21.8	19.4	20.9	20.3	19.1	18.5
Primary expenditure	23.8	21.0	19.7	17.0	18.2	17.8	16.7	16.2
Interest payments	1.7	1.8	2.0	2.4	2.6	2.5	2.5	2.4
Overall fiscal balance	-4.6	-4.2	-5.0	-2.6	-2.6	-2.3	-1.8	-1.5
Non-resource primary balance (% non-extractive GDP)	-6.6	-4.4	-4.5	-1.6	-2.8	-2.7	-1.0	-0.6
Net public debt	27.0	30.7	34.6	34.6	35.4	34.9	34.7	33.8
Gross government debt	27.0	30.8	36.1	35.7	37.6	36.9	36.3	35.0
Gross government savings	0.0	0.1	1.5	1.1	2.2	2.0	1.6	1.2
External accounts <i>(In millions of U.S. dollars, unless otherwise indicated)</i>								
Exports, f.o.b., <i>of which:</i>	8,794	8,425	8,202	9,952	10,253	11,315	11,427	11,742
Extractive sector	7,349	7,199	6,730	8,335	8,746	9,764	9,769	10,026
Imports, c.i.f.	-4,322	-2,687	-2,478	-3,219	-2,764	-3,029	-2,999	-3,356
Current account	1,796	4,140	4,380	4,892	5,549	5,949	6,281	5,918
(in percent of GDP)	7.8	19.4	22.0	22.7	24.9	24.7	24.6	21.2
Overall balance of payments	-520	-440	587	54	386	-26	-37	176
Gross official reserves	2,305	1,865	1,681	1,736	2,236	2,095	2,058	2,233
(in months of goods and services imports)	6.8	6.0	4.1	4.9	5.6	5.4	4.8	4.7
(in months of non-extractive imports)	17.1	19.3	11.9	12.6	13.8	14.0	13.3	14.0
Money and credit <i>(In percent, unless otherwise indicated)</i>								
Broad money growth	3.4	8.0	10.9	0.9	16.5	-10.5	2.5	6.6
Domestic credit growth	12.8	23.5	15.9	-1.0	10.5	-7.6	3.6	5.2
Growth of credit to the private sector	3.5	3.4	7.2	-3.6	7.0	3.1	2.4	5.8
Interest rate of 182-day T-bills, period average	5.3	7.1	7.4	7.1	7.0	8.1	7.8	7.8
Social indicators								
Population, total (millions)	7.8	7.9	8.1	8.3	8.4	8.6	8.8	8.9
Population growth (percent)	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9
Life expectancy at birth (years)	65.2	65.4	65.5

Sources: Official data; World Bank staff estimates and projections.

Note: * An increase represents appreciation and a decrease is depreciation.

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