

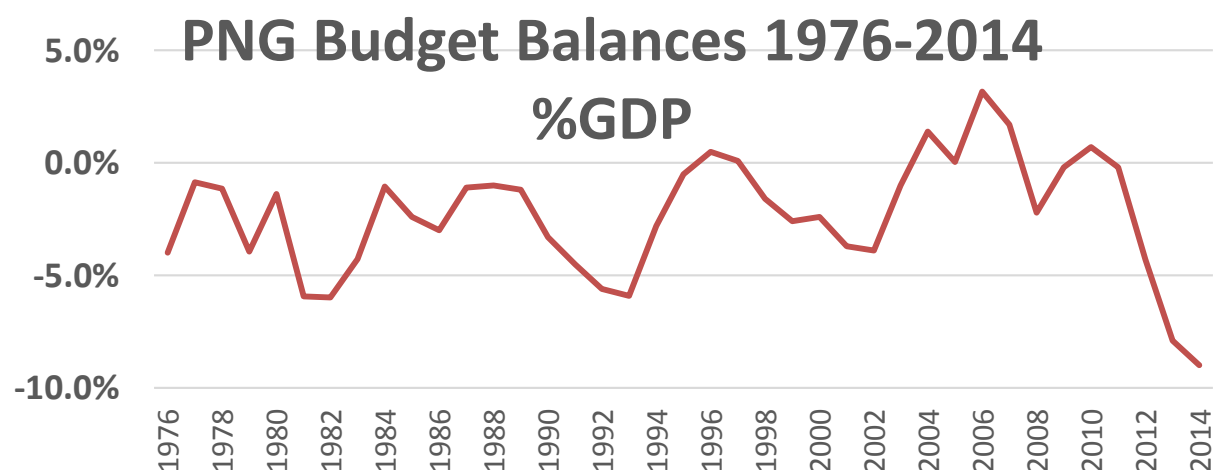
## Pathways away from crisis

Paul Flanagan presentation

PNG Update: UPNG Port Moresby 18 June 2015

Good afternoon and thank you for inviting me to be in this beautiful country with its wonderful people today. I love PNG – and have done so since I first visited in 1978. I did my honours studies here in the Southern Highlands in 1983. I worked in the PNG Treasury on secondment from the Australian Treasury from 2011 to 2013. I am now working with the ANU, UPNG and NRI on issues affecting this wonderful country. I say this because the following presentation will be filled with what some of my PNG friends have called “hard talk” or “malnourished talk”. The message is that PNG is facing major challenges – on the economic front, the most severe for well over a decade. How PNG handles these challenges will shape its future and its children’s future. I fear there is a potential crisis coming – we can see the early signs with exchange rate rationing, increasing interest rates, and pressures on getting government cash out. But I believe that there is a pathway away from crisis and back towards prosperity.

A quick overview. In the limited time available I will focus first on the fiscal challenge, and then on the external challenge – especially international reserves. In doing this, I will present an overview of PNG’s own history on some key economic variables as well as international comparisons with countries in the Asian region. PNG is aspiring to be better integrated into Asia so we need to know what these neighbouring countries are doing. We will then examine in more detail a pathway from the fiscal challenge. This will involve a stepped approach from getting the right starting point, exploring some revenue and expenditure adjustments, and then considering how these can be best financed. The final part of the talk will focus on the external economic challenges.

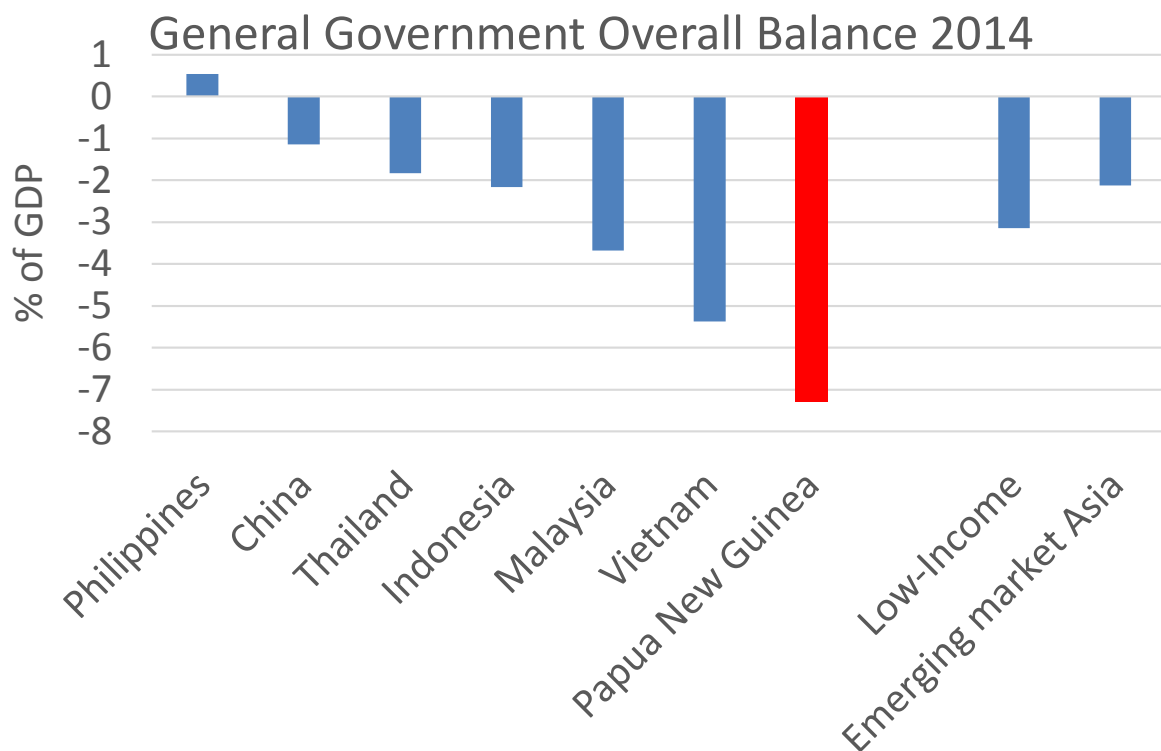


So on the fiscal challenge. This graph shows the pattern of PNG’s budget deficits from the time of Independence until now. A big budget deficit can lead to problems. There have been several periods in PNG’s past where large deficits have led to major economic crises. This was the case with a major crisis in both the mid-1990s and late 1990s – the big dips in the middle of this graph. These involved having to go to the international financial institutions to ask for help. Growth slowed, jobs were lost, inflation and interest rates moved above 20%, foreign exchange was rationed. At the end of the

graph are current years. 2013 and 2014 have had the largest deficits in PNG's history. This is part of a slippery slope that I have mentioned in some of my earlier writings.

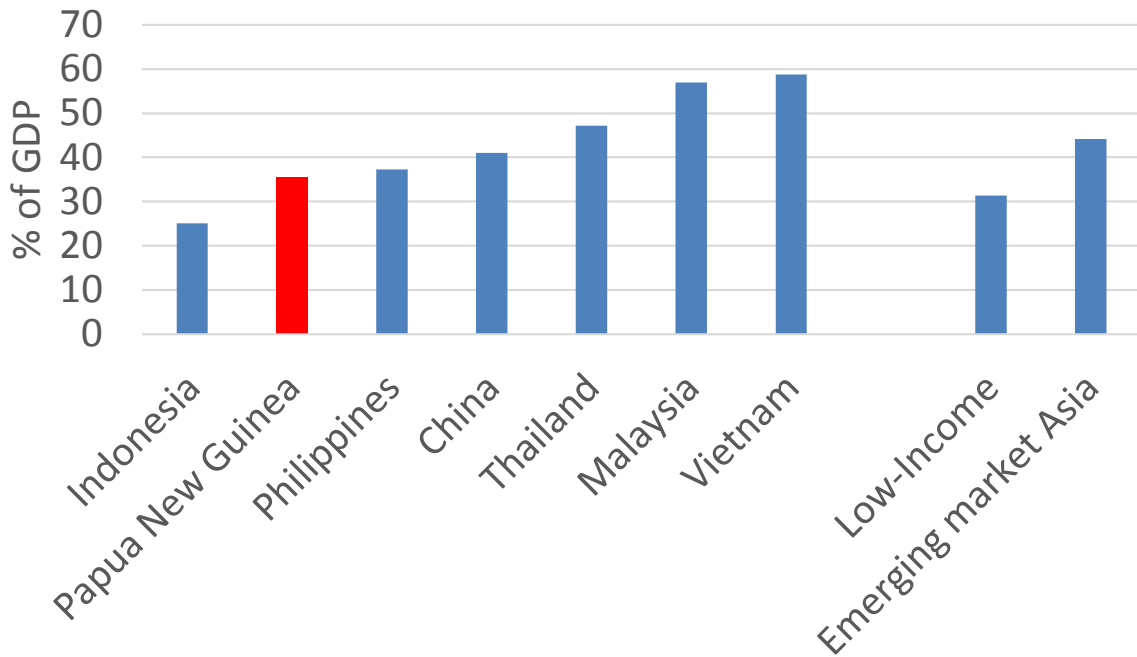
So how does this situation compare with other countries in the Asia region?

The next few graphs will run through international comparisons. The comparisons are with countries that are close to PNG – Indonesia, Malaysia, Philippines, Thailand, Vietnam and China. The focus is on other APEC member countries rather than countries of the Pacific which are all much smaller than PNG in economic terms. Where the data is available, comparisons are made with groupings of countries – so PNG is listed as a low income country in this source of data from the IMF.

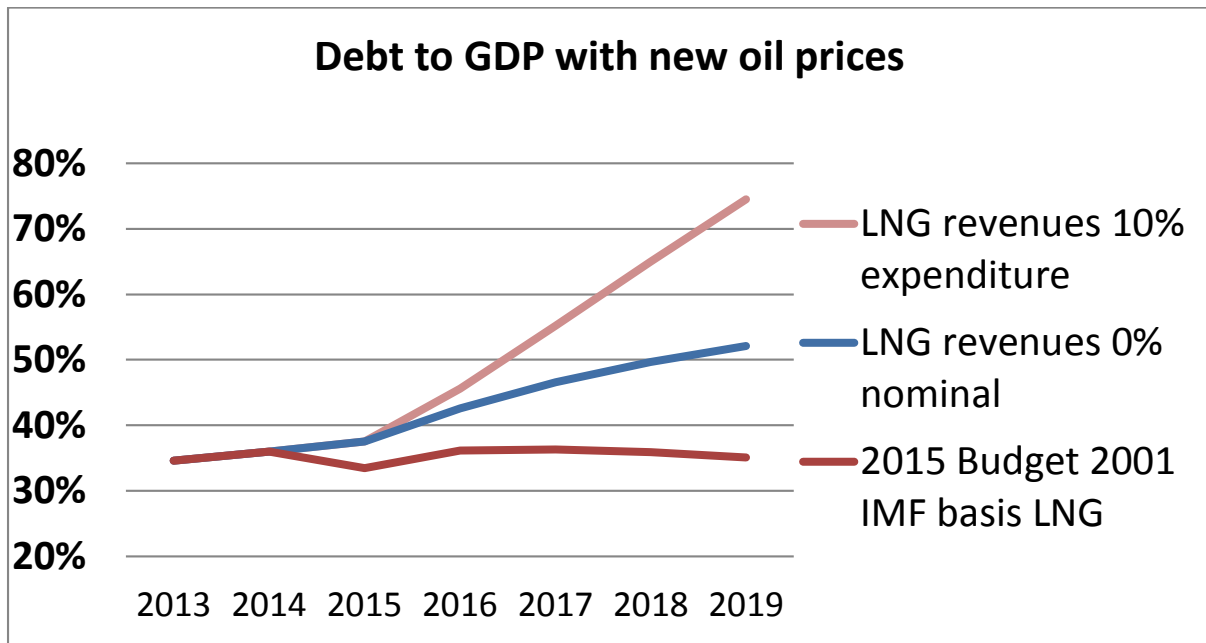


The above graph shows fiscal deficits in 2014 across these countries. PNG is shown in red. PNG has by far the largest deficit in 2014 relative to these other countries. We see the deficit is about double the average of other low income countries. One important element of this slide relates to fiscal strategy which will be discussed later. Specifically, as indicated in this graph, many countries operate at deficit levels of around 2 to 3 per cent.

## General Government Gross Debt 2014

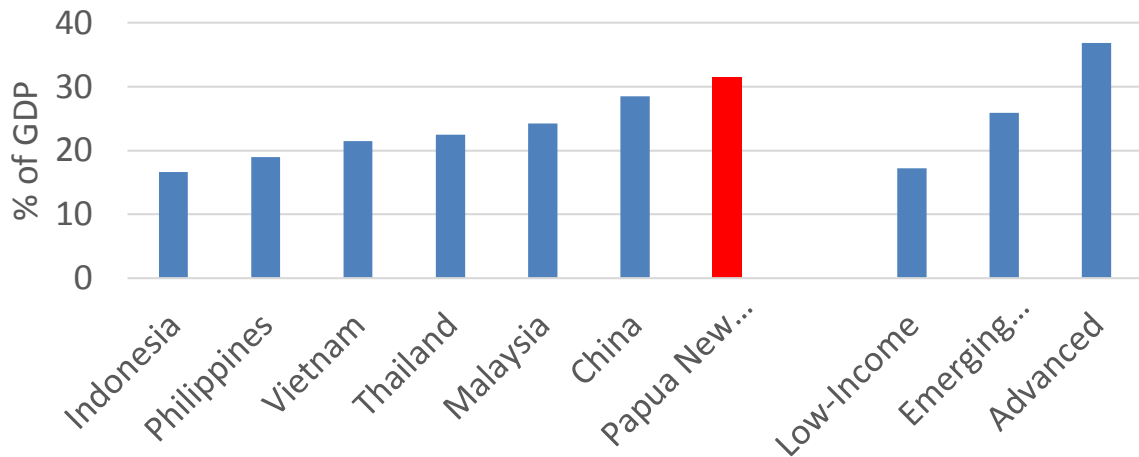


On public debt levels, as shown above, PNG is currently at a relatively low level. It is the second lowest amongst its Asian peers. Two important points however. First, PNG's public debt level in 2014 is above the average for all low income countries. Second, with deficits of 7 per cent, these can quickly build up public debt levels.



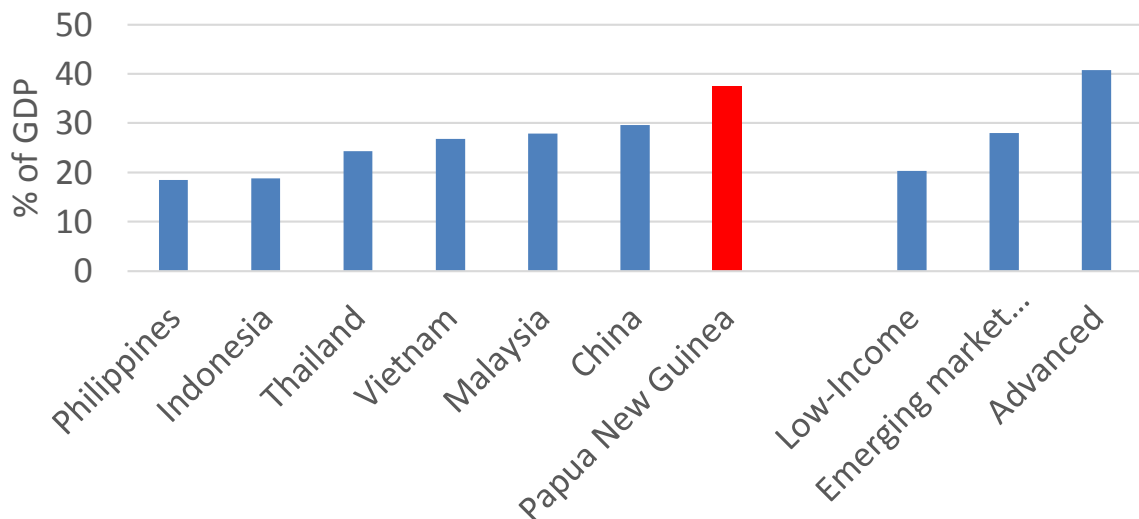
This graph shows some potential projections for PNG's debt levels if adjustments are not made. The bottom line shows current PNG budget projections. The two higher lines include more realistic projections for what may happen without finding a pathway from crisis.

## General Government Revenue 2014

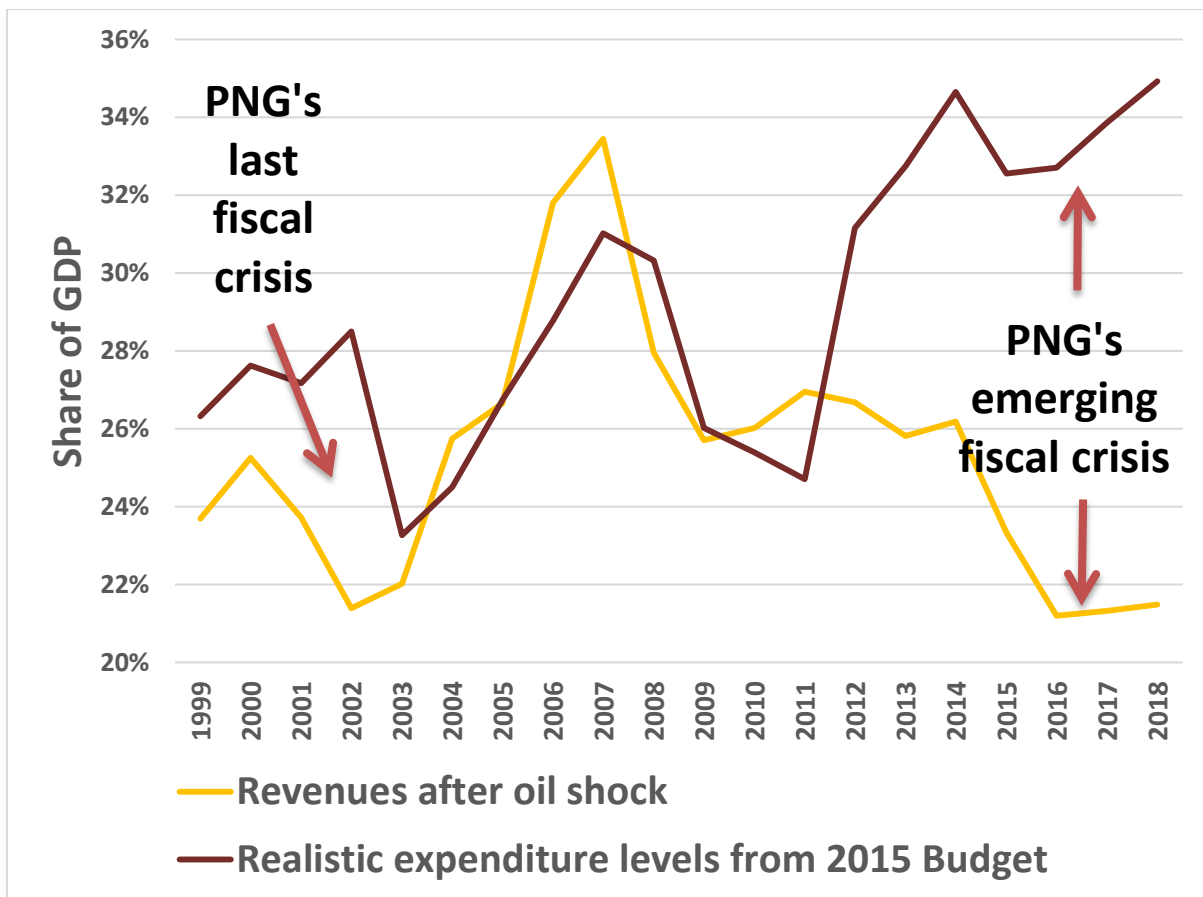


The deficit is the gap between public revenues and public expenditures. If PNG aims to reduce its deficit, the question is whether the change should come through mainly from increasing revenues, or from reducing expenditure? The above graph shows PNG's taxes are comparatively already high. Indeed, they are nearly double some Asian neighbours and low income countries as a whole. This suggests that taxes should probably be lowered rather than increased.

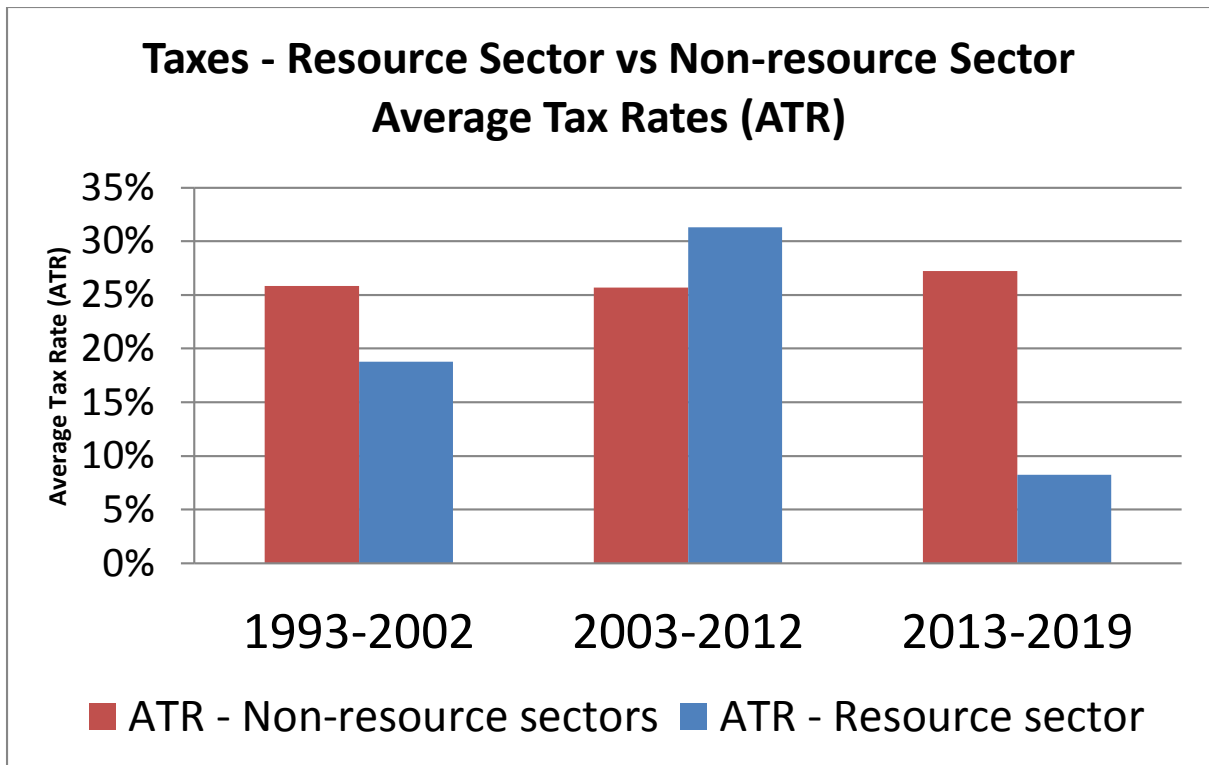
## Central Government Expenditure 2014



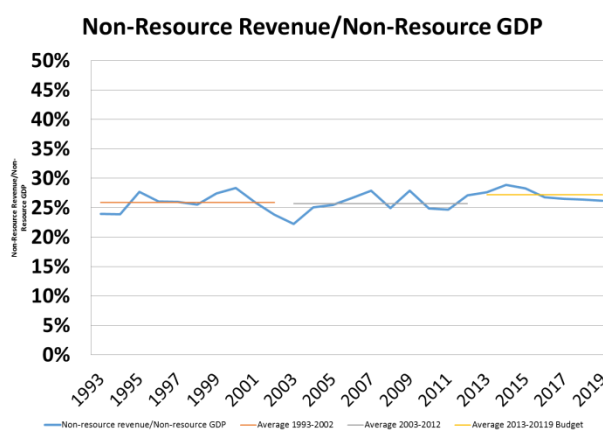
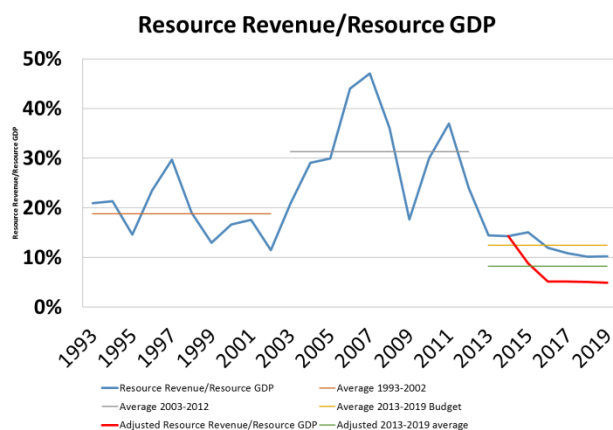
On the other hand, PNG's expenditures are very high. Once again they are much higher than its Asian neighbours and developing countries as a whole. This suggests most of the adjustment to get the deficit down means cutting expenditures.



Moving on from international comparisons, we will now focus on PNG. This graph shows two ratios. The red line is the Expenditure to GDP ratio – it shows public expenditure in the budget as a proportion of the overall PNG economy. In future years the expenditure figures are based on realistic expenditure levels based on PNG’s recent history. The yellow line shows the revenue to GDP ratio. The gap between these two lines is the budget deficit. So as the gap grows, the deficit grows. As shown, the last big gap was at a time of the late 1990s economic crisis in PNG. The gap shown for current and future years is very large. There is a need for adjustment and the government is committed to do this as indicated by its plans for a supplementary budget. The Finance Minister this morning noted that “stringent measures” are required. And he indicated that the government is aware of PNG’s history as the Finance Minister discussed the tough decisions still being made in 2001 when recovering from the late 1990s crisis. The question is how best to do this? Essentially, how much should we lift the yellow line up – to increase taxes – and how much to push the red line down – to cut expenditure?



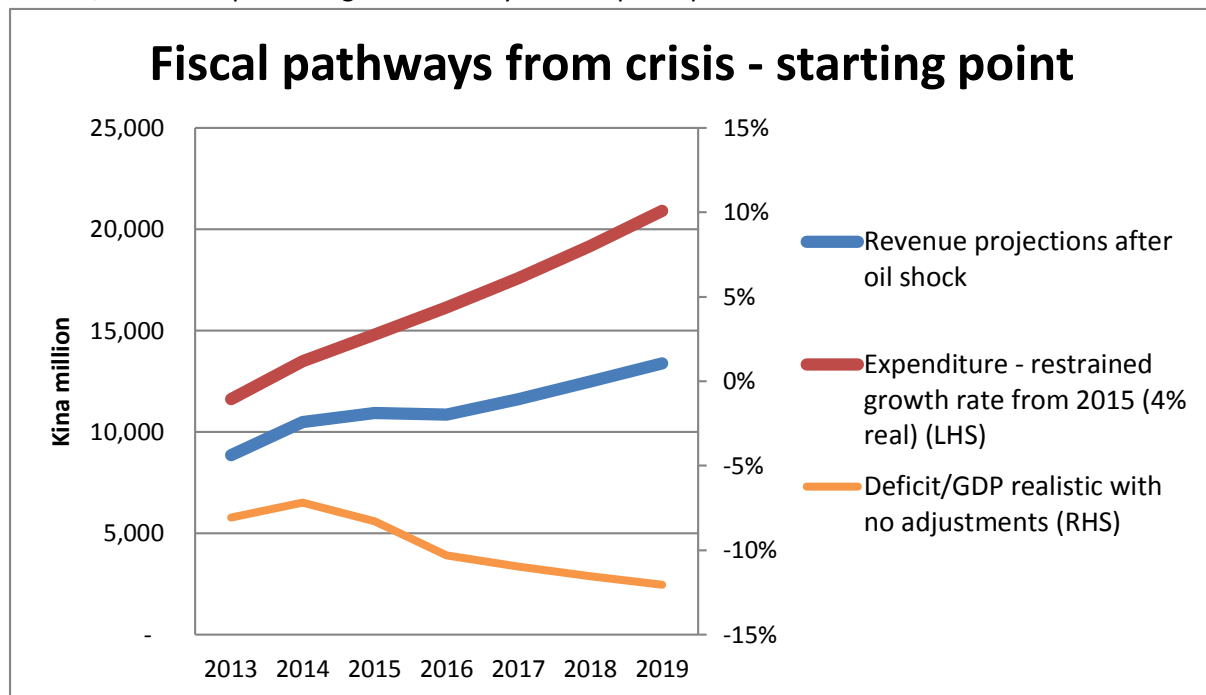
First, let us examine revenue adjustment options. The graph above is rather complicated. More detail is provided in the two graphs below and these have been summarised into the graph above. The red columns show the average tax rate of the non-resource sector over nearly the last three decades. The average tax rate is obtained by totalling all non-resource revenues (such as income taxes, excise duties, the GST and company taxes from other than resource companies) and dividing this by the non-resource sector of the economy (specifically, nominal GDP less the petroleum, gas and minerals sectors). These have averaged just over 25% of GDP throughout this time. Indeed, the final red column indicates that average revenue collections from 2013 to 2019 in the non-resource part of the economy are actually due to increase slightly. So there is not strong grounds for even further tax increases in this part of the economy. The blue columns tell a very different story. They are average tax rates in the resource sector (so resource revenues divided by resource GDP). Going through time, we see that the mining sector essentially faced average tax rates of around 20% in the 1990s, around 30% in the 2000s, but that this average tax rate will drop to around 10% through to 2019. So the implication is that if something is to be done on lifting tax rates, the focus should be on resource taxation. However, this takes time. The tax holiday for Ramu Nico will continue until well into the next decade. The tax concessions for PNG LNG cannot be changed. The main lesson is the long-term cost of tax concessions (or “tax incentives”) to the resource sector. As a new PNG LNG project is negotiated, the impact of tax concessions must be taken into account. It may help get the project off the ground, but there is little point in selling PNG’s resources if PNG does not get a good return. Indeed, most economists would say that on average the blue column should be higher than the red column – tax rates should be higher in the sector with resource rents that can be efficiently taxed.



The following table is drawn directly from the 2015 budget. This is the official story to return to surplus by 2017. This table shows very major cuts are planned in areas that we know are PNG government priorities. The budget figures talk of real cuts in education of 26%, of a 33% cut in health spending, of a 48% cut in infrastructure spending. As commented in earlier articles, this does not appear to be credible for cuts to be concentrated in the priority areas for government. The substantial planned nominal cut in 2017 (of K1,247 million) would seem unlikely in an election year – expenditure has historically gone up in such years. So the next sections will look at revising the starting point, and then seeing what pathways can return to a sustainable macro-economic pathway for PNG’s development.

Sector	2015	2016	2017	Real cut 2015 to 2017
Education	1,909	1,566	1,422	-26%
Health	1,772	1,304	1,192	-33%
Infrastructure	2,733	1,982	1,426	-48%
Law and Order	1,578	1,260	1,440	-9%
Other	8,207	7,122	6,508	-21%
<b>Total</b>	<b>16,199</b>	<b>13,235</b>	<b>11,988</b>	<b>-26%</b>

There are three lines on the following graph. The top line represents nominal PNG government expenditure – so it excludes grants and input tax credits. You can see, it goes up very quickly. The starting point on expenditure is the 2015 budget. Future year’s expenditure is then grown at 4% in real terms (or 9% after allowing for inflation). 4% real growth in expenditure is much less than the 13% average of recent years in PNG. Indeed, with underlying population growth of around 3% per annum, this line represents growth of only 1% real per capita. The second line in blue is the level of

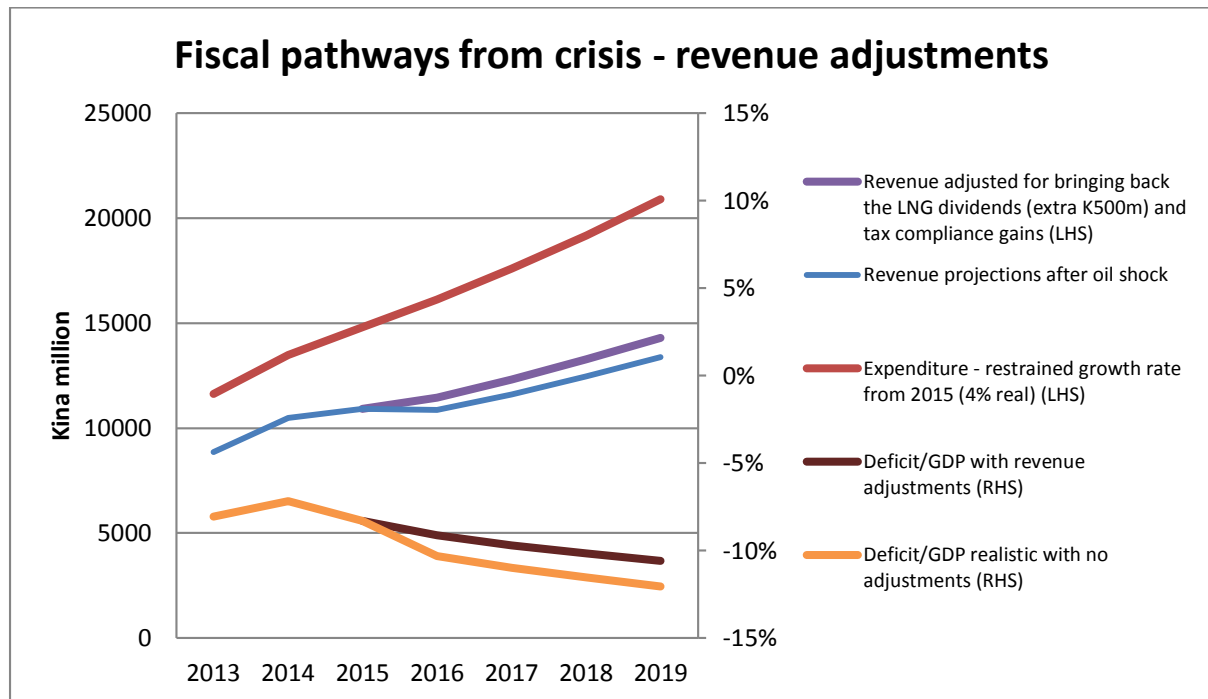


Government of PNG revenues (once again excluding grants and ITCs). This is based on the 2015 budget. My estimates of the impact on revenues from the fall in oil and LNG prices in my December article are then deducted. These are reductions of K1.4 billion in 2015 – a figure very close indeed to the K1.3 billion mentioned by the Treasurer recently. The revenue losses are estimated to then slowly fall to around K1 billion by 2019. The gap between the red expenditure line and the blue revenue line is the government deficit. This line is then represented by the orange line at the bottom – not in nominal Kina terms but as a percentage of GDP. So the bottom line refers to the right-hand axis of the graph. What this shows is that in 2015, the starting point has a deficit just over 8% of GDP – the original 4.4% predicted by the 2015 budget as well as the reduction of revenues of over K1 billion in 2015 because of falls in commodity prices. Going forward, this deficit increases so that by 2019 the deficit is over 12% of GDP. Clearly, this is not sustainable. This would not respect what the Finance Minister noted this morning about the importance of fiscal stringency. He talked of the challenges of the fiscal crisis from the late 1990s. PNG does not want to go down that slippery slope again. So how is this to be achieved?

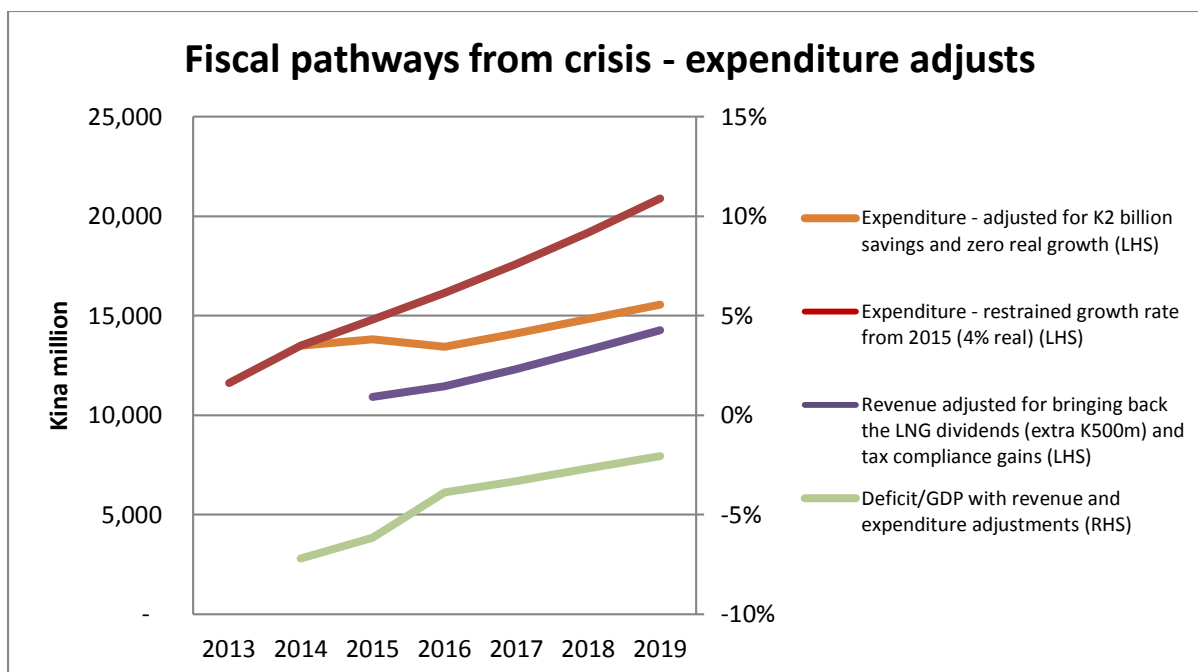
Let’s start with examining tax options. As noted earlier, PNG taxes are generally already relatively high – the key issue is the low level of resource taxation due to tax incentives. However, there are a couple of revenue options which could be considered. The first is to bring back the LNG dividends that were taken away from the budget in 2015. Some K500 million per annum was diverted. Fixing the deficit, and thus funding for health and education, surely is a higher priority than supporting some off-budget activity? Second, extra work could be invested in tax compliance – and the following graph assumes that K100m can be raised in the first year from improved tax compliance,



increasing by a further K100m per year to reach K400m by 2019. These two measures help lift the revenue line in the following graph – but it doesn't look very much – the purple line is only a bit above the blue line. There is a reduction in the size of the deficit to GDP ratio as shown in the brown line – but deficits remain at above 10% of GDP by the end of the period.



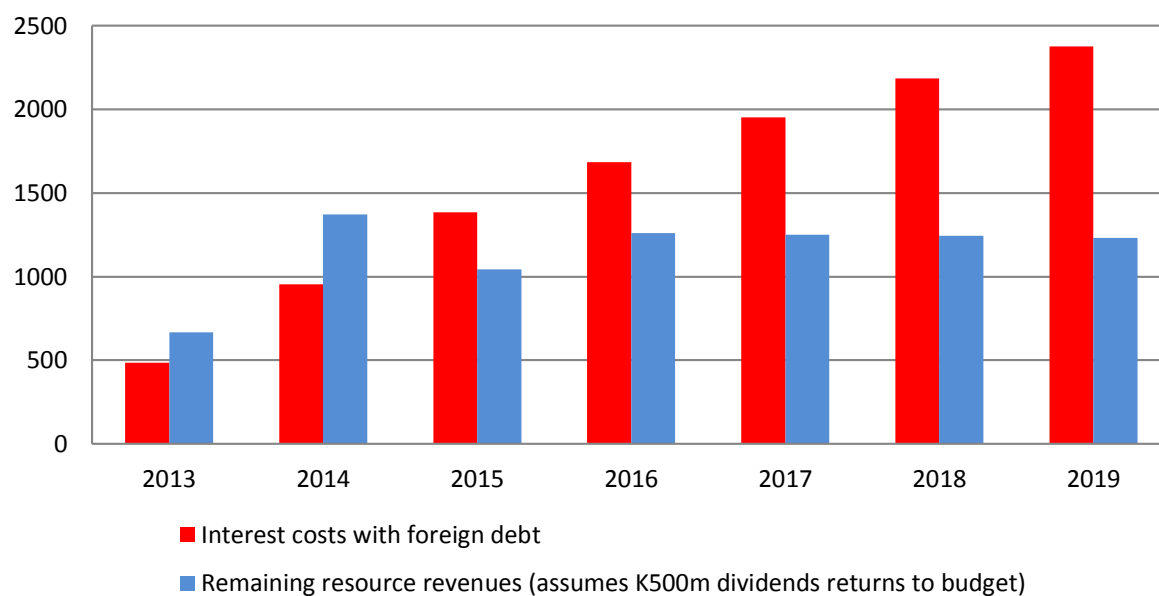
So the main work needs to be done on the expenditure side. The Minister noted this morning the importance of keeping to around the original fiscal deficit target of 4.4% in 2015. This can really only be achieved through expenditure cuts. And these cuts arguably cannot just be limited to this year – there is a need for adjustment in the 2016 budget also. There are many assumptions that can be made on the size of the cuts, and where they should best fall. As noted at the beginning of this presentation, this will be a presentation setting out some hard talk. The size of the required cuts also depend on the size of the deficits being targeted, and the timing of cuts. The excel model underlying this ‘pathways from crisis’ analysis will be made public – so anyone can make decisions on what adjustments could occur and their implications. For illustration, the expenditure adjustments in this graph consist of two components. First, expenditure cuts of K1billion are made in both the 2015 supplementary budget, as well as a further K1billion in the 2016 budget – so K2bn in cuts in total. These cuts are actually slightly less than the K2.2 billion in cuts foreshadowed for 2016 in the 2015 budget table shown on page 7 above. How these cuts should be made is clearly a matter for PNG. However, these cuts should probably not be across the board. The government has deliberately lifted the emphasis on the key enablers of health, education, infrastructure, and law and order. It would seem better to protect these areas – so the cuts fall on other areas of the budget. For example, given the blowout in public service costs in the recent 2014 Fiscal Budget Outcome, significant public sector reform is likely to have to be part of the adjustment strategy. For such major cuts, a bottoms up major public expenditure review would seem appropriate. This would be a form of zero-based budgeting.



The second component is then to stop any real expenditure growth in future years. So zero real expenditure growth is allowed for from 2017 to 2019. The budget goes up in line with inflation estimates of 5% per year – but this does not allow for new activities. This means that any new initiatives must be funded through finding savings elsewhere in the budget. It also means that major expenditure items in future years would need to be funded from other savings. For example, if the hosting of APEC in PNG in 2018 proceeds, the likely cost of several billion Kina, much more than the Pacific Games, would have to be funded through the same size cuts in other areas. Indeed, this line has to include any additional interest costs if public debt levels are higher (more on this below). Putting these together, we move from the red line to the orange line. This is now much closer to the revenue line in purple. The size of deficit declines as shown in the bottom line in green. Indeed, the deficit to GDP does fall, but even after all of these expenditure cuts and revenue increases, the deficit is still in the range of 2 to 3 per cent. In this pathway from crisis scenario, the budget does not return to surplus. Once again, this is a decision for PNG to determine what it wants to target in these key fiscal variables. Overall, this could be seen as the minimum required adjustment – getting to a 2% deficit to GDP level by 2019. It would be a credible adjustment path. Of course, many economists would argue for even more adjustment and a move to surplus by 2019. These are matters of balance.

The next challenge is how to finance these years of on-going deficits. The total cost of this pattern of deficits is slightly over 9.5 billion Kina. How do we fund this? Two key options are examined below – one through foreign borrowing, one through asset sales. There may be some scope to ask the domestic market to do more – but the model already assumes that the domestic market is the main source of financing of on-going public debt levels. The analysis also doesn't go into the option of additional concessional financing from sources such as the World Bank and ADB. Of course, this would lower the interest costs and should be part of the financing strategy but realistically probably could account for no more than K1 billion of the financing challenge.

### Interest and foreign exchange costs with K9.5 bn extra foreign debt financing relative to resource revenues to government



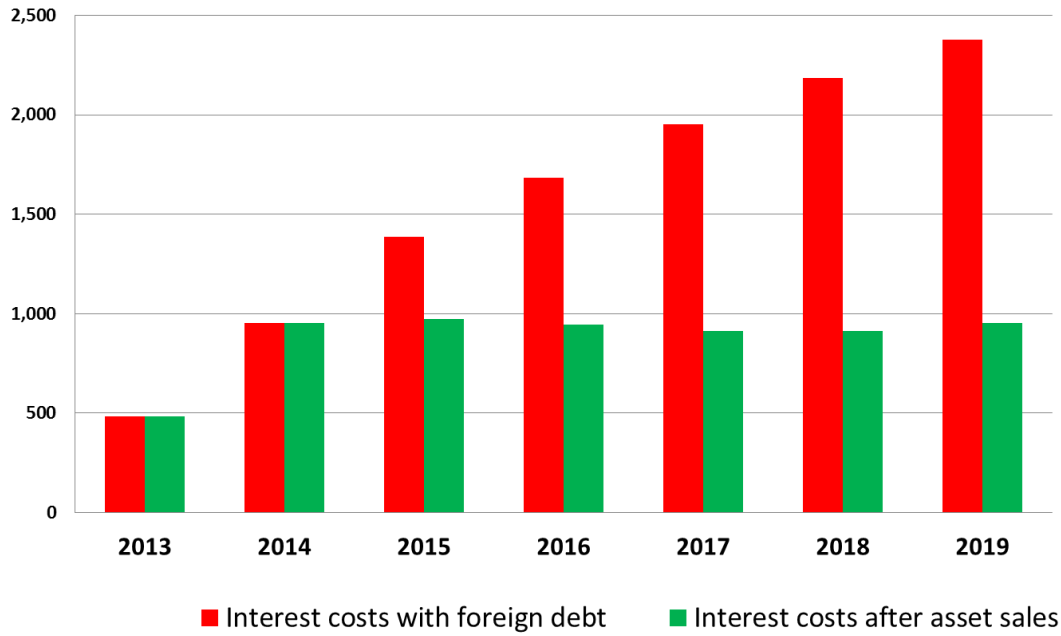
This graph assumes that all of the fiscal deficits from 2015 to 2019 are financed through foreign borrowing – a total of K9.5 billion. The red bars show the estimated build-up in interest costs. Interest costs for a foreign borrowing consists of three components. The first is the direct interest costs – usually based around LIBOR plus something like 5 to 8 per cent. The second is the foreign exchange risk. Foreign borrowings are likely to be in US dollars, but even if they are in Yuan, there is a foreign exchange risk. As noted below, it is likely that the Kina will need to continue depreciating – possibly by significant amounts. As the Kina depreciates, then the costs of servicing interest costs increase in Kina terms. These costs can represent an additional 5 to 10 per cent per year – although these are difficult to predict. These exchange rate risks are usually not explicit – however, they do represent in Kina terms part of the additional costs of borrowing in a foreign currency when one’s own currency is likely to keep depreciating (as PNG’s inflation rate tends to be higher than the US or Euro area). There are also the costs of fees for organising international borrowings – say around 1.5%. For this graph, the assumption is a rather conservative total cost of 15% per annum – only slightly above domestic financing costs of around 13%.

The red bars show the growth in financing costs of PNG’s public debt. As shown, there have already been significant increases in interest costs facing PNG – moving from around K500 million per year to close to K1,000 million per year. Indeed, the increase in interest costs over the last two years is almost equivalent to the cost of the tuition fee free education policy. Going forward, these interest costs will continue increasing from around K1 billion currently to around K2.3 billion by 2019 – 15% of all expenditure. If all-up foreign borrowing costs are higher, then these figures are even worse. For example, if the all-up foreign borrowing costs were 20% (including coverage for foreign exchange risk), interest costs would exceed K2.8 billion by 2019.

Some of the borrowing was based on the assumption of higher resource revenues, so the graph also shows the size of resource revenues to the government in blue. These resource revenues include

tax revenues and dividends – including the assumed K500m which it was recommended should come back onto the budget. **By 2019, interest costs after foreign borrowing will be nearly double all resource revenues.** Of course, this additional interest is not available for spending on current government priorities.

## Financing deficits: foreign debts vs asset sales



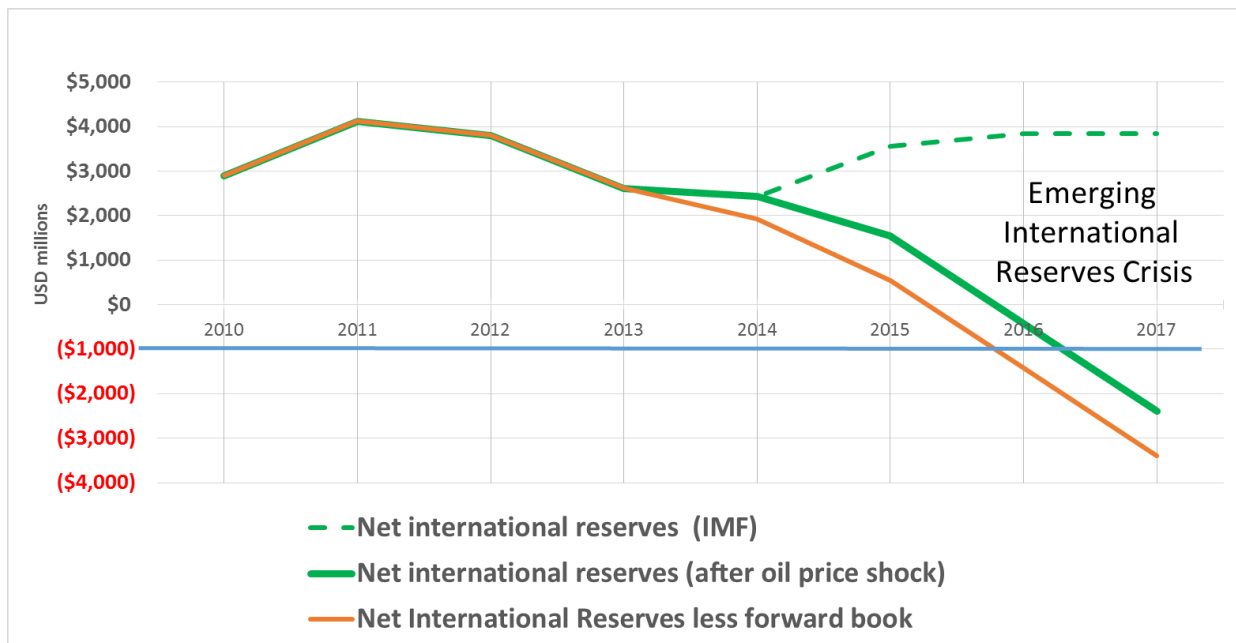
An alternative option is to finance the deficit through asset sales. This is essentially the strategy within the 2015 budget – to sell K2.5 billion of PNG LNG shares to landowners and provincial governments. Once again, different options can be explored in the model. This graph assumes asset sales of K2.5bn in 2015, a further K2.5bn in 2016, another K2.5bn in 2017, K1.5bn in 2018 and K0.5bn in 2019 (totalling K9.5bn). The outcome is shown in the green columns – essentially interest costs are held at the same nominal levels of 2014. Indeed, if the overall fiscal adjustment strategy is judged by the market to be credible, then domestic interest costs may even fall back to 2013 levels freeing some funds for other priority areas of government expenditure.

Overall, a pattern of significant asset sales would seem preferable to K9.5bn in foreign borrowing. The challenge is then what assets should be sold. A key element here is ensuring that any sales of State Owned Enterprises is done in a way to improve competition and the delivery of services to customers – not just to make revenue.

Let me now move from the fiscal challenge to the external challenge.

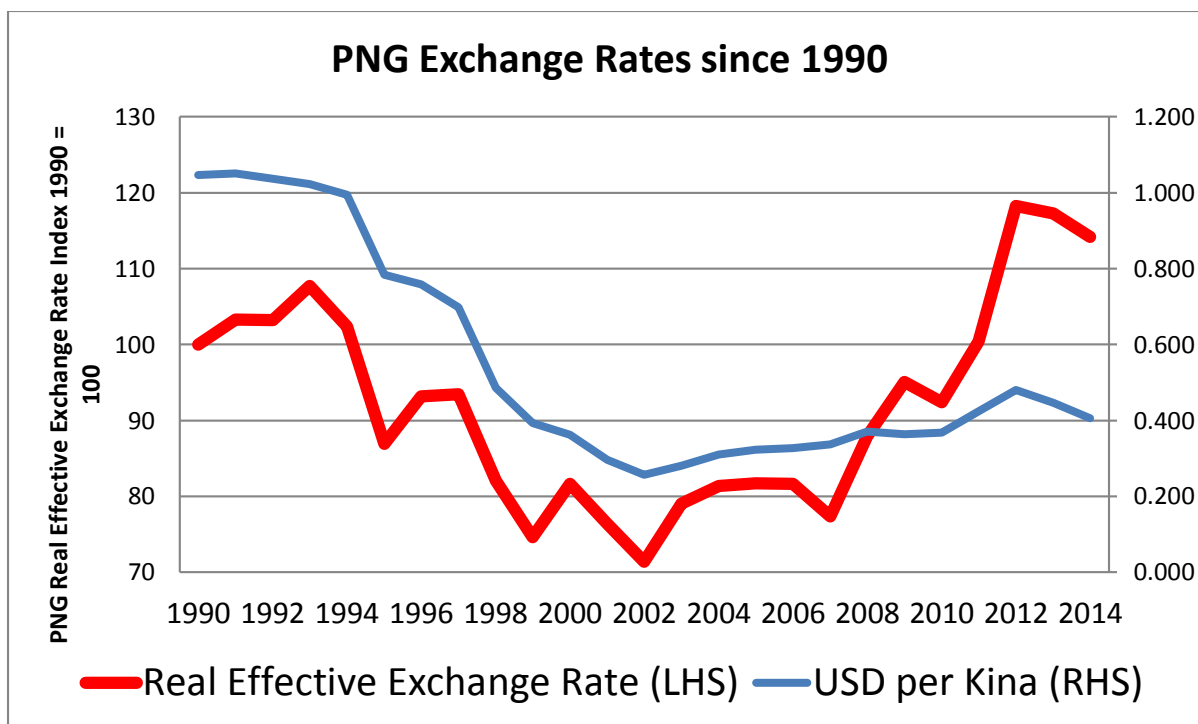
The following graph builds on the graphs shown by other speakers earlier this morning. It shows that PNG's international reserves built up through to 2011 and stayed at high levels through 2012 at around \$US 4bn. Since then reserves have about halved. The dotted green line shows projections from the IMF in October 2014 for future years. However, since then there has been a fall in commodity prices, especially in oil and LNG prices. The solid green line shows an assumed new

pattern of falls in international reserves as the value of exports fall. This is based on analysis available on the Development Policy Centre website. (It should be noted that this earlier analysis has assumed an oil price of around USD 63 per barrel not USD 49 as possibly has been suggested by some). This line assumes no asset sales to foreigners or additional external loans. Such action would help with the level of reserves. So based on the green line, unless something is done, then international reserves will run out early in 2017. If allowance is made for the backlog in payments in import orders – then the underlying level of reserves will be exhausted earlier. This is sometime down the track and there is time to make adjustments.



As an economist, the preference is to get the market price right in the foreign exchange rate rather than imposing various forms of export controls that we are currently seeing. In terms of exchange rate prices, most of the focus usually is on a nominal exchange rates such as US dollars to Kina. This is shown in the blue line below. There has already been some discussion this morning about the 17% appreciation when moving to the new trading band. There are concerns about the distributional impacts of that.

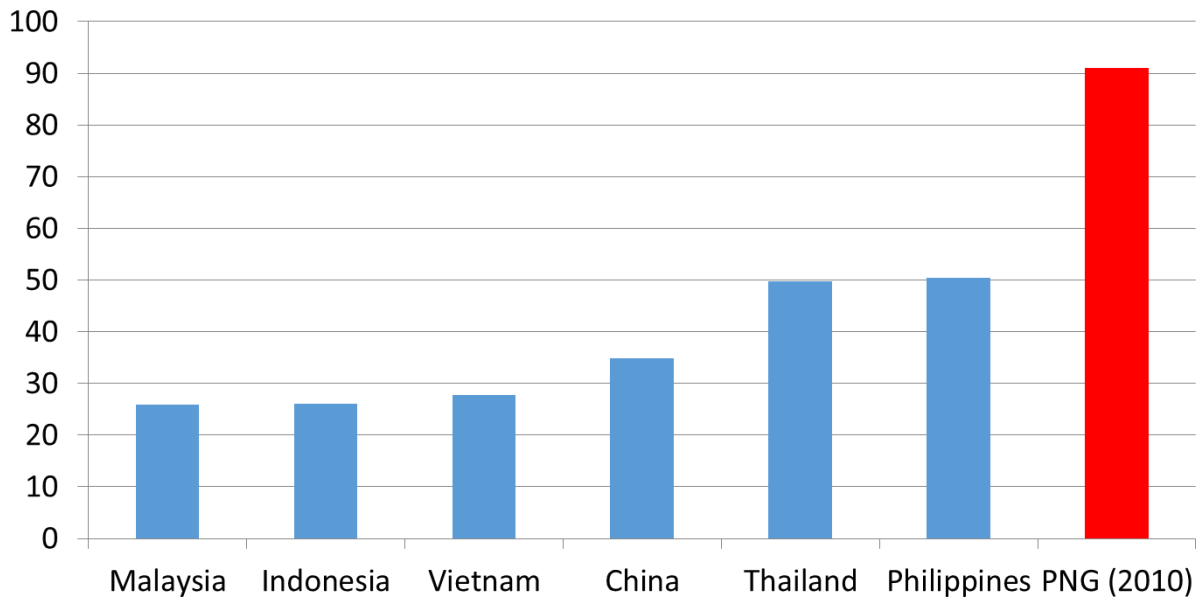
However, let me focus on the red line. This is the line that really matters in determining how competitive PNG is with other countries – and its chances of integrating with the Asian region. This line combines PNG’s various exchange rates with other countries – so it includes all the exchange rates with countries such as Australia and the EU and China weighted by their trade shares. This is then adjusted for inflation differences between countries. A country with high inflationary pressures will become less competitive relative to countries with low inflation rates. Combined, this produces the real effective exchange rate. So in the last three years, PNG has had the highest real effective exchange rate since 1990 – the start of the graph. Indeed, one would need to go back to 1986 to find a rate as high as the 2014 level. In practice, this means that it is harder for a SME to produce local produce and sell it overseas than at any time in the last 30 years. This has major issues for the development of PNG. There would appear to be scope for a major devaluation to improve the overall level of PNG’s competitiveness.



In part, this red line indicates the adjustment required on the external account must take into account not just nominal exchange rates, but also factors related to inflation. A nominal devaluation of the Kina will not improve the balance of payments unless the resulting inflation pressures are controlled. The main focus of this usually is on controlling wage pressures – ensuring that higher inflation from the depreciation doesn't flow straight into higher wage levels.

It is difficult to get good data on international comparisons of underlying costs. The following graph gives a view of one of the key wage controls in PNG – the minimum wage rate. It takes the minimum wage and puts it as a share of GDP/capita. So it shows the minimum wage relative to the average income of everyone in the economy. On this measure, PNG's ratio is nearly double the level of its nearest Asian neighbours. And this is using the 2010 minimum wage rate and does not include recent increases. This highlights how valuable it is in PNG for someone to get a job in the formal sector – the incentives to become a wage employee on this measure are much higher than other countries. There are limits to this data and this one ratio does not indicate that wages are too high in PNG. However, the gap indicates that there are questions about the minimum level of wages in PNG relative to its Asian neighbours. And the importance of ensuring that inflationary pressures flowing from devaluation do not flow into domestic cost bases still holds.

## Minimum wage as percentage of GDP/capita



### Conclusion

PNG faces short-term challenges which if not managed will lead to a crisis. The deficit is at historic levels as is the real exchange rate. These settings are out of step with PNG's own history and its Asian neighbours.

The fiscal crisis can be managed but this will involve very hard choices. A possible pathway includes aiming for a 2% deficit/GDP in 2019, returning PNG LNG dividends to the budget and increased tax compliance, K2 billion in expenditure cuts through a thorough expenditure review by the 2016 budget, and no real growth in spending until 2019 so no scope for major new initiatives without other savings.

Even then there will be a major financing challenge for the nearly extra K10 billion in deficits – asset sales appear to be preferable to foreign loans to avoid very high interest and exchange rate costs.

The external crisis can be managed with a major depreciation in the real exchange rate – this will also need restraint on wages.

These are very difficult issues and will require discussions in PNG about how best to handle the required adjustment.