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MALAYSIA

SELECTED ISSUES

March 2015

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MALAYSIA

SELECTED ISSUES

January 30, 2015

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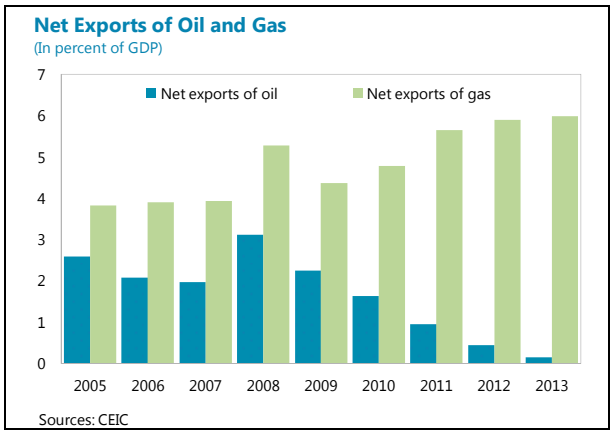
Prepared By Asia and Pacific Department

CONTENTS

THE IMPACT OF LOWER OIL PRICES ON MALAYSIA: A VAR APPROACH[1]

A. Introduction



1. Introduction. This paper examines the implications of lower crude oil prices on Malaysia's economy. Although Malaysia's net oil exports are now very small as a share of GDP (0.1 percent in 2013), its gas exports are sizeable (over 6 percent of GDP with gas export prices are linked to crude oil prices through long term contracts. The net effect on the macroeconomy of the decline in oil prices is not clear-cut a priori: Malaysia has an important hydrocarbons exploration, extraction, and processing sector but its economy has diversified, with manufacturing and services now accounting for more than 80 percent of output. While energy exploration and extraction are likely to take a hit from the reduction in oil prices, non-oil sectors (and some oil-related ones) could benefit from lower energy costs and a depreciated exchange rate.

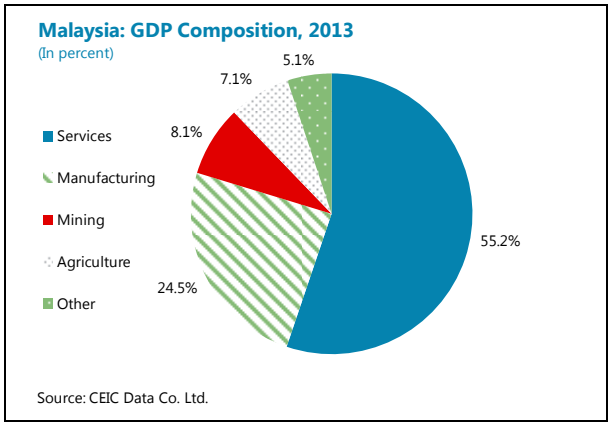
2. Source of the shock matters. The reason for the decline in oil prices is also likely to matter. If the recent decline in oil prices is driven more by increased supply of energy rather than by weakening global demand, then Malaysia could potentially be a net beneficiary as the export-oriented sectors of the economy can continue to perform well. Arezki and Blanchard (2014) discuss the respective roles of demand and supply factors behind the recent decline in oil prices concluding that oil market factors, particularly, supply factors are the dominant explanation. In a scenario where a supply shift accounts for 60 percent of the recent decline in oil prices global output is estimated to increase by 0.7 percent in 2015 and 0.8 percent in 2016 compared to the baseline. The effect will be smaller—increases of 0.3 percent and 0.4 percent in 2015 an 2016 respectively—if the supply shift is partly reversed over time.

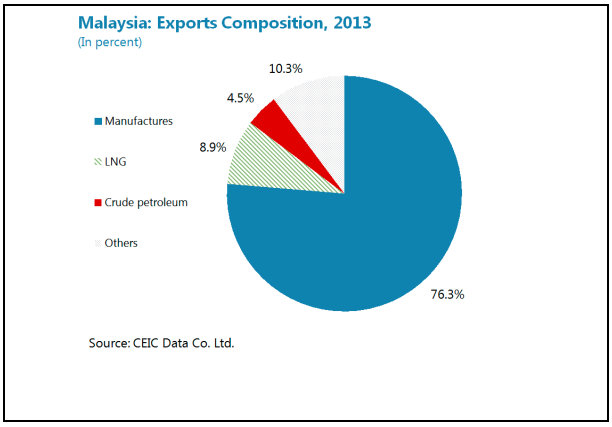
3. Outline. The paper proceeds as follows. It first provides some background on the structure of energy production and trade in Malaysia. It then presents results from empirical analysis of the oil prices on Malaysia's growth. This analysis distinguishes between sources of oil price shocks and concludes that the decline in prices is likely to have a net negative impact on growth, even though the recent decline in oil prices partially reflects supply considerations. The final section concludes.

[1] Prepared by Niamh Sheridan.

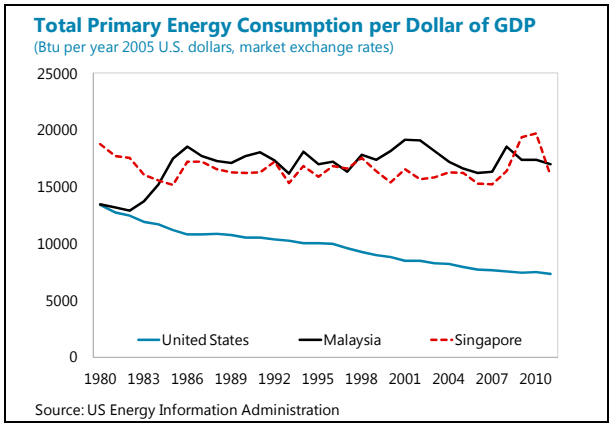
B. Malaysia's Energy Sector

4. Overview. Malaysia is a high middle income country with a diversified economy dominated by services (55 percent of GDP) and manufacturing (25 percent), with mining (8 percent) and





agriculture (7 percent) following in the distance. Malaysia's economy is highly open to international trade. Exports amount to over 70 percent of GDP, of which three quarters are manufactures and oil and gas are about 14 percent. Domestic energy consumption has until recently been heavily subsidized. This has undoubtedly contributed to the energy intensity of Malaysia's GDP remaining relatively stable, unlike the declining pattern seen in most advanced economies.

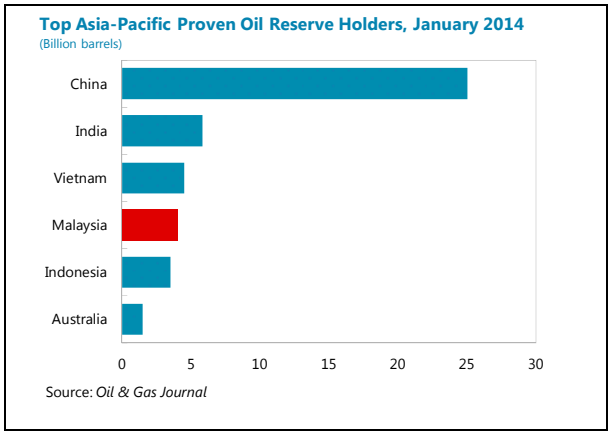


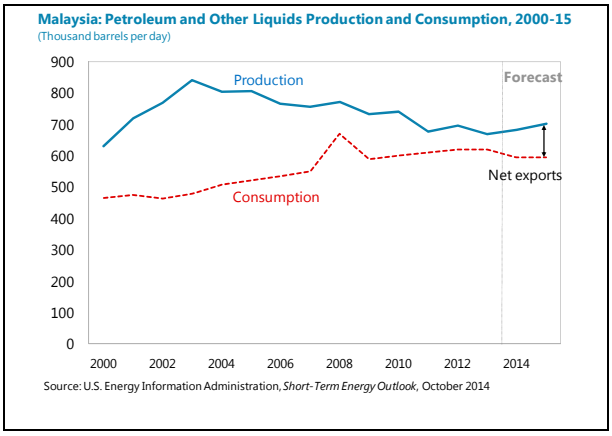
5. Energy Sector. Malaysia's business and commodity cycles are positively correlated and developments in energy and other commodities are especially important for fiscal and balance of payments developments. The production, processing and exports of energy products (crude oil and products and natural gas) amounted to 15 percent of GDP in 2014 and contributed a net surplus of about 6 percentage points of GDP to the trade balance. State-owned PETRONAS dominates upstream and downstream activity in the energy sector. The next sections provide more details on production and trade in crude oil and natural gas.

Crude oil

6. Background. Malaysia is Southeast Asia's second largest oil producer after Indonesia. Almost all of its crude oil comes from offshore fields, with most of the reserves located in the Malay basin. Malaysia produces a light and sweet crude, called Tapis. Because Tapis crude oil can produce higher-value products, it is priced higher than other benchmarks. During 2014, Tapis oil averaged about US$10 above the IMF's average spot price for crude oil. At end-2014, futures markets indicate a Tapis crude average price of US$75 in 2015.

7. Oil production. Malaysia's crude oil production was about 590,000 barrels per day (bbl/d) during the first 11 months in 2014, down from a peak of about 844,000 bbl/d in early 2000s. The decline was caused by the maturing of oil fields and has prompted Malaysia to seek joint ventures and the government has provided incentives to undertake enhanced oil exploration in order to prolong the life of mature oil fields.

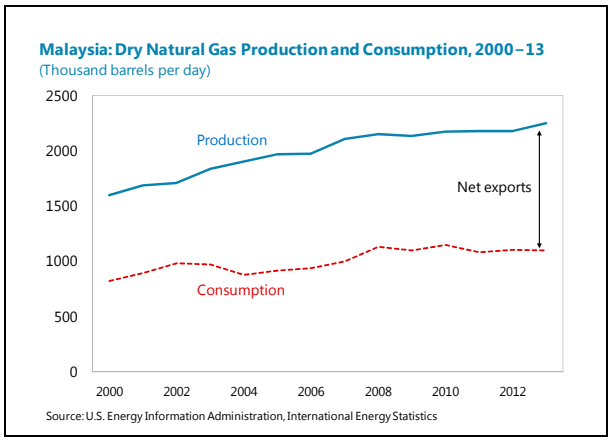


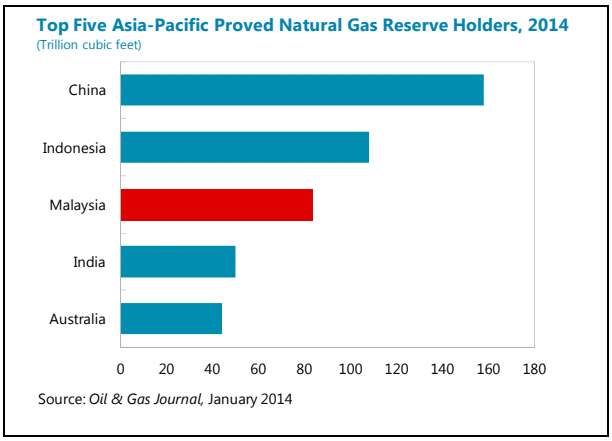


8. Oil consumption and exports. Rapid economic growth in recent years has raised domestic energy demand and consumption of crude oil. Coupled with declining output, this has resulted in a reduction of crude oil exports. Malaysia remained a net exporter of crude oil and products in 2013, with exports of 240,000 bb/d in 2013 and imports of 183,000 bb/d. It exports sweet crude, which commands a premium, and imports heavier crude oils from the Middle East and other locations for refining and domestic consumption. Primary export destinations are Australia, India, Thailand and Japan.

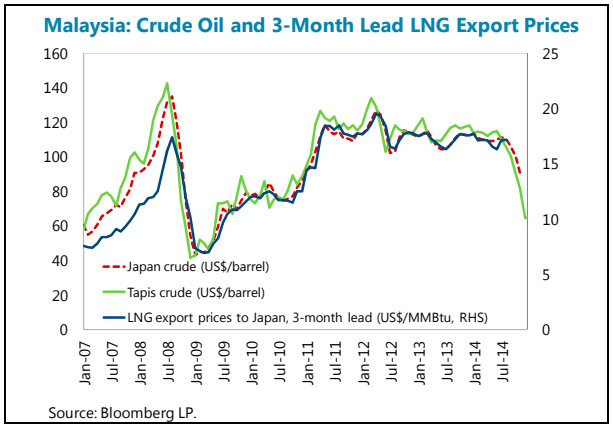
Natural gas

9. Overview. Natural gas is playing an increasingly important role in Malaysia's energy production and trade. Its proven gas reserves of 83 trillion cubic feet (Tcf) are the third largest in Asia. Production comes from offshore fields in Sabah and Sarawak and has steadily increased steadily to 2.3 Tcf in 2013. Domestic consumption has also risen to meet the needs of power generation (50 percent) and industry (33 percent). Demand for natural gas for power generation and industrial use is expected to remain strong as Malaysia transitions to high income status. A number of new gas projects are under development. Interestingly, high demand for natural gas in peninsular Malaysia has forced Malaysia to import LNG and invest in regasification.





10. Natural gas exports. Malaysia is the world's second largest exporter of LNG after Qatar with exports reaching 1.2 Tcf in 2013. Major destinations are Japan (68 percent), Korea (15 percent), Taiwan Province of China (13 percent) and China (6 percent). Most of Malaysia's natural gas exports are subject to medium and long term contracts. These contracts stipulate a floor and ceiling price, to protect the seller and the buyer respectively, but are tied to spot crude prices for Japan—the so-called Japan crude cocktail (JCC). In practice, prices for Malaysia's LNG exports tend to follow those of the JCC with a lag of about 3–5 months. LNG export prices tend to be higher than those for domestic consumers of gas, which are regulated by the government. In addition, PETRONAS maintains a fleet of LNG tankers that meet spot demand for natural gas worldwide.



C. Empirical Analysis: The Impact of Oil Prices on Growth

11. Overview. The net effect of lower oil and gas prices on growth in Malaysia is not clear-cut a priori. Although there will be a negative impact on the oil and gas sectors, other manufacturing and services will benefit from lower energy costs and a depreciated exchange rate. The positive impact on exports could be further increased by an improved outlook in trading partners, particularly the United States. This section of the paper uses two empirical approaches to examine the potential net impact of lower fuel prices on Malaysia. The first uses a three variable vector autoregression (VAR) model that includes global oil prices, world GDP growth and Malaysian GDP growth. The results from this model suggest a positive (negative) impact on Malaysia from increases (decreases) in oil prices. The first approach does not sufficiently differentiate between alternative types of oil prices shocks and the impact on Malaysia is likely to depend on the underlying cause of the price increases. Therefore, this paper also adopts a second approach which addresses this issue by first identifying different types of oil price shocks using a structural VAR for the oil market; and then assesses the impact of these different types of oil price shocks on the economy. The analysis

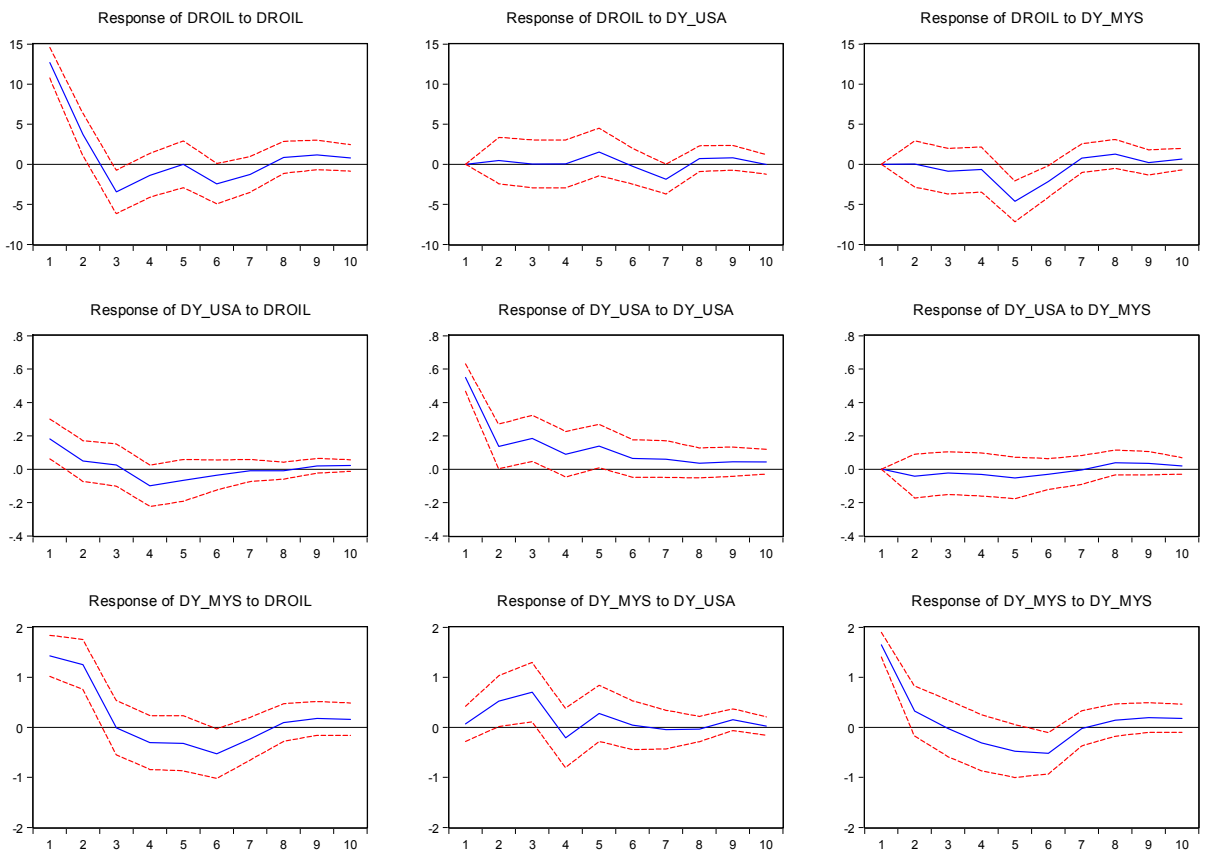
suggests that even when changes in oil prices are driven by supply considerations, there is a positive correlation with growth in Malaysia, and the net impact of a decline in oil prices is likely to be negative.

VAR Model

12. VAR specification. This VAR includes GDP growth for Malaysia and the United States, and the real oil price. The VAR was estimated using quarterly data, with 4 lags, from 1992Q1 to 2014Q2. The included variables are defined as follows: log change in the real price of oil (measured using the refiner acquisition cost of imported crude oil, from the U.S. Department of Energy, deflated by the U.S. CPI); log change in U.S. seasonally-adjusted real GDP; and log change in Malaysia seasonally-adjusted real GDP. Including U.S. growth into the VAR, in addition, controls for the impact that changes in oil prices have on growth in the U.S., and in addition allows for the analysis of the impact on growth in Malaysia.

13. Empirical results. The impulse responses show that real GDP growth increases in Malaysia with increases in the real oil price (see Figure 1, third row, first column). However, the impact of the

Figure 1. Impulse Response Functions from VAR model



Sources: Staff Calculations

increase becomes statistically insignificant after 3 quarters. The analysis also shows that stronger U.S. GDP growth has a positive impact on growth in Malaysia, with the peak effect after about 3 quarters.

Distinguishing Between Sources of Oil Price Shocks

14. Empirical approach. Evidence for the United States shows that the underlying cause of oil prices matters in terms of the impact on economy, see for example, Hamilton (2003), Barsky and Killian (2004), and Blanchard and Gali (2009). These papers distinguish between different sources of oil price shocks and show that that impact on the economy can be different. An implication is that an empirical analysis to assess the impact of oil price shocks should take into account the different types of oil price shocks. Distinguishing between sources of oil shocks is also likely to be relevant for a small open economy, such as Malaysia, that is highly dependent on global trade. In the analysis to follow, the paper makes this distinction using the approach in Killian (2009) which identifies different sources of shocks before assessing their impact on the economy. In the first step, three distinct market shocks are identified; crude oil supply shocks; shocks to the global demand for all industrial commodities; and crude oil market specific shocks. The second step analyzes the impact on growth in Malaysia of each of these different types of oil shocks.

15. Data and sample. In order to distinguish between different types of shocks to oil prices a three variable structural VAR model of the oil markets is estimated using monthly data from 1974:01 to 2014:09. The included variables are: Δprod_t, the percentage change in global crude oil production; rpo_t, the real price of oil; and rea_t, an index of real economic activity (see charts in Appendix 1). Following Killian (2009), the index of real economic activity provides a measure of the component of worldwide real economic activity that drives demand for industrial commodities and is constructed using dry cargo freight weights.[2]

16. Oil Market Model. The structural representation of the VAR model for the oil market is:

$$\mathbf{A}_0\mathbf{z}_t = \boldsymbol{\alpha} + \sum_{i=1}^{24}\mathbf{A}_i\mathbf{z}_{t-i} + \boldsymbol{\varepsilon}_t,$$

where $\boldsymbol{\varepsilon}_t$ is a vector of serially and mutually uncorrelated structural innovations. Following Killian (2009), $\mathbf{A}_0^{-1}$ has a recursive structure, the errors can be decomposed according to $\mathbf{e}_t = \mathbf{A}_0^{-1}\boldsymbol{\varepsilon}_t$. The reduced form errors are decomposed as follows:

$$\mathbf{e}_t \equiv \begin{pmatrix} e_t^{\Delta prod} \\ e_t^{rea} \\ e_t^{rpo} \end{pmatrix} = \begin{bmatrix} a_{11} & 0 & 0 \\ a_{21} & a_{22} & 0 \\ a_{31} & a_{32} & a_{33} \end{bmatrix} \begin{pmatrix} \varepsilon_t^{\text{oil supply shock}} \\ \varepsilon_t^{\text{aggregate demand shock}} \\ \varepsilon_t^{\text{oil specific demand shock}} \end{pmatrix}$$

[2] The updated series is available on Killian's website: http://www-personal.umich.edu/~lkilian/paperlinks.html.

Shifts in the demand curve for oil are caused either by fluctuations in the global business cycle (*aggregate demand shocks)* or by changes in the demand for oil that are specific to the oil market, such as weather related shocks or shifts in preferences for holding oil inventories (*oil specific demand shock)*. The structure of $\mathbf{A}_0^{-1}$ implies that there is no supply response to oil demand shocks within the same month; the short-run supply curve for crude oil is vertical. Additionally, oil market specific shocks that increase the price of oil can only lower global real economic activity with the delay of at least one month.

17. Evolution of oil demand and supply shocks. Figure 3 shows the time path of the annual averages of the estimated structural shocks. As is apparent from the figure, at any point in time, the oil market is buffeted by the different types of shocks. For example, a large negative oil supply shock in 1980; a large negative aggregate demand shock in 2008 which occurred along with a negative shock specific to the oil market; and large positive demand shocks—which are unrelated to economic activity—in 1999 and 2000.

18. Understanding the impact on the Malaysian Economy. The second stage of the analysis addresses the question of what is the impact on the Malaysian economy of the three identified oil price shocks and whether there are differences. The analysis is carried out using quarterly data from 1991:1 to 2014:2. The (monthly) structural innovations from the first stage are averaged for each quarter to compute the quarterly innovations:

$$\hat{\varsigma}_{jt} = \frac{1}{3}\sum_{i=1}^{3} \hat{\varepsilon}_{j,t,i}$$

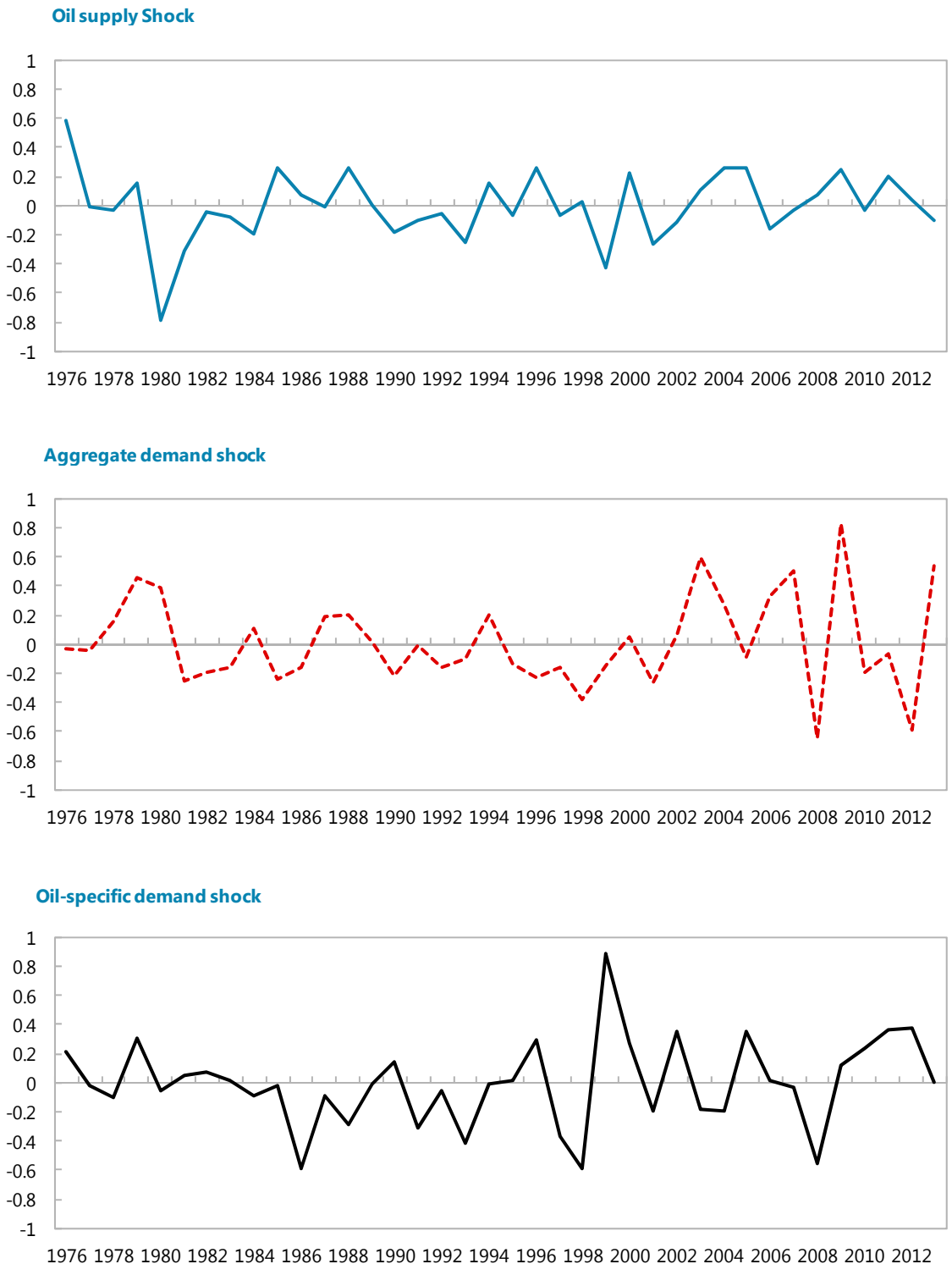
where $\hat{\varepsilon}_{j,t,i}$ is the j^{th} structural shock in the i^{th} month in the t^{th} quarter. The effect of these shocks on the Malaysian economy is assessed by estimating the following regression:

$$\Delta y_t = \alpha_j + \sum_{i=0}^{12} \phi_{ji} \hat{\varsigma}_{jt-1} + u_{jt}\,, \qquad j = 1,2,3$$

In this regression model, the impulse response coefficients at horizon *h* correspond to ϕ_{jh}. The lag length 12 is the maximum horizon for the impulse response function. Two specifications are estimated: one which includes 12 lags of each shock, and a second specification, following Killian (2009), where three separate regressions are estimated, one for each type of shock.

19. Results. Regression results indicate that oil market shocks explain a large portion of fluctuations in Malaysian GDP growth. Figure 4 shows the cumulated response on GDP from each of these shocks, normalized so that each represents an increase in the oil prices. In each chart, the solid line shows the estimated impact from separate models for each shock, as in Killian (2009) while the dotted line shows the estimated impact from a single regression equation including all the shocks. These charts show that there are differences depending on the source of the shock. In the case of an oil supply shock, initially there is a negative impact but over time growth increases. Only in this case, is there a difference between the two specifications, with a much lower impact in the combined

Figure 3. Historical Evolution of Structural Shocks



Sources: Staff calculations.

Figure 4. Cumulative Impulse Responses to Shocks

Sources: Staff calculations.

model. An increase in oil price caused by higher global economic activity has a sustained positive impact on growth in Malaysia. Finally, increases in the oil demand, unrelated to aggregate economic activity, are also positive for Malaysia but the declines over-time. The chart also includes the impact on the U.S. as a comparator and the results are similar to those in Killian (2009).

D. Conclusions

20. Conclusions. The results from the empirical analysis suggest that the recent drop in energy prices are expected to have a modest negative effect on Malaysia's growth prospects in the near term. The analysis presented distinguishes between different sources of shocks to oil prices and assesses their impact on growth in Malaysia. Lower oil prices tend to reduce growth in Malaysia with global aggregate demand shocks having the greatest impact both in the near- and medium-term, as Malaysia benefits from higher oil prices and strong global growth. According to Arezki and Blanchard (2014, the recent decline in oil prices is largely driven by supply factors and despite the potential boost to other sectors from lower energy prices, the net impact is likely to be negative.

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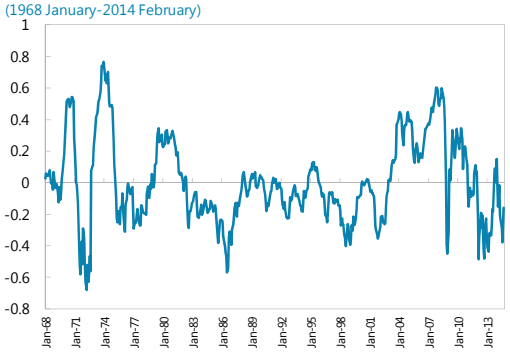
Appendix 1. Data

Index of Global Economic Activity

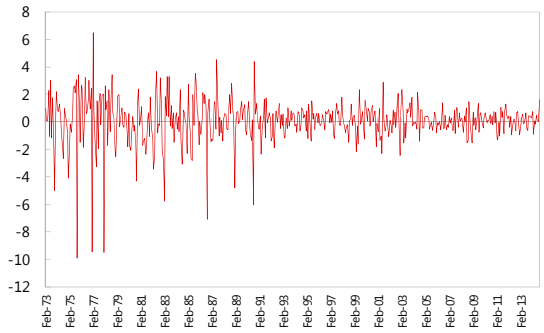
(1968 January-2014 February)



Source: Updated index based on Killian (2009)

Global Oil Production

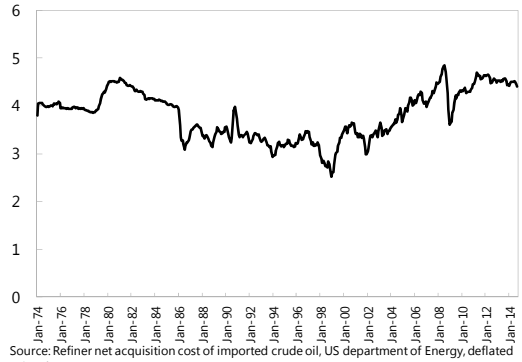
(Month-on-month percent change, 1973 February-2014 August)



Source: U.S. Energy Information Administration

Real Price of Oil

(Index, 1974 January-2014 September)



Source: Refiner net acquisition cost of imported crude oil, US department of Energy, deflated using the US CPI.

SELECTED FISCAL ISSUES[1]

A. Introduction

1. Background. In recent years, the Malaysian authorities have taken significant steps to reinforce their public finances and introduce far-reaching fiscal reforms. In doing so, they took advantage of a near ideal environment characterized by full employment, a rapidly growing economy, subdued inflation and well anchored inflation expectations. Their response aimed in part to reverse the increase in the federal debt—a byproduct of the successful effort to stem the effects on Malaysia's economy of the global financial crisis (GFC). And, more recently, an acceleration of fiscal reform was triggered by the collapse in crude oil prices, which is having a significant impact on the federal budget.

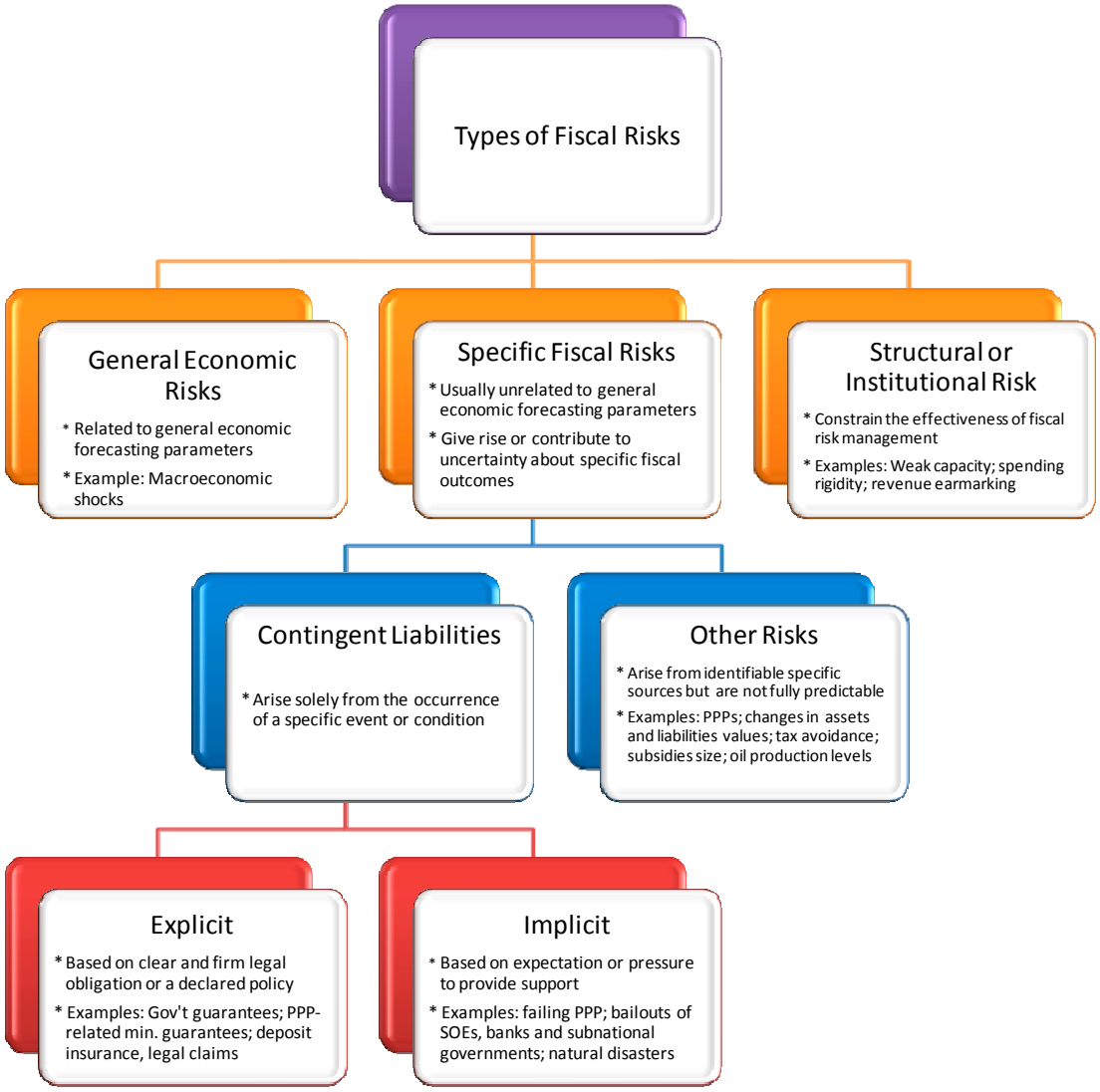
2. The strategy. Starting in the fall of 2013 the authorities embarked on an ambitious yet gradual fiscal consolidation strategy. The federal deficit is being reduced by ½ percent of GDP every year, from 4½ percent of GDP in 2013 to an estimated 3½ percent in 2014 and 3.2 percent in 2015. Fiscal adjustment is anchored in a rationalization of fuel and other budget subsidies, a broadening of the revenue base, and a strengthening of social safety nets.[2] Recent measures include the removal of remaining subsidies on diesel and RON95 gasoline and the imminent introduction of Goods and Services Tax (GST) in April 2015. Fiscal reforms acquired additional importance as the need to shore up the revenue side of the budget became apparent in late 2014 amid rapidly falling crude oil prices. In anticipation of substantially lower oil- and gas-related budget revenues, the authorities reacted in a timely manner, bringing forward by nearly two years the process of price subsidy rationalization that began in 2010. In addition to safeguarding fiscal sustainability, the reduction of the federal budget's dependence on oil and gas revenues should help raise the efficiency, equity and environmental sustainability of Malaysia's fiscal system.

3. Fiscal management. The reduction in the budget deficit and the implementation of fiscal reforms, including GST introduction and continued subsidy reforms, are supported by measures to reinforce Malaysia's fiscal management. Fiscal systems and institutions are being reformed and innovations in fiscal management are an important and under-appreciated source of fiscal resilience in Malaysia. These reforms notwithstanding, a number of economic and fiscal risks remain (see Figure 1), including those related to resource price volatility and contingent liabilities associated with PPPs, among others. While the financing of lumpy infrastructure through public-private partnerships (PPPs) subject to state guarantees makes sense, it could add to explicit debt and lead to higher

[1] Prepared by Juan Jauregui and Lewis Murara.

[2] For details of Malaysia's medium-term fiscal strategy, see Elif Arbatli, "A Medium-Term Fiscal Strategy for Malaysia," Selected Issues Paper prepared for the 2013 Article IV Consultation with Malaysia.

Figure 1. Types of Fiscal Risks



funding costs. The implications of these risks being realized are quantified in the paper by means of a simple Debt Sustainability Analysis (DSA).[3]

[3] Other sources of fiscal risk not studied in this paper include those related to the design and implementation of new fiscal instruments, such as the GST; those from unrealistic economic assumptions; and those related to ageing populations and rising health and pension spending. GST implementation risk is assessed to not be major in the case of Malaysia at present. Similarly, the authorities' economic assumptions are realistic and are revised in a timely fashion. Finally, pension and health spending will be rising in years to come but are not a major risk at this juncture.

4. **Plan.** With this background, this paper discusses the three pillars underpinning fiscal adjustment and reform in Malaysia—introduction of the GST; fuel subsidy reform; and the modernization and upgrading of fiscal institutions. In order to assess the consequences for the federal budget of the dramatic drop in crude oil prices, the paper also presents an extended application of the IMF's DSA. The discussion of GST, fuel subsidies and fiscal institutions draws on Malaysia's own experience and on good international practices, including documentation provided by IMF technical assistance. The paper proceeds as follows. The next section discusses principles of a good Value Added Tax (VAT) and Malaysia's GST. This is followed by a discussion of fuel subsidy reform principles and a summary of the Malaysian experience. The following section presents an extended DSA of Malaysia's federal budget with tailored stress tests related to the price of oil and gas. The following section discusses the role of fiscal institutions and draws lessons from Malaysia's own fiscal policy and institutional innovation. These lessons are relevant for other emerging markets. Case studies are then presented of countries' management of fiscal risk and lessons drawn. The final section concludes.

B. GST Implementation

5. **Overview.** The GST set to be introduced in April 2015 is a key pillar of Malaysia's medium-term fiscal adjustment and reform strategy. It adds a potentially large revenue source to Malaysia's fiscal panoply and can prove instrumental in the effort to balance the budget by 2020 and diversify the revenue base away from hydrocarbons. This section summarizes international good practices regarding the implementation of VAT and then assesses the features of Malaysia's GST set to be implemented in April 2015.[4]

6. **Design features.** A well-designed GST is one levied at a single rate on a comprehensive base that includes all goods and all services. International good practice is to not provide GST exemptions beyond standard ones for margin-based financial services, health care and education and zero-rates only exports. It is important to have an expeditious GST refund procedure to deal with excess net credits, an adequate threshold to exclude small and micro businesses and to not burden capital goods by carefully monitoring input credits.

7. **Implementation.** International experience suggests that a successful GST introduction depends on both high-level political commitment and readiness of the tax administration. In particular, sufficient time is needed between enacting legislation and implementing the tax. Well calibrated introductory rates and registration thresholds to foster public buy-in are also important. Timing of GST introduction is also important to avoid inflationary pressures. Finally, GST implementation requires a robust public awareness campaign.

[4] Sources: (1) Michael Keen and Stephen Smith, 2006. "VAT Fraud and Evasion: What Do We Know and What Can Be Done?" National Tax Journal vol. 59(4), pages 861-87; (2) Malaysia—Goods and Services Tax—Strategy, Policy and Implementation, FAD TA Report, May 2014; (3) Michael Keen, The Anatomy of VAT, IMF Working Paper, May 2013.

8. **Risks.** International experience suggests the need for heightened awareness against several risks of GST evasion and avoidance.

- First, small businesses that operate close to the level of turnover at which registration becomes compulsory may fail to register. This allows them to save the GST for which they would be liable and to economize on GST compliance costs. Firms selling to final consumers are likely to predominate in this group.

- Second, firms may register simply to claim input credits. Small businesses below the registration threshold may choose to register, perhaps temporarily, to claim input credits for significant inputs or for purchases of private consumption items.

- Third, firms may under-report their sales. A trader may report only a proportion of sales or falsify records and accounts. Again, this is especially relevant for sales to final consumers or exempt businesses, as no credit would be available. Common examples include personal services (hairdressing, home decoration, building contractors working for private customers, etc.) for which value added at the final stage is usually large relative to inputs.

- Fourth, traders may misclassify their sales. When traders have sales that are liable to GST at different rates, they may reduce their liability by exaggerating the proportion in the lower-taxed categories.

- Fifth, the tax authorities need to guard against tax collected but not remitted (missing traders). This becomes possible through false accounting (under-reported sales, as above) or by engineering bankruptcy before tax is paid. 'Missing trader' frauds involve registered businesses charging their customers GST but disappearing before paying tax to the authorities.

- Sixth, firms may make false claims for refunds. This is a way for bogus traders to exploit the GST credit-invoicing mechanism, for example by presenting forged invoices for non-existent or exaggerated purchases. Companies may be set up solely to generate invoices that allow recovery of GST. Such "invoice mills" exploit the practical impossibility of cross-checking every invoice against evidence that earlier tax has been paid. It poses a challenge in implementing the GST between the desire to pay refunds promptly and the need to protect revenues.

- Seventh, the authorities must guard against claims for refund that are issued for purposes that are not creditable. This happens when traders supply some outputs subject to GST and others exempt, giving them an incentive to allocate inputs to production of the taxed items to claim input tax credit. Items bought for private consumption may be misrepresented as business inputs, allowing GST to be recovered.

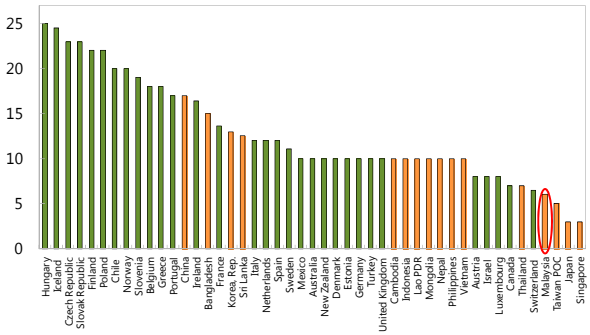
9. **Risk mitigation.** International experience offers lessons on the strategies needed to confront common risks and ensure successful GST implementation (see Table 1), including risks related to the organization and resourcing of the tax administration; policy and legislative risk; and operational and political risks that could lead to backsliding.

Table 1. GST Implementation and Mitigation Measures	
Risk to successful implementation	**Possible risk mitigation**
Organizational and resourcing risks and those associated with the complexity of implementation task. • Tight timeframe provides no flexibility to absorb any delays or account for unforeseen problems • Inadequate resourcing of development team • Late recruitment or selection of GST staff • Inadequate financial allocation	Ensure that there are: • focused and accountable management arrangements; • processes to facilitate early identification, escalation and resolution of issues which could impact schedule; • clear dependency identification and management; and • critical milestones are mapped and delivery to milestones carefully monitored by the steering committee. Consider appointing an external peer review agency to provide a periodic (every 6 months) independent assessment of the quality and timeliness of the development activity.
Policy and legislative risk • Failure to pass law sufficiently early for implementation activities to commence. • Failure to freeze policy changes in period leading up to implementation date.	Ensure that Minister of Finance and Prime Minister are aware of the implications of delays in passing law and of the need for legislation change to be frozen before systems can be finalized and advisory activities commenced.
Operational risks • Late delivery of effective IT systems. • Delay in commencement of initial registration.	Communicate reasons for changes to staff, provide modern training in GST issues and continually seek staff feedback and emphasize the overall organizational benefits of the changes.
Taxpayer rejection Taxpayer rejection of new law and intensified government lobbying for repeal or major relaxation.	Intense consultation, marketing of benefits of change and extensive taxpayer service in the lead up to the major activity periods. Ensure all taxpayers receive high quality, high-integrity advisory/educational visits.

10. Evaluation. It is instructive to assess Malaysia's GST against the background of international good practices above. The 2014 federal budget unveiled in October 2013 announced the introduction of a GST, a full-fledged value-added tax set to be implemented starting in April 2015.[5] The time period allowed between legislation and adoption is assessed as adequate. The GST will replace a sales and services taxes (SST) that is levied on a narrow base at the manufacturer's level and yields about 1.6 percent of GDP.[6] The GST is expected to yield between 1.9–2.6 percent of GDP at the introductory rate of 6 percent. To compensate for the GST, direct taxes are being reduced in 2015–16, with personal and corporate income taxes cut by 1 to 3 percentage points.[7] Since Malaysia's fiscal system is biased toward corporate income taxation, this is a welcome development.

11. Design features. The standard GST rate at introduction in Malaysia will be 6 percent, which is relatively low compared to current VAT rates in other ASEAN countries (7 percent in Thailand and Singapore, 10 percent in Vietnam and Indonesia, and 12 percent in Philippines. Brunei and Myanmar do not have a VAT). Relative to the standard rate at introduction in a group of OECD and Asian countries, Malaysia's 6 percent rate is also somewhat low. The initially low rate was judged to be necessary from a political economy perspective to ensure passage. It may be reconsidered in the future. Regarding the GST base, some essential food items will have a zero tax rate and some services such as public transport, financial services, education and government services will be exempt from tax. While some of these exemptions are consistent with good practices, others are considered too generous. Regarding technical preparations and resourcing, the GST will be introduced together with offsetting one-off cash transfers to low income households and subsidies to SMEs for the purchase of accounting software. The GST registration threshold of 500,000 ringgit (about US$160,000), is considered appropriate although it is high compared to peer countries; it will cover about 150,000 companies—a significant increase relative to the existing sales tax. Simulations suggest that lowering the threshold would not have a material impact on the revenue yield but would increase the burden of tax administration.

OECD and Selected Asian Countries: Rate at Introduction
(In percent)



Sources: International Bureau of Fiscal Documentation website; and Deloitte, *Global Indirect Taxes*, 2013.

[5] This section draws on Kiyoshi Nakayama, Ruud De Mooij, and Bruce Quigley, "Malaysia Goods and Services Tax: Strategy, Policy and Implementation," Fiscal Affairs Department Technical Assistance Report, May 2014.

[6] Its SST standard rate is 10 percent for most taxable goods and a 5 percent tax on food items and other select products. Services tax applies to certain professional services and to restaurants, hotels and telecommunications.

[7] The personal income tax rate will be reduced by 1 percent to 3 percent depending on the applicable tax rate bracket from year of assessment 2015, while the corporate tax rate will be cut by 1 percent, from 2016.

12. Implementation. The authorities' preparations in the 18 months between the announcement of the GST and its introduction the authorities made extensive technical preparations to ensure smooth rollout of the tax, with Fund technical assistance. These include the rolling out of a robust IT system; recruitment and training of personnel; the establishment of an efficient refund system and the provision of training to small and medium enterprises. A comprehensive education and outreach program was an integral part of this campaign, including nationwide seminars, workshops and road shows to create awareness, explain the GST and how it will impact different prices.

13. Revenue implications. While the GST registration threshold has been set appropriately, the revenue productivity of Malaysia's GST is reduced by the generous list of exemptions and zero-rated items, including for non-export goods and services such as water, electricity and some food items. In addition to lowering revenue productivity, exemptions from GST make more difficult the cross-checking of returns and break the information chain, thus reducing the ability of the tax authorities to fight tax evaders. Placing the administration of GST under the customs department might also affect GST productivity, especially if coordination between both agencies is not reinforced. Efforts to reduce fiscal dependence on oil and gas revenues and achieve a balanced budget should include a tightening of the list of zero-rated and exempt items. Consideration could also be given to raising the GST rate over time (since it is not likely to have a large initial revenue impact) and simplifying its administration. Raising the GST rate to, say 10 percent would yield between 3.1–4.4 percent of GDP, compared to yields of between 1.9–2.6 percent of GDP expected from the current rate of 6 percent.

14. Administration. In Malaysia, the GST will be administered by the Customs Agency. International experience has demonstrated that best results are generally achieved when all major domestic taxes are administered by a single inland revenue agency. The authorities are fully aware of the importance of implementation and have formed a GST monitoring committee to better address potential problems and challenges. The voluntary registration procedures will need to be carefully instituted to ensure administrative efficiency by avoiding the registration of many small businesses. It will be absolutely critical to ensure very close coordination between the customs and internal revenue departments.

C. Energy Subsidy Reform

Overview

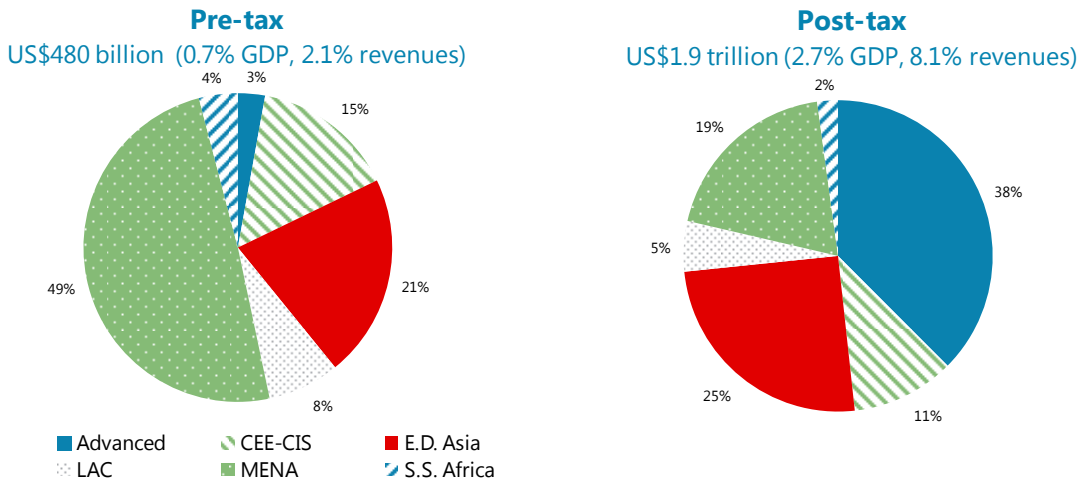
15. Malaysia's moves. Recent steps by the Malaysian authorities to remove expensive and poorly targeted fuel subsidies have been decisive in shoring up the 2015 budget, whose targets were at risk owing to the large recent decline in crude oil prices. These steps accelerated the implementation of a subsidy reform plan that began in 2010 and constitutes the second pillar in Malaysia's medium-term fiscal adjustment and reform strategy. This section summarizes the international evidence regarding the pitfalls of generalized energy price subsidies.

16. The Extent of fuel price subsidies. Fuel subsidies are widespread in many energy-producing countries. Globally, energy subsidies amount to 0.7 percent of GDP or 2.1 percent of revenue.[8] This captures so called pre-tax subsidies, or the difference between the price paid by consumers (Pc) and the cost recovery price (Pw). A pre-tax subsidy occurs when energy consumers pay a price below the supply cost of energy, including transportation and distribution costs, pretax subsidy=Pw-Pc>0.

Principles and good international practices

17. Distortions due to fuel subsidies. Evidence suggests that fuel price subsidies are an inefficient and ineffective way to meet fiscal policy's efficiency, growth and equity goals. To begin with, generalized fuel subsidies are very expensive and tend to encourage inefficient energy consumption which helps deplete natural resources and hurts the fiscal and external positions. They crowd out priority public spending, including investments in human capital and physical and other soft infrastructure. They tend to depress private investment, including in the energy sector itself, reduce incentives for investment in renewable energy, thus hurting future energy production, energy conservation and innovation and, more broadly economic growth prospects. In addition, they are mostly captured by higher-income households which helps aggravate inequality.

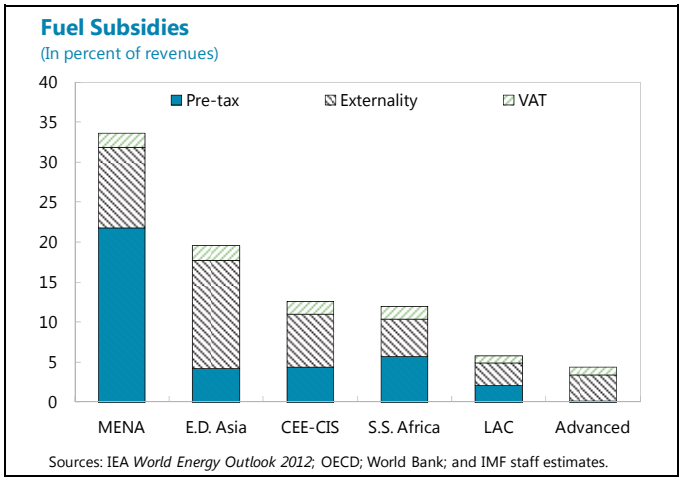
Post-tax Subsidies around the World



Sources: Sources: IEA *World Energy Outlook 2012*; OECD; World Bank; and IMF staff estimates.

[8] IMF, 2014 Getting Energy Prices Right; and IMF, 2013, Energy Subsidy Reform—Lessons and Implications.

18. Efficient fossil fuel taxation. Fuel subsidies lead to excessive fuel consumption which contributes to pollution, is detrimental to health and the environment and also accelerates global warming, which will affect future generations. The negative externalities associated with the burning of fossil fuels suggest the need for fuel prices to be raised above market prices. This can be done by means of carbon taxes. The post-tax subsidy is defined as (Pw+t*)–Pc and reflects the efficient tax rate on energy use, where t*>0 is the efficient level of energy taxes, reflecting both the need for revenues and to correct for negative externalities (Pigouvian taxes). The revenue component of t* reflects an ad valorem tax on energy products consumed by households that would be consistent with taxation of any other consumer good at the standard VAT or general sales tax (GST) rate. The Pigouvian charge component of t* adds the cost of correcting the externalities associated with CO2 emissions, local pollution, and (in the case of gasoline and motor diesel) traffic congestion and accidents.



19. Ingredients of successful energy subsidy reforms. Experience with energy subsidy reform from around the world underscores the complexity of these undertakings. Several key ingredients are needed to ensure success[9] of fuel subsidy reforms, beginning with the need to for these reforms to be embedded in a comprehensive reform plan with clear long-term objectives. Fuel subsidy reforms are more durable if they are embedded in a broader reform agenda that includes a sustainable energy pricing and improving the efficiency of energy consumption and supply. For example, in the Philippines and in Turkey, full price liberalization and structural reform of the energy sector for both fuel and electricity were articulated as the ultimate goals. In Armenia, Brazil and Kenya, electricity reforms were successful because they were part of a broader electricity sector reform intended to address supply problems.

20. Assessment and and communication. A successful reform plan must include an assessment of the size of subsidies, of the benefit of reforms and a communication strategy to get the word out. A far-reaching communications strategy is needed to inform the public of the size of subsidies and benefits of reform (higher spending on education, health, infrastructure and social protection). In Namibia, a white paper on energy policy was used for an effective public communications campaign. In the Philippines, an early public communication campaign was undertaken with a nationwide road-show. In Uganda, an effective communication campaign was undertaken on the cost of electricity subsidy, large portion of media considered the subsidy reform

[9] IMF, 2013, Energy Subsidy Reform—Lessons and Implications.

a pro-poor measure. Related to this is the need to strengthen transparency in reporting subsidies. Niger started to record fuel subsidies explicitly in the budget. Ghana and South Africa publish information on how prices are formulated and the factors behind planned price increases.

21. Quantifying the impact of reforms. In order for reforms to be successful and a political backlash avoided, the impact of reforms on the population must be identified and adequate mitigating measures must be articulated. For example, in Ghana (2005), independent poverty and social impact analysis were undertaken. And in Nigeria (2011), the National Assembly did not support the reform claiming lack of data on the size and incidence of subsidies. Communication and consultations with stakeholders are critical in this regard. Stakeholders must be engaged in the formulation of the subsidy reform strategy. In Kenya, electricity tariff increases were negotiated with stakeholders and in particular large consumers. In Namibia, the National Energy Council established the National Deregulation Task Force. In Indonesia (2003), inadequate consultation with stakeholders led to opposition to reforms which was partially motivated by the belief that the reform had been undertaken in favor of powerful interest groups.

22. Mitigating mechanisms. Targeted mitigating measures to protect the poor are an important component of successful reform. Targeted cash transfers are preferred. In Iran, the cash compensation program covered 80 percent of the population and was designed to be fiscally neutral. The government emphasized that the cash benefit was intended for the poorest households and would be targeted over time. In Jordan, Indonesia and Armenia, targeted cash transfers were made to the poor households. When cash transfers are not feasible, other programs can be expanded as administrative capacity is developed. In Gabon, Niger, Ghana, Nigeria, Mozambique, spending on targeted social spending programs was increased. In Armenia, Brazil, Iran, Kenya and Uganda, lower electricity lifeline tariffs were kept fixed. In Philippines, subsidized loans to convert engines used in public transportation to less costly LPG were used and other social programs were introduced. In Indonesia and Yemen, the government helped low-income households to switch from kerosene to lower cost LPG. SOE restructuring and affected energy-intensive sectors may also require targeted measures (e.g., job training). Iran used consultation with enterprises and cash transfers and fuel coupons to certain sectors such as agriculture, fisheries and transport. In Poland, job training and social assistance to unemployed miners were deployed.

23. Phasing and gradualism. Moreover, success requires that fuel price increases be appropriately phased and sequenced. Households and enterprises must be given time to adjust and governments must build social safety nets, especially if the required energy price increases are large. In Namibia and Jordan, subsidies were removed over a three-year plan. In Iran, a large initial adjustment followed by gradual adjustments over 5 years. In Kenya, progressively larger support for broader reform was achieved by delivering improved services. It is important to plan the timing of price increases so that they do not coincide with price increases for other socially sensitive products. In Uganda, coordinated electricity price increases coincided with the expansion of capacity. Price increases should be sequenced differently across products, starting with gasoline and jet kerosene and with large residential and commercial users. Brazil and Peru adopted such a sequenced approach.

24. Improving the efficiency of energy sector SOEs. Improvements in the efficiency of state-owned enterprises (SOEs) are needed as part of fuel subsidy reforms to reduce their fiscal burden. Efforts are needed to improve information on SOE costs, set performance targets and incentives, and introduce competition where appropriate. In Kenya, Uganda and Zambia, information systems were adopted to provide data on SOE operations and costs. In Cape Verde, the electricity power company was allowed to save resources from over-performance. Improvements in the collection of energy bills and in demand management are also part of this strategy, including charging higher during peak hours.

25. Depoliticizing energy pricing. Finally, an important long-term objective of fuel price subsidy reform is to depoliticize price setting. An automatic price mechanism with price smoothing is preferred to ad-hoc price adjustments, which could lead to the reappearance of subsidies later on. In Turkey, Philippines and South Africa, automatic price adjustment mechanisms were successfully implemented. In Ghana (2005), fuel subsidies were eliminated but the automatic link to international prices was suspended during 2008. In Chile, Columbia, Malawi, Morocco, Nigeria, and Thailand price smoothing mechanisms have been used. For this strategy to be effective, an autonomous body to oversee price setting and provide information on the pricing mechanism is useful. In Turkey and South Africa, an independent authority was created responsible for price adjustments. Armenia, Turkey, Kenya and Philippines achieved similar success in the electricity subsidy reform initiatives. The long-term objective is to fully liberalize fuel pricing. This is a more robust policy than other pricing mechanisms to avoid the reemergence of subsidies. There is a need to ensure that a well functioning social safety net is in place before full liberalization.

Energy subsidies in Malaysia

26. Energy intensity of output. Before the reforms of 2013–14, energy subsidies in Malaysia had increased considerably as energy demand and rose with economic growth and urbanization, high car ownership and oil subsidies. Starting in 2010, government indicated its intention to reform energy subsidies and replace universal subsidies with targeted cash transfers and initiated reform of some fuel subsidies. It then accelerated the pace of reform during 2013–14 by first gradually raising prices for remaining subsidized fuels in 2013 and 2014, and in the most recent past by eliminating diesel and gasoline subsidies through floating of their prices. Fiscal cost of subsidies had been increasing, crowding out other growth enhancing public spending. Balance of payments considerations will be more relevant going forward. A further important consideration is the impact of negative externalities (pollution and global warming) associated with fuel consumption.

Malaysia: Subsidies on Petroleum Products, Electricity, Natural Gas, and Coal

(In percent of GDP)

	Petroleum Products	Electricity	Gas	Coal
Pretax	1.24	0.33	0.31	0
Post-tax	5.38	0.56	1.02	0.98

(In percent of Government Revenues)

	Petroleum Products	Electricity	Gas	Coal
Pretax	5.67	1.49	1.41	0
Post-tax	24.61	2.54	4.66	4.46

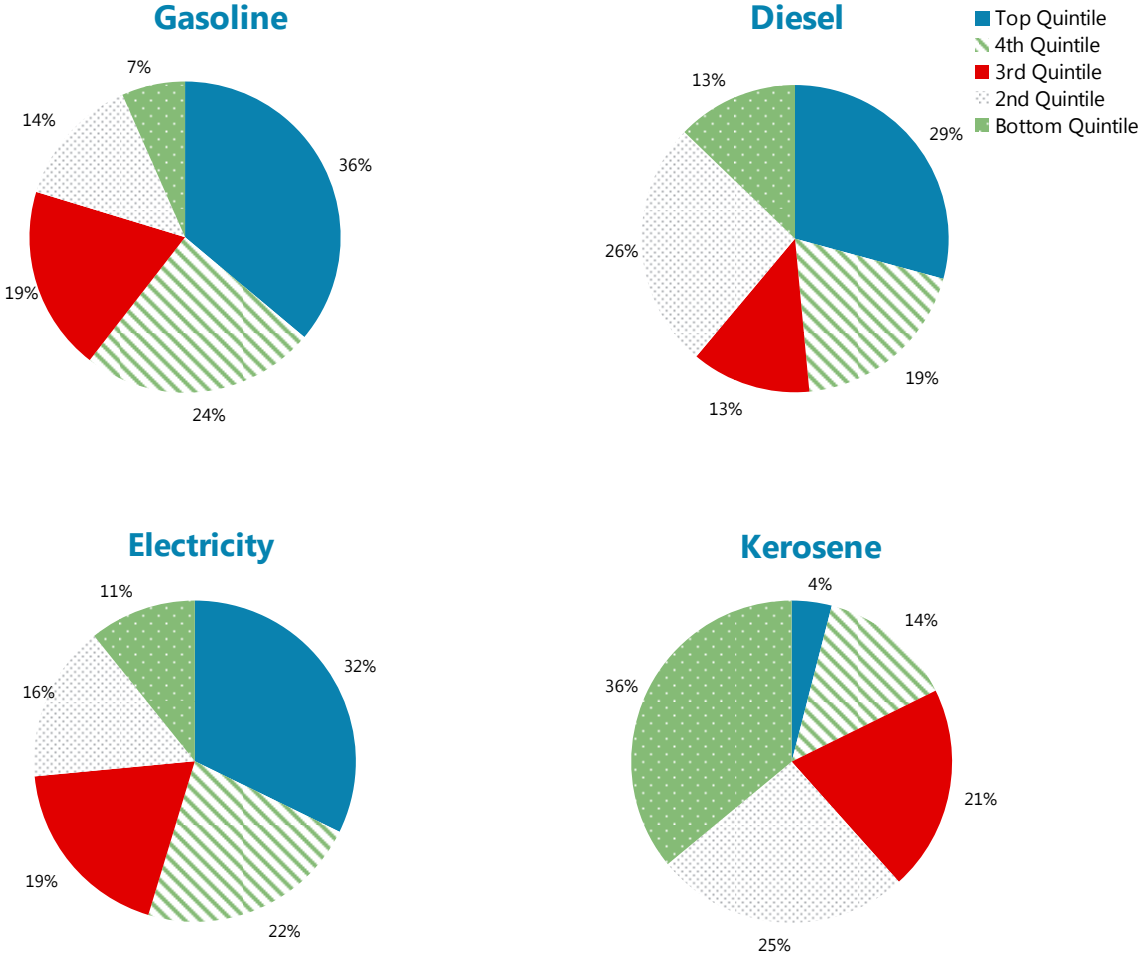
Sources: IMF staff estimates.

27. Timing. From a macroeconomic perspective, there were several reasons why recent reforms of energy subsidies are being pursued and are well timed. To begin with, Malaysia's oil production has been declining while oil consumption has been increasing—in 2004, about 862,000 barrels were produced per day; in 2013, below 600,000 barrels per day were produced, and the production is stabilizing at that level. As mentioned, there is a need to diversify away from oil and gas revenues—Petronas contributes about 45 percent of government revenues through taxes and dividends. Declining production has resulted in a decline of Malaysia's petroleum exports by almost 40 percent between 2000 and 2010. Fuel subsidies encourage smuggling (annual losses from smuggled fuel was estimated at US$175 million in 2005 but could have decreased since then because of efforts by the recently established Anti-Smuggling Unit). Most importantly, Malaysia's full employment and growing economy provide a unique opportunity for reforming energy subsidies. Also in a subsidy regime, if consumer prices decrease, consumers buy more fuel than other goods (leading to a substitution effect), but price reduction also has an income effect; leading to higher consumption for both goods overall. But in a targeted cash transfer regime, the substitution effect is eliminated; only the poor gets an income effect, leading to an optimal bundle that fits the households and increasing their welfare. And the final, most interesting outcome is that with cash transfers, resource allocation reaches the intended beneficiaries: i.e. low-income households.

28. Distributional Incidence. The recently eliminated subsidies for petroleum products were poorly targeted and led to high leakage in the system.[10] The top two quintiles of per capita consumption received about 60 percent of total benefits vs. 3 percent for the bottom decile (subsidies for diesel are better targeted: 49 percent to top two quintiles vs. 39 percent to bottom two quintiles). Over 90 percent of the benefits for LPG go to the top consumption quintile vs. zero to the bottom two deciles (except LPG is only a fraction of household expenditure).

29. Welfare impact of energy subsidy removal. Although elimination of (even poorly targeted subsidies) will have an adverse effect on the poorest households, most of the cost of its elimination will fall on higher income households. At 2009 prices, a 19 percent increase in the consumer price would be required to eliminate the subsidy (on a pre-tax basis). On a partial post-tax basis (i.e. accounting for tax revenues only, and not for possible externalities); the required increase in consumer price would be 52 percent. The required increase at full Pigouvian rate was not estimated but given the data above, it is expected to be substantive. The impact on welfare would be that: (1) an increase of minimum 19 percent (at pre-tax level) in consumer price would imply a welfare loss of 0.7 percent of household expenditure for the bottom decile vs. 1.4 percent for the top quintile; and (2) an increase of maximum 52 percent (partial post-tax) in consumer price would imply a welfare loss of 1.9 percent of household expenditure for the bottom decile vs. 3.9 percent for top the quintile.

[10] IMF, 2009, Reforming the Social Safety Net, IMF TA Report.



Sources: Reforming the Social Safety Net, IMF Fiscal Affairs Department (FAD) TA Report, 2009

30. Strengthening safety nets. Malaysia has locked-in important fiscal gains through the successive measures taken in 2013 and 2014 resulting in gradual increases of fuel prices, and ultimately removing remaining subsidies by floating diesel and gasoline prices in December 2014. A gradual but concrete plan to phase out remaining subsidies will help build fiscal credibility over time. In this regard, Malaysia would benefit by improving the targeting of social assistance programs through a comprehensive reform of the social safety net as recommended by previous FAD and WB reports. Cash transfers such as BR1M can be used to mitigate the impact of subsidy reform and gain wide public support (but the coverage of transfers such as BR1M is wide—expected to reach 70 percent of households). Other more targeted social programs can also be considered. Targeting of cash transfers should be improved over time; e.g. only targeting the poorest 40 percent of the population, as these fixed transfers can quickly offset the fiscal savings from subsidy reform. Also linking cash transfers to energy prices could be considered.

31. **Pigouvian taxation.** Finally in Malaysia, reflecting the environmental side effects of diesel in the tax system would help reduce carbon emissions by 3.2 percent (vs. 5.1 percent for gasoline tax); and reduce pollution deaths by 9.7 percent (vs. 2 percent for gasoline tax). Similarly a corrective Pigouvian tax on gasoline in Malaysia has the potential to generate significant additional revenue if combined with GST, representing a significant revenue gain worth pursuing in years ahead.[11]

32. **Future agenda.** Going forward, a comprehensive and robust subsidy reform strategy is needed to meet fiscal targets, encompassing all energy subsidies (electricity and fuel). This would include a strategy to improve energy efficiency, including the ongoing upgrading of public transportation infrastructure and support of investments in energy saving technologies. It would also be important to address potential inefficiencies in power generation and distribution.

D. Debt Sustainability: The Role of Oil and Gas Prices

33. **Updated DSA framework.** This section uses the IMF's updated debt sustainability analysis (DSA) framework for market access countries to assess Malaysia's debt sustainability and risks related to funding, debt structure and lower oil and gas prices. As is well known, fiscal sustainability takes into account political and economic considerations and has solvency and liquidity dimensions. Regarding the former, it emphasizes that sustainable public debt management should not require large, unexpected or politically infeasible policy adjustments in response to shocks (Assessing Sustainability, IMF, 2001).The updated DSA framework is risk-based, expanding the treatment of rollover risk and the maturity structure of the debt to include: (i) an assessments of the realism of baseline assumptions and the projected fiscal adjustment; (ii) an analysis of risks associated with the debt profile; (iii) macro-fiscal risks; (iv) a stochastic debt projection taking into account past macro-fiscal volatility; and (v) a summary of risks in a heat map.

34. **Coverage.** Consistent with the data on government debt reported by the authorities, the fiscal DSA focuses on the federal government budget. This coverage excludes local and state governments and statutory bodies which typically borrow from the federal government or receive explicit federal guarantees. The liabilities of these entities are captured in the federal government's gross debt and stock of loan guarantees. Borrowing by state owned enterprises, which in some cases are also under federal government guarantees, has increased in recent years and is projected to continue to increase in the medium term.

35. **Federal debt developments.** Federal gross debt increased sharply in 2009, reflecting sizable discretionary fiscal stimulus, declining real and nominal growth, and a large fall in oil prices. Although growth has recovered since, primary deficits have remained high, pushing the debt-to-GDP ratio to about the authorities' self-imposed debt ceiling of 55 percent. Gross financing needs

[11] IMF, 2014, Getting Energy Prices Right.

(GFN) are estimated at 10.6 percent of GDP in 2013 and are expected to remain below 10 percent in the medium term.

36. Macro-fiscal DSA assumptions. Growth is projected at 5.9 percent in 2014, slowing to 4.8 percent in 2015. Growth will average 5 percent in the medium term. In staff's baseline projections, the federal government deficit is reduced in the near term from 3.5 percent of GDP in 2014 to 1.5 percent in 2019.[12] The projected fiscal consolidation is consistent with the authorities' targets and is supported by structural reforms announced in the 2014 and 2015 budgets, in particular, the floating of remaining fuel price on diesel and RON95 gasoline and their replacement with targeted cash transfers to lower income groups. It also assumes that a GST is introduced in 2015.

37. Realism of assumptions. The median forecast error for real GDP growth during 2005−13 is zero, suggesting little evidence of systemic projection bias that could undermine the DSA. The median forecast error for GDP deflator is 2.9 percent, suggesting that staff forecasts have been more conservative. The median forecast error for the primary balance suggests that staff projections have been slightly pessimistic (a forecast bias of -0.72 percent of GDP), but the forecast bias has improved in the later years.

38. DSA findings. Cross-country experience suggests the projected fiscal adjustment is feasible. The maximum three-year adjustment in the cyclically adjusted primary balance (CAPB) over the projection period (3.2 percent of GDP) is ambitious but is premised upon concrete measures endorsed by the government. As highlighted earlier, staff does not rule out the existence of implementation risks and therefore considering a no-adjustment scenario, as done in this DSA, is necessary to take that into account. Finally, the maximum level of the primary balance (0.4 percent of GDP) that is assumed in the projections is reasonable when compared to the experience in other market-access countries.

39. DSA stress tests. The DSA framework suggests Malaysia's government debt-to-GDP ratio remains below 70 percent and its GFN remain below 15 percent of GDP under different macroeconomic and fiscal shocks.

- Under the baseline, the debt-to-GDP ratio is projected to decrease to about 45 percent by 2019, but if the projected consolidation does not take place, captured under the constant primary balance simulation, it decreases to about 50 percent by 2019. Under most macro fiscal stress tests, the debt-to-GDP ratio continues to decline, but if there is a one standard deviation shock to real GDP growth, the debt-to-GDP ratio initially increases to about 55 percent in 2016 and

[12] Authorities' measure of the overall fiscal balance and the IMF's measure of fiscal balance (net lending/borrowing) are different due to differences in accounting standards (GFSM2001/accrual versus authorities' modified-cash based accounting) and differences in the treatment of certain items.

declines thereafter. The combined macro fiscal shock imply a flat debt-to-GDP profile in the medium term. Stochastic simulations based on historical volatilities in Malaysia's macroeconomic variables also show that the 90th percentile of debt-to-GDP ratio simulations is below 70 percent. GFN under all scenarios remain at below 14 percent, except for the contingent liabilities scenario in which it peaks at about 17 percent to fall later below 12 percent by the end of the projection horizon.

- A contingent liability shock whereby the government would have to absorb all of the government-guaranteed loans (totaling 15 percent of GDP) over two years would increase risks significantly. If the economy is also hit by a persistent shock to growth and interest rates rise by 150 basis points, the debt-to-GDP ratio would remain just below the 70 percent debt benchmark. Although this is a low-probability scenario, the simulations underscore the growing vulnerability posed by contingent liabilities.

A Severe Oil Price Shock Scenario

- The price of oil is very important for the government as oil related revenue is about a third of all revenue. Income tax on oil and gas companies constitutes more than half of such revenue, and the rest comes from the dividends paid by Petronas, the national oil company owned by the state. Petronas is very large, and with revenue at about 30 percent of GDP, profits reached about 9 percent of GDP in 2013. Dividends are negotiated between the government and the company, providing stability to fiscal accounts. The payout has been between 50 and 75 percent of after tax dividend. The company had assets in excess of 50 percent of GDP and cash equivalent to 14% of GDP in 2013. With capital expenditure at 6 percent of GDP it accounts for a significant amount of investment, domestically and abroad.

- Under a severe oil price shock, in five years, gross federal debt would increase by 15 percent of GDP from 45 percent of GDP in the baseline to over 60 percent under the shock. Gross financial needs would reach almost 14 percent of GDP. The shock we consider is a 60 percent permanent decline in oil price in 2015 with respect to 2014. This represents an additional decline in crude prices by 20 percent relative to the January WEO projection. Unlike the WEO projection, which assumes a modest recovery of prices over time, the shock we consider is a permanent one in which crude oil prices remain at the 2015 level for the entire forecast period.

- The shock imposes a fall in oil tax revenue of 1.5 percent of GDP. We also assume that the dividend of PETRONAS, the national oil company, is reduced by 1.5 percent of GDP. The combination of the two reductions imply a fall in the primary balance of about 3 percent of GDP. We assume also a 1 percent lower GDP growth than in the baseline.

- Under this extreme shock, we assume that tax revenue falls at a rate of 280 million ringgit per dollar fall in prices, according to recent estimates of the Malaysian Treasury. In 2009 we observed a rate of 240 million ringgit per dollar. The assumptions are particularly severe as in 2009, when oil price fell by 27 percent, the oil related tax revenue actually increased because of earlier profits and it fell in 2010 by 34 percent. However, the dividend from Petronas was higher

than in other years, reaching 4 percent of GDP. Finally, we impose additional 15 basis points higher interest rates for each additional percentage point of difference in the primary balance with respect to the baseline.

- This stress test assumes fiscal policy remains passive: the federal government does not tighten the non-oil part of the budget and finances the additional deficits generated by the deterioration in oil-related revenues. Naturally, the federal government could react by tightening the non-oil budget, for example, by 1 percent of GDP, reducing the deficit. Non-priority current spending could be reduced while protecting investment spending, and even investment projects could be stretched out. However, it is likely that the negative impact on growth discourages the authorities to do so. On the revenue side, the GST rate could be raised by 4 percentage points generating about 1½ percent of GDP extra revenue.

40. Heat map. Despite its low share of foreign currency and short-term debt, Malaysia faces risks arising from its external financing requirement and large share of public debt held by foreigners. At 34 percent, the external financing requirement is above the upper threshold of early warning benchmarks and the share of debt held by foreigners is relatively high at about 30 percent of total. As discussed earlier, the existence of large domestic institutional investors who tend to make opportunistic investments provides some comfort along this dimension.

Malaysia Public Sector Debt Sustainability Analysis (DSA)—Baseline Scenario

(In percent of GDP unless otherwise indicated)

Debt, Economic and Market Indicators [1/]

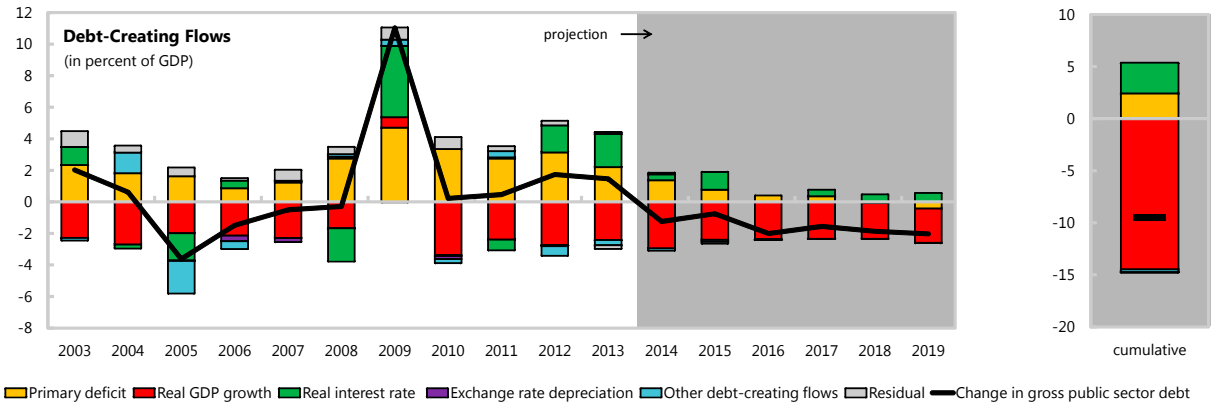
	Actual			Projections					
	2003-2011 [2/]	2012	2013	2014	2015	2016	2017	2018	2019
Nominal gross public debt	45.2	53.3	54.7	53.5	52.7	50.7	49.2	47.3	45.3
Public gross financing needs	9.1	10.9	10.6	9.3	9.0	8.9	9.6	9.1	6.9
Real GDP growth (in percent)	5.0	5.6	4.7	5.9	4.8	4.9	5.0	5.0	5.0
Inflation (GDP deflator, in percent)	4.6	0.7	0.0	3.4	2.0	4.3	3.4	3.5	3.4
Nominal GDP growth (in percent)	10.0	6.4	4.8	9.5	6.9	9.4	8.6	8.7	8.6
Effective interest rate (in percent) [4/]	5.2	4.3	4.1	4.3	4.3	4.4	4.5	4.7	4.9

As of October 14, 2014

Sovereign Spreads		
EMBI (bp) 3/		141
CDS (bp)		93
Ratings	Foreign	Local
Moody's	A3	A3
S&Ps	A-	A
Fitch	A-	A

Contribution to Changes in Public Debt

	Actual			Projections							
	2003-2011	2012	2013	2014	2015	2016	2017	2018	2019	cumulative	debt-stabilizing primary balance [9/]
Change in gross public sector debt	0.9	1.73	1.46	-1.2	-0.7	-2.0	-1.6	-1.9	-2.0	-9.4	
Identified debt-creating flows	0.4	1.43	1.69	-1.3	-0.6	-2.0	-1.6	-1.9	-2.0	-9.4	
Primary deficit	2.4	3.1	2.2	1.4	0.8	0.4	0.4	-0.1	-0.4	2.4	-1.6
Primary (noninterest) revenue and grants	20.8	21.3	21.1	20.7	20.3	20.3	20.2	20.6	20.8	122.8	
Primary (noninterest) expenditure	23.2	24.5	23.3	22.0	21.1	20.7	20.5	20.5	20.4	125.2	
Automatic debt dynamics [5/]	-1.9	-1.1	-0.2	-2.6	-1.3	-2.4	-1.9	-1.8	-1.6	-11.5	
Interest rate/growth differential [6/]	-1.9	-1.0	-0.3	-2.6	-1.3	-2.4	-1.9	-1.8	-1.6	-11.5	
Of which: real interest rate	0.2	1.7	2.1	0.4	1.1	0.0	0.4	0.5	0.6	2.9	
Of which: real GDP growth	-2.0	-2.7	-2.4	-2.9	-2.4	-2.4	-2.3	-2.3	-2.2	-14.5	
Exchange rate depreciation [7/]	-0.1	-0.1	0.1	...	...	...	...	...	...	...	
Other identified debt-creating flows	-0.1	-0.6	-0.3	-0.1	-0.1	0.0	0.0	0.0	0.0	-0.3	
General government net privatization proceeds (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Other change in financial assets	-0.1	-0.6	-0.3	-0.1	-0.1	0.0	0.0	0.0	0.0	-0.3	
Residual, including asset changes [8/]	0.6	0.3	-0.2	0.1	-0.1	0.0	0.0	0.0	0.0	0.0	



Source: IMF staff.

1/ Public sector is defined as central government.

2/ Based on available data.

3/ EMBI.

4/ Defined as interest payments divided by debt stock at the end of previous year.

5/ Derived as [(r - p(1+g) - g + ae(1+r)]/(1+g+p+gp)) times previous period debt ratio, with r = interest rate; p = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

6/ The real interest rate contribution is derived from the denominator in footnote 4 as r - π (1+g) and the real growth contribution as -g.

7/ The exchange rate contribution is derived from the numerator in footnote 2/ as ae(1+r).

8/ For projections, this line includes exchange rate changes during the projection period.

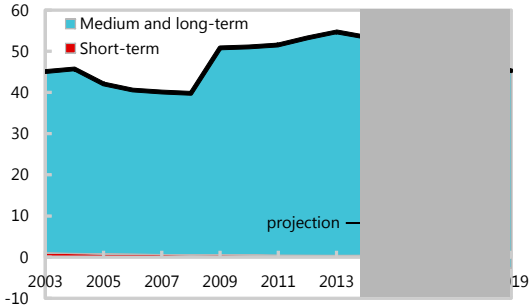
9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Malaysia Public DSA—Composition of Public Debt and Alternative Scenarios

Composition of Public Debt

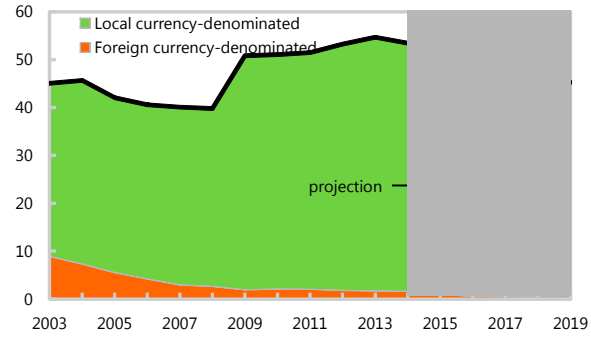
By Maturity

(in percent of GDP)

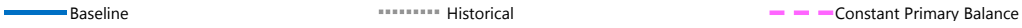


By Currency

(in percent of GDP)

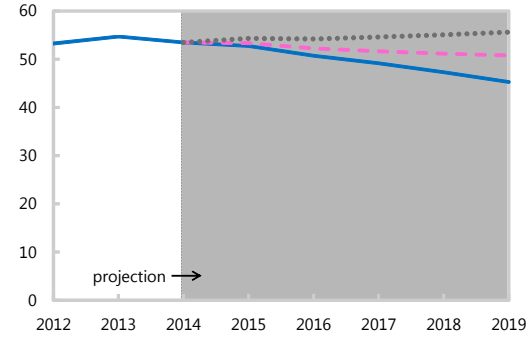


Alternative Scenarios



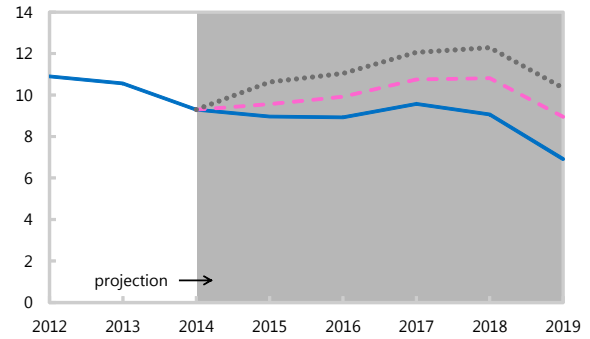
Gross Nominal Public Debt

(in percent of GDP)



Public Gross Financing Needs

(in percent of GDP)



Underlying Assumptions

(in percent)

Baseline Scenario	2014	2015	2016	2017	2018	2019
Real GDP growth	5.9	4.8	4.9	5.0	5.0	5.0
Inflation	3.4	2.0	4.3	3.4	3.5	3.4
Primary Balance	-1.4	-0.8	-0.4	-0.4	0.1	0.4
Effective interest rate	4.3	4.3	4.4	4.5	4.7	4.9
Constant Primary Balance Scenario						
Real GDP growth	5.9	4.8	4.9	5.0	5.0	5.0
Inflation	3.4	2.0	4.3	3.4	3.5	3.4
Primary Balance	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4
Effective interest rate	4.3	4.3	4.4	4.5	4.7	4.9

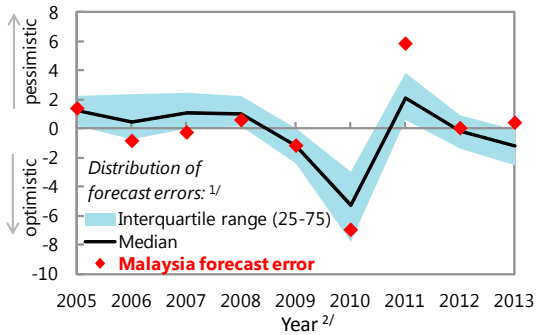
Historical Scenario	2014	2015	2016	2017	2018	2019
Real GDP growth	5.9	5.0	5.0	5.0	5.0	5.0
Inflation	3.4	2.0	4.3	3.4	3.5	3.4
Primary Balance	-1.4	-2.4	-2.4	-2.4	-2.4	-2.4
Effective interest rate	4.3	4.3	4.4	4.5	4.7	4.9

Source: IMF staff.

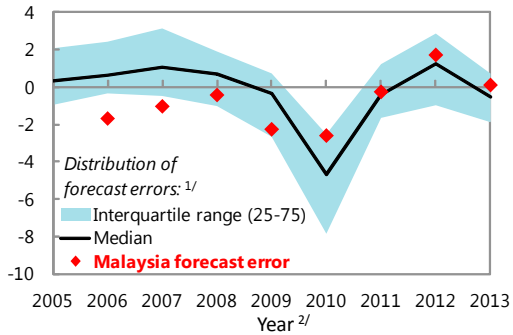
Malaysia Public DSA—Realism of Baseline Assumptions

Forecast Track Record, versus surveillance countries

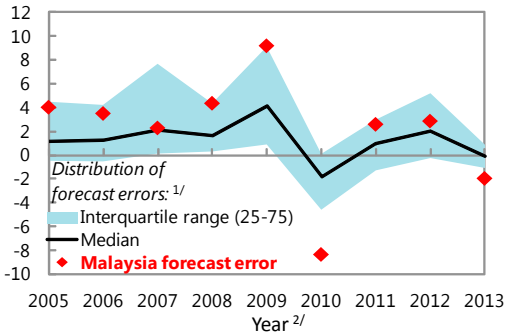
Real GDP Growth
(in percent, actual-projection)
Malaysia median forecast error, 2005-2013: 0.03
Has a percentile rank of: 44%



Primary Balance
(in percent of GDP, actual-projection)
Malaysia median forecast error, 2005-2013: -0.72
Has a percentile rank of: 35%

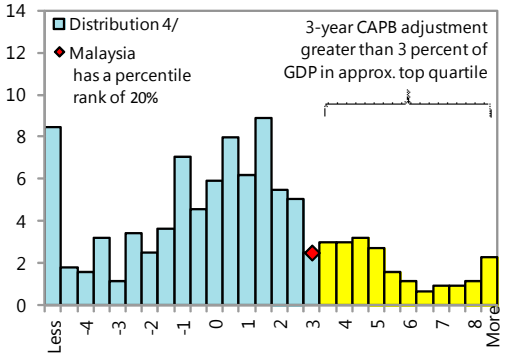


Inflation (Deflator)
(in percent, actual-projection)
Malaysia median forecast error, 2005-2013: 2.86
Has a percentile rank of: 68%

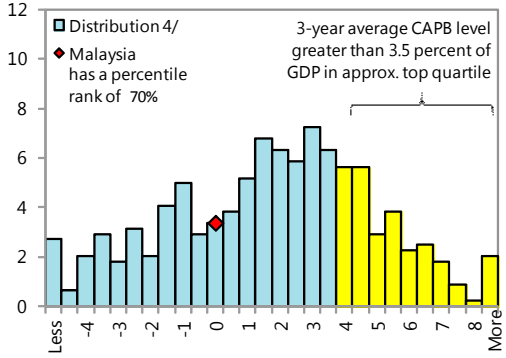


Assessing the Realism of Projected Fiscal Adjustment

3-Year Adjustment in Cyclically-Adjusted Primary Balance (CAPB)
(Percent of GDP)

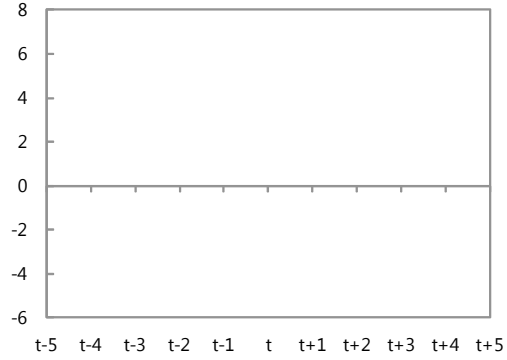


3-Year Average Level of Cyclically-Adjusted Primary Balance (CAPB)
(Percent of GDP)



Boom-Bust Analysis 3/

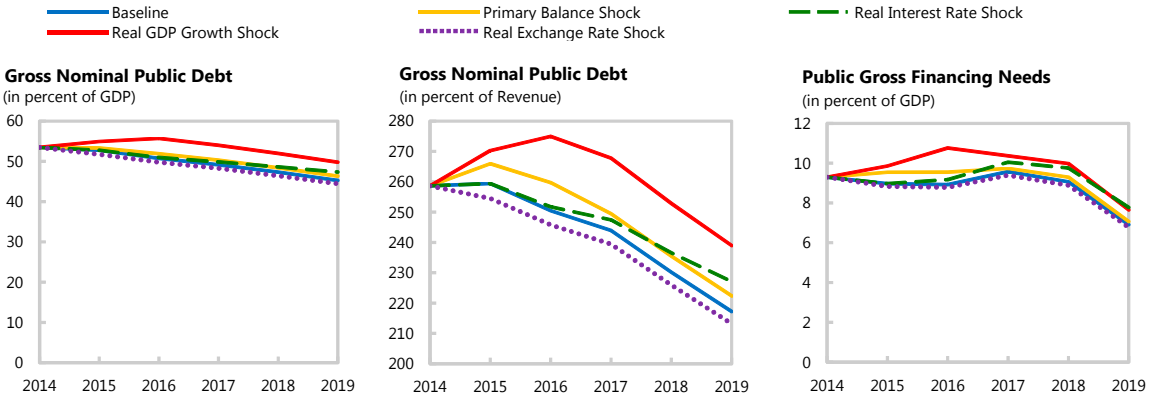
Real GDP growth
(in percent)
Malaysia



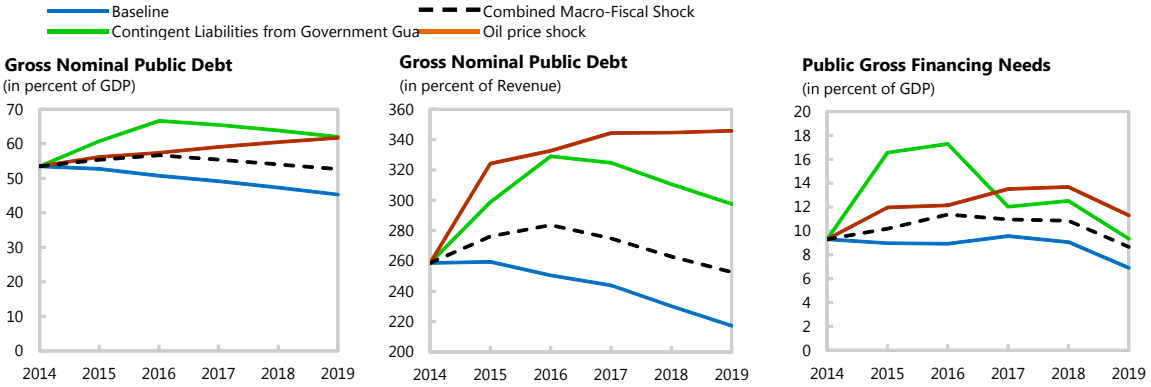
Source : IMF Staff.
1/ Plotted distribution includes surveillance countries, percentile rank refers to all countries.
2/ Projections made in the spring WEO vintage of the preceding year.
3/ Not applicable for Malaysia.
4/ Data cover annual obervations from 1990 to 2011 for advanced and emerging economies with debt greater than 60 percent of GDP. Percent of sample on vertical axis.

Malaysia Public DSA—Stress Tests

Macro-Fiscal Stress Tests



Additional Stress Tests



Underlying Assumptions

(in percent)

	2014	2015	2016	2017	2018	2019
Primary Balance Shock						
Real GDP growth	5.9	4.8	4.9	5.0	5.0	5.0
Inflation	3.4	2.0	4.3	3.4	3.5	3.4
Primary balance	-1.4	-1.3	-1.0	-0.4	0.1	0.4
Effective interest rate	4.3	4.3	4.4	4.6	4.8	4.9
Real Interest Rate Shock						
Real GDP growth	5.9	4.8	4.9	5.0	5.0	5.0
Inflation	3.4	2.0	4.3	3.4	3.5	3.4
Primary balance	-1.4	-0.8	-0.4	-0.4	0.1	0.4
Effective interest rate	4.3	4.3	4.9	5.5	6.1	6.7
Combined Shock						
Real GDP growth	5.9	2.3	2.4	5.0	5.0	5.0
Inflation	3.4	1.4	3.7	3.4	3.5	3.4
Primary balance	-1.4	-1.7	-2.0	-0.4	0.1	0.4
Effective interest rate	4.3	4.4	5.0	5.6	6.2	6.7
Contingent Liabilities from Government Guarantees						
Real GDP growth	5.9	3.8	3.9	4.0	4.0	4.0
Inflation	3.4	2.0	4.3	3.4	3.5	3.4
Primary balance	-1.4	-8.3	-7.9	-0.4	0.1	0.4
Effective interest rate	4.3	4.3	4.8	5.1	5.1	5.2

	2014	2015	2016	2017	2018	2019
Real GDP Growth Shock						
Real GDP growth	5.9	2.3	2.4	5.0	5.0	5.0
Inflation	3.4	1.4	3.7	3.4	3.5	3.4
Primary balance	-1.4	-1.4	-1.7	-0.4	0.1	0.4
Effective interest rate	4.3	4.3	4.4	4.6	4.8	5.0
Real Exchange Rate Shock						
Real GDP growth	5.9	4.8	4.9	5.0	5.0	5.0
Inflation	3.4	4.3	4.3	3.4	3.5	3.4
Primary balance	-1.4	-0.8	-0.4	-0.4	0.1	0.4
Effective interest rate	4.3	4.4	4.4	4.5	4.7	4.9
Oil price shock						
Real GDP growth	5.9	3.8	3.9	4.0	4.0	4.0
Inflation	3.4	2.0	4.3	3.4	3.5	3.4
Primary balance	-1.4	-3.7	-3.2	-3.3	-2.9	-2.6
Effective interest rate	4.3	4.4	4.5	4.6	4.9	5.1

Source: IMF staff.

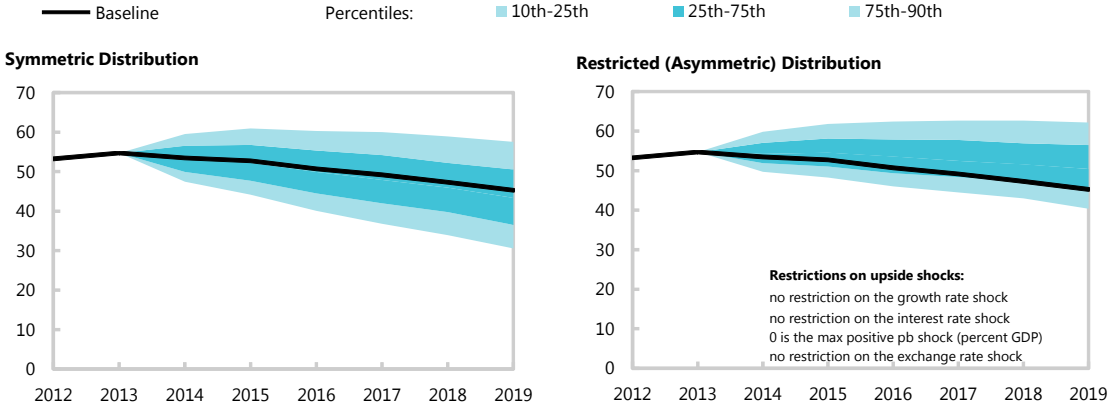
Malaysia Public DSA—Risk Assessment

Heat Map

Debt level [1/]	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability shock
Gross financing needs [2/]	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability Shock
Debt profile [3/]	Market Perception	External Financing Requirements	Change in the Share of Short-Term Debt	Public Debt Held by Non-Residents	Foreign Currency Debt

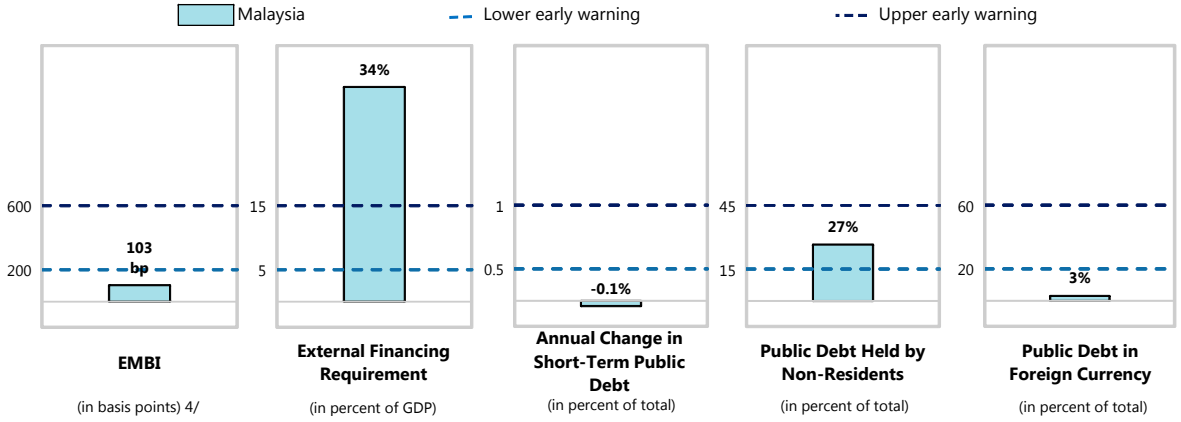
Evolution of Predictive Densities of Gross Nominal Public Debt

(in percent of GDP)



Debt Profile Vulnerabilities

(Indicators vis-à-vis risk assessment benchmarks)



Source: IMF staff.

1/ The cell is highlighted in green if debt burden benchmark of 70% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

2/ The cell is highlighted in green if gross financing needs benchmark of 15% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

3/ The cell is highlighted in green if country value is less than the lower risk-assessment benchmark, red if country value exceeds the upper risk-assessment benchmark, yellow if country value is between the lower and upper risk-assessment benchmarks. If data are unavailable or indicator is not relevant, cell is white.
Lower and upper risk-assessment benchmarks are:

200 and 600 basis points for bond spreads; 5 and 15 percent of GDP for external financing requirement; 0.5 and 1 percent for change in the share of short-term debt; 15 and 45 percent for the public debt held by non-residents; and 20 and 60 percent for the share of foreign-currency denominated debt.

4/ An average over the last 3 months, 16-Jul-14 through 14-Oct-14.

E. Fiscal Institutions

41. Overview. The quality of a country's macro-fiscal system and institutions is crucial for durable success in fiscal policy and in the management of fiscal risks. Good fiscal institutions begin with fiscal reporting systems that produce reliable, credible and usable information—data that is accurate, timely, comprehensive and well documented. Also of crucial importance are sound public financial management (PFM)—budget formulation and execution, internal controls and auditing procedures together with well-resourced, independent and sound macro-fiscal analysis.

42. Transparency. The global financial crisis also underscores the importance of fiscal transparency, including the need to do better in identifying, measuring, managing and disclosing fiscal risks:

- The failure to disclose and prepare for such risks has caused additional government obligations, larger public debts and, in some of the more extreme cases, crises situations with daunting financing challenges.
- Unexpected spending pressures or revenue losses resulting from fiscal risks have often required disruptive ad-hoc adjustments.
- The sharp deterioration of the fiscal stance that accompanied the crisis, and the related need for fiscal adjustment, have increased the incentives for governments to engage in activities which cloud the true state of their finances.

43. Fiscal institution-building in Malaysia. Malaysia has made considerable progress in strengthening its macro-fiscal institutions. A high-level Fiscal Policy Committee was created in September 2013 to provide strategic guidance and oversight and plays a leading role in ensuring fiscal sustainability and long term macroeconomic stability. This strategic decision making body includes the prime minister, finance minister, central bank governor and other key economic policymakers. A Fiscal Policy Office (FPO) within the Treasury has also been set up and acts as the secretariat to the FPC. The FPO provides analytical guidance in the formulation of fiscal policy, produces fiscal forecasts, and facilitates collaboration between the Treasury and different government agencies.

44. Significance. The FPC has reinforced the government's commitment to reducing the budget deficit and public debt and has been instrumental in the passage of fiscal measures that are helping to shore up Malaysia's fiscal position. Going forward, the government, guided by the FPC, should develop guiding principles for the conduct of sound fiscal policy, endorse Malaysia's medium term fiscal strategy, review the government's fiscal performance, and ensure alignment across ministries and agencies in order to meet fiscal targets and manage fiscal risks. Sufficient resources commensurate to the FPO's remit should be made available, as well as full transparency and strong media presence, should be sought. Over time, publication of FPO analyses and assessments, including a comprehensive statement of fiscal risks, should reinforce the credibility of the fiscal policy (see Appendix 1)

45. The role of macro-fiscal analysis. Independent macro-fiscal analysis is important in the timely identification of economic trends and of policy response options. This can be illustrated by the technical analysis needed to understand the implications of the large energy price shock. Recent analysis carried out by the IMF demonstrates that oil price volatility creates substantial uncertainty about the level of Malaysia's federal debt over the medium term (up to 2020). It turns out that the effect of oil price volatility on debt is substantial. In a stochastic analysis of future federal debt undertaken by staff, eliminating shocks to the deviation of real oil price from its long run trend would shrink the uncertainty around debt simulations significantly. Specifically, the band of possible debt outturns that are possible with 90 percent confidence shifts down by 4 percent of GDP (2013 staff report, Box 3). This in turn highlights the importance of employing mechanisms to counteract the fiscal risks from oil related revenue.

46. Medium-term fiscal strategy. Embedding the annual budget in a medium-term fiscal strategy can go a long way in identifying and ameliorating medium- and long-term fiscal risks. The Malaysian authorities are now undertaking additional work to further strengthen macro-fiscal management and manage fiscal risks over the medium term: they aim to balance the budget by 2020, which will create additional space to conduct countercyclical fiscal policy and absorb contingent liabilities in the event of major shocks. The effort to reduce the budget deficit further will require additional measures amidst pressures from declining (as a percent of GDP) oil revenues and rising expenditure commitments. This highlights the need to reduce the fiscal risk from oil prices by continuing to diversify the budget and by further raising expenditure efficiency and equity. This drive should extend to off-budget subsidies, for example natural gas subsidies provided to power sector and industry at a discount relative to international prices. Furthermore anchoring budget targets to the non-oil-and-gas primary balance would help insulate the budget from fluctuations in oil prices.

F. Country Cases of Fiscal Risk Management and Disclosure

47. Overview. The following country cases have been selected on the basis of two main criteria: (1) regional examples of countries presenting comparable institutional characteristics to Malaysia and which are making a relatively strong start in establishing fiscal risks management frameworks; e.g. Indonesia, Philippines; and (2) G-20 countries with mature fiscal risks management frameworks on the one hand; e.g. Australia, New Zealand, and those with young but promising fiscal risks management frameworks; e.g. Brazil, Turkey. The order in which the following country cases appear has no major importance.

New Zealand

48. A series of reforms has forged New Zealand's approach to fiscal risk disclosure and management. The public financial management reforms of the 1980s created a legal framework that assigns clear accountability for the different dimensions of fiscal risk disclosure and management. With the introduction of accrual accounting in the Public Finance Act (PFA) of 1989 and the adoption in 1993 of Generally Accepted Accounting Practice (GAAP) for budgeting and reporting,

the coverage of fiscal statistics was broadened to include all assets and liabilities, including contingent liabilities. The emphasis on transparency in the conduct of government affairs culminated with the introduction of the Fiscal Responsibility Act (FRA) of 1994 and its subsequent incorporation (with some extensions) in the PFA. These acts require the government to reduce the debt to prudent levels by running operating surpluses, and then maintain the debt at prudent levels; pursue policies that are consistent with a reasonable degree of predictability about the level and stability of tax rates for future years; and prudently manage the fiscal risks facing the state.

49. The legislation requires that budget documents include both a statement showing the sensitivity of fiscal aggregates to changes in economic conditions and a statement of specific fiscal risks. The statement of specific fiscal risks contains both policy risks and explicit contingent liabilities that may have a material effect on the fiscal and economic outlook. All information must be disclosed, unless disclosure is likely to prejudice the substantial interests of the country, compromise the government in a material way in negotiation, litigation, or commercial activity, or result in material loss of value to the government. In practice, these exclusions are mainly applied to policy risks, rather than to existing legal obligations. The notes to the financial statements discuss key risk management strategies across the government and SOEs, and provide data on concentrations of credit risk, foreign exchange risk, refinancing risk, use of derivatives, and fair value of financial instruments.

50. Other key features of New Zealand's fiscal risk disclosure and management framework include:

- Official macroeconomic forecasts underlying the budget are reviewed before finalization by an external panel of experts and full alternative macroeconomic scenarios are included in the budget documents;
- The budget includes a full set of independent tax forecasts by the Inland Revenue Department (IRD), with a discussion of the reasons for any differences between the IRD and official (treasury) forecasts;
- fiscal forecasts in the annual budget include indicative amounts for new operating and capital initiatives in the second and third years, which are linked to the specific fiscal risks disclosed in the budget;
- contingent liabilities are managed by the relevant department and monitored by the treasury; policy initiatives that involve contingent liabilities are subject to scrutiny;
- The treasury operates a centralized system for monitoring and reporting on fiscal risks, called "Inspect a Risk," which gathers information from discussions with departments and Crown entities, the register of contingent liabilities maintained by departments, and minutes of meetings of cabinet and cabinet committees; "Inspect a Risk" is then used by the fiscal reporting division of the treasury to generate the Statement of Specific Risks;

- The government has established a number of financial asset portfolios to match the risk characteristics of specific liabilities, such as a fund managed by the earthquake commission;
- SOEs report directly to shareholding ministers each quarter, and the performance of SOEs is monitored by the treasury, which provides ministers with a quarterly report on SOE performance; SOEs borrow without government guarantee;
- The debt management office, a unit within the treasury, has responsibility for aggregating information on assets and liabilities across the government, and for managing risks to the government's overall balance sheet;
- External audit of information on fiscal risks is conducted by parliament's office of the comptroller and auditor general, which has published reports on specific areas of fiscal risk in recent years.

Indonesia

51. The Indonesian government publishes a statement of fiscal risks as part of its annual budget report. As in Malaysia, the Indonesian government owns a large oil company and incurs a heavy cost subsidizing fuel and electricity when international oil prices are high. It also owns a large electricity company that has entered into many independent power projects.

52. The government is in the process of adopting IPSAS, but is some years away from preparing government-wide financial statements on that basis. However, the Indonesian government is notable for preparing annual statements of fiscal risk since 2008 that provide information on fiscal risks not covered by its standard fiscal reporting. An idea of the content of the section on fiscal risks can be obtained by noting that in 2009, the chapter was 22 pages long and contained the headings below:

53. Example: Indonesia—2009 Budget Report, Section 6.3 (Fiscal Risks)—Headings:

- Sensitivities to macroeconomic assumptions
- Risk associated with government debt
- Infrastructure development projects
- Risk of state-owned enterprises (SOEs): Sensitivity of fiscal risk of SOEs to changes in oil prices, exchange rates, and interest rates
- Financial sector
- Pension plan and old age allowance for civil servants
- Fiscal decentralization
- Legal claims on the government
- Membership in international financial institutions
- Natural disasters

54. The report combines description with simple quantitative information. Under the heading of infrastructure development, for example, a table shows the electrical capacity and investment cost of new power-generation projects undertaken as part of a "crash" program of investment designed to remedy energy shortages. As the headings imply, the report includes some sensitivity analysis. For state-owned enterprises, it also presents a stress test. The scope and brevity of Indonesia's statement make it an attractive model for Malaysia. It has two attractive features. It includes a broad range of important risks, not just contingent liabilities, and it integrates the discussion of those risks in one concise report.

Brazil

55. The 2000 Fiscal Responsibility Law is the cornerstone of Brazil's PFM reforms. Over the past decade, this law and other initiatives have successfully contributed to fiscal discipline at the federal and sub-national government levels. Fiscal reporting is comprehensive, covering all levels of government. An extensive fiscal risk statement is presented to Congress annually, though some gaps in the analysis remain.

56. The federal government's consolidated end-of-year financial statement includes a balance sheet with all assets and liabilities. Macroeconomic projections for four years ahead are included in the multi-year national plan prepared by the Planning Ministry. In mid-April of each year, an Annual Budget Guidelines Law is presented to Congress for approval, which includes updated medium-term macroeconomic and fiscal projections for the current year and two years ahead along with the government's major economic assumptions.

57. The fiscal responsibility law requires that the Annual Budget Guidelines Law include an estimate of fiscal risks and contingent liabilities. These estimates are contained in a comprehensive fiscal risk statement, which includes sensitivity analyses and discloses risks to revenue, expenditures, and public debt levels associated with changes in macroeconomic assumptions. The statement also incorporates various contingent liabilities, including fiscal risks from state-owned enterprises, various legal risks, and debt and non-debt guarantees, although contingent liabilities from state-owned banks are not incorporated in the analysis. Congress analyzes and approves the Annual Budget Guidelines Law, which includes the fiscal risk statement in an annex.

Chile

58. Chile publishes detailed analyses of its contingent liabilities. From 2003, Chile began incorporating information on certain contingent liabilities in its annual report on public finances, and, from 2007, began publishing an annual report devoted to contingent liabilities. But although the government publishes substantial information on the fiscal situation, its fiscal statistics do not yet fully comply with the GFSM2001, and it does not publish long-term fiscal projections. And although it prepares audited financial statements on an accrual basis, these are not prepared according to international standards and are not the focus of attention in developing its fiscal strategy.

59. The Informe de Finanzas Públicas contains a good annex on the government's direct and contingent liabilities in concessions and other public-private partnerships. Chile has a large program of PPPs, including user-fee-funded concessions for roads and airports and government-funded contracts for prisons and other buildings. Most of the user-fee funded concessions contain minimum-revenue guarantees, which create significant contingent liabilities, while the government-funded PPPs create direct liabilities. The measures of debt that are the focus of fiscal policy making in Chile do not include the values of either of these liabilities. The Informe, however, shows the present value of committed government payments and two measures of the risks associated with minimum-revenue guarantees: maximum possible losses and the present value of expected guarantee payments. The present values of the guarantees recognize that guarantee payments are more likely in bad states of the world, and are thus greater than the expected payments discounted at the risk-free rate.

60. The Informe de Pasivos Contingentes collects information on many fiscal risks. The table of contents of the 2009 report (which is 88 pages) gives an idea of its coverage (Source: Chile: DIPRES—Informe de Pasivos Contingentes—Table of Contents).

- Introduction
- Analysis of the fiscal position (taking contingent liabilities into account)
- Explicit contingent liabilities
  1) Guarantees of the pension system
  2) Guarantees of concessions for public works
  3) Guarantees of deposits
  4) Guarantees of debt of public enterprises
  5) Guarantees of financing for higher education
  6) Legal claims
  7) Contingency program against unemployment
  8) Auction insurance for the system of housing subsidies
  9) Funds for covering risk of CORFO
  10) Guarantee funds for small enterprises

- Other contingent liabilities
  1) Financial position and operating deficit of the Central Bank
  2) Fuel-price stabilization fund

- Management of contingent liabilities
  1) Fiscal policy
  2) Sovereign funds
  3) Central Bank capitalization
  4) Decision mechanism for concessions

- Challenges

61. Different kinds of information are reported for each kind of contingent liability. For the minimum-revenue guarantees, there are fan charts of possible spending. For guarantees of the debts of public enterprises, the government's maximum losses are presented. For deposit guarantees, there is a list of the credit ratings of Chilean banks. The most significant of the contingent liabilities is that associated with minimum pension guarantees. For this, the report describes policy developments, reports spending in recent years, and projects spending until 2025.

62. Although Chile's report on contingent liabilities is a possible model for a statement of fiscal risks in Malaysia, a report with a broader scope would be better. Chile's report is attractive in several respects. The analysis is detailed and transparent. It not only describes risks but also discusses the government's strategy for dealing with them. And its discussion of PPPs is relevant for Malaysia. But Chile's report concentrates on risks associated with guarantees and other contingent liabilities, and does not discuss macroeconomic risks to the budget and other elements that might be more relevant in the case of Malaysia, such as public debt management, SOEs, and the financial sector.

Australia

63. Regarding the legal framework for fiscal reporting, the Charter of Budget Honesty 1998 requires fiscal risk to be disclosed in a Statement of Risks in each budget and Midyear Economic and Fiscal Outlook. The definition of fiscal risks in Australia encompasses changes in economic and other parameters, matters not included in fiscal forecasts because of uncertainty about their timing, magnitude and/or likelihood; and the realization of contingent liabilities.

64. Contingent liabilities and other fiscal risks with a possible impact on forward estimates greater than AS$20M in any one year, or AS$40M over the forward estimates period, have to be reported. These include government guarantees, PPP risk-sharing arrangements, contractual disputes, and tax litigations. Explicit parliamentary authorization is sought for major guarantees, and accrual-based forward expenditure estimates presented to parliament include provisions for expected future write-downs, impairments, or losses. There is, however, no annual ceiling for contingent liabilities, nor is it part of the medium-term expenditure framework. Both the budget and mid-year update include an analysis of the sensitivity of revenue and expenditure to alternative economic assumptions. The budget also includes an Asset and Liability Management Statement which discusses the risks around both sides of the government balance sheet. From the 2013–14 Mid-year Economic and Fiscal Outlook, the budget update also contains a Debt Statement which reports in more detail on Commonwealth Securities and the balance sheet.

Philippines

65. The Philippines published its first FRS in 2012. The statement covers both general macroeconomic risks to the budget, and a range of specific fiscal risks. While some attention is devoted to natural disasters, given the Philippines' high exposure to natural hazards, there is also discussion of a range of elements particularly relevant to Malaysia.

66. The Philippines fiscal risks statement outlines the country's exposure to fiscal risks stemming from various channels such as the projections used for budgetary purposes, public debt dynamics, operations of local governments and government corporations as well as public-private partnerships, contingent liabilities and the mechanics of the financial sector. Furthermore, it also deals with the risks posed by natural disasters and calamities especially for a country prone to such catastrophes as the Philippines.

67. The fiscal risks statement also details some of the current and proposed measures by which the various government departments and attached agencies are striving to mitigate these risks along with minimizing their impact should they materialize. It gives the end-users an idea as to the country's exposure to various sources of fiscal risks and insight as to what more can be done to ensure fiscal viability in the event of unfavorable fiscal developments. Ultimately, it is the goal of the fiscal risks statement to present a holistic view of the risks to the government's fiscal position and aid in the formulation of necessary policies and plans of action.

68. Of relevance to Malaysia is that the Philippines fiscal risks statement presents information on:

- The magnitude of the first round impacts of changes in key macroeconomic variables on the fiscal aggregates.
- Data on deviations between macroeconomic assumptions used for the budget and the actual outturns.
- Data on the difference between budgets and outturns.
- A brief description of how the government's liability management functions is being strengthened through creation of a Debt and Risk Management Division under the Department of Finance to institutionalize policy and debt strategy formulation. There is also a brief discussion of the debt management strategy, and the results of a DSA, including stress tests.
- Discussion of government-owned and/or controlled corporations.
- Discussion of the financial sector, including the deposit insurance scheme.
- An overview of local government finances.
- Discussion of reforms to the selection of PPPs.

Mexico

69. The Economic Report includes discussion of fiscal risks caused by short-term macroeconomic fluctuations (GDP growth, price of oil, interest rates and the exchange rate), and long-term risks and contingencies (demographics, health and pensions, development bank credit risk, deposit insurance, SOE losses, and natural disasters). This discussion does not cover certain

specific risks such as legal actions, international treaties, financial assets, physical assets, or PPPs. Congress must approve increases in net new federal borrowing annually. While states can borrow domestically on their own initiative, they cannot borrow externally or in foreign currency.

70. The public accounts consolidate all central government budget entities and state-owned enterprises (SOEs) under direct government control, including PEMEX, the state oil company, and CFE, the state electricity company. It includes a comprehensive balance sheet. The 2008 Government Accounting Law requires that all levels of government (federal, state, and municipality) move in a phased manner to accrual accounting standards. Rolling medium-term estimates are included in budget documents for five years beyond the budget year, and include oil and non-oil related revenue; and expenditure for personnel services, pensions, subsidies and transfers, and capital expenditure. Estimates of transfers to sub-national governments and payments for social security and health care are made as a percent of GDP. The estimates are not part of a medium-term expenditure framework, and are thus not binding. Medium-term estimates of total net debt are also provided.

India

71. Since 2010, the government is taking steps to improve the disclosure of contingent liabilities arising from PPP projects. Government guarantees are subject to a limit of 0.5 percent of GDP. The government is systematically building a fund for servicing any guarantees that may be invoked.

72. Outstanding explicit guarantees are reported in quantitative terms for each ministry. Fiscal risks emanating from other possible sources, such as macro-fiscal developments, international and social commitments, pensions, PPPs, legal claims and implicit contingent liabilities are neither discussed nor quantified. The 2013 amendment to the budget law requires the government to report explicit contingent liabilities arising on account of annuity payments on PPP infrastructure projects. The law also places an annual limit of 0.5 percent of GDP on new guarantees. This low ceiling will most likely ensure that the stock of guarantees will decrease as a percentage of GDP, as they have done over the last ten years. The government in 1999 established a Guarantee Redemption Fund, a revolving fund that is built up through transfers appropriated in the budget, to discharge liabilities arising from any guarantees invoked. The government does not publish a medium-term debt strategy but plans to do so beginning in FY2014–15. It does not publish an assessment of the risks associated with government assets.

China

73. A comprehensive quantified statement of fiscal risks is not included in budget documents. However, in recent years, the State Council has requested investigations into general government fiscal risk, especially of liabilities and contingent liabilities of sub-national government. The National Audit Office has provided (and published) reports on this on a one-off basis. The budget documents provide only a limited discussion of macroeconomic and fiscal risk.

74. A full annual budget execution report on the central government, including almost all extra-budgetary funds, is provided to the National People's Congress for its deliberations on the new budget in March. The annual budget documentation provides macro and fiscal forecasts of key aggregates for the year ahead. Medium-term projections are also produced by Ministry of Finance in the Medium-term Fiscal Plan, but this plan is not published. The key published planning document is the Five-Year Plan of National Economic and Social Development, which contains a macroeconomic and fiscal outlook over the planning period. The Five-Year Plan of National Economic and Social Development is updated mid-way of the planning cycle.

Turkey

75. Turkey's fiscal reports are relatively comprehensive and detailed and have further improved in institutional coverage since 2010. Government publishes detailed, three-year macro and fiscal forecasts, but provide only a single, central scenario without long-term fiscal projections. The legislature approves limits on guarantees and on-lending. The budget contains information on public-private partnership contracts, but no comprehensive fiscal risk statement is prepared.

76. Limits on government guarantees and on-lending are included in the annual budget which also includes a risk account to cover the potential costs from called guarantees. Total contingent liabilities arising from guarantees and on-lending are provided in the debt management report which also analyzes risks associated with government's conventional asset and liability holdings. Since 2010, the Ministry of Development has been publishing information on Public Private Partnerships (PPPs) including total number and value of the projects sector by sector.

Summary

77. The country cases presented above offer some important lessons with regard to Malaysia's fiscal risks management. A comprehensive fiscal risks management framework should, at a minimum, include the following elements: (1) a comprehensive statement of fiscal risks alongside the budget including discussion and quantification of the main fiscal risks—macro-fiscal, guarantees, international commitments, social commitments, public-private partnerships, and legal claims—see Indonesia, Brazil, Australia; (2) extensive analysis of the risks around the official macroeconomic and fiscal forecasts, including fiscal implications of alternative macroeconomic scenarios alongside the main forecasts—see Mexico, Australia, and recent efforts in China; (3) requirements to report on contingent liabilities—see India, Turkey; (4) requirements for additional reporting on the risks from state-owned enterprises—see Philippines and Mexico.

G. Concluding Remarks

78. This paper has summarized the progress Malaysia has made in recent years to reinforce its public finances and assessed fiscal challenges, including from sharply lower oil and gas prices. The authorities have embarked on an ambitious multiyear consolidation effort, and the federal deficit is being gradually reduced with a view to achieving a balanced budget by 2020. This effort rests on

three pillars: first, starting in 2010, costly and untargeted fuel and other subsidies are being rationalized and remaining explicit fuel subsidies were eliminated in 2014. Second, the fiscal system is being diversifying away from volatile energy-related revenues, including through the GST that is about to be introduced. Third, fiscal institutions are being strengthened, the size of supplementary budgets is being reduced, and the authorities are gradually moving to performance-based budgeting and accrual accounting. In this context, the creation of the Fiscal Policy Committee in 2013 was an important institutional innovation that cemented top-down fiscal control. These reforms should help safeguard debt sustainability, increase fiscal resilience, and raise the efficiency and equity of Malaysia's fiscal policy. This has been a timely effort that should help the authorities better deal with the large energy price shock of 2014. It will also help them recreate fiscal space and allow automatic stabilizers to work when needed and also leave room for countercyclical policy in response to large shocks.

Appendix 1. A Comprehensive Statement of Fiscal Risks for Malaysia

Statement of the government's objectives in publishing information on fiscal risks, and its general strategies for risk management.

Macroeconomic Risks and Budget Sensitivity

- Discussion of the macroeconomic forecasting record in recent years, comparing the assumptions used in budget forecasts against actual outcomes.
- Sensitivity of aggregate revenues and expenditures to variations in the key economic assumptions on which the budget is based with explanation of underlying mechanisms.
- Possible methods and presentational devices include scenario or stochastic analysis with fan charts.
- Analysis of the variance of budgets versus outturns in recent years.

Public Debt

- Sensitivity of public debt levels and debt servicing costs to variations in assumptions, e.g., on interest rates.
- The government's debt management strategy and its impact on the government's risk exposure.

Government lending programs

Policy and institutional framework for government lending, including subsidized lending: projected inflows, outflows, and balances; disposition of loan repayments, monitoring arrangements, and NPLs.

Civil service pension liabilities

Level of the government's liabilities, and its approach to managing costs and risks in the scheme.

Fiscal Incentives

Description of main incentive schemes together with estimates of foregone revenues; evidence of cost effectiveness.

Contingent Central Government Expenditure

- *Contingent Liabilities*: Government's gross exposure to contingent liabilities and, where feasible, the expected value of exposures—especially federal government loan guarantees. Rationale and criteria for the provision of guarantees, recent experience of non-repayment of guaranteed loans; description of any guarantees fund.

- *Banking sector:* Deposit insurance scheme, prudential regulation, and—to the extent that the authorities feel this does not generate moral hazard—risks from the banking sector.
- *Other contingent liabilities:* This might include a short discussion of fiscal risks from natural disasters, and legal action against the federal government, and how these are managed.

Public Private Partnerships

- Summary of the PPP program and its relationship to the public investment program; policy framework and rationale for PPPs.
- Cumulative overall multiyear obligations from government's current PPP program.
- Discussion of additional announced PPP contracts under active consideration.
- Gross exposure from guarantees and other contingent liabilities in PPP contracts.

State-Owned Enterprises

- Policy framework for SOEs (pricing policy, dividend policy, noncommercial obligations).
- Financial performance and position of the SOE sector and the largest SOEs.
- Financial performance and position of state-owned financial institutions.

State and local governments

Legal framework for, and description of, intergovernmental fiscal relations, and summary of recent state and local government financial performance and financial position.