



# INDONESIA

## SELECTED ISSUES

March 2015

This Selected Issues paper on Indonesia was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed on February 23, 2015.

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**International Monetary Fund**  
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# INDONESIA

## SELECTED ISSUES

February 23, 2015

Approved By  
**Asia and Pacific  
Department**

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and Lawrence Dwight (SPR)

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# THE IMPACT OF MAJOR COMMODITIES ON THE CORPORATE SECTOR AND BANKING SYSTEM<sup>1</sup>

## A. Introduction

**1. This note looks at links between Indonesia's commodities sector and recent corporate sector and banking system performance.**<sup>2</sup> On the production side, oil and natural gas output has fallen since 2010, with existing fields in decline, while production of coal, palm oil, and rubber output has increased steadily. At the same time, prices have mostly trended down since late 2011, reflecting the current commodity down-cycle, which has led to a significant drop in revenues. Substantial swings in prices have also contributed to volatility in revenues and profits for commodity producing firms, while their leverage has been rising. While these firms have tended to rely more on internal financing, and lately on external borrowing, and less on borrowing from resident banks. Nevertheless, some banks are seeing a rise in nonperforming loans (NPLs) tied to the mining and agricultural sectors, but from a small base. Facing the near-term prospect of weak revenue generation and tighter financial conditions, commodity producers' balance sheets could come under further pressure absent a noticeable pick up in external demand. This development could have knock-on effects to other parts of the economy, particularly in more commodity dependent rural areas.

## B. Recent Trends

**2. The contribution of Indonesia's commodities sector to economic activity remains significant, but the value of production and exports has declined sharply in recent years.** Total production accounted for around 9 percent of GDP in 2014, compared to 14 percent in 2011 (Figure 1). Major commodities still comprised about half of all merchandise exports in 2014. However, since their peak in 2011, the overall value of commodity exports has fallen by almost 30 percent in U.S. dollar terms. This decline has occurred across all products, but the causes have differed. For coal, palm oil, and rubber, the drop in the value of exports has been mainly driven by the recent slump in commodity prices, but for oil and gas underinvested and declining production capacity has been a key factor (Table 1).

**3. Markets for Indonesia's commodity exports vary by product** (Figure 2). While China has been an important and fast growing trading partner (coal and metal ores), Japan is still Indonesia's largest export market (oil and natural gas). Singapore (including re-exports), the United States (rubber products), India (coal and palm oil), and Korea (most commodities) are also important

<sup>1</sup> Prepared by Lawrence Dwight.

<sup>2</sup> The focus of this note is on the export-oriented commodities sector, which is dominated by coal, oil, natural gas, metal ores, palm oil, and rubber products in Indonesia.

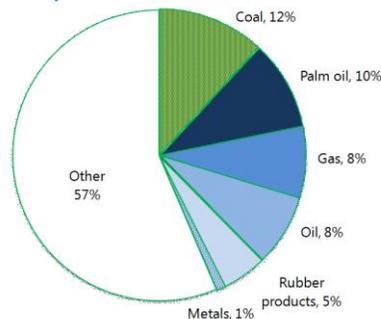
**Figure 1. Indonesia: Recent Trends in the Commodities Sector**

**Contribution to the Economy—Share of GDP**

	2011 (A)	2012	2013	2014 (B)	Difference (B-A)
Coal	3.2	3.0	2.8	2.4	-0.7
Palm oil	2.3	2.1	1.9	2.0	-0.3
Rubber products	1.7	1.2	1.1	0.8	-0.9
Oil	2.3	2.0	2.1	1.6	-0.8
Natural gas	2.2	2.0	1.8	1.8	-0.3
Metal ores	0.8	0.5	0.7	0.2	-0.6
<b>Total</b>	<b>12.5</b>	<b>10.9</b>	<b>10.3</b>	<b>8.9</b>	<b>-3.6</b>

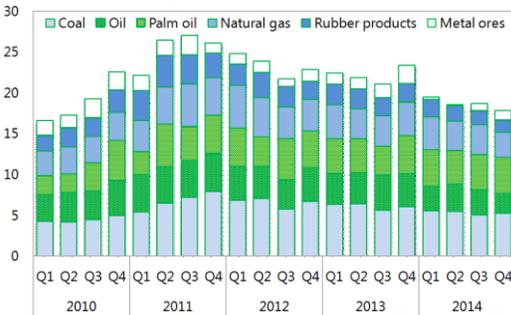
Source: Statistics Indonesia (BPS); and IMF staff estimates.

**Contribution to Exports—Share of Total, 2014**



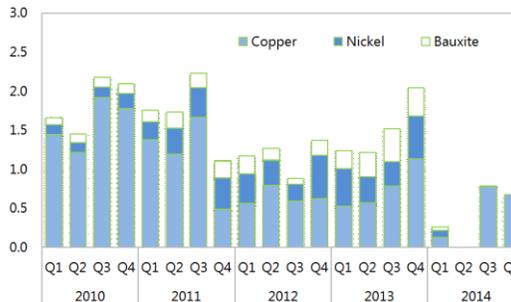
Source: Global Trade Atlas.

**Indonesia: Export Value, 2010–14**  
(In billions of U.S. dollar)



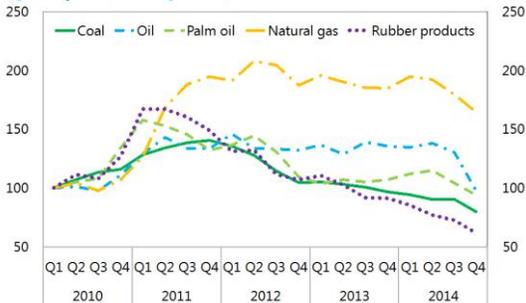
Sources: Bank Indonesia; and IMF staff estimates.

**Indonesia: Export Value, 2010–14**  
(In billions of U.S. dollar)



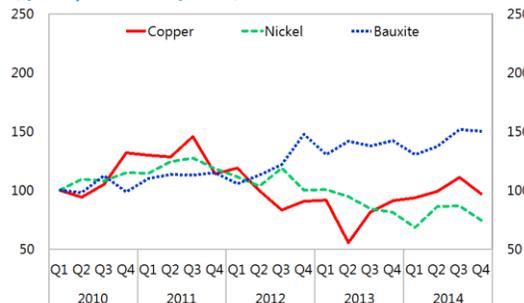
Sources: Bank Indonesia; and IMF staff estimates.

**Indonesia: Commodity Prices, 2011–14**  
(Quarterly index, 2010:Q1 = 100)



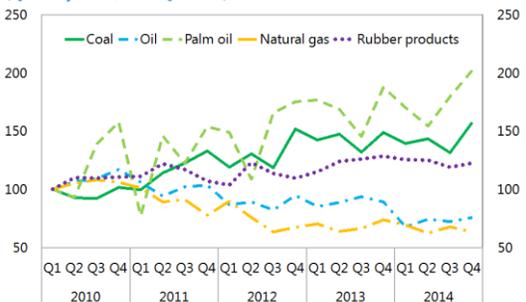
Source: IMF staff estimates.

**Indonesia: Commodity Prices, 2011–14**  
(Quarterly index, 2010:Q1 = 100)



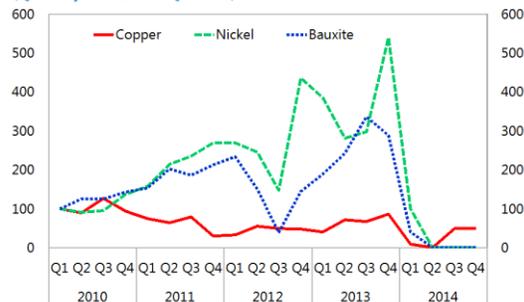
Source: IMF staff estimates.

**Indonesia: Commodity Volumes, 2011–14**  
(Quarterly index, 2010:Q1 = 100)



Source: IMF staff estimates.

**Indonesia: Commodity Volumes, 2011–14**  
(Quarterly index, 2010:Q1 = 100)



Source: IMF staff estimates.

**Figure 2. Indonesia: Export Destinations for Major Commodities 1/**

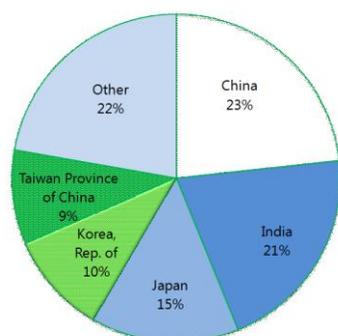
**Indonesia: Main Export Markets—Share of Exports**

(In percent of total)

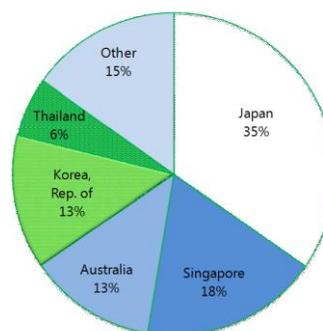
	2011 (A)	2012	2013	2014 Est. (B)	Difference (B-A)
Japan	16.6	15.9	14.8	13.1	-3.5
China	11.3	11.4	12.4	9.9	-1.4
Singapore	9.1	9.0	9.1	9.6	0.6
United States	8.1	7.8	8.6	9.3	1.2
India	6.6	6.6	7.1	6.9	0.4
Korea, Rep. of	8.1	7.9	6.3	6.2	-1.9
Malaysia	5.4	5.9	5.8	5.6	0.2
Other	35.0	35.5	35.8	39.4	4.4

Sources: Global Trade Atlas; and IMF staff estimates.

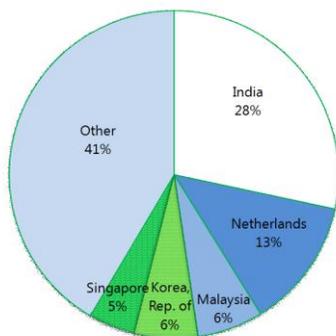
**Coal**



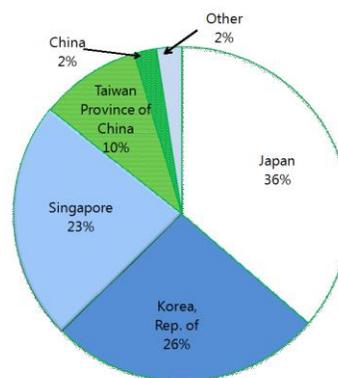
**Oil**



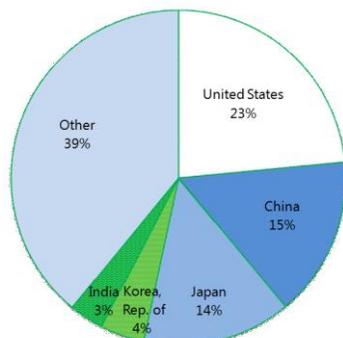
**Palm Oil**



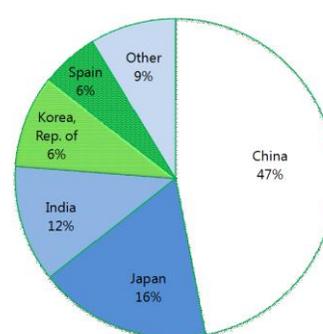
**Natural Gas**



**Rubber**



**Metal Ores**



Sources: Global Trade Atlas; and IMF staff estimates.

1/ Figures are averages for 2011–13.

**Table 1. Indonesia: Changes in Export Receipts**

	Prices (US\$/ton) 1/			Production (tons, in thousands) 1/			Exports (US\$ billions)		
	2011	2014	Change	2011	2014	Change	2011	2014	Change
Coal	130	75	-42%	207	277	34%	26.9	20.8	-23%
Oil	104	96	-7%	19	14	-27%	19.6	13.3	-32%
Natural gas	16	17	8%	12	9	-21%	18.5	15.7	-15%
Palm Oil	1,077	739	-31%	18	23	26%	19.4	16.8	-13%
Rubber	2.19	0.89	-59%	0.65	0.79	22%	14.1	7.0	-51%
Metal ores 2/							6.8	2.0	-70%
Copper	8,823	6,863	-22%	53	26	-52%	4.7	1.8	-62%
Nickel	22,909	16,893	-26%	58	8	-87%	1.3	0.1	-90%
Bauxite	2,401	1,867	-22%	319	56	-82%	0.8	0.1	-86%

Sources: Bank Indonesia; and IMF staff estimates.

1/ Except natural gas (in cubic meters) and rubber (in pounds). Implied production volumes were computed from export receipts and world prices.

2/ Calculations for metal ores are complicated by the government's implementation of a ban on the export of raw mineral ores beginning in 2014. Output increased in 2013 ahead of the ban, but then declined sharply in 2014. As of mid 2014, exports of copper concentrate had resumed, but exports of nickel and bauxite remained close to zero.

markets. As of August 2014, the agriculture sector employed around 39 million people (34 percent of the total, but mainly outside the export-oriented commodities sector), while the mining and quarrying industry provided employment to 1.4 million people (1.3 percent of the total).

## C. Impact on Corporate Sector

### 4. Recent trends in commodity exports have had a significant impact on corporate revenues and profits.<sup>3</sup> In

general, revenues and profits of commodity producers have been highly correlated with the U.S. dollar value of exports and global prices (Table 2 and Figure 3). For the oil and gas, metal ores, and palm oil and rubber sectors, profits have been highly correlated with global prices. However, in the coal

**Table 2. Indonesia: Drivers of Revenues and Profits, 2008-13**

(Correlation coefficients)

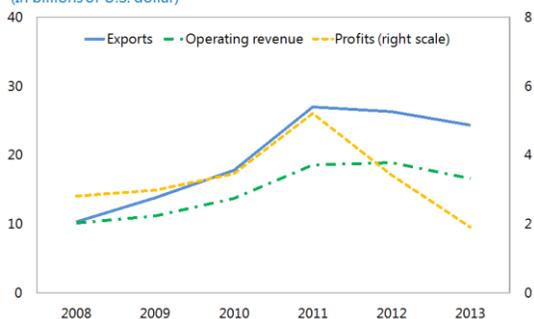
	Exports		Prices	
	Exports	Prices	Exports	Prices
Coal				
Revenues	0.992	0.042		
Profits	0.376	0.496		
Oil and gas				
Revenues			0.933	0.994
Profits			0.839	0.976
Minerals				
Revenues	0.535	0.450		
Profits	0.140	0.705		
Palm oil and rubber				
Revenues			0.889	0.841
Profits			0.750	0.917

Source: IMF staff estimates.

<sup>3</sup> Corporate financial data covers the largest companies in each industry for which data was available. Many corporations are active in both the oil and gas sectors and palm oil and rubber sectors, respectively. Thus, the corporate financial data is combined for these two pairs of sectors.

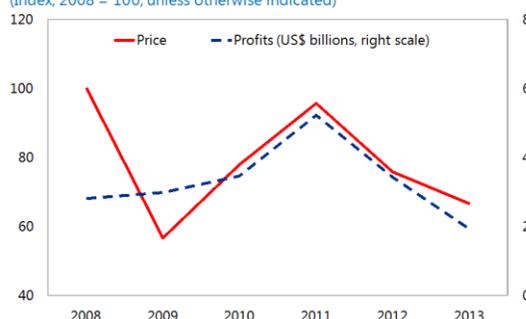
**Figure 3. Indonesia: Exports, Revenues, and Profits by Sector**

**Coal: Exports, Revenues, and Profits**  
(In billions of U.S. dollar)



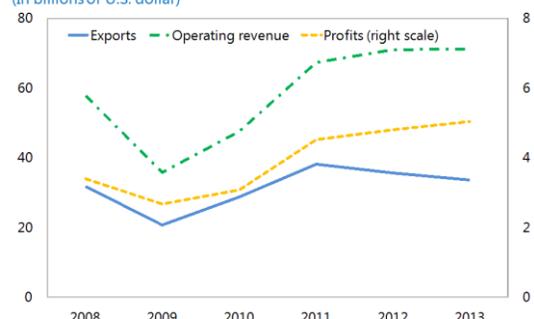
Sources: Orbis database; and IMF staff estimates.

**Coal: Prices and Profits**  
(Index, 2008 = 100; unless otherwise indicated)



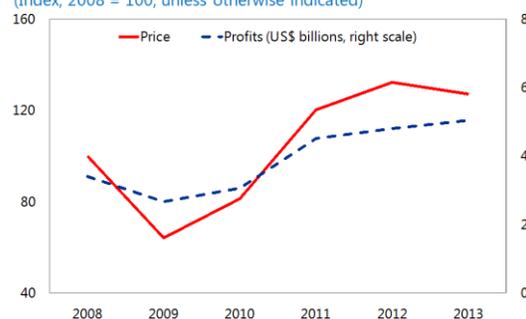
Sources: Orbis database; and IMF staff estimates.

**Oil and Natural Gas: Exports, Revenues, and Profits**  
(In billions of U.S. dollar)



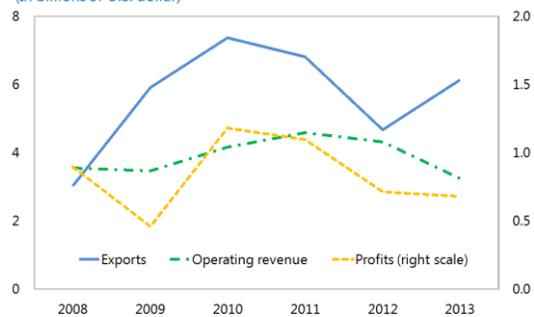
Sources: Orbis database; and IMF staff estimates.

**Oil and Natural Gas: Prices and Profits**  
(Index, 2008 = 100; unless otherwise indicated)



Sources: Orbis database; and IMF staff estimates.

**Metal Ores: Exports, Revenues, and Profits**  
(In billions of U.S. dollar)



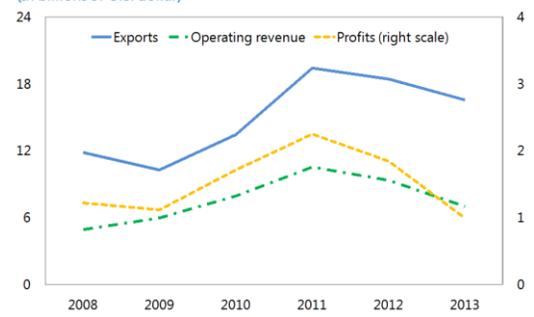
Sources: Orbis database; and IMF staff estimates.

**Metal Ores: Prices and Profits**  
(Index, 2008 = 100; unless otherwise indicated)



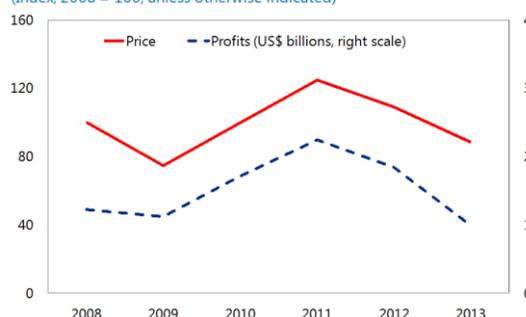
Sources: Orbis database; and IMF staff estimates.

**Palm Oil and Rubber: Exports, Revenues, and Profits**  
(In billions of U.S. dollar)



Sources: Orbis database; and IMF staff estimates.

**Palm Oil and Rubber: Prices and Profits**  
(Index, 2008 = 100; unless otherwise indicated)



Sources: Orbis database; and IMF staff estimates.

sector, profits and revenues show lower correlations with prices, indicating that production also plays a role. These observations are consistent with the view that the coal sector in Indonesia has a relatively low cost of entry and is more competitive so that producers attempt to boost output to cover costs when prices fall. However, it also means that coal producers have lower profit margins.

**5. For corporations operating in the nonrenewable commodities sector, liabilities and debt ratios have increased significantly in recent years** (Figure 4). This trend may reflect lower global interest rates, which made debt financing more attractive, especially for exporters that have access to U.S. dollar revenues.

- In the **coal sector**, liabilities have risen by about 30 percent per year on average since 2008, while operating revenues have grown only 10 percent and profits have declined. The increase in liabilities shows up in leverage ratios, with the debt-to-equity ratio in the coal sector around 80 percent at end 2013—doubling since 2008.<sup>4</sup> Given a high correlation between prices and profits, further declines in prices could result in higher leverage ratios.
- The **oil and gas sector** largely reflects developments at Pertamina. Debt liabilities in the sector have increased more than six-fold since 2008, and leverage ratios have also risen, with the debt-to-equity ratio at 80 percent at end 2013. Pertamina itself began to issue global bonds in 2011. The increase in funding in this sector reflects the need for substantial investment to maintain production, as existing oil and gas fields naturally decline.
- In the **metals mining sector**, liabilities have also risen rapidly, with annual growth averaging 20 percent since 2008. With operating revenues and profits flat during this period, however, leverage ratios have increased. Nevertheless, the debt-to-equity ratio remains low at just over 20 percent.
- In the **palm oil** and **rubber** sectors, liabilities have risen in U.S. dollar terms but the debt-to-equity ratio has not shown an overall trend, ranging from 40–60 percent.

## D. Impact on Banking System

**6. Direct exposure of the banking system to the agriculture and mining sectors is relatively low.**<sup>5</sup> At the same time, weak commodity sector revenues have been a factor in slower deposit growth, contributing to funding pressures in the banking system. While loans to

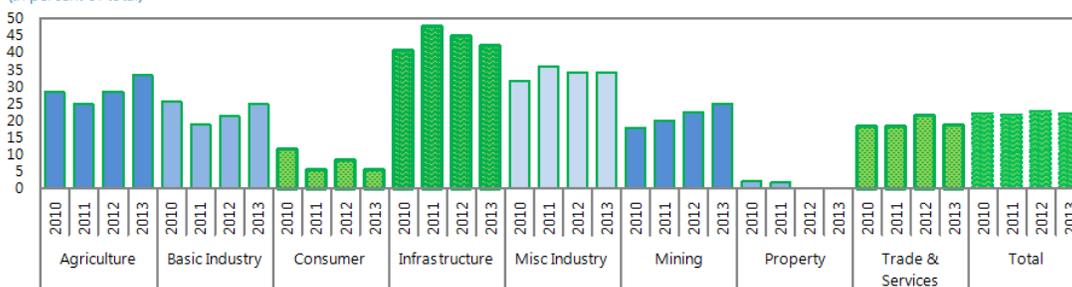
<sup>4</sup> These figures exclude liabilities of PT Bumi Resources, a large thermal coal producer in Indonesia, which had its rating cut by Standard & Poor's to default in December 2014. It holds 40 percent of the liabilities of companies in the coal sector for which data were available.

<sup>5</sup> Banking data are more aggregated than corporate financial data. Bank Indonesia reports outstanding loans to and NPLs for mining and quarrying (including coal, oil, and gas) and agriculture (including palm oil and rubber) but not to individual sectors.

**Figure 4. Indonesia: Debt Indicators for the Commodities Sectors**

**Share of High Debt Nonfinancial Public Listed Companies by Sector 1/**

(In percent of total)

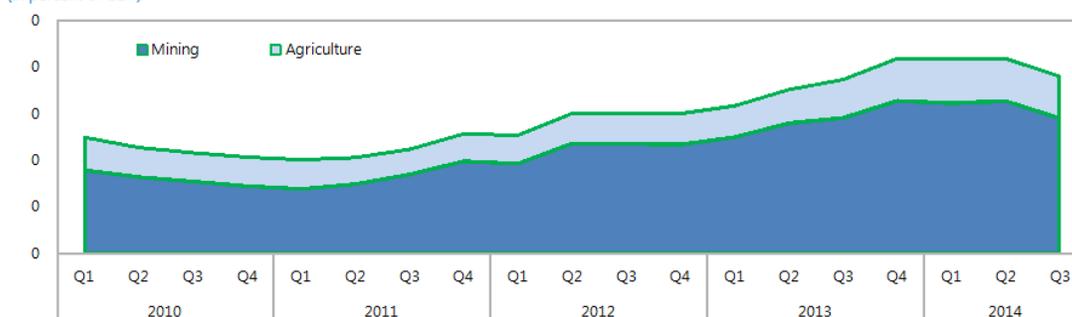


Sources: Bloomberg L.P.; and IMF staff calculation.

1/ Companies with net debt to equity ratio more than one or negative equity.

**External Debt by Sector**

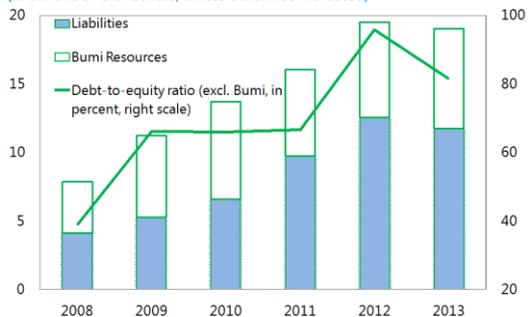
(In percent of GDP)



Sources: Bank Indonesia; and IMF staff estimates.

**Coal Sector**

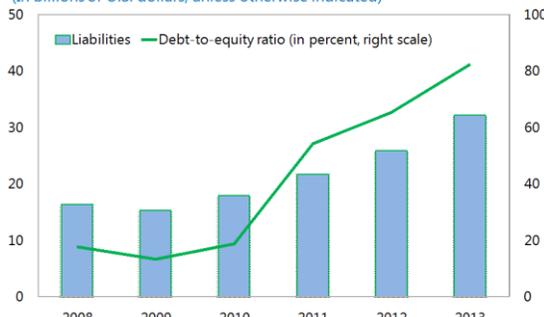
(In billions of U.S. dollars; unless otherwise indicated)



Source: IMF staff estimates.

**Oil and Gas Sector**

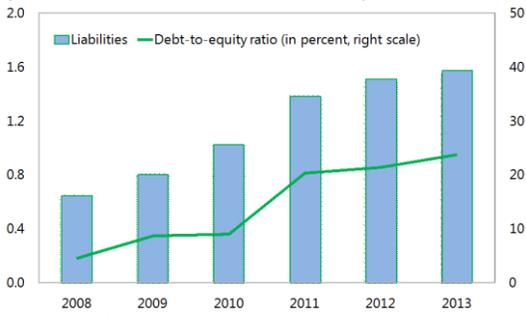
(In billions of U.S. dollars; unless otherwise indicated)



Source: IMF staff estimates.

**Metals Sector**

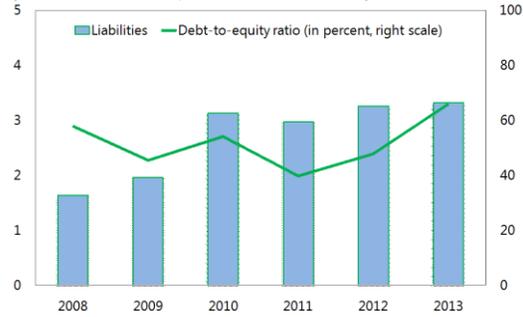
(In billions of U.S. dollars; unless otherwise indicated)



Source: IMF staff estimates.

**Palm Oil and Rubber Sectors**

(In billions of U.S. dollars; unless otherwise indicated)

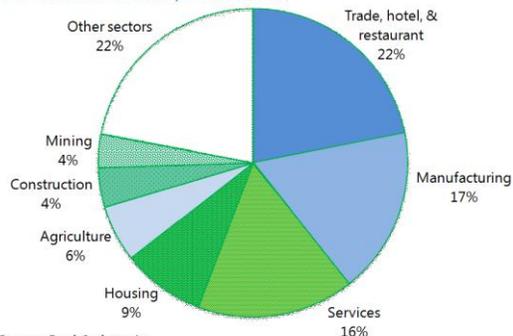


Source: IMF staff estimates.

**Figure 5. Indonesia: The Banking System and Commodities Sector**

**Indonesia: Loans by Sector**

(As of November 2014, in percent of total)



Source: Bank Indonesia.

**Indonesia: Nonperforming Loans by Sector**

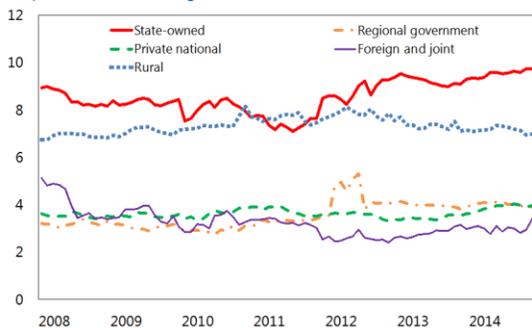
(As of August 2014, in percent of outstanding loans)



Source: Bank Indonesia.

**Indonesia: Loans to the Agricultural Sector by Type of Bank**

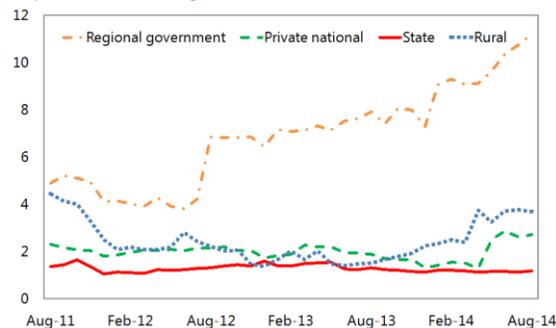
(In percent of outstanding loans)



Source: Bank Indonesia.

**Indonesia: Nonperforming Loans to Agriculture by Type of Bank**

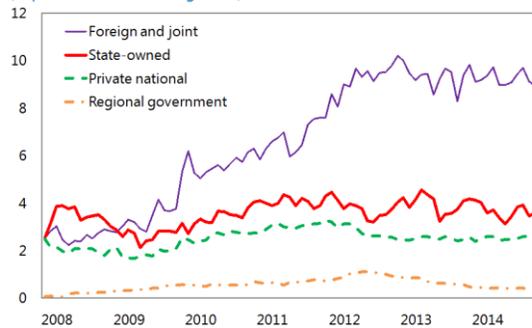
(In percent of outstanding loans)



Source: Bank Indonesia.

**Indonesia: Loans to the Mining Sector by Type of Bank**

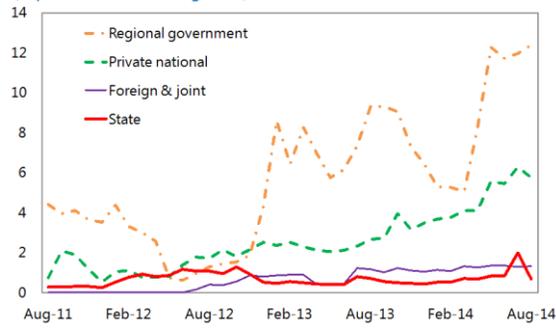
(In percent of outstanding loans)



Source: Bank Indonesia.

**Indonesia: Nonperforming Loans to Mining Sector by Type of Bank**

(In percent of outstanding loans)



Source: Bank Indonesia.

agriculture and mining as a share of total loans outstanding are only 6 percent and 3½ percent, respectively (Figure 5), banks' exposure could be larger via indirect effects on other related sectors, for example construction and equipment. Some lending to commodity-related activity may also be classified as lending to processing-related sectors.

**7. Different types of banks have different exposures.** For agricultural loans, state and rural banks have higher exposures, given their customer base. For mining, foreign banks have the largest exposure, likely reflecting relationships arising from heavier foreign investment in this sector. Banks' concentration risk appears to be contained, nonetheless, since even for the banks with the largest exposures the loans to each sector constitute less than 10 percent of all loans outstanding. Still, caution is warranted, given these sectors' common risk exposure profile to a price shock.

**8. Nonperforming loans in the agriculture and mining sectors have been lower than the average, but those in mining have risen recently, drawing closer to the average for all sectors.** Broadly speaking, the major lenders to agriculture (state and rural banks) and to mining (foreign and joint venture banks) have relatively low NPLs. For regional government banks, NPLs have surged in both the agriculture and mining sectors, but loans to these sectors account for only a small fraction of these banks' loan portfolios.

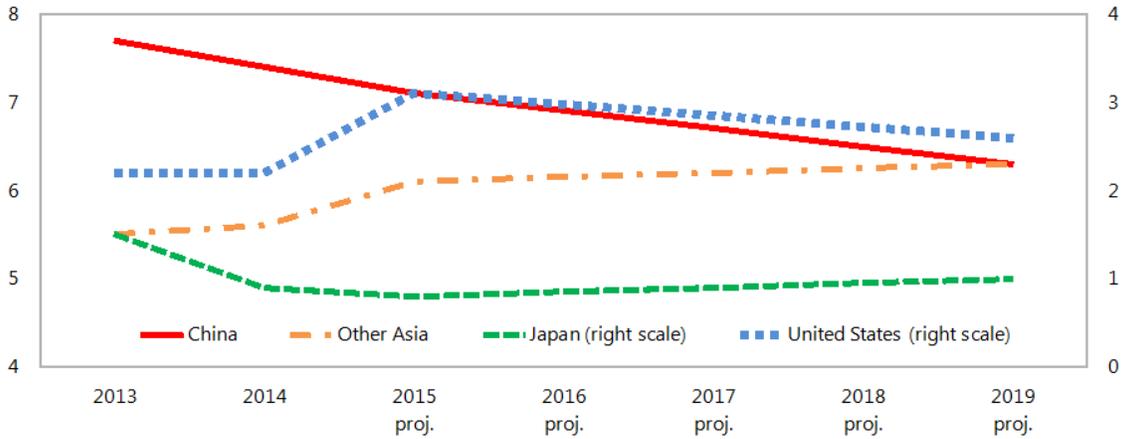
## E. Near- to Medium-Term Outlook for the Commodities Sector

**9. Risks facing the commodities sector will likely stay elevated in the near term, given slowing growth of several major trading partners and the outlook for lower commodity prices.** (Figure 6). To contain the effects of weak profitability and higher leverage of commodity producing firms on the broader economy, steps to improve monitoring of corporate sector performance, including external borrowing, should help. However, it will also require close supervision of those banks heavily exposed to commodity sectors, given the likelihood that NPLs will increase if demand conditions faced by commodity producers fail to improve. Fiscal and structural reforms aimed at improving Indonesia's competitiveness could help commodity producers through access to better power and transport infrastructure, streamlined investment approvals, and possibly more foreign investment in the sector.

**Figure 6. Indonesia: Global Outlook**

**Indonesia: Real GDP Growth by Trading Partner, 2013–2019**

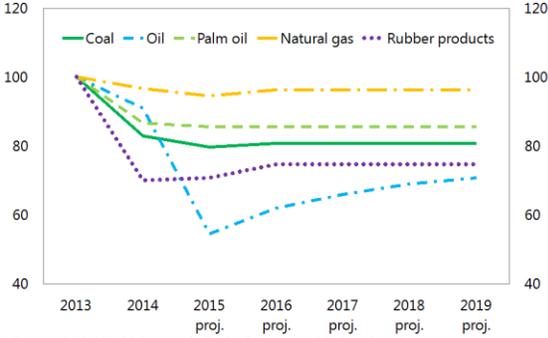
(In percent)



Source: IMF, *World Economic Outlook* (January 2015 update).

**Indonesia: Commodity Price Projections, 2013–19**

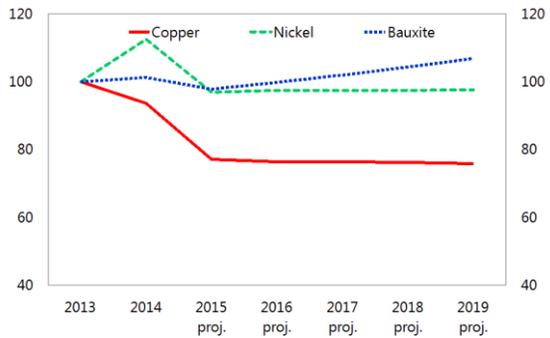
(Annual index, 2013=100)



Source: IMF, *World Economic Outlook* (January 2015 updates).

**Indonesia: Commodity Price Projections, 2013–19**

(Annual index, 2013 = 100)



Source: IMF, *World Economic Outlook* (January 2015 update).

# MANAGING FISCAL RISKS IN INDONESIA<sup>1</sup>

## A. Introduction and Main Observations

**1. This paper looks at current and prospective fiscal risks in Indonesia.** It attempts to highlight the risks that could materialize when exogenous shocks interact with fiscal vulnerabilities to affect macroeconomic and financial stability. Focus is placed on those risks related to the general government's fiscal and debt positions (Section B), nonfinancial state-owned enterprises (SOEs) (Section C), and health and pension spending (Section D).

**2. Declining public debt in Indonesia since the late 1990s has strengthened the economy's resilience to exogenous shocks, but vulnerabilities have built up recently that may heighten fiscal risks.** They can be summarized as follows.

- First, government funding needs have become increasingly reliant on foreign investors, with a change in market sentiment possibly leading to a sharp slowdown or reversal in foreign funding, squeeze on domestic bank liquidity, and rising borrowing costs.
- Second, total and external indebtedness of key SOEs has risen. A sharper than anticipated weakening in the exchange rate, in combination with other risks, could erode the equity position and debt servicing capacity of those SOEs with incomplete hedges of their foreign exchange exposure.
- Third, despite recent energy subsidy reforms, a close connection remains between budget performance and world oil prices, given the narrow revenue base and still significant reliance on oil and gas revenues. A further drop in oil prices could add to downside pressures on revenues and narrow space for key social and infrastructure spending, while also weighing on the finances of Pertamina, the state oil company.
- Finally, public spending on health and pensions is expected to increase over the medium and long run, especially if coverage of social insurance is expanded.

**3. To help mitigate these risks, prudent design and management of fiscal policy will remain essential.** Specifically, moderate fiscal consolidation would keep funding needs contained, while non-oil and gas revenues mobilization is needed to safeguard fiscal space for social and infrastructure spending. Improved operational efficiency of SOEs could strengthen their financial performance and debt management. Finally, well-designed health insurance and pension systems will be important to ensuring long-run fiscal sustainability. In addition, fiscal risks should be communicated effectively with the public to reduce uncertainties for the private sector and improve the economy's resilience to shocks. In this connection, Indonesia's current practice of submitting an annual fiscal risk statement to Parliament along with the budget is commendable.

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<sup>1</sup> Prepared by Masahiro Nozaki.

## B. General Government Fiscal Position and Debt Sustainability

### 4. Indonesia has maintained favorable fiscal and debt positions compared with its peers.

General government debt at 26 percent of GDP at end 2014 and current gross funding needs of around 4 percent of GDP a year are much lower than the median of other emerging market economies (EMEs) (Table 1 and Figure 1). Indonesia's public debt has an average maturity of 10 years and an average interest rate that is well below GDP growth, which also compare favorably with the peers. Local governments' debt is insignificant, since their borrowing is closely monitored and regulated by the central government.

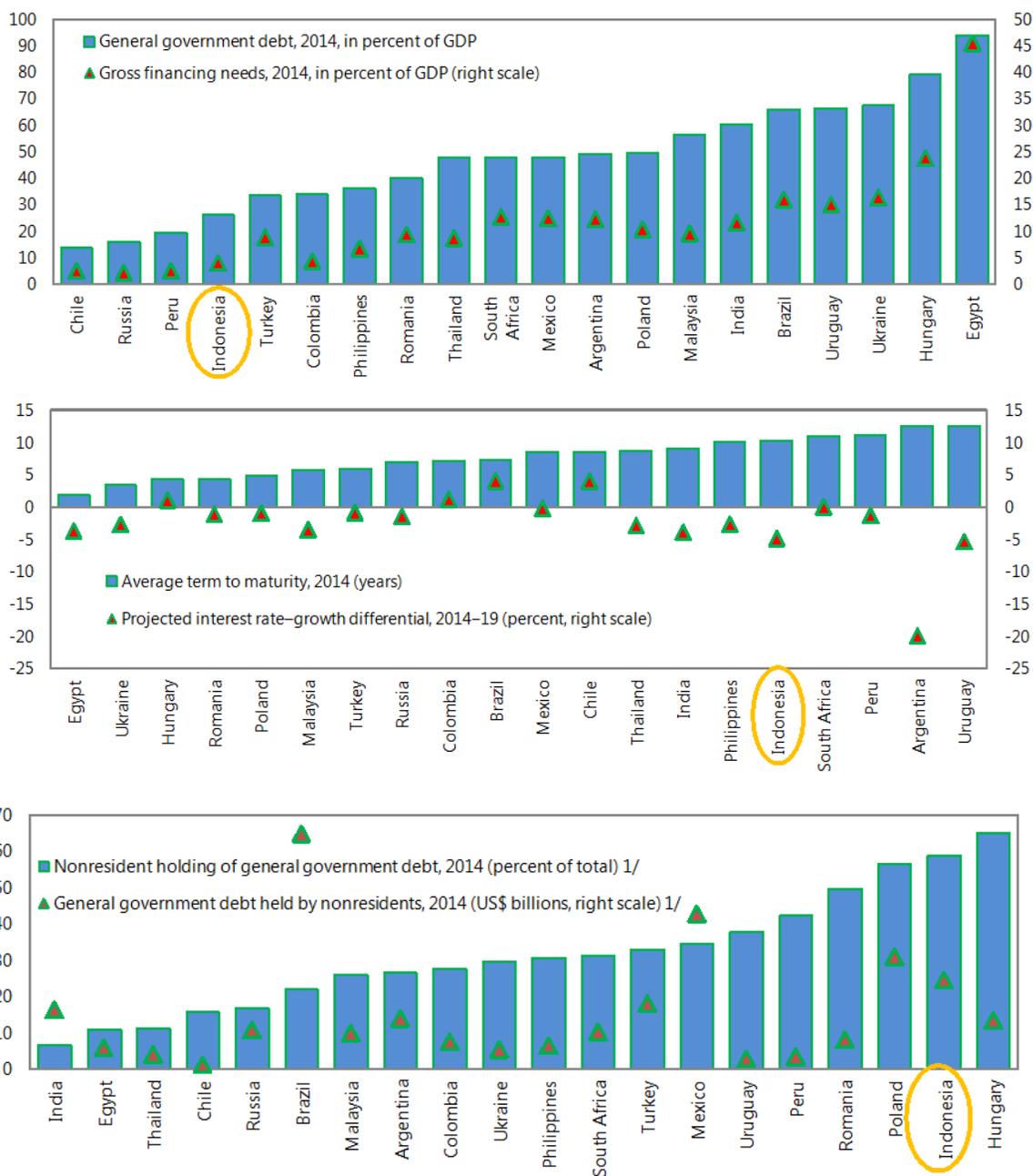
**Table 1. Indonesia: General Government Debt, 2008–2013**

	2008	2009	2010	2011	2012	2013
	(In percent of GDP)					
General government debt	33.1	28.4	26.1	24.4	24.0	26.1
Central government debt	33.1	28.4	26.1	24.4	24.0	26.1
<i>Decomposition by type</i>						
Foreign loans	14.8	10.9	9.6	8.4	7.5	7.8
<i>Of which: bilateral and multilateral</i>	14.3	10.5	9.1	8.0	7.2	7.4
Government securities	18.3	17.5	16.5	16.0	16.5	18.3
<i>Currency denomination</i>						
Rupiah	15.8	14.9	14.0	13.4	13.3	13.9
Non-rupiah	17.2	13.5	12.1	11.0	10.7	12.2
<i>Resident decomposition</i>						
Held by residents	...	...	11.1	10.6	11.0	10.7
Held by nonresidents	...	...	15.0	13.8	13.0	15.4
<i>Maturity decomposition</i>						
Short-term 1/	...	...	1.8	1.9	1.7	2.2
Medium- and long-term (due in more than one year)	...	...	24.3	22.5	22.4	23.9
	(In percent of total)					
Central government debt						
Non-rupiah denominated	52.1	47.4	46.3	45.1	44.5	46.7
Held by nonresidents	...	...	57.4	56.7	54.1	58.8
Short-term 1/	...	...	7.0	7.9	6.9	8.4
<i>Memorandum items:</i>						
General government gross financing needs (percent of GDP)	1.7	3.7	3.3	2.5	3.9	3.9

Sources: Ministry of Finance.

1/ Includes medium- and long-term debt due in one year or less.

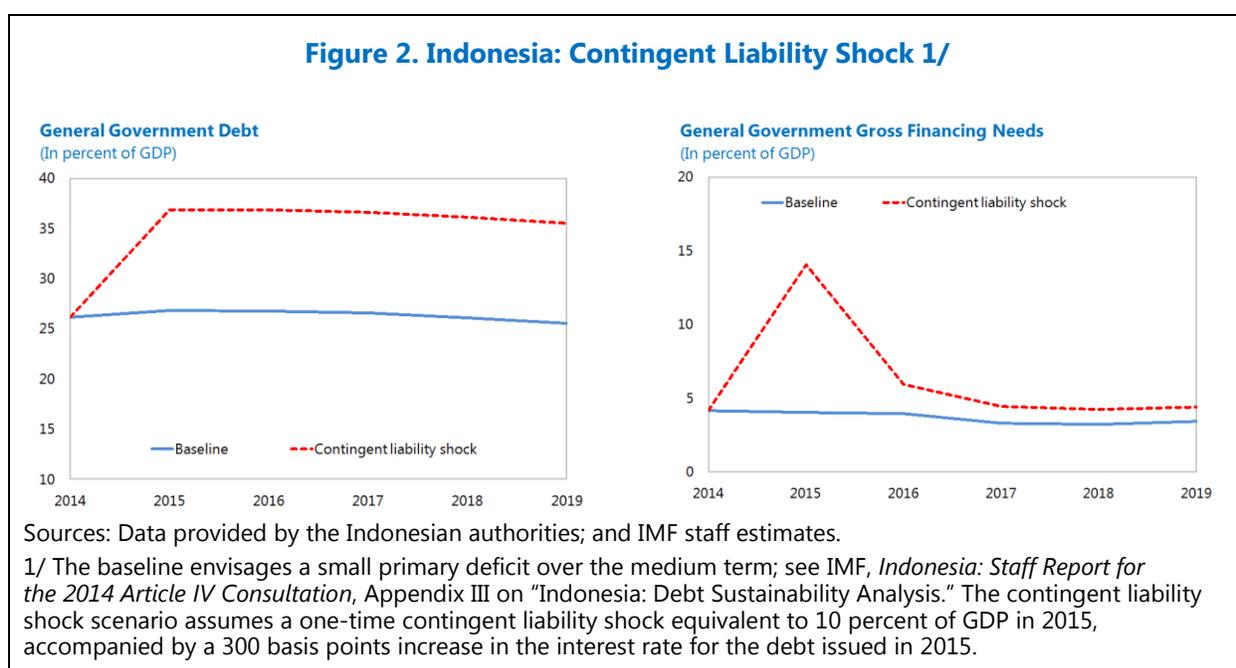
**Figure 1. Selected Emerging Market Economies: Public Debt Profile, 2014**



Sources: IMF, *Fiscal Monitor* database; and IMF staff estimates.

1/ For Indonesia, data as of end 2013; for other countries, data are 2014:Q1 or latest available.

**5. In addition to low public debt, contingent liabilities also appear manageable.** Based on available data, the size of contingent liabilities is not large enough to pose an immediate threat to debt sustainability. Nonfinancial SOEs' debt was moderately low at 5 percent of GDP at end 2013, but nearly doubled as a share of GDP since end 2009 (see Section C). Debt guarantees to support the financing of electricity and water infrastructure projects totaled only 1½ percent of GDP as of March 2014. Public-private partnerships (PPPs) projects are another potential source of contingent liabilities due to obligations such as state guarantees for minimum revenues, but Indonesia has contracted only around 70 PPP projects since 1990, with the cumulative investment of US\$35 billion (equivalent to about 4 percent of 2014 GDP).<sup>2</sup> In the event of a large one-time contingent liability shock (equivalent to 10 percent of GDP), the ratio of public debt and gross funding needs to GDP would initially rise, but public debt would unlikely be put on an upward trajectory, reflecting Indonesia's favorable public debt dynamics (Figure 2).



**6. Nevertheless, vulnerabilities have built up in recent years due to increased dependence on government funding from foreign investors.** The share of public debt held by nonresident investors (rupiah and foreign currency denominated) was around 59 percent of the total at end 2013, among the highest in major EMEs (Figure 1, bottom panel), as Indonesia has benefitted from the trend of increased risk appetite and global portfolio allocation to EMEs with the advent of unconventional monetary policies and low interest rates in the advanced economies

<sup>2</sup> Based on the World Bank's database on private participation in infrastructure (see <http://ppi.worldbank.org/index.aspx>).

since 2009 (IMF, 2014).<sup>3</sup> Nonresident investors raised their holdings in Indonesia in 2014, amid global push factors and relatively attractive yields, purchasing around 70 percent of the net issuance of government securities during the year (Figure 3, left panel), with their ownership of rupiah-denominated government bonds reaching nearly 40 percent of the total stock outstanding at end 2014 (Figure 3, right panel).



**7. A narrow revenue base with reliance on oil and gas revenues adds to fiscal vulnerabilities.** At around 17½ percent in 2014, Indonesia’s general government revenue-to-GDP ratio is among the lowest in peer EMEs, with revenues from oil and gas production around 17 percent of the total (3 percent of GDP). While the government’s fiscal rule has successfully maintained the general government deficit below the cap of 3 percent of GDP, the low revenue base coupled with large energy subsidies have constrained public spending on infrastructure and social programs in recent budgets. Energy subsidy reforms have opened space for larger spending in these areas.<sup>4</sup> However, a further drop in world oil prices from the IMF’s baseline outlook would subject the general government budget to additional revenue losses, with less offset coming from subsidy costs savings than in the past (Table 2), all pointing to the need to mobilize more non-oil and gas revenues.

<sup>3</sup> Debt held by nonresidents is currently above the early-warning threshold of 45 percent under the IMF’s debt sustainability framework for EMEs (IMF, 2013).

<sup>4</sup> See IMF, *Indonesia—Staff Report for the 2014 Article IV Consultation*, Box 5, “Indonesia: Fuel Subsidy Reform and the Fiscal Impact of Low World Oil Prices.”

**Table 2. Indonesia: Central Government Operations, 2014–15**

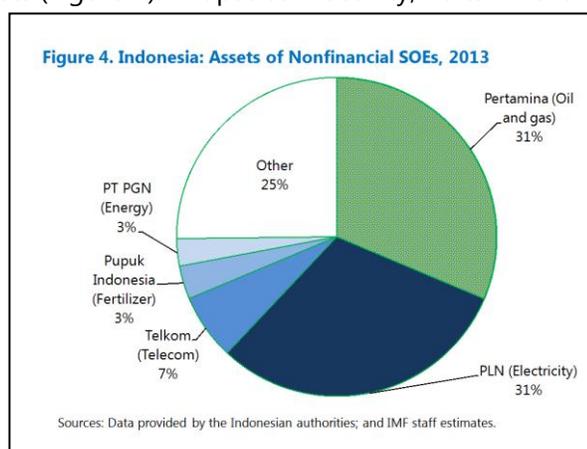
	2014 Prel.	2015		
		Baseline	Scenario 1 Low oil price 1/	Scenario 2 High oil price 1/
Crude oil price (US dollars per barre	96.2	51.4	30.0	70.0
		(In percent of GDP)		
Revenue	15.3	13.5	12.9	14.0
Oil and gas	3.0	1.4	0.8	1.9
Non oil and gas	12.3	12.1	12.1	12.1
Expenditure	17.5	15.9	15.7	16.1
Energy subsidy	3.4	1.0	0.9	1.2
Fuel	2.4	0.6	0.4	0.7
Electricity	1.0	0.5	0.4	0.5
Other	14.1	14.9	14.9	15.0
Overall balance	-2.3	-2.4	-2.8	-2.1

Sources: Data provided by the Indonesian authorities; and IMF staff estimates and projections.

1/ Scenario 1 (Scenario 2) assumes a world oil price of US\$30 per barrel (US\$70 per barrel). A lower oil price would reduce oil and gas revenues, while reducing energy subsidies and local government transfers (included in "other expenditure"). The rest of parameters are the same as in the baseline.

## C. Nonfinancial State-Owned Enterprises

**8. Nonfinancial SOEs play an important role in the Indonesian economy, particularly in the energy sector.** As of end 2013, Indonesia had 124 nonfinancial SOEs, with total assets of about 21 percent of GDP. Pertamina and PLN (Perusahaan Listrik Negara), the state electricity company, account for more than 60 percent of these assets (Figure 4). In upstream activity, Pertamina is currently the second largest oil producer in Indonesia, accounting for around 15 percent of average daily oil output in Indonesia in 2013, and the third largest gas producer, with a market share of 13 percent in 2013. On the downstream side, it has maintained a *de facto* monopoly in the distribution of key petroleum products such as gasoline and diesel. As for PLN, it accounts for more than 80 percent of national electricity generation and effectively monopolizes electricity distribution. For most of the final products of Pertamina and PLN (e.g., regular gasoline, diesel, LPG (3kg canisters), kerosene, and electricity), prices are administered by the government. While recent energy subsidy reforms effectively discontinued regular gasoline subsidies for all and electricity subsidies for medium and large users,



the other products are still subsidized by the government. For such subsidized products, the government budget compensates Pertamina and PLN with payments calculated based on agreed formulas to reflect economic costs, including changes in the exchange rate.

**9. Total and external debt of nonfinancial SOEs has increased in recent years, while their profits have compressed** (Figure 5). Although still relatively low, total debt doubled as a share of GDP between 2009 and 2013. About two-thirds of this increase originated from debt issued to nonresidents, with external debt reaching 2.8 percent of GDP at end 2013 (54 percent of total). Similarly, the share of foreign currency-denominated debt rose to about 70 percent in 2013. This trend mirrored a similar development in the corporate sector in Indonesia, reflecting loose global financial conditions and low borrowing costs abroad. Pertamina and PLN accounted for the majority of the increase in the aggregated debt level of nonfinancial SOEs, using the proceeds from new borrowing to finance investment in physical assets (e.g., oil pipelines, power plants). As a result, their balance sheets have become much more leveraged in recent years. On the other hand, nonfinancial SOEs' profits have fallen the past few years, while facing higher interest payments. PLN recorded losses of about 0.3 percent of GDP in 2013, mainly due to exchange rate depreciation.

**10. These developments make nonfinancial SOEs more susceptible to external shocks.** For SOEs that have relied on external debt financing, shifts in the global financial sentiment could raise their borrowing costs and further weaken profitability. For those SOEs with incomplete hedges of their foreign exchange exposure, exchange rate depreciation could erode their net worth, with PLN appearing more vulnerable in this respect. In addition, low world oil prices would affect Pertamina's revenues from upstream production and its profit margins. To reduce these vulnerabilities and better ensure profitability and debt sustainability, improvements in the operational efficiency of SOEs and maintenance of sound debt management remain important. A strengthening in the institutional capacity of the government and SOEs to plan, select, and execute high-quality infrastructure projects is also crucial, in light of government's strategy to recapitalize a number of SOEs in 2015 to increase their borrowing capacity (including external) to support infrastructure investment.<sup>5</sup>

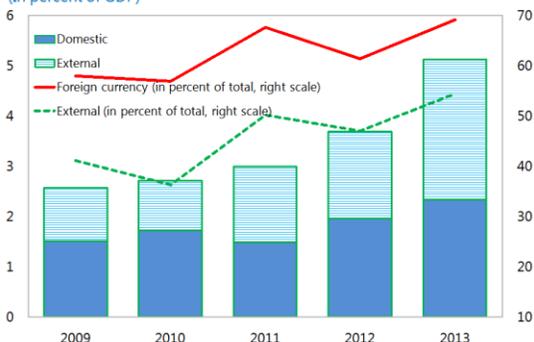
## D. Health and Pension Spending

**11. Public spending on health care and old-age pensions could become a significant source of fiscal risks in future.** Broadly speaking, this spending has three components: (i) demographics, because pension spending increases with the number of retirees, while the elderly spend more on health care; (ii) coverage of health care insurance and public pension schemes, and (iii) adequacy of benefit levels per recipient. While strengthening public health insurance and

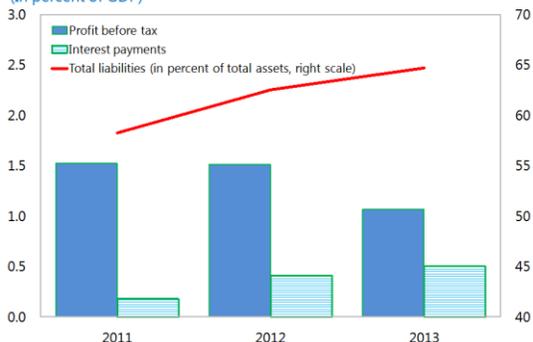
<sup>5</sup> See *Indonesia—Staff Report for the 2014 Article IV Consultation*, Box 4, "Indonesia: Closing the Infrastructure Gap."

**Figure 5. Indonesia: Financial Indicators of Nonfinancial SOEs, 2009–13**

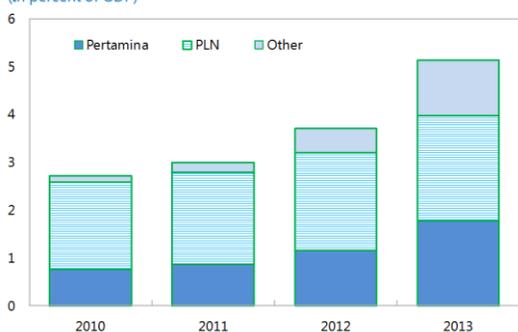
**Nonfinancial SOEs: Debt**  
(In percent of GDP)



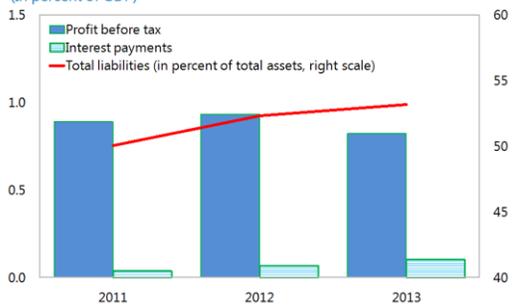
**Nonfinancial SOEs: Financial Performance**  
(In percent of GDP)



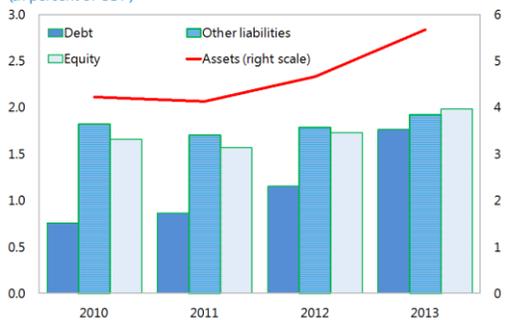
**Nonfinancial SOEs: Debt**  
(In percent of GDP)



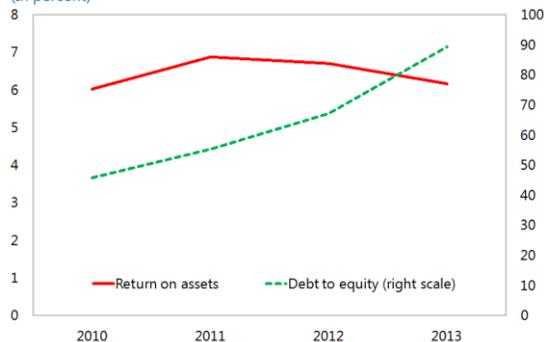
**Nonfinancial SOEs excluding Pertamina and PLN: Financial Performance**  
(In percent of GDP)



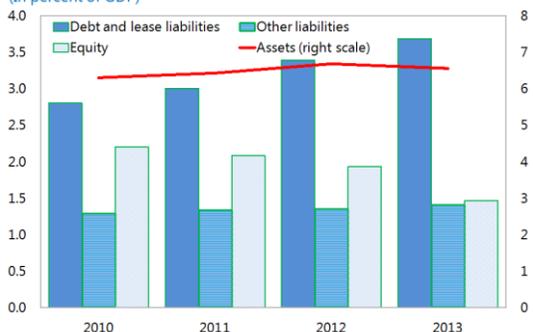
**Pertamina: Balance Sheet**  
(In percent of GDP)



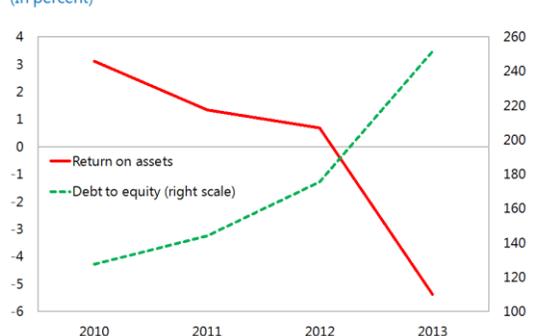
**Pertamina: Return on Assets and Debt-to-Equity Ratio**  
(In percent)



**PLN: Balance Sheet**  
(In percent of GDP)



**PLN: Return on Assets and Debt-to-Equity Ratio**  
(In percent)

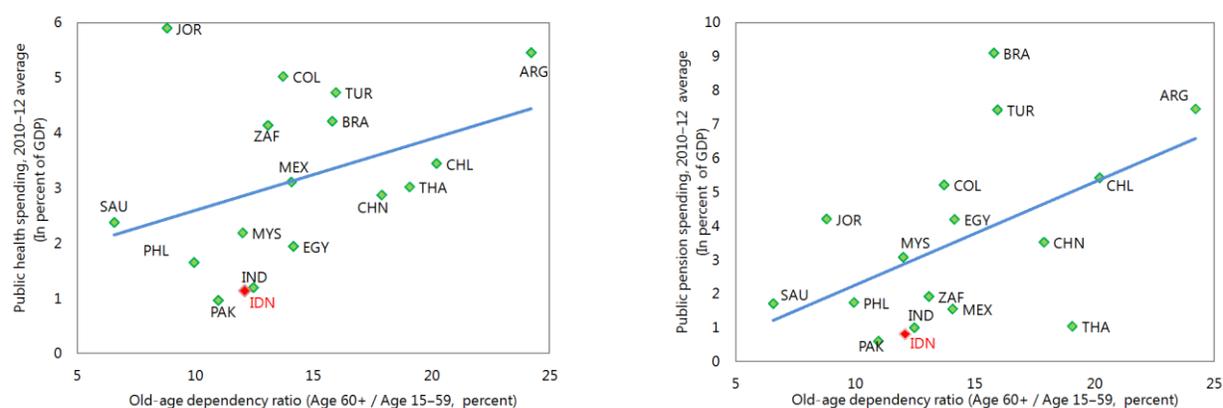


Sources: Data provided by the Indonesian authorities; *Public Sector Debt Statistics of Indonesia*; financial statements of Pertamina and PLN; and IMF staff estimates.

old-age pensions is seen as supporting stronger, more inclusive growth in developing economies, it recognizably can add to fiscal pressures. Population ageing tends to exacerbate such pressures in the long run.

**12. In recent years, public health and pension spending in Indonesia has been among the lowest of its peers** (Figure 6). In 2012, central government outlays for health and pensions were 1.2 percent of GDP and 0.8 percent of GDP, respectively. Demographics does not fully explain this, with Indonesia's old-age dependency ratio—defined as the ratio of the elderly population (age 60 and older) to the working-age population (age 15–59)—was at 12 percent in 2010, only slightly lower than the median for its peers (14 percent). Instead, low population coverage and possibly inadequate benefit levels appear to contribute more. For health, public spending covered only 40 percent of total health spending in Indonesia in 2012 (the median of the comparators included in Figure 6 is 50 percent). Also, because of supply bottlenecks, access to health care services is more limited in rural areas, holding down average per capita health spending (World Bank, 2014). For pensions, public spending consists mostly of civil service pensions (0.7 percent of GDP in 2012), with the rest accounted for by the pension scheme for formal private sector workers (i.e., the PT Jamsostek program). However, these two public pension schemes covered only around 12 percent of the total labor force in 2012 (Muliati and Wiener, 2014).<sup>6</sup>

**Figure 6. Selected Emerging Market Economies: Public Health and Pension Spending, 2010–12**



Sources: PT Jamsostek, *Annual Report 2013*; United Nations, *World Population Prospects, 2012 Revision*; World Bank, *World Development Indicators*; and IMF, *Fiscal Monitor* database, and staff estimates.

**13. In this context, the authorities have embarked on an initiative towards universal social insurance, including for health insurance and old-age pensions.** The initiative began in 2004 with enactment of the Law on the National Social Security System, followed in 2011 by a law establishing a single social insurance administrator, or BPJS (Badan Penyelenggara Jaminan Sosial). Under this

<sup>6</sup> In addition to the civil service pension scheme, civil servants also participate in a retirement benefit program called the THT (Tabungan Hari Tua) program, which provides lump sum retirement benefit. The accrued liabilities of the THT program are projected to reach around 2 percent of GDP by 2015 (World Bank, 2012).

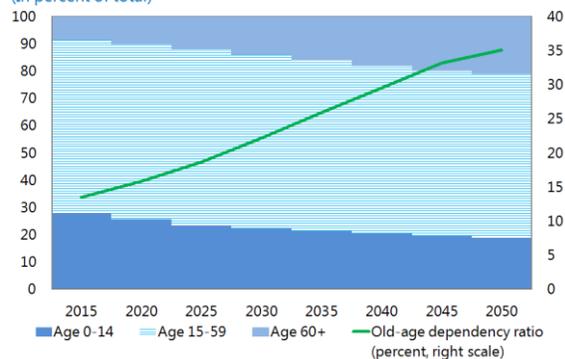
framework, the government began implementing a universal health insurance system (BPJS Health) in January 2014, consolidating several public health insurance schemes.<sup>7</sup> The new scheme is financed through contribution payments and aims at covering the entire population by 2019, including informal sector workers. Currently, the central government fully subsidizes contribution payments of the poor and the near-poor (the lowest 35 percent of income distribution), with the annual subsidy cost budgeted at around 0.2 percent of GDP in 2014. Separately, BPJS will start offering employment-related social insurance in July 2015, including old-age pensions and death benefits (called BPJS Employment). The new scheme aims at covering formal sector workers and will be financed by their payroll contributions, with no budgetary support envisaged. The pension schemes for civil servants and private sector workers will eventually be integrated into this scheme.

**14. Demographic prospects would contribute to a modest rise in public pension and health spending over the next few decades.** Assuming coverage and benefit levels remain unchanged and taking account of an expected rise in Indonesia's old-age dependency ratio to 35 percent in 2050 (Figure 7, left panel), public spending on health and pensions would increase by 0.2–0.3 percentage points of GDP by 2020, and only double as a share of GDP by 2050 (Figure 7, right panel).

**Figure 7. Indonesia: Demographic Prospects and Public Health and Pension Spending, 2010–50**

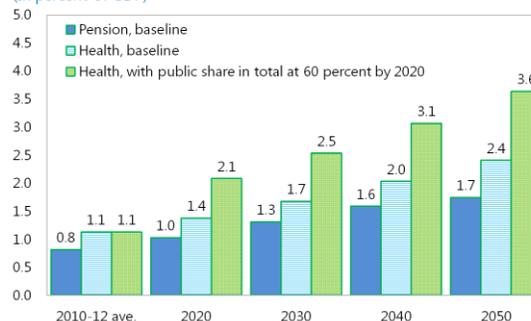
**Indonesia: Population Projection by Age Group, 2015–2050**

(In percent of total)



**Indonesia: Baseline Projections for Public Health and Pension Spending, 2010–50 1/**

(In percent of GDP)



Sources: PT Jamsostek, *Annual Report 2013*; United Nations, *World Population Prospects, 2012 Revision*; World Bank, *World Development Indicators*; and IMF, *Fiscal Monitor* database, and staff estimates.

1/ Baseline projections for pension and health spending take account of Indonesia's demographic prospects based on United Nations, *World Population Prospects, 2012 Revision*.

<sup>7</sup> The programs for civil servants (Askes), formal sector workers (Jamsostek), and the poor and near poor (Jamkesmas) have been consolidated into BPJS Health. Universal coverage still requires participation of non-poor informal workers.

**15. Broadening the coverage of health insurance would require careful management over the medium term.** Following the experience of Thailand in implementing universal health coverage, an alternative scenario might see the share of public spending in total health care spending rise from 40 percent now to 60 percent by 2020. In the event, the ratio of public health spending to GDP would reach 2.1 percent of GDP in 2020—0.7 percentage points of GDP above the baseline (Figure 7, right panel).<sup>8</sup> Eventually, public health spending would rise to 3.6 percent of GDP by 2050. To avoid undue burden on the budget, BPJS Health will need to ensure its financial sustainability. Contribution rates and patient copayments should be set at adequate levels, with budgetary offsets to limit burden for low-income participants.

**16. The pension system should be designed prudently to avoid emergence of fiscal risks in the long run.** Compared to BPJS Health, broadening coverage of the BPJS Employment will be challenging because informal sector workers account for 65 percent of the labor force (Muliati and Wiener, 2014). Even if this occurs, pension spending would not begin to climb noticeably until new entrants start to retire several decades later. Nevertheless, any expansion of the system should be designed in a way that avoids emergence of actuarial imbalances in future, which might necessitate budgetary support. Key parameters of pensions systems such as contribution rates, benefit levels, and retirement age will need to be reviewed periodically, backed by actuarial studies. In view of rising life expectancy, a gradual increase in retirement age could also be warranted.

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<sup>8</sup> Thailand has achieved universal coverage by expanding its health care system. As a result, the share of public spending in total health spending increased from 56 percent in 2000 to 76 percent in 2007 and has remained around this level since then.

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# RECENT DEVELOPMENTS IN BANKING SYSTEM LIQUIDITY<sup>1</sup>

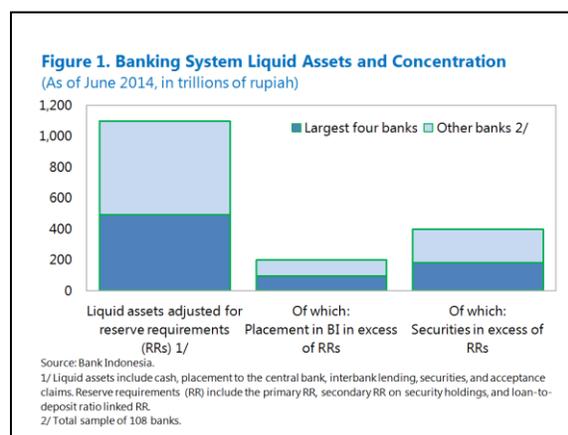
## A. Introduction

**1. This paper discusses recent developments in banking system liquidity in Indonesia.** At the outset, it highlights several structural characteristics that have helped shape liquidity developments in recent years, notably the microstructure underlying the distribution of liquidity and limitations in the money markets. Taking these into account, it then attempts to answer several questions. First, what has driven the decline in available liquidity since late 2011, in particular, why did deposit growth fall sharply over the past three years? Second, how have banks been affected by the decline—specifically, why has it been more acute at smaller banks? Third, what has been the effect of policy changes, particularly since mid 2013, on banking system liquidity; i.e., have they exacerbated structural liquidity problems or been effective in helping banks manage liquidity needs in a period of adjustment to tighter funding conditions? Fourth, what are the near-term prospects for banking system liquidity, in particular with a possible tightening in global financial conditions? Finally, the paper offers views on the implications of these factors on the monetary policy transmission mechanism in the current environment.

## B. Characteristics of Banking System Liquidity in Indonesia

**2. Several aspects of agents' behavior characterize the liquidity situation in the Indonesian banking system, which has led to a structural liquidity problem.**

This problem can be best described as the concentration of excess liquidity in larger banks, which exists beyond normal liquid asset requirements and has not been absorbed through instruments used by Bank Indonesia (BI) to conduct open market operations (Figure 1). It can be traced back to BI's liquidity support operations during the late 1990s, which resulted in a major expansion in the monetary base.<sup>2</sup> Large portfolio inflows in 2010–11 also contributed substantially



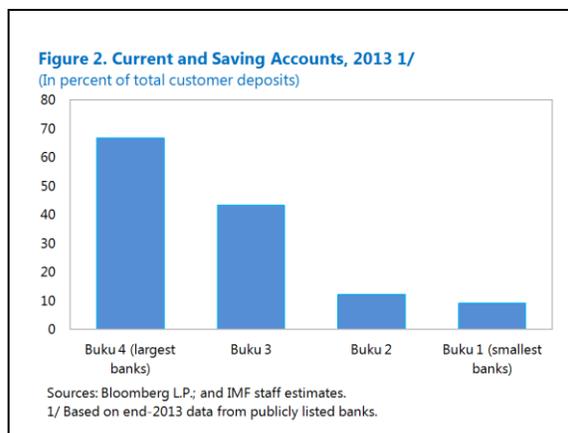
<sup>1</sup> Prepared by Seng Guan Toh.

<sup>2</sup> Following the onset of the Asian Financial Crisis, banks representing more than half of total assets of the system experienced deposit runs to varying degrees. In response, BI injected a large amount of liquidity into the banking system and in return received nontradable government bonds carrying little interest. Since then, BI has relied on use of its own securities (SBIs) to mop up the resulting excess liquidity (IMF, 2010).

to this liquidity, as a result of partial sterilization of the inflows.<sup>3</sup> The structural liquidity problem is symptomatic of the undeveloped money markets in Indonesia, which are thin, segmented, and generally inaccessible to the smaller banks. As a result, monetary policy transmission is hampered and development of a functional term structure of interest rates is constrained.

### 3. The main characteristics of banking system liquidity in Indonesia are as follows:

- Banks' funding structure is generally very short term, with dependence on large deposits, and highly skewed in favor of large banks.* Reflecting depositor preferences, more than 90 percent of maturities are of one month or less or at call, although they are typically rolled over. Current and savings accounts (CASA deposits) represent over half of the total funding base and term deposits<sup>4</sup> the rest. Large corporate-related deposits tend to be a dominant source of funding<sup>5</sup> and come from the banks' premium customers. The top four largest banks (i.e., Buku 4 banks, or those with core capital above Rp 30 trillion) have access to almost three-fifths of low-cost and stable CASA deposits of the system, reflecting their larger branch and ATM network and name recognition, while mid-sized and small banks rely predominantly on higher-cost term deposits for funding (Figure 2).
- Demand for precautionary liquidity buffers is high, reflecting banks' self-insurance for liquidity management.* Given the history and funding structure of the Indonesian banking system, deposit flight remains an element taken into account in banks' behavior.<sup>6</sup> Banks have tended to place sizable excess liquidity with BI in a range of short-term facilities. To manage available liquidity, some have also tended to keep their credit extension in check relative to



<sup>3</sup> The challenge to monetary authorities of sterilizing liquidity from surging inflows to the region was not confined to Indonesia. For example, during 2010–11, the Philippines's central bank nearly exhausted its holdings of government securities for use as collateral in reverse repo transactions. Given constraints on issuance of its own securities, Bangko Sentral ng Pilipinas had to rely increasingly on other instruments such as nontradable special deposit accounts. Furthermore, the emergence of excess reserves in the money market in the Philippines contributed to market interest rates falling below the policy rate, affecting monetary policy transmission (Affandi and Peiris, 2012).

<sup>4</sup> At end 2013, almost half of term deposits had a maturity of one month or less.

<sup>5</sup> The heavy concentration of the deposit base was such that the Deposit Insurance Corporation (LPS) noted that at end 2013, a mere 0.3 percent of depositors owned 61 percent of deposits by value. This is also why the LPS did not guarantee approximately 55 percent of the nominal values of total deposits (despite having an ample ceiling equivalent to almost US\$200,000 per bank depositor).

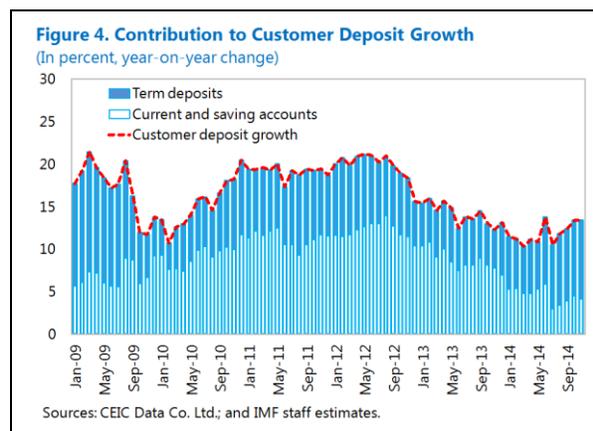
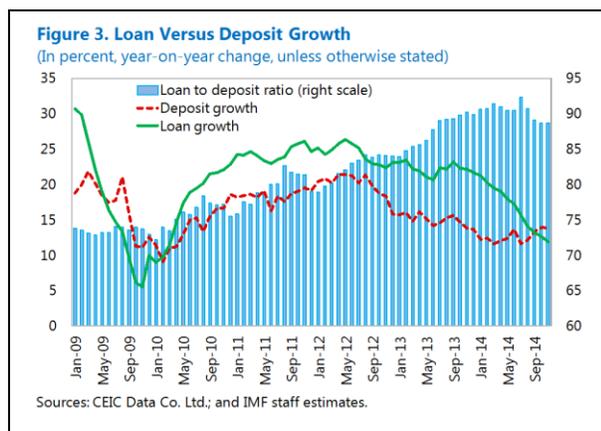
<sup>6</sup> This also helps explain why the maximum deposit guarantee rates set by LPS have some influence on banks' at-the-counter deposit rates.

their deposit-taking activities,<sup>7</sup> with low loan-to-deposit (LDR) ratios at some banks precipitating BI to introduce a floor on them in 2010 to spur credit growth. The shallowness of the money market, perceptions of supervisory stigma in accessing BI's standing facility for lending, uncertainties surrounding the availability of a fully functioning lender of last resort, lack of averaging in reserve requirements, and capacity limitations of the deposit insurance scheme also contribute to the preference by banks to hold excess liquidity.

- *The money market lacks depth, reinforcing the concentration of bank liquidity and diminishing its influence on broader liquidity conditions.* Incentives to trade in the interbank money market are weak, given banks' desire to hold precautionary liquidity, while access by smaller banks is limited due to concerns about counterparty risks. Given the small interbank volumes relative to system-wide activity, money market rates do not give an accurate picture of funding conditions and have a limited impact on banks' deposit rate setting.

### C. Recent Trends in Bank Liquidity Conditions

**4. Banking system liquidity in Indonesia has generally been on a declining trend since late 2011, driven primarily by a slowdown in deposit growth.** This trend is reflected in a slowing of growth in both term and CASA deposits, which peaked by early 2012 and declined noticeably thereafter (Figures 3 and 4). The deposit growth slowdown can be attributable to several factors: (i) constrained corporate cash generation following the downturn in the commodity cycle since 2012; (ii) more volatile capital flows since mid 2012, lowering the net foreign assets (NFA) contribution to M2; and (iii) the drawdown of deposits given the opportunity cost imposed by low bank deposit rates prior to mid 2013.



**5. At the same time, bank credit growth picked up as the effects of the global financial crisis (GFC) waned,** peaking in May 2012 at around 26 percent (y/y). Consequently, the average LDR of banks rose sharply from 72 percent at the beginning of 2010 to more than 92 percent by July 2014. The trend of higher LDRs from slowing deposit growth relative to credit growth was not

<sup>7</sup> Small banks' LDRs are typically capped by funding constraints.

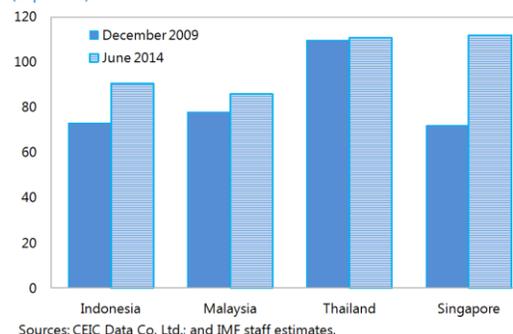
unique to Indonesia; this was also seen in Malaysia, Singapore and Thailand (Figure 5), driven in part by a combination of credit-supportive policies adopted after the GFC and shifts from bank deposits into alternative financial products amidst relatively low levels of local interest rates.

**6. Prior to mid 2013, however, large banks in Indonesia still viewed liquidity buffers as comfortable.** At the time, they continued to hold a large amount of structural liquidity, predominantly in the form of short-dated nontradable term deposits with BI. Banks' reliance on them for liquidity management was reinforced over time by BI's gradual reduction starting in mid 2010 of its issuance of SBIs for liquidity absorption (Figure 6), due to the tendency for these instruments to attract volatile capital flows, which complicated monetary management. In contrast, due to the constraints in their funding structure, smaller banks were more sensitive to liquidity pressures, with many offering term deposit rates above the deposit insurance corporation (LPS) guaranteed ceiling rates.

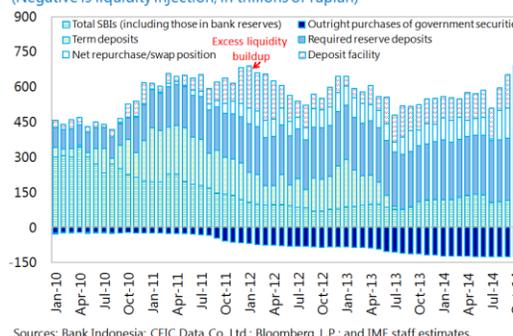
**7. From mid 2013 to mid 2014, a reassessment of liquidity conditions among large banks occurred.** This change was prompted by the shock from the May 2013 Fed tapering talk combined with several related developments, which tightened bank funding conditions, triggering a period of adjustment.

- *Liquidity conditions tightened further as deposit growth continued to slow noticeably relative to credit growth, pushing up LDRs further (Figure 7). Initially this was due to foreign portfolio outflows, mainly in 2013:Q3, but as these subsequently normalized, deposit growth remained subdued into 2014:H1 by the broader*

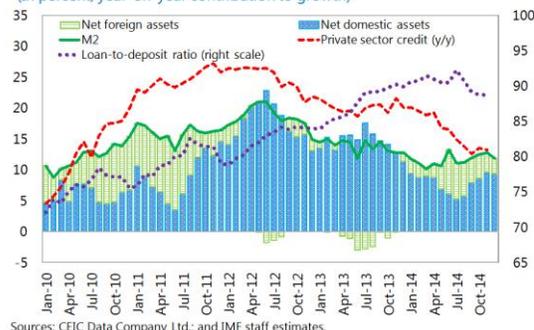
**Figure 5. Selected ASEAN Countries: Loan-to-Deposit Ratios (in percent)**



**Figure 6. Bank Indonesia's Liquidity Absorption by Instrument (Negative is liquidity injection, in trillions of rupiah)**

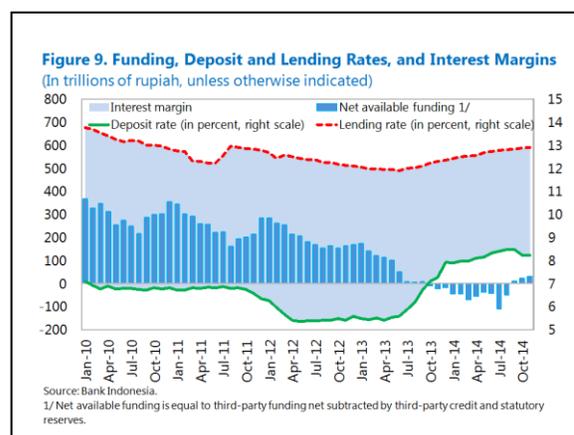
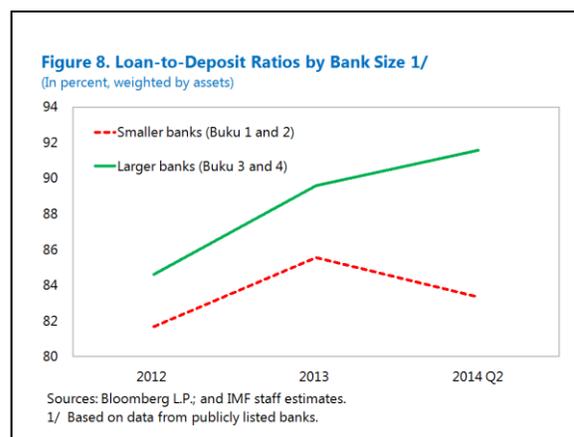


**Figure 7. Monetary Aggregates and Loan-to-Deposit Ratios (In percent, year-on-year contribution to growth)**



*slowdown* in economic activity. Liquidity conditions in 2014 were also affected by substantial frontloading of government financing needs<sup>8</sup> and large private external amortization payments. Bank Indonesia signaled its guidance for banks to adjust liquidity positions by increasing from September 2013 the secondary reserves requirement (on liquid assets) and lowering the upper LDR limit on which banks would incur additional reserve requirements.<sup>9</sup>

- Attempts to slow private credit growth could not initially keep pace with declining deposit growth, particularly for large banks.* Large banks mainly retrenched new loan approvals, particularly for working capital; outstanding loans could not be adjusted down as quickly, as customers drew on previously unutilized credit lines. Faced with more severe funding constraints, smaller banks cut credit lines forcefully and mobilized funding from equity owners. Several of them also borrowed from the interbank repo market, which was temporarily boosted by a new Mini Master Repo Agreement rolled out at end 2013. As a result, even though the LDRs of smaller banks (Buku 1 and 2) had begun to decline, the LDR of larger banks (Buku 3 and 4) generally rose further in 2014:H1 (Figure 8), indicative of the tighter funding pressures they faced.
- These developments, coupled with a reassessment of depleted liquidity buffers, prompted a surge in large banks' competition for term deposits.* The onset of acute funding pressures in this period was reflected in a steep decline in net available funding (customer deposits subtracted by credit, adjusted for statutory reserve holdings), which led to a marked rise in deposit rates due to aggressive competition for term deposits (Figure 9).



<sup>8</sup> In light of market uncertainties, the government frontloaded its issuance of rupiah securities in 2014:H1. As a result, it accumulated surplus financing estimated in excess of 0.6 percent of GDP in 2014:H1 compared to the same period in the previous year, which resulted in a large buildup in government deposits placed in BI.

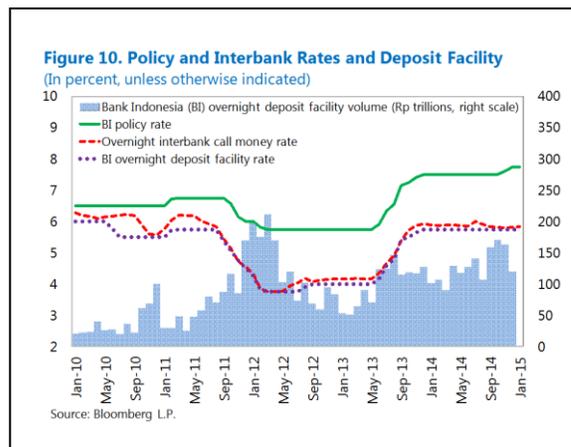
<sup>9</sup> Bank Indonesia raised the secondary reserve requirement (RR) in September 2013 (fulfilled by banks' holding of treasury and BI securities) from 2.5 percent to 4.0 percent, to be phased in by December 2013, and also tightened the LDR-linked RR by applying it to banks with an LDR in excess of 92 percent (previously 100 percent) and with a capital adequacy ratio under 14 percent.

These system-wide average rates likely understate the extent of the “deposit war” among banks, as banks were widely reported to offer special rates to their premium customers that were higher than at-the-counter rates. Lending rates were also adjusted upward, but less rapidly and only with a lag, as banks’ wide net interest margins (NIMs) provided a cushion to absorb increases in deposit rates for a time, as banks were reluctant to lose market share with their premium customers.

## D. Role of Policy Actions

### 8. Actions by BI have been aimed at smoothing adjustment in rupiah liquidity conditions.

When the tapering talk pressures hit, BI rapidly unwound the term deposit facilities with banks to offset the sharp liquidity contraction that would have resulted due to its large FX sales interventions, particularly in the June-July 2013 period. As a result, the amount outstanding in such facilities was brought down to virtually zero by September 2013. Purchases of rupiah government bonds in line with BI’s dual intervention (FX and bonds) strategy also provided a secondary source of liquidity injections. The combination of these injections more than offset the contractionary influences, resulting in a buildup of cash parked by banks in BI’s overnight deposit facility (FASBI), which more than doubled between May and August 2013, and which has since remained large. This buildup also kept overnight interbank rates close to the FASBI rate, notwithstanding increases in the BI benchmark rate (Figure 10). Meanwhile, the use of swaps by BI, including via FX swap auctions, provided rupiah liquidity to segments of banks experiencing acute mismatches between FX and rupiah funding.



### 9. Policy actions outside of BI, however, have tended to exacerbate the tightness in bank liquidity conditions up to mid 2014.

First, the government’s sizable issuance of rupiah securities added to liquidity demands on larger banks. These banks, as primary dealers, have had to commit liquidity to securities auctions at an elevated level since mid 2013, as a consequence of the government’s catch-up issuance in 2013:H2 and frontloading strategy in 2014:H1. Second, slower-than-usual execution of the government capital budget in 2014:H1 added to liquidity pressures, particularly at smaller regional banks, which tend to be more reliant on this type of funding. Third, deposit rates, particularly those at the counter, rose further following an increase in deposit insurance (LPS) guaranteed rates in May 2014, which occurred at a time of peak seasonal cash demand pressures before Ramadan.

**10. Recent supervisory action to introduce deposit rate caps could create additional distortions.** The measure, undertaken by the Financial Services Agency (OJK), aimed to alleviate competition among large banks for term deposits and bring down lending rates. Effective October 1, 2014, deposit rates offered on all bank deposits up to Rp 2 billion were capped at no more than the maximum LPS-guaranteed rate (at 7.75 percent). Deposit rates for large deposits (above Rp 2 billion) were capped at (i) 200 bps above the current BI rate for the largest banks (i.e., Buku 4 banks) and (ii) 225 bps above the current BI rate for medium to large banks (i.e., Buku 3 banks, with core capital between Rp 5 trillion and Rp 30 trillion). While the full effects of these measures have yet to be seen,<sup>10</sup> it could potentially send confusing signals about BI's monetary policy stance and encroach on BI's monetary policy operations, further distorting policy transmission by introducing an interest rate control with a fixed spread around the BI rate. The caps also limit the ability of individual banks in the system to adjust to shocks on liquidity via interest rate flexibility on deposits, which could not only affect their ability to mobilize large deposits, but even small ones (i.e. less than Rp 2 billion) given the lower level of rate caps being applied to these. Under these conditions, banks may resort to keeping more liquidity for self-insurance purposes.

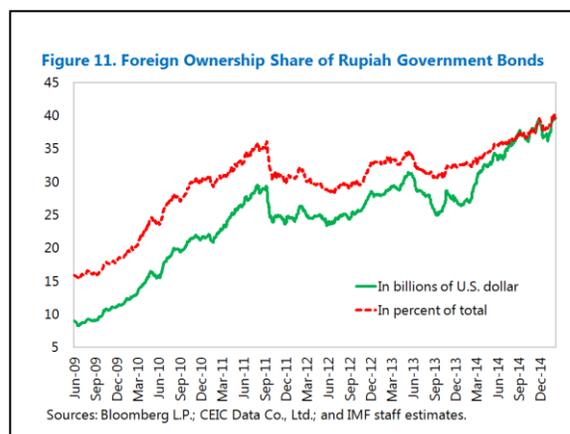
## E. Near-Term Prospects and Risks

**11. Even though bank liquidity conditions remain relatively tight, there has been some easing since the second half of 2014 on a combination of adjustments and seasonal factors.** First, credit growth has decelerated below deposit growth in 2014:H2. Second, portfolio inflows have been sizable since late 2013, helping replenish deposits, as reflected in increases in the NFA component of M2 (Figure 7) and the level of BI's gross international reserves. Third, government budget execution improved in 2014:H2, while seasonal deposit outflows also eased, following the surge in profit repatriation abroad, external amortization payments, and imports in 2014:Q2. Large banks have lowered their special deposit rates to premium customers. However, system-wide LDR remained relatively elevated, registering at around 88 percent as of November 2014.

**12. The banking system remains vulnerable to deterioration in external financing conditions, or at the extreme, a sudden reversal of portfolio flows.** This could occur in the event of unexpected sharp tightening in global financial conditions in 2015. Buoyant conditions in 2014 had facilitated record sovereign bond issuance and portfolio inflows into rupiah government bonds,

<sup>10</sup> A similar measure to cap deposit rates was attempted by BI in 2009 through suasion, with mixed results, notably with lending rates remaining relatively high while tending to bolster banks' net interest margins.

with foreign bidders taking up about a third of new rupiah treasury issuances. Vulnerability to a reversal is now heightened as large foreign holdings have risen further to record highs (Figure 11).<sup>11</sup> Domestically, the gross fiscal financing requirement in 2015 is expected to remain large relative to 2014. If the government were to face challenges borrowing abroad, it would have to rely more on the domestic market, potentially putting a further squeeze on domestic liquidity and driving up private borrowing costs.



## F. Implications for the Monetary Transmission Mechanism in the Current Environment

**13. Monetary policy operations tended to have a more limited impact on the banking system's marginal cost of funds,** which appears driven more by rates on premium deposits. As noted, the rates paid by banks on these deposits tend to be less reflective of money market conditions, due to banks' heightened attention to their LDR. However, changes in the BI policy rate and LPS guarantee rate affect banks' average cost of funds, as at-the-counter deposit rates are benchmarked off these two policy rates (even before the recent OJK action to cap deposit rates).

**14. Lending rates appear relatively insensitive to the increase in the marginal cost of funds, and tend to be based more on the average cost of funds of the largest banks,** which set the market reference for lending rates and are the dominant credit providers in the system. Lending rate adjustments have been sluggish, as these banks preferred to compress their large NIMs as system-wide deposit rates increased, rather than raise lending rates sharply and unnecessarily risk the loss of their premium customers or a rise in nonperforming loans.

**15. The main impact from an interest margin squeeze tends to occur through loan portfolios of the small and medium sized banks,** reflected in either aggressively cutting credit lines to noncore customers or attempting to shift the loan book towards high-yielding credits to preserve their NIMs.

<sup>11</sup> Notably, the foreign share of rupiah government bond holdings rose from about 30 percent in October 2013 to 40 percent by January 2015. However, for Indonesia, the predominant share of institutional investor holdings (relative to retail investors) historically provides a partial stabilizing factor during outflow episodes due to global volatility.

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