Papua New Guinea Economic Briefing

From the last days of the boom to lasting improvements in living standards

THE WORLD BANK GROUP IN PAPUA NEW GUINEA **2013—1**

In 2012 PNG's economy enjoyed what it is likely to be the last year of strong growth for most sectors of PNG's economy in this economic cycle. Construction of PNG-LNG and various spin-off investments, and broader investments in the domestic service sectors, continued to be key drivers. External conditions detracted from the economy, although they also helped to slow growth in prices. The government's 2013 budget represents a marked change from recent years, with the largest deficit on record aside from the 2009 global economic crisis, substantially more funds allocated to lower-level administrative units, and markedly slower revenue growth expected. While this budget may be affordable in the short-term, an extended series of deficits of this size risk returning PNG to the macroeconomic instability that followed its last extended economic boom, as the government has acknowledged.

The government expects to bring the budget back to balance by the 2017 elections through stronger revenue growth and plans to slow spending. Many of these plans appear ambitious, and may create tensions with the government's development goals. By capping the government's debt ratios, the new medium-term debt strategy anchors these fiscal targets. But there are significant risks around these projections, and around the effectiveness of spending as far more funds are allocated to less developed areas of PNG's public financial management systems. Improving this will be key to addressing PNG's significant human development needs, documented in the recently-released 2009-2010 PNG Household Income & Expenditure Survey. Over coming years, growth across the economy is likely to slow significantly, beyond the large impact on headline growth rates of first production from the PNG-LNG project. In this environment, the foundations for PNG's next boom will lie in ensuring government policies effectively and efficiently help Papua New Guinea's emerging entrepreneurs do business.

1. Economic Update: The economy continued to expand strongly through 2012, although the drivers are receding and growth will slow through the coming years

Strong and broad economic growth continued in 2012, although the drivers of this strength started to recede

PNG's economy continued to expand strongly through the first half of 2012, albeit less quickly than in 2010 and 2011. Over 2012, the economy is likely to have grown by around 8 percent, compared with near 9 percent growth in 2011. Domestic demand remained the key driver, with pre-election spending of government funds augmenting the effects of ongoing construction of the PNG-LNG project and spin-off investments. Indeed, the strength in PNG's non-tradable sectors (largely domestic services) has accelerated the economy ahead of its Pacific neighbors. (Figure 1, Figure 2) Since early 2012, external factors have detracted from the domestic strength. The appreciation of the Kina (PGK) in 2011 and early 2012 and weakening international commodity prices into the second half of 2012 had the effects of both reducing rural production, incomes and government receipts, while also slowing the growth in urban consumer prices.

Treasury Department estimates suggest the key drivers of growth remained construction of the PNG-LNG project and activity across other domestic services…

Construction of PNG-LNG and of the various spin-off investments remained the key drivers of PNG's economic growth into the second half of 2012. While the official national accounts published by the PNG National Statistics Office have not been updated since 2006, the Treasury Department estimates that construction activity grew by almost one-quarter in 2012, to be double the level recorded as recently as 2009. Growth in wholesale & retail trade, and transport & communications activity in 2012 was only a little less rapid than construction, following several years of very strong growth. All these sectors have been benefiting from the one-off surge in demand associated with the PNG-LNG project, which will end as construction winds down in 2013 and 2014. But there also appears to be a positive effect from this demand that is boosting Papua New Guinean firms' physical and organizational capacity, and some of this boost in capacity will be beneficial for sustaining activity beyond the PNG-LNG project.

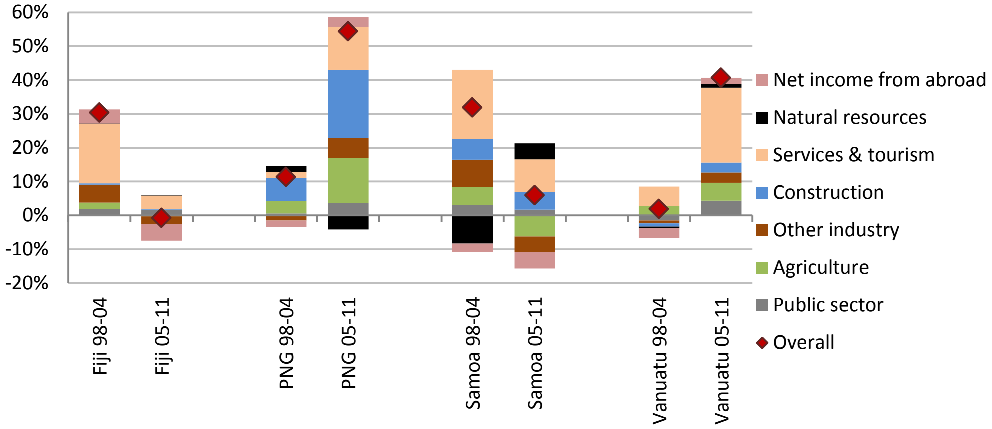
…and looser fiscal policy in 2012…

The first half of 2012 was also notable for the deteriorating fiscal position and stimulus to domestic consumption, as government funds were spent ahead of the mid-year elections.

Government spending in the first half was faster than usual, with 40 percent of the 2012 appropriation spent by the end of June, or 25 percent more than was disbursed in the first six months of 2011. Sixty percent of the recurrent budget had been released, while near one-third of the development budget was spent by mid-year. (Figure 11, Figure 12) Meanwhile revenues were weaker than the government had expected. Forecasts made in the third quarter were for tax receipts in 2012 to be PGK 354 million (5 percent) below budget. The deterioration was due to weaker mining and petroleum taxes and dividends, in part reflecting over-optimistic projections for commodity prices in the 2012 budget. Gold prices in 2012 were US$ 200 per ounce lower than the budget forecasts, and copper prices US$ 1000 / tonne lower. This added to the impact of volumes of both being significantly lower than expected. On the other hand, oil prices were US$ 10 per barrel higher and production 700,000 barrel greater than expected.

Figure 1: PNG has out-paced its Pacific neighbors since 2005, due to expanding activity in non-tradable sectors

(cumulative real output growth and contributions, 1998-2004 and 2005-2011, percent and percentage points)



Sources: World Development Indicators and World Bank staff calculations

…while new public spending also made a notable contribution to domestic demand

The difference between the above-budget spending and below-budget revenues was funded through domestic debt issuance, especially short-term (6 to 12 month) Treasury bonds and by drawing down the government's cash reserves. The central government's net claims on the central bank fell by PGK 1.1 billion between December 2011 and June 2012, although about 15 percent of this draw-down of the government's holdings at the central bank appears to have shifted to commercial banks. At the same time, deposits in trust accounts, ear-marked for future spending on defined projects (and held at both BPNG and commercial banks), fell by PGK 732 million in the first six months of 2012. About one-third of this movement is attributable to the first payments of the government's new tuition fee subsidy program (pre-funded through the 2011 Supplementary Budget). (Figure 3)

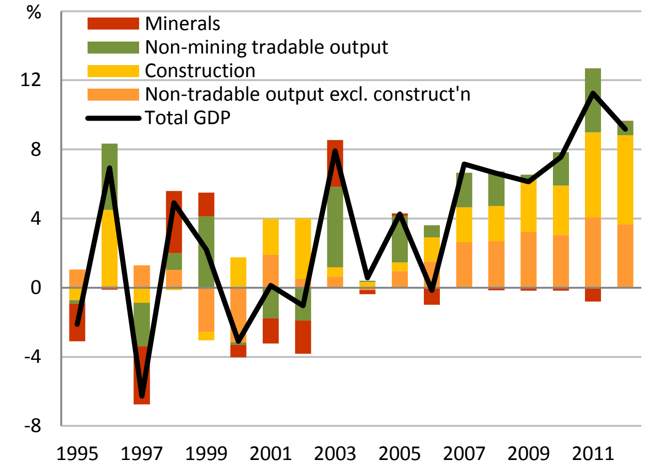
Meanwhile, weaker external conditions and the stronger exchange rate became a drag on the economy

The flow-through from deteriorating external conditions contrasts with the strength of the domestic economy. Copra, cocoa and coffee farmers and exporters all saw their incomes compressed by the falls in international prices through the first half of 2012, exacerbating the impact of the appreciation of the PGK in 2011. Domestic factors, such as the shut-down of processing mills and supply chain issues, further reduced opportunities for domestic farmers. They responded by producing less, amplifying the negative impact of lower Kina prices on rural incomes. Copra and coffee farmers' production appears to be particularly responsive to changes in prices, and to have become more so in recent years. (Figure 4)

…and lower production across PNG's mines was only offset by the start of production at the Ramu Nickel/Cobalt mine later in the year

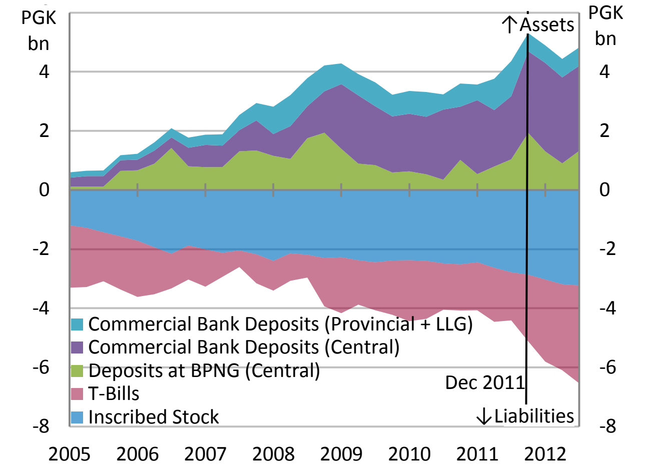
Wetter-than-usual weather, infrastructure problems and resource depletion hampered minerals and oil & gas production, especially in the first half of the year. However, Treasury still estimates output volumes rose by ½ percent in 2012, following 11.8 percent decline over 2011. The Kina value of this output weakened 16.5 percent compared with 2011 due to the stronger exchange rate and weaker international prices. The Ramu Nickel/Cobalt mine started production in the second quarter of 2012, and expects to reach full production by late 2013, several years later than initially planned following repeated court injunctions related to its offshore tailings outfall system among other issues. Mine start-up will contribute to export receipts and GDP and is expected to employ 700 PNG nationals by late 2013, but it will not contribute to tax revenues until a ten-year tax holiday expires in 2022. Production is expected to last 35 to 40 years, and at full capacity the mine is expected to produce about 31,000 tonnes of nickel and 3,300 tonnes of cobalt annually.

Figure 2: Domestic activity again drove strong output growth in 2012, while output of non-mining tradable goods slowed
(contributions to annual growth, percentage point)



Sources: PNG Treasury, IMF and World Bank staff calculations

Figure 3: The public sector drew down its financial reserves and expanded domestic borrowing in the first half of 2012
(government deposits and domestic debt issuance; billions of PGK; the difference between domestic financial assets and liabilities indicates changes in the public sector's overall domestic financial position)



Sources: BPNG and World Bank staff calculations

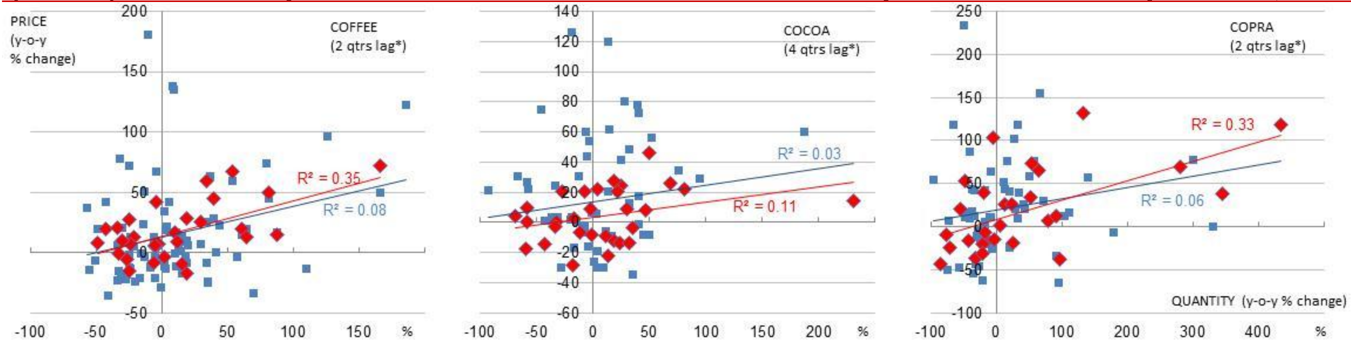
The PNG-LNG project remains on schedule, although its development costs are considerably larger than originally planned, which will be partially offset by higher expected revenues from the project

The PNG-LNG project manager reported in mid-November 2012 that 70 percent of construction had been completed and the project remained on schedule for first deliveries in 2014. However, the project would cost significantly more than originally estimated – US$19 billion, compared with the revised estimate of US$15.7 billion announced in December 2011, itself above an initial cost ceiling of US$15 billion. Project developers attributed a total of US$2.1 billion in higher costs to currency movements, especially the stronger AUD, US$1.2 billion to delays from work stoppages and land access issues, while wetter-than-normal weather added US$0.7 billion to costs. Project developers also raised their projections of production (by 5 percent) and price (by 30 percent) from the project, and these higher revenues are likely to at least partially offset the higher development costs. The higher development costs require the government to contribute approximately US$180 million to maintain its equity share, but maintaining this equity share should allow it to benefit in the longer-term from the higher returns from the project.

Among other features, documents available publically indicate that the tax structuring of the PNG-LNG project has "development" (largely investment) costs offset from its initial profits for the purpose of calculating tax liabilities. The increase in development costs announced in late 2012 could potentially postpone the flow of corporate taxes from the project, although the expected greater revenues from higher production and sale prices will offset these costs at least to some extent. The government expects its annual revenues from PNG-LNG to be PGK 1.7 billion to PGK 2.2 billion until early next decade, and then, with the development costs depreciated, to rise raise rapidly to around PGK 4.5 billion. To the extent that these development-cost offsets are akin to accelerated depreciation of the capital investments for a project, they postpone when a government receives tax revenues from a project, rather than reduce the government's total receipts – they accelerate the rate at which the investments are depreciated for taxation purposes. This contrasts with a tax holiday arrangement, which generally reduces a government's total receipts from a project rather than deferring these payments to later in the project's life. Tax holidays can also create incentives to maximize profits from the mine while the holiday applies, creating distortions in productivity and further reducing the total return to the government.

Figure 4: Most cash crop farmers cut production when prices fall, and the response may have become stronger in recent years

(year-on-year percentage change in quarter-average PGK prices and exports; blue points and trend line cover observations from early 1990s to June quarter 2012; red dots and trend line relate to the March quarter 2005 to the June quarter 2012)



* Lag between movement in international prices and in production with the strongest correlation. These lags may reflect transport, processing and storage periods. Each point represents the lagged change in prices from a year earlier relative to the change in quantity sold. Observations since 2005 are colored red. The R^2 indicates the share of the correlation explained by the trend line. *Sources:* BPNG and World Bank staff calculations

Inflation slowed in 2012, due to one-off factors such as the education fee subsidy and the strengthening in the Kina

Inflation slowed through the first half of 2012, before picking up slightly in the third quarter. The expanded tuition fee subsidy introduced at the start of the year, pass-through of the greater purchasing power from the stronger Kina into lower prices for imported items, and the effects of the government's tariff reduction program in 2011 and 2012 all helped to slow the rate of growth of the consumer price index calculated by the NSO. Headline inflation fell to 1.4 percent in the year to Q2 2012, and was still 2.0 percent in the year to Q3 2012, compared with rates near or above 6 percent since the economy accelerated out of the 2009 global downturn. Part of this fall in inflation is due to declines in volatile prices, with underlying inflation slowed to 3 to 3½ percent, according to the central bank's estimates. Anecdotal reports also suggest that the prices of producers' inputs are stabilizing, as supply from recent investments in new capacity becomes available and demand stabilizes. The factors slowing inflation in 2012 are one-off rather than likely to have an ongoing impact: after the appreciation from late 2010 through early 2012, the exchange rate was relatively stable through the remainder of 2012, most of the key education and health fees have now been subsidized, and, after several years of import tariff reductions, the government will raise import tariffs in the 2013, which will increase costs for producers and, in due course, consumers.

…this allowed the central bank, on balance, to maintain the stance of monetary policy

On balance, the Bank of Papua New Guinea (BPNG) broadly held the stance of monetary policy unchanged in the year since February 2012. In October 2012 it took advantage of the fall in inflation to lower the Kina Facility Rate (KFR) by 100 basis points to 6.75 percent. This was the first easing since 2009, and reverses the total increase of 100 bps in 2011. But the KFR tends to have limited effect on the depositors' or borrowers' behavior, largely due to the high level of excess liquidity in the banking system. In June BPNG sought to reduce this liquidity by raising banks' cash reserve requirements (the share of deposits that banks must hold at BPNG) by 100 basis points (bps) to 8.0 percent.

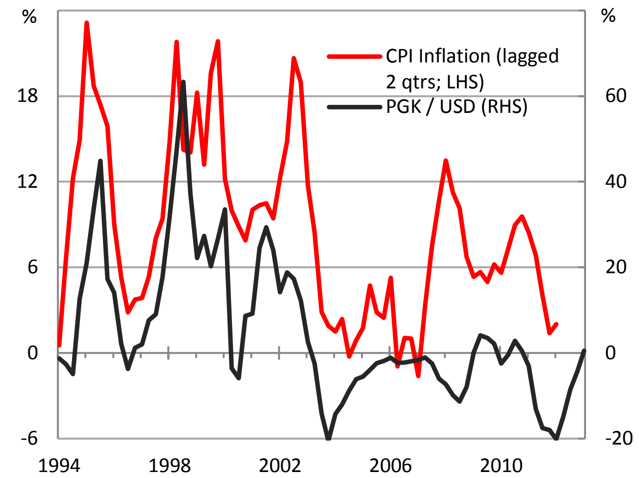
…and to continue to rely on the ongoing effects of the exchange rate's appreciation in 2011 to limit inflation

Notwithstanding these adjustments in the conventional monetary policy instruments, the most effective influence on inflationary pressures has been the controlled appreciation of the PGK. BPNG allowed the exchange rate to appreciate by 27 percent against the USD between June 2010 and March 2012. Historically there has been a strong 'pass-through' of movements in the exchange rate into final consumer prices, as is common in countries where a significant share of urban consumer purchases are imported items. This relationship appears to have weakened in the past decade, due to a number of factors. (Figure 5) These may include large increases in international commodity prices through the mid- and late-2000s, which fed inflation even as the exchange rate strengthened. It may be due to diversification of the PNG economy, with a larger share of the cost of items generated domestically. It may also be due to the decreasing relevance and ability to measure the 1976 consumption basket that the NSO continues to use.

But this effect is waning, and the Kina has depreciated slightly since Q2 2012

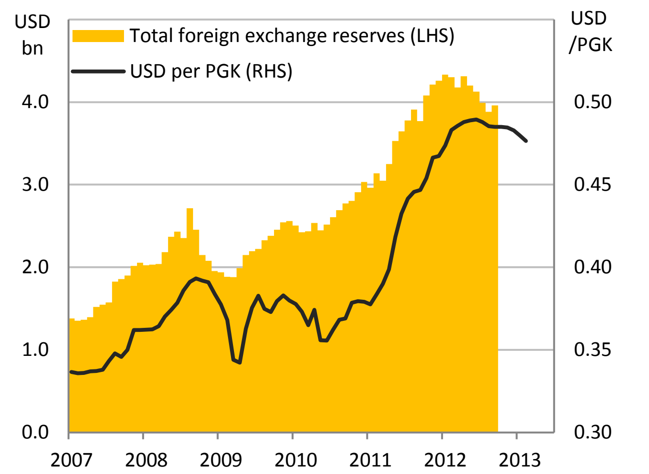
Since the second quarter 2012, it appears that the balance of pressures have been towards depreciation. Between April 2012 and February 2013, the exchange rate depreciated by 2.5 percent against the USD, to 2.1 PGK per USD. Indeed, assessed more broadly against a basket of trading partner currencies weighted by the importance in PNG's trade, the Kina peaked in June 2012 and had declined by 3¼ percent by November 2012. The appreciation may have been larger, had BPNG not used some of its foreign exchange reserves to meet the increase in demand for foreign currency relative to demand for the Kina, with reserves peaking at US$4.33 billion in April and failing to US$3.96 billion at the end of September 2012 (the most recent data available).

Figure 5: One-off factors slowed inflation, including the stronger Kina – although pass-through may be weakening
(CPI and the PGK-USD exchange rate, year-on-year percentage change)



Sources: NSO, BPNG and World Bank data and staff calculations

Figure 6: Foreign exchange reserves declined from mid-2012, while the Kina stabilized against the USD
(USD per PGK and total foreign exchange reserves)



Sources: BPNG and World Bank

The decline in foreign exchange reserves slowed growth of the money supply, from a peak of 25 percent in in the year to December 2011 to 9.6 percent in the year to September 2012. When the central bank accumulates foreign exchange reserves, it issues Kina to investors and traders in exchange for their foreign currency. In the simplest terms, the foreign exchange reserves appear as net foreign assets on the central bank's balance sheet, balancing out the liability for the central bank of the increase in Kina in circulation (there are nuances to this, for example, the foreign exchange is to buy Kina to pay royalties and taxes to the government and the government holds these payments in its accounts at BPNG). The growth in foreign exchange reserves was the main driver of growth in the money supply in 2010 and 2011 through the increase in net foreign assets, and, as the central bank's foreign exchange reserves decline, its net foreign assets have fallen (by 4.3 percent in the year to the end of September 2012), slowing growth in the money supply from a peak of 25 percent in the year to December 2011 to 9.6 percent in the year to September 2012.

Private sector lending accelerated modestly in 2012, but has still not kept pace with growth in the overall economy

Another source of potential economic instability, deteriorating business conditions and rising inflation can be rapid growth in credit. Observers often cite this as a potential concern for PNG out of fear that the structurally high levels of free liquidity in the banking system could generate a surge of lending, unsustainably stimulating demand, in turn feeding inflation and undermining the health of the financial system. But these risks have not been realized through the recent boom. Lending to the private sector picked-up through the first nine months of 2012, although it is still slower than nominal GDP, with the ratio of bank lending to GDP falling to 22 percent. Lending to manufacturing rose by almost 70 percent between the end of December 2011 and end of September 2012, largely due to K 190 million of new loans to engineering and metal processing firms. Lending to transport & communications firms maintained the 20 to 30 percent year-on-year growth rates experienced since the start of 2011. The level of lending to agricultural firms remained relatively modest overall, although advances to foresters surged through 2012. Meanwhile the level of personal lending fell one-quarter in the year to September 2012, on lower non-housing lending. The rate of growth in lending for housing, while still very high, fell from 150 percent in the year to March 2012 to 41 percent in the year to September. In other contexts this rate of growth may be a concern, especially given the very high house prices in PNG's cities, but this series is volatile and housing loans constitute only 6 percent of banks' private lending. Meanwhile deposit growth slowed, to 10.7 percent in the year to the end of September compared with 20.3 percent for the year to the end of December 2011, as government and 'other non-financial corporations' drew down their deposits and other depositors, who hold 71 percent of all deposits, slowed their accumulation. This slowdown reduced the deposit to GDP ratio to below 50 percent, and allowed the bank loans to deposit ratio to rise to 45 percent. The liquid asset ratio was near 53 percent at the end of September, near the level of a year earlier.

Box 1: Is PNG Suffering Dutch Disease – before the gas even starts flowing?

'Dutch Disease' refers to the unintended negative impact of a resource boom on a country's non-resource tradable sector (agriculture, manufacturing, and tradable services such as tourism). It was first used to describe the unexpected negative impact of the discovery of the North Sea gas fields on the Netherlands economy in the 1960s. The large inflows of foreign exchange following a resource boom lead to an appreciation of the exchange rate. The inflows are also spent in the domestic economy which results in a rise in the price of non-tradable goods. Together this implies an increase in a country's real exchange rate which in turn harms the tradable (exports and import-competing) sectors. For PNG, these pressures mean lower production and incomes for rural cash crop exporters. It reduces the amount of cash available for the majority of PNG's population living in rural areas in the short-term. It undermines incentives to maintain and invest in plantations, and processing and transport infrastructure in the longer-term. It also slows the diversification of PNG's economy and broadening of the range of job opportunities and revenue sources, by making it more difficult for local manufacturers and tourist operators to compete and expand.

In most economies these pressures follow the start of resource production or a boom in prices. In PNG, the volume of resource production has declined since 2003 – although those resources now receive much higher prices with the increase in international commodity prices. Rather, in PNG in recent years, the source of any Dutch Disease has been the large capital inflows associated with the construction of the PNG-LNG project with investments in future resource production – unlike Holland, PNG is potentially suffering from Dutch Disease before its gas starts flowing.

Five broad indicators of Dutch Disease emerge from the economic literature. While data limitations prevent a firm answers to some of the questions below, these indicators do seem to be moving in the direction suggested by the Dutch Disease hypotheses:

1. **A real appreciation in the currency:** The Kina real effective exchange rate (ie, against a basket of PNG's trading partners' currencies and adjusting for differences in inflation) was 52 percent stronger in November 2012 than January 2005. ✓
2. **A rise in government spending:** In 2013 the central government budgets to spend nearly 90 percent more than it did in 2005, in real terms. As a share of GDP, domestically-financed central government spending rises from 21.7 percent in 2005 to 28.1 percent in 2013. ✓
3. **A rise in non-traded goods prices:** Lack of data makes this difficult to assess. The urban consumer price index in Q3 2012 was 50 percent higher than in Q1 2005. But this tells us little about non-tradable prices, as over half of the NSO's current (1976) CPI basket are tradable items, and the prices of many items are likely to suffer from significant mis-measurement, especially non-tradable prices such as housing and services. However anecdotal evidence points to steep growth in non-tradables prices, such as very large increases in residential and commercial property prices and rents, and in wages and other employment costs for skilled and semi-skilled workers (with few anecdotes suggesting gains in productivity have matched labor costs). ? / ✓
4. **A resultant shift of resources out of non-commodity traded goods:** The share of PNG's aggregate GDP of agricultural and manufacturing output (PNG's core non-resource tradable sectors) declined from almost 40 percent in 2005 to 35 percent in 2012. However this was in a context of rapid economic growth across the economy – output from these sectors still expanded by approximately 30 percent between 2005 and 2012, but this was well out-paced by output of non-tradable services, which rose by 130 percent. But lack of data on production inputs also makes this difficult to assess fully. No sectoral investment information are available, bank lending data likely to relate to a fraction of investments, and BPNG's employment survey has suffered from poor coverage of emerging firms that have generated many of PNG's new jobs, which suggests little difference in employment growth between resource, non-resource tradable and non-tradable industries between 2005 and 2012. ?
5. **A current account deficit:** PNG's current account deficit has been around one-third of GDP in recent years. However this deficit has been due to the large amount of imports of equipment and workers especially for the PNG-LNG project, and has been funded by foreign direct investment (FDI). Issues with data quality, especially given that many of these imports have not been transacted through Kina and so may be poorly covered in BPNG's balance of payments data, makes it difficult to assess PNG's underlying current account position. Especially as the FDI inflows slow and imports for project developments complete, and the emergent Dutch Disease pressures slow production from PNG's non-resource exports, this is an area to be especially watchful. ?

Policy makers can reduce the Dutch Disease impacts by improving the competitiveness and lowering the costs of non-resource tradable producers and through implementing the Sovereign Wealth Fund. The PNG Sovereign Wealth Fund will reduce the pressure on the Kina by investing the proceeds from mineral revenues offshore. Indications that the pass-through from exchange rate movements into consumer prices suggest that BPNG may have greater scope to allow the Kina to depreciate without the inflationary impact that would have been expected in the past, while still supporting farmers' Kina incomes and production decisions. In the longer-term, most effective can be efforts by the government to address other impediments to PNG businesses' competitiveness, including reducing the impact of crime on business costs, cutting the cost of complying with regulations, and addressing market restrictions that raise the price of inputs, and improving the quality of infrastructure services (discussed further in Box 2).

Sources: BPNG, Treasury, IMF, National Statistics Office. World Bank data and World Bank staff

Following nation-wide elections in mid-2012, Peter O'Neill was elected Prime Minister, and three women took seats in Parliament

The 2012 national and provincial elections led to the re-election of Peter O'Neill as Prime Minister. His predecessor and main rival, Sir Michael Somare, supported Mr O'Neill in the Parliamentary vote. Mr O'Neill's previous Deputy Prime Minister, Brendon Namah, became the Opposition Leader. Don Polye remained Treasurer. Parliament now includes three female members, one of whom has been appointed to Cabinet and another is a provincial governor. The 2012 elections were generally peaceful relative to previous elections, although significant concerns focused on the completeness of the electoral roll, as many voters found their names missing. The new government obtained parliamentary approval to extend the grace period before a motion of no-confidence can be tabled in Parliament to 30 months, arguing that the current 18-month period is insufficient to implement a full policy program.

2. The 2013 Budget and Beyond: Supporting demand by spending more through decentralized channels, but with future challenges to maintain fiscal sustainability

The 2013 budget is a significant shift in policy stance and spending strategy from recent years'

The government's 2013 budget represents a significant shift from recent years. It targets a one-quarter increase in spending, while forecasting that nominal revenue growth will slow from 9.2 percent in 2012 to an expected 3.2 percent in 2013. The government projects these trends to generate a deficit of 7.2 percent of GDP in 2013, on a cash basis. Accounting for some additional spending out of trust accounts raises the projected deficit to around 7½ percent of GDP, compared with a deficit of around 1.5 percent in 2012. The 2013 deficit will be the largest since at least 1990 and perhaps in PNG's history, apart from the 9.5 percent deficit recorded in 2009 at the nadir of the global economic downturn.

Slower revenue growth in 2013 explains some of the deficit

Another year of more modest revenue growth, at least compared with much of the 2000s, explains some of this larger deficit. The government expects total revenue to rise by 5.8 percent in 2013 from 2012, following 4.6 percent growth in 2012. These rates compare with 12.4 percent average annual growth of total revenues and grants between 2003 and 2011. Mineral revenues are again expected to be markedly weaker than in recent years, with a total of PGK 1.35 billion expected in 2013, modestly higher than the PGK 1.28 billion received in 2012 but still much lower than the PGK 2.1 billion received in 2011. This reflects weaker production and lower returns overall across the portfolio of mines and oil fields operating in PNG. The government's mineral price projections are not notably conservative (eg, the government again adopted the Consensus Inc. projections that prices of PNG oil will average around USD 103 per barrel in 2013, 7.3 percent higher than in 2012, and copper will average USD 8047 per tonne, about 4.4 percent above the price when the 2013 budget was announced). The budget includes limited new revenue measures; most notable is the increase in tariffs on chicken, plywood and cars, reversing recent years' cuts in import tariffs. Overall, these factors and improved collections from the non-resource economy with improved capacity at the Inland Revenue Commission are expected to raise government revenues by over 6 percent in 2013.

…but large increases in spending are the key driver

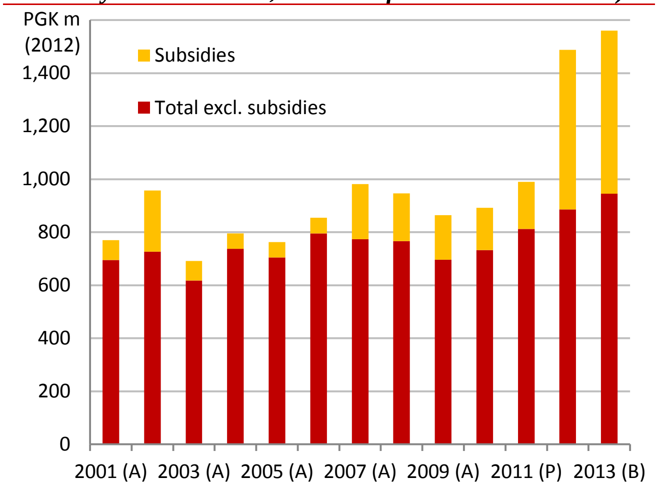
The government allocated the additional spending largely to the so-called Medium-Term Development Enablers. This includes investing in new and rehabilitated infrastructure, continuing and expanding the subsidy for tuition fees and healthcare charges, and increased spending by districts and local level governments (LLGs), including the various district service improvement funds (in many countries called 'constituency funds').

The funding of the tuition fee subsidy clearly contributes to many households' welfare, but is likely to add pressure to the education system

The allocation for the Department of Education and for education through Provincial governments has been increased from PGK 1.49 billion in 2012 to PNG 1.65 billion in 2013, in comparison with PGK 0.96 billion in 2011. Seventy percent of the overall increase between 2011 and 2013 has been to fund tuition fee subsidies, including new funding in 2013 to expand the fee subsidy program to cover Years 11 and 12, following its application to Grade 2 through 10 in 2012. The 2009-2010 PNG HIES found gross enrollment rates to be around 75 percent nationally (ranging from 61 percent for females and 70 percent for males in rural areas to 85 percent for males in urban areas), and 44 percent for secondary (ranging from 19 percent for females and 27 percent for males in rural areas to 70 percent among urban males), and net enrollment rates were considerably lower.[1] Around one-fifth of respondents reported that the cost of school fees was the most important reason for not continuing school. (See Appendix)

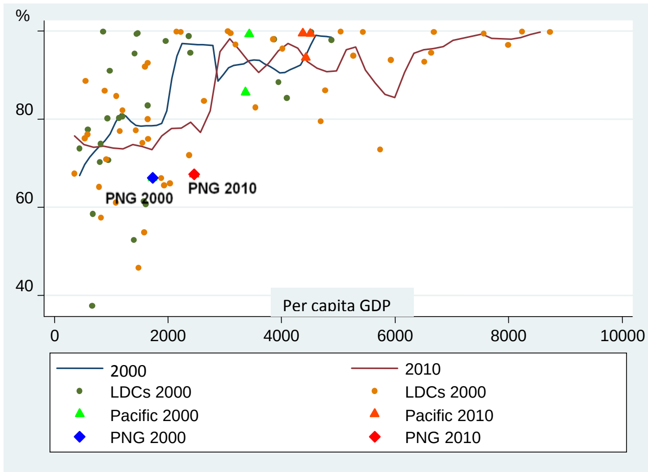
The tuition fee subsidy is perhaps the most effective means currently available to the Government of PNG to address this. By effectively acting as a funds transfer by eliminating the cost of tuition fees from families' budgets, it also acts as a means for the State to transfer revenues it collects from, for example, resource projects, to families nation-wide. If the subsidy is indeed executed well and schools are able to stop charging tuition fees, these fund transfers are especially valuable in more remote and poorer areas, where school fees are likely to consume a much larger share of the limited cash available to households.

Figure 7: Funding for education has grown strongly in recent years, mostly to improve affordability through the tuition fee subsidy
(actual and budgeted allocation to the Education Department and Provincial governments, and through Treasury Miscellaneous, millions of constant* 2012 Kina)



* Deflated by the Consumer Price Index
Sources: PNG Budget papers, NSO and World Bank staff calculations.

Figure 8: …and there is also need to improve the quality of education, with PNG's educational outcomes below its peers' as indicated by weaker youth literacy rates
(youth literacy rates in 2000 and 2010 for a range of developing countries; lines show fitted trends)



Sources: World Development Indicators and World Bank staff calculations.

It may reasonably be expected that the number of children enrolled in school to have grown strongly with the expansion of the fee subsidy program through primary and high school and in 2012 and secondary school (grades 11 and 12) in 2013. Given that the funding to provide educational services (rather than to substitute for the fees that parents had previously paid) increased by only 16 percent in real terms between 2011 and 2013, these extra students are likely to be stretching PNG's schooling capacity. Already there is a clear need to improve the quality of education – respondents to the HIES cited 'failing exams' slightly more often than the cost of education as their reason for leaving school, and PNG ranks well below its peers in terms of recent school leavers' self-reported literacy skills. (Figure 8) The allocation in the 2013 budget for 3,132 new teachers and K 11 million for examinations are examples of the kinds of additional spending that will be required over coming years to strengthen the quality of education provided to the growing number of students. However the 2013 budget appears to suggest that such initiatives may not be continued, with funding for teachers held at 2013 levels through to 2017. PNG's fast population growth will add to these pressures, with 126,000 more children aged between 5 and 14 in 2015 than in 2010 and 100,000 more by 2020, under the UN's medium population scenario.

The government is providing significantly more funds to districts and local governments

Alongside the shift in overall fiscal position, perhaps the most important feature of the 2013 budget is the increase in development funding allocated to districts and local-level governments. This rose from less-than PGK 200 million in 2012 to PGK 1.5 billion in 2013, and

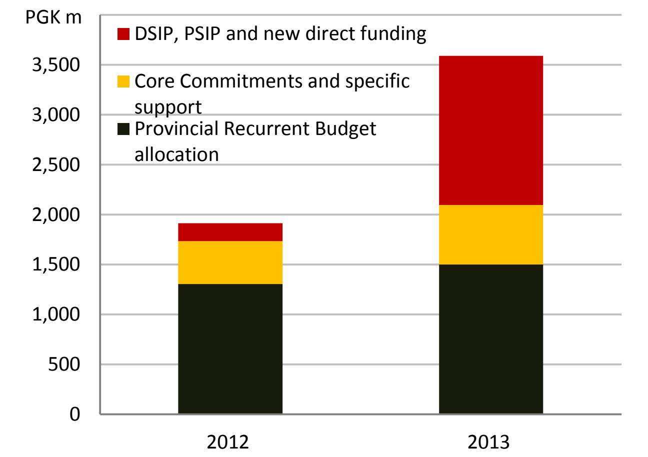
[1] Gross enrollment is the ratio of all students enrolled in a level of schooling to the population of children at the relevant ages for that level; net enrollment only includes enrolled students at the appropriate age.

reflects in part the governing coalition's commitments in the Alotau Accord. (Figure 9) The government argues that the devolution of spending can address the limited capacity of national institutions to provide services and make investments at the local, decentralized level.

Spending of the development budget is skewed to the final quarter of each year, far more so than disbursement of the recurrent budget. (Figure 11, Figure 12) This back-loading of disbursement is often an indicator of difficulties in project planning, implementation and execution. Many countries and organizations experience this spending profile, especially for more-complex and unique capital projects, but the extent of this back-loading may have been reduced in PNG through the use of trust accounts to manage multi-year capital works spending.

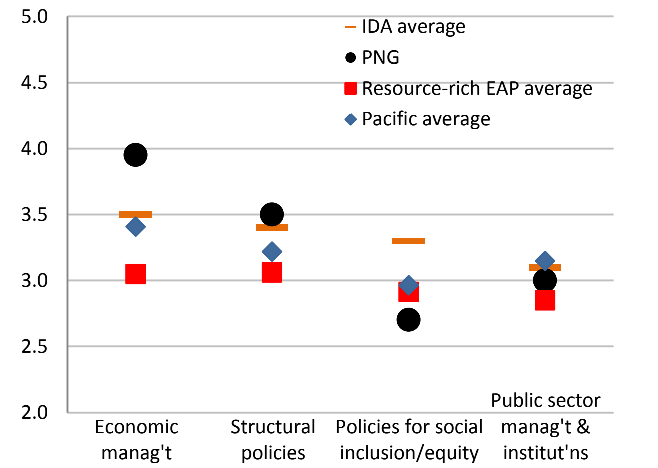
While channeling more funds for capital spending to the most decentralized levels of government can be effective in some instances, it is not clear that this will typically be the case, given that PNG's institutions under-perform those in peer countries in areas of decentralized delegation and implementation and where public sector management tasks become more complex, at both national and subnational levels.[2] (Figure 10) Further, the uniform nature of allocations (PGK 10 million to each of PNG's 89 districts under the District Services Improvement Programme (DSIP), and PGK 500,000 to each local level government) may mean areas with greater needs, or for investment projects that require coordination and implementation across several LLGs or districts, may be inadequately funded.

Figure 9: The 2013 budget features an 87 percent increase in funding for local and district authorities
(nominal budgeted allocation, millions of PGK)



Source: PNG 2013 Budget documents

Figure 10: PNG's policies and institutions outperform at the centralized level of macroeconomic management, and underperform in policies for social inclusion and equality, where authority and implementation are most devolved
(2011 Country Policy and Institutional Assessment scores)



Source: World Bank World Development Indicators & staff calculations

As spending ambitions grow, spending will need to become more effective, and the government is investing in better budget management, technically and through developing stronger institutions

The government's growing development ambitions will place additional pressures on a public financial management system that has been shown to have weaknesses in many Auditor General reports and other assessments, even at the better-resourced central level. Achieving the government's goals, especially as spending becomes more constrained, will require significant improvements in the effectiveness with which resources reach their intended targets. This will be particularly important in the less-developed parts of the public finance system which are receiving significantly more funds under this budget. In launching the 2013 budget, the government acknowledged the limited implementation capacity especially at more

[2] Each year the multilateral development banks (the World Bank and the ADB in the Asia-Pacific) assess the quality of policies and institutions of their borrowing members. The Banks use these 'Country Policy and Institutional Assessments' (CPIAs) for a range of purposes, including in determining a country's access to the multilateral banks' financing especially for low-income countries with access to the bank's concessional financing (International Development Association or 'IDA' finance))and for assessing the risk that the country's public and external debt may become unsustainable. They also offer a high-level means of identifying where a country's policies and institutions are relatively strong, where greatest progress has been made, and where slippages and stagnation are most notable. As a uniform assessment calibrated to ensure consistency across countries, the CPIAs allow robust comparisons of the dimensions in which a country outperforms and lags its peers.

decentralized levels in many areas. It highlighted various efforts to strength budget preparation and execution at all levels of government, from national through to local:

- Better costing of projects, including publishing 5-year forward estimates of spending and revenues for specific projects and activities.
- Expanding the chart of accounts (by which spending is classified) through Provincial to District authorities.
- Shift to funding well-formed national, provincial and district plans rather than public investment plans (PIP). This will reduce the discretion of, for example, the Department of National Planning in assessing individual PIP proposals.
- Provide new guidelines for the use of District Service Improvement Program (DSIP) funds.
- Integrate the development and recurrent budgets into a single national budget from 2014.
- Invest in rolling out the new Integrated Financial Information System across national departments and to subnational governments.
- Increase transparency around spending through decentralizing the responsibility of spending.
- In the future, use the Government Financial Statistics 2001 to report budget aggregates.
- Develop subordinate legislation, policies and processes around the PNG Sovereign Wealth Fund (PNG SWF), with the goal of having the PNG SWF operational from 2014, including to support spending for infrastructure projects of national importance.

Figure 11: Development spending disproportionately happens in the last quarter of the year, although this may have improved in 2012….
(quarterly development spending, millions of PGK, and as a share of total annual spending)

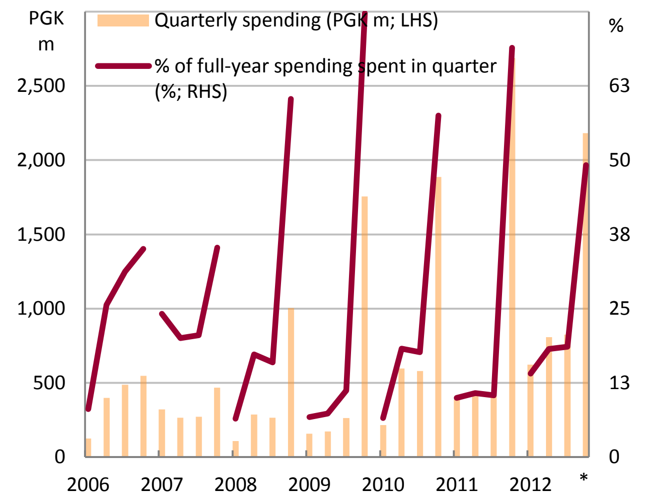
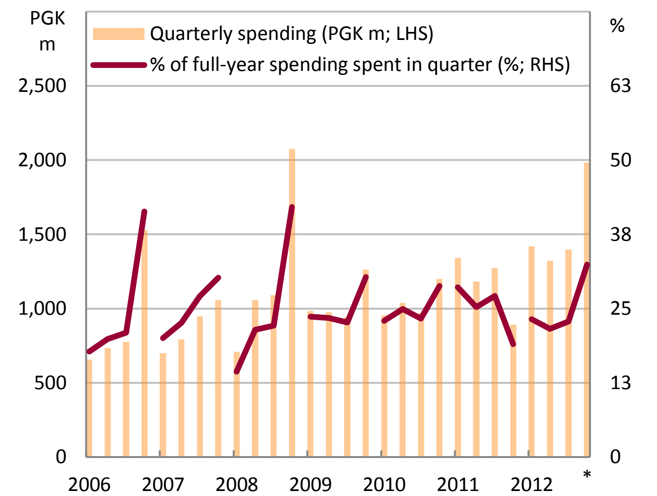


Figure 12: while recurrent spending is more evenly spread across the year
(quarterly recurrent spending, millions of PGK, and as a share of total annual spending)



* 2012 Q4 and full-year spending are projections based on PNG Treasury projections published in 2013 Budget papers.
Sources: PNG Treasury, BPNG, and World Bank staff calculations.

The government projects that it will return the budget to balance by 2017, mostly through restraining spending and helped by strong revenue growth, but these are challenging goals, creating risks that PNG's recent macroeconomic achievements may be unwound

Despite weakening minerals revenues in 2014 and 2015, and a marked slow-down projected for the non-mineral economy (see Section 3 below), the government expects to be able to return the budget to surplus by 2017. The government expects to achieve this partly through somewhat faster growth in revenues and grants in 2013-2017 than during the commodity price boom of 2008-2012. (Figure 14) But key to the government's balanced-budget projections will be cutting spending, at least in real terms. Overall these plans are only modestly ambitious, with the government projecting real per capita spending (which abstracts from the impact of both inflation and PNG's 2½ percent to 2¾ percent annual population growth) in 2017 to still be at 2012's historically high levels, although this gradually-declining trend would be a sharp reversal of recent years' rising spending.

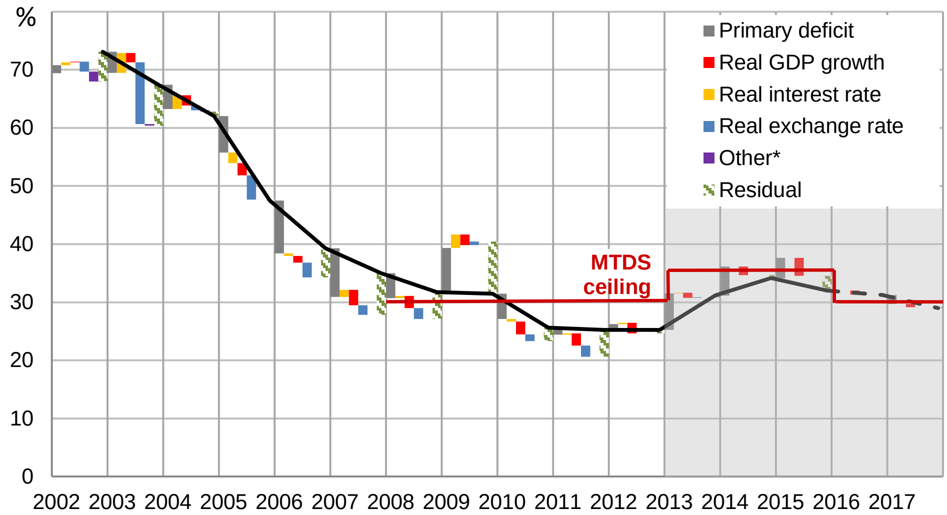
Still, achieving these cuts may be a challenge: while some of the new spending announced in the 2013 budget may be transitory (eg, preparing for the South Pacific Games that PNG will host in 2015), most new expenditures are likely to be permanent. The tuition fee subsidy, if implemented well, is likely to do much to support human development outcomes in PNG, plus it would be politically difficult to withdraw. In addition, PNG's own history through the 1990s and early 2000s shows that transfers for district grants and to local governments are very difficult to cut, even in times of extreme fiscal stress. The government instead is looking to cut spending by national departments for service provision between 2013 and 2014, and to hold total spending on personnel at 2014 levels through to 2017, and transfers to provincial governments at 2013 levels through to 2017.

The revised medium-term debt strategy now acts as the key fiscal anchor, capping potential deficits by requiring that public debt remains below 35 percent of GDP in 2013 and 2014 and below 30 percent from 2015, with total public liabilities not exceeding 60 percent of GDP

According to the budget documents, the government expects to be able to finance these deficits largely through 'other' domestic borrowing. Primary budget surpluses, along with the appreciation of the real exchange rate, allowed the government to lower its debt burden through the 2000s, and have created room for increased borrowings. (Figure 13) The budget deficits will raise debt to around 35 percent of GDP by 2014, compared with gross public debt near 25 percent of GDP in 2012 (not including contingent and off-balance sheet liabilities, estimated at a further 15 percent to 20 percent of GDP). In 2015, the government expects that a 26 percent increase in nominal GDP (as production at PNG-LNG starts) will return the debt-to-GDP ratio to below 30 percent of GDP.

With the projected temporary increase in the debt-to-GDP ratio, the government will revise the Medium-Term Debt Strategy (MTDS), from the current 30 percent ceiling, to target debt-to-GDP below 35 percent in 2013 and 2014, before returning the target debt ceiling to 30 percent of GDP from 2015. Importantly, given the size of off-balance-sheet liabilities, the revised MTDS also targets capping the government's gross liabilities at less-than 60 percent of GDP. These targets will act as the key medium-term fiscal anchor, limiting the size of deficits and scope to accumulate liabilities through off-balance sheet transactions. Meanwhile the new medium-term fiscal strategy focuses more on shifts in the composition of spending, as well as the longer-term goal of returning the budget to balance by 2017.

Figure 13: Budget surpluses and the appreciating real exchange rate have been the most important factors lowering PNG's public debt burden between 2002 and 2012
(public debt, contributions to the change in public debt in each year from identified automatic debt dynamics, with the total change in debt equal to the sum of these contributions, and medium-term debt strategy public debt target; percent of GDP)



Sources: PNG Treasury, BPNG, IMF and World Bank staff calculations.

Given the risks around both the budget's medium-term revenue and expenditure projections, and their implications for the government's financing needs and PNG's macroeconomic stability, it is useful to assess alternative scenarios. For example, if real per capita expenditure remains at projected 2014 levels (slightly lower than in 2013), the budget deficit would still be approximately 1¼ percent of GDP in 2017, and public debt would likely be between 35 percent and 40 percent of GDP (not including any changes in contingent liabilities and only partial transfer of off-balance sheet liabilities onto the public sector's balance sheet). (Figure 14)

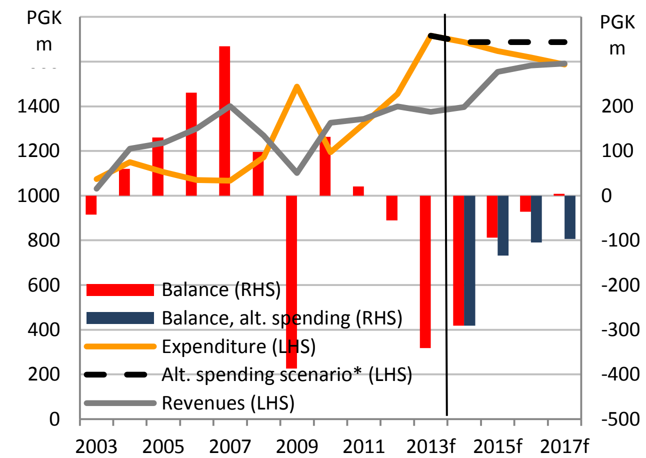
3. The Outlook: With less supportive conditions, growth will slow, and PNG will need to work smarter to generate its next set of opportunities

The outlook is for markedly slower growth in 2013 and subsequent years, abstracting from the headline impact of first LNG production

In 2013 and 2014 aggregate GDP growth is expected to slow markedly, as construction of the PNG-LNG project and spin-off private sector investment concludes, partially offset by the commissioning of the Ramu Nickel/Cobalt mine. In 2014 and 2015 aggregate and non-mineral GDP are expected to diverge significantly. Aggregate GDP will rise by 20 to 25 percent with first production from PNG-LNG in late 2014 and into 2015. The full impact is likely to be estimated poorly, given its scale and that PNG does not currently produce LNG. This growth will be a shift in the level of GDP for the life of the LNG facility, rather than likely to generate ongoing growth.

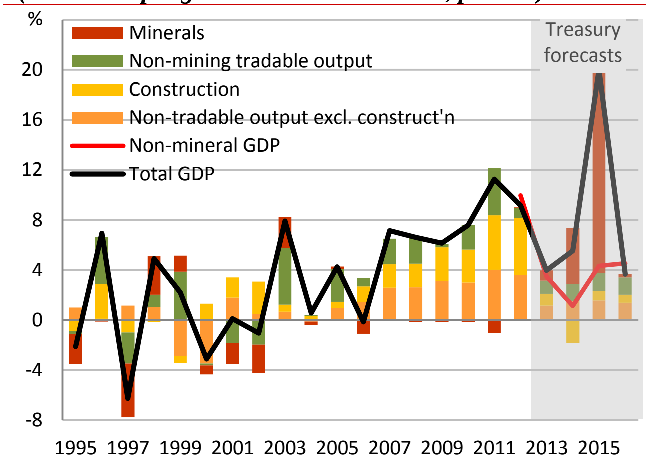
This growth will be due to increased resource extraction, rather than more value-added in the broader economy. Indeed, the PNG Treasury forecasts the non-tradable economy to slow to below 4 percent growth in 2013 and to decline in 2014. This compares with 12.5 percent average annual growth in non-tradable activity between 2006 and 2012. There are likely to be downside risks to these projections. In particular, construction activity is forecast to expand by a further 4.4 percent in 2013, and to decline by only 8.5 percent in 2014 as the USD 19 billion PNG-LNG construction project concludes, to still be 18.5 percent larger than in 2011 and more than double its level in 2008. If, instead, in 2014 construction activity returns to 2011 levels, overall GDP growth would be 3 percentage points lower and the non-resource economy would contract by 2.3 percent in 2014, rather than expanding by 1.1 percent. Inflation is likely to return to trend rates around 5 to 6 percent, as the effects wane from the various one-off factors that slowed inflation in 2012.

Figure 14: The government aims to return the budget to balance by 2017, through stronger revenues and reducing real per capita spending
(spending, revenues and the budget balance, expressed per capita and at constant 2012 Kina values)



* Deflated using CPI inflation. Alternative spending scenario assumes real per capita spending remains at 2014 levels.
Sources: 2013 Budget papers, IMF and World Bank staff calculations

Figure 15: Behind very strong headline growth forecasts, the government expects sharply lower growth in the non-minerals sectors from 2013
(annual output growth and contributions, percent)



Sources: 2013 PNG Budget Papers, and World Bank staff calculations

…and this emphasizes the need to spend efficiently and reduce costs and other barriers to Papua New Guinea's businesses

In 2014 and beyond, the pipeline of new resource projects currently being assessed may create some additional impetus for the non-resource economy – if they are approved. However, various developments in 2012 are likely to have reduced the likelihood of approval, at least in the short-term. High construction costs in PNG, especially in light of the stronger exchange rate, plus the weakening in international commodity prices, and investors' rising difficulty in accessing finance, can impact on project approval. In particular, new LNG production may not receive prices as high as those contracted by the current PNG-LNG project, as the economics around LNG change in the Asian region. LNG prices in Asia have generally been considerably higher than those in European and North American markets, but the expansion in supply becoming available in the region, and the changes in the North American energy market, are enabling major regional customers to negotiate lower prices.

The uncertainty around the outlook for minerals production emphasizes the importance of ensuring that the business environment supports entrepreneurs and investors in other sectors of PNG's economy. Often, the most effective means of doing this can be low-cost but well-designed policies, that reduce the costs of doing business while aiding entrepreneurs overcome specific market failures, without creating other distortions. These policy efforts can help enable a continuation of the broad-based, employment-generating growth that PNG experienced from 2007 to 2012. (Box 2)

The pressure to respond to PNG's significant human development needs will continue to grow. The 2009-2010 PNG Household Income and Expenditure Survey (PNG HIES) data, released by the government in August, found large ongoing challenges, including elevated rates of malnutrition among children, limited physical assets for most households, and significant exposure to violent disputes, while also finding areas of change, such as improving literacy among younger Papua New Guineans, and the importance of mobile phones for many households. (Discussed further in the Appendix) Stronger institutions of governance and accountability across the public sector, supported by aligning the incentives for public servants with the community's interests, can help achieve PNG's public service delivery goals, even as funding becomes scarcer.

The 2009-2010 PNG Household Income and Expenditure Survey is the first comprehensive and nationally representative survey of PNG's households in 15 years

In August 2012, the Minister of National Planning launched the 2009-2010 Household Income and Expenditure Survey (PNG HIES) Summary Tables and dataset. The PNG HIES is the first comprehensive and nationally representative survey of the socio-economic status of PNG households since 1996, and the first that the Government of Papua New Guinea (GoPNG) has officially recognized since the mid-1970s. The survey was conducted from July 2009 to January 2011 in all 19 provinces of PNG, and includes interviews with 4,191 household. The data include:

1. **Household level information** on housing characteristics, ownership of consumer durables, non-food consumption, access to various types of public services, and incidence and resolution of different types of disputes.
2. **Person-level information** on age, sex, education, health, employment status, receipt of remittances, and personal security. This was supplemented by anthropometric data for children aged six years or younger.
3. A personal diary of **all food and nonfood purchases** for 14 consecutive days for all household members 15 years and older.

The data are representative by urban and rural areas for each of PNG's four regions, plus metropolitan areas, and can be broken down by gender. As the summary statistics generated from the HIES data are based on a sample survey, they are subject to sampling error, but it is possible to calculate a range within which the true statistic lies for given confidence interval.

The survey covers demographics…

Demographically, PNG's population remains young, with 52 percent of the population aged 19 years or younger, and only 7 percent older than 55. A somewhat greater proportion of PNG's youth and older people are in rural areas; those in prime working age (20-44 years), however, are disproportionately in urban areas. Households are predominately male-headed (88 percent nation-wide), although a woman is a little more likely to be the household head in urban areas, especially in the Southern and Highlands regions. Female-headed households (5.5 members) tend to be smaller than male-headed households (6.6 members). Urban households (7.7 members) are larger than rural ones (6.2 members).

participation and achievement in education…

The largest number of respondents (45.6 percent) report their highest educational attainment to be at the Elementary level followed by the Primary level (32.3 percent). Nationally, only 7.3 percent of respondents reported receiving Tertiary education. Attainment of Tertiary level education is much higher in urban areas (21.8 percent) where 25.6 percent also report receiving secondary education. Markedly more women than men (51.4 percent versus 40.2 percent) report the primary level as their highest educational attainment. A larger share of younger Papua New Guineans report being able to read and write: 78.8 percent of those aged 14 to 25 versus 55.3 percent of those aged over 50. The proportion that can read and write rises to 94.1 percent in urban areas. However school enrollment rates decline quickly: gross enrollment rate declines from 83.3 percent at the elementary school level to 74.4 percent at the primary school level to 44.4 percent for secondary school level. While there is little difference between the enrollment rates of boys and girls at elementary level, by the secondary level the difference amounts to 11 percentage points and this is even higher in urban areas (15 percentage points). Among the most-cited reasons for stopping school were lack of ability to pay school fees (20.0 percent overall, 14.3 percent in urban areas, and with slightly higher rates for girls) and failing exams (23.3 percent overall).

the quality and ownership of dwellings…

The HIES recorded information on dwellings construction and materials. Generally, most dwelling were traditional houses (60.2 percent) and made of traditional materials (59.9 percent). In rural areas, 48.5 percent of households depended on rivers, streams, lakes or ponds for access to water while in the urban areas 59.6 percent of the households had access to water piped in the house and 14.7 percent depended on community taps. As for sanitation, 59.7 percent of rural households and 25.8 percent of urban households depended on pit latrine without a slab, though 55.3 percent of urban households reported a flush toilet. Over two-thirds of urban households had access to electricity from the grid, while 51 percent of rural households relied on kerosene or spirit lamps for lighting. Most households everywhere use firewood for cooking while gas and electricity were used by 38.6 percent of urban households. The overwhelming majority of households own their dwelling including in urban areas (61.4 percent), although they not necessarily own the land it is built on – in rural areas 59.7 percent of dwellings are built on traditionally-held land, and in urban areas 48.1 percent are built on government-owned land.

households' material possessions…

Mobile phone ownership rates were high even in 2009-2010 when the survey was conducted: nationwide, 49.1 percent of households reported having a mobile phone, and this rate was much higher in urban areas (89.2 percent). The next most commonly owned items nationwide were radios (22 percent) and cassette or CD players (22.2) percent, although television was the next most commonly owned item in urban areas (58.5 percent).

employment and unemployment…

Nationally, 61.6 percent of respondents aged 15 or older reported being employed; this included 60.9 percent of men and 62.2 percent of women. But the employment rate was lower in urban areas, 44.8 percent, where people were more likely (compared to rural areas) to be a student (22.8 percent) or a homemaker (20.3 percent). About 32.7 percent of urban women were homemakers. Nationally, 0.7 percent reported to be looking for work. The self-reported unemployment rate at the time of the survey was 4.0 percent nationally and 8.4 percent in urban areas, with higher rates among youths in urban areas (11.5 percent). Unemployment rates were also higher among respondents aged 55-64 years (5.1 percent) and those aged 45-54 years (4.0 percent). Most of those employed reported being wage workers (59 percent nationally), although women are more likely than men to be informal workers. Nationally, most wage workers are employed in private companies (47.1 percent), while the public sector and army together employ 36.7 percent of wage workers. But most women wage workers in rural work for the public sector (56 percent). Four-fifths of informal workers at the national level and 90 percent of informal workers in urban areas engage in wholesale trade, retail, restaurants and hotels; in rural areas, 11.4 percent of them reported doing agricultural work.

financial transfers…

About half the population reported receiving private transfers and there was little difference across gender or rural/urban areas, but such transfers were much more prevalent in the Southern and Highlands than in the Islands regions. The value of these transfers in the 12 months prior to the survey averaged K 445, and was higher in metropolitan areas (K 1337). Taking loans was less common: 16.9 percent of the population reported having outstanding loans and the average loan size was K 193 (for loans taken the last 3 months up to the survey).

respondents' quality of health and access to healthcare, including anthropometric indicators of children's health

The survey elicited a number of health-related questions, and also made anthropometric measurements of children (height and weight). Around half the population sleeps under a mosquito net, with higher rates for children. Still, 17.7 percent of respondents reported suffering from malaria in the month preceding the day of the survey. While 29.7 percent of respondents reported suffering from some disease, only one fifth among them indicated that this disrupted their daily activities. Just over half of those reporting unwell sought treatment, and among those that did not, 17.5 percent attributed this decision to long distance to a health facility. On average, respondents reported paying K 15.6 for medicines in the month prior to the survey. Near half of the population indicated that they chew betel nuts daily, and over one-quarter said that they smoke.

The anthropometric component of the survey weighed and measured the height of children up to age 5. The height and weight measurements are compared with the averages of a reference population, set by the World Health Organization, which includes individuals of a variety of ethnicities and from developed and developing countries. Children significantly shorter or lighter than the average (with height or weight more-than two standard deviations below the average of children their age) are at greater risks of suffering from health complications including slower development of vital organs and more health issues later in life. Some of these health issues can also affect their children. According to the measurements taken with the HIES, 48.2 percent of children 5 years or younger (35.3 percent in urban areas) were significantly shorter that the reference population at the time of the survey. 27.2 percent nationally (19.6 percent in urban areas) weighed significantly less. Girls were generally in better nutritional health than boys.

personal security, disputes and how these are resolved…

The HIES also asked households about disputes and personal security. Respondents were asked about the incidence of various categories of disputes, whether and how these were resolved, perceptions and fears about crime, its effects on their daily lives, and actual incidence of crime in the previous 12 months. Forty percent of respondents reported that their household experienced a dispute in the last 12 months, and the overwhelming bulk of those remain unresolved at the time of the survey. The incidence of disputes was higher in rural areas (41 percent) than in urban areas (29 percent), both in aggregate and across all dispute types except for financial, development-related and government disputes. The results suggest that Momase region consistently has the highest rates of disputes, followed by Highlands, with the Islands having the lowest rates.

As in many developing countries, the most frequent disputes were over land and water (23 percent) followed by domestic violence (9 percent), theft, and physical assault. Male respondents in rural areas reported that disputes over natural resource, including over land, water, forestry and agriculture, had the most serious impact on their lives. Meanwhile domestic violence had a greater impact in urban areas (20 percent compared to 11 percent in rural area) and among women (17 percent to 10 percent of men).

To resolve disputes, community leaders (32 percent), village courts (23 percent), and wantoks/family (18 percent) were most often chosen by respondents, mainly on the basis of community respect and the power they hold. The wealthiest fifth of respondents were least likely to talk to their wantoks and more likely to use village courts which also play a pivotal role in resolving disputes. Interestingly, church and NGO legal aid groups are not in high demand for resolving disputes (4 percent and 1 percent of disputes respectively), and the police were involved in only 9 percent of cases.

crime, both material and violent and how it effects respondents' lives and whether it's improving or worsening

A significant proportion of men and women believe there has been less crime in their area over time, with almost half of the men (43 percent) and over a third of women (39 percent) responding this way. The remaining men are split between "more crime" and "stayed the same", but women are significantly more likely to say "more crime". These findings are less negative than the findings of qualitative research, which indicates that both genders and all age groups believe that crime has become worse over time.

- Stealing is universally seen as the most common crime by both men and women – this includes categories such as personal property stolen from a dwelling (34 percent) and personal property stolen outside home (32 percent). Robbery was more prevalent in urban areas (7 percent of crimes reported) than rural (3 percent).
- Assessments of frequency of other crimes are relatively similar between men and women except for sexual assault; women feel twice as likely as men this to be the most common crime in their area. The home appears more dangerous than the outside for women – for instance, they experience assault and sexual assault at higher rates inside the home (10. 5 percent and 1.1 percent respectively) than outside (3.4 percent and 0.4 percent respectively).
- Women and men are equally "afraid of" alcohol and drug-related crimes for which rates are the highest among men, followed by stealing and robbery (stealing with violence) as the second worst crime. Women are most afraid of sexual assault (32 percent of women as compared to only 2 percent of men citing it as their worst fear). Just under 1 percent of reported domestic violence cases led to death.
- Men are almost twice as likely to report that "crime does not stop me from doing anything" (63 percent of men versus 39 percent of women). Women are twice as likely to

report that crime stops them from using public transport, walking to work or shopping, fetching water, walking to the garden and allowing children to walk to school. More than half (55 percent) of PNG women surveyed said that crime prevents them from walking at all at night.

- No men reported being hit or beaten by someone within their household in the 30 days prior to the survey, whereas 9 percent of women/girls reported being beaten (67 percent by their husband, 8 percent by their brother, 7 percent by their father, 6 percent by their mother). One-quarter of those who reported being beaten sought help, with first recourse being a family member, friend or wantok, the second being a community leader and the third being a Village Court.
- Nineteen percent of all crimes are reported to the police and wealthier people (the top consumption quintile) are more likely to report crimes to the police. Of those who do not report to the police, 20 percent do not do so because they believe no action will be taken. Those in the formal employment and living in urban areas have considerably less confidence that action will be taken than the rest.
- While there was no category of "homicide" included in the crime incidence questions, there was a question in the disputes module that asked whether the incident resulted in property damage, injury or death. Of all the deaths reported, 89 percent occurred in rural areas, especially in the Highlands and Momase regions. Almost half of all recorded disputes that lead to death were tribal disputes (followed by election disputes and those over land and natural resources), and the bulk of these occurred in Highlands region.

Like all datasets, the results from the HIES should be interpreted carefully

While the HIES is an extremely rich dataset, like all surveys, information collected in the HIES – especially those related with sensitive aspects of life like violence, disputes, or assault – needs to be analyzed and interpreted carefully paying attention to cell size that may be very low in some cases giving large standard errors. Also, questions need to be read carefully in interpreting responses. For example, questions in the personal security module are about categories of crime not consistent with categories used in typical victimization surveys nor closely in correspondence with offences under PNG law.

The HIES is an important new resource for better monitoring of living and economic conditions across PNG, and will help policy makers design policies that better support PNG's long-term development

The 2009-2010 PNG HIES will enable significant improvement in the ability of the Government to assess living standards and welfare needs across the country. By being able to assess and monitor living standards and livelihoods in different areas, the government will be able to improve development planning and ensure its spending is allocated to where it is most effective and needed. The HIES will also support monitoring, including of human development indicators in the context of PNG's Millennium Development Goals. For macroeconomic management, the HIES enables a reweight of the urban Consumer Price Index – the current CPI is based on the spending patterns reported in the 1975-76 survey, when Port Moresby had a drive-in cinema and urban households spent five percent of their budget on motor vehicles on average. As a robust gauge of household consumption and economic activities, the HIES will also enable a more accurate estimate of PNG's National Accounts, which have not been updated by the NSO since 2005. However, given the survey was conducted over 2009-2010, and that Papua New Guinea's economy has undergone important and rapid changes since then, conducting and publishing this analysis quickly will be vital for ensuring that the results are still relevant. Considering the pace of change taking place, it will soon be time to make preparation for the next household survey.

Box 2: Improving the environment for small business growth in PNG

Small and medium enterprises are the largest source of employment across the world. In PNG, SMEs can increase economic opportunities for those who have not been able to participate directly in large-scale projects. In the second half of 2012, there has been renewed debate in PNG on ways to encourage SME growth. In April 2011, the Kokopo Summit led to the formation of the Indigenous Business Council of PNG, and development of proposals restricting some types of foreign investment, and providing heightened support to SMEs through subsidized` finance, tax incentives and national buying commitments by government. There have also been calls for increased duties on imports that compete with goods produced in PNG. The Government has now endorsed a number of these measures, some of which may not be supportive of business development and employment growth. These policy proposals are motivated by the strong desire to provide opportunities to Papua New Guineans to run and own businesses, but they implicitly assume that PNG-owned businesses cannot compete without special benefits and subsidies.

Closing markets to competition and providing subsidies is not a long-term solution to encouraging locally owned businesses in PNG. Similarly, tax holidays and other concessions are not an effective or efficient means of attracting foreign investment. Protection from competition is a "patching" measure; it does nothing to address the underlying problems that limit PNG firms' ability to compete with international competition. Import duties raise the cost of living, which has the biggest impact on the poorest and most vulnerable citizens. They also raise the cost of operating a business and harm the competitiveness. Historically, governments in many countries have turned to this kind of policy because it may seem easier to bring more immediate benefits than longer-term reform. Unfortunately, the experience across many countries at various stages of development, including PNG, also shows that businesses that receive special protection or subsidies rarely "grow up". In the long run, protected industries tend not to flourish because they are sheltered from incentives to innovate and improve their efficiency. Meanwhile, the higher inputs costs caused by tariffs make it more difficult for competitive businesses to emerge in the unprotected or unsubsidized sectors.

Rather than working to reduce competition, policy makers' efforts would more effectively bring sustained improvements in living standards by improving the ability of businesses to compete. There are many things that can be done to improve PNG's competitiveness that can increase efficiency and reduce the costs of operation without increasing costs for consumers and other businesses. The World Bank Group's 2013 Doing Business indicators show that there are many aspects of government regulation in PNG that are inefficient and that increase costs for business owners.

Table 1: While PNG ranks relatively well on a few indicators, in most areas regulation is holding PNG businesses back
(ranking of PNG in 2013, out of 185 countries)

Starting a business	Dealing with construction permits	Getting electricity	Registering property	Getting credit	Protecting investors	Paying taxes	Trading across borders	Enforcing contracts	Resolving insolvency
91	159	23	88	83	49	106	120	166	125

Doing Business surveys conditions for businesses in the capital city of each country. *Source:* World Bank Group *2013 Doing Business*

Ineffective and complicated business regulations increase business costs because entrepreneurs spend more time dealing with bureaucracy and less running their business well. They hinder service providers such as banks from getting the information they need to decide whether a business is credit-worthy. They raise barriers between businesses that want to sell to one another. They make it more difficult for informal businesses to enter the formal business world and grow and diversify. These types of impacts are hardest for small businesses to bear because they do not have the resources to deal with bureaucracy and because they are already the most disadvantaged in access to credit and infrastructure.

The kinds of reform that will reduce costs for PNG's businesses and increase their competitiveness are not expensive, and they are not difficult. They require commitment from government and an understanding that good regulation achieves its aims without creating an excessive burden for business.

The good news is that some of these reforms are already under way:

- The PNG Investment Promotion Authority is developing an electronic business registry that will make it easier and faster to register a business in PNG.
- Draft legislation is ready for introduction into Parliament by the Minister for Commerce and Industry that will improve protections for minority shareholders, giving investors more confidence to provide equity capital to small businesses.
- The PNG government is introducing a secured property registry that will register moveable property that has been used as collateral for a loan, giving lenders greater confidence to lend to small businesses.
- The National Capital District Commission is undertaking a review of its business licensing procedures with a view to making it faster and more straightforward to obtain a business licence in Port Moresby.
- The National Court of PNG is developing its mediation program, which allows commercial disputes to go through a mediation process rather than going through court, which speeds up the process of resolving a commercial dispute and reduces its cost.
- The Internal Revenue Commission is about to embark on a program to improve its outreach to SMEs and examine ways to simplify the process of tax compliance for this sector.

There is more to be done. Doing Business 2013 suggests that the documentation requirements for export and import in PNG are burdensome, and more complex than neighbours such as Solomon Islands or Fiji. Other reforms remain to be addressed in areas such as improving insolvency practices and construction approvals. The National Working Group on Improving Business and Investment in PNG (with representation from government and all business peak groups including the Indigenous Business Council) is a good forum for prioritizing and progressing these types of reform.

These types of reforms are also key to increasing the effectiveness of other programs that help people take advantage of business opportunities. These wider programs include access-to-finance programs such as the SME Risk-Share Facility and the BSP Rural Banking Program; improvements in physical infrastructure such as roads and highways, investments in the electric power grid, improvements in telecommunications; continued improvements in social infrastructure such as schools and hospitals including the expanded access to these services coming from fee subsidies; and general strengthening of the rule of law and integrity of public spending in PNG. Reducing barriers to business formalization particularly improves the ability of women to participate in the private sector – women are the backbone of the informal economy in PNG but are heavily under-represented in the formal business community.

Business-enabling reforms will help PNG-owned businesses to make the most of the spin-off opportunities presented by large foreign investment projects such as the PNG-LNG project. Ultimately, inclusive economic growth in PNG will come from embracing opportunities – for example, linking in with large-scale foreign investments rather than from turning away from the opportunities of a competitive world.

Sources: The World Bank Group/IFC 'Doing Buisiness' Survey 2013; International Finance Corporation staff

This Papua New Guinea Economic Briefing was prepared at the World Bank Group office in Papua New Guinea, drawing on material produced by staff across the World Bank and International Finance Corporation (IFC). It reports on and synthesizes recent quarters' key developments in the national economy, assesses the outlook, and draws some implications for future policy. It is intended to prompt further discussion of economic issues in Papua New Guinea among a wide audience, including policy makers, business leaders, and the community of analysts, professionals and citizens engaged in Papua New Guinea's development. This complements the World Bank's East Asia & Pacific Economic Update (www.worldbank.org/eapupdate) and various global economic analysis publications (www.worldbank.org/prospects).

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