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INDONESIA ECONOMIC QUARTERLY

March 2014

Investment in flux

THE WORLD BANK | BANK DUNIA
Sharing Development Solutions
for an Emerging Indonesia

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Preface

The Indonesia Economic Quarterly (*IEQ*) has two main aims. First, it reports on the key developments over the past three months in Indonesia's economy, and places these in a longer-term and global context. Based on these developments, and on policy changes over the period, the *IEQ* regularly updates the outlook for Indonesia's economy and social welfare. Second, the *IEQ* provides a more in-depth examination of selected economic and policy issues, and analysis of Indonesia's medium-term development challenges. It is intended for a wide audience, including policymakers, business leaders, financial market participants, and the community of analysts and professionals engaged in Indonesia's evolving economy.

The *IEQ* is a product of the World Bank's Jakarta office. The report is compiled by the Macro and Fiscal Policy Cluster, Poverty Reduction and Economic Management (PREM) Network, under the guidance of Jim Brumby, Sector Manager and Lead Economist, Ndiame Diop, Lead Economist and Economic Advisor, and Ashley Taylor, Senior Economist. Led by Alex Sienaert and with responsibility for Part A, editing and production, the core project team comprises Arsianti, Magda Adriani, Masyita Crystallin, Fitria Fitrani, Ahya Ihsan, Elitza Mileva (Part A lead), Michele Savini Zangrandi and Violeta Vulovic. Administrative support is provided by Titi Ananto and Sylvia Njotomihardjo. Dissemination is organized by Nur Raihan, Indra Irnawan, Jerry Kurniawan and Nugroho Sunjoyo, under the guidance of Dini Sari Djalal.

This edition of the *IEQ* also includes contributions from Yue Man Lee and Arvind Nair (Section B.1, mineral exports policy), Suryani Amin, Abigail Baca, Iwan Gunawan, Jossie McVitty and Saut Sagala (Bandung Institute of Technology)(Section B.2, urban disaster risk preparedness). Key input was received from The Fei Ming, Neni Lestari, Djauhari Sitorus and Carlos Pinerua. The report also benefited from discussions with, and in-depth comments from, Mark Ahern, Bill Wallace (Australia Indonesia Partnership for Economic Governance) and Roland Rajah (Australian Department of Foreign Affairs and Trade). Peter Milne edited much of the report.

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Executive summary: Investment in flux

As Indonesia's economic adjustment to a changing global environment continues, further progress is needed on long-standing policy priorities…

Indonesia's economy continues to adjust to weaker terms of trade and tighter external financing conditions, with the composition of growth tilting more towards net exports, and economic growth slowing moderately. While this shift is positive for macroeconomic stability, it has to date been based primarily on tighter monetary policy and the depreciation of the Rupiah in 2013, the effects of which are continuing to play out. To further reduce Indonesia's vulnerability to external shocks, to minimize the risks of a more marked cyclical slowdown in growth, and to convert the near-term macro adjustment into strong, sustained growth over the longer term, further progress on long-standing policy priorities is warranted.

…including improvements in the quality of the investment and trade climate, fiscal reforms, and continuing to make progress on loosening the structural impediments to growth

Progress in three key areas can support both near-term macro stability and Indonesia's long-term economic prospects. First, there is a need to support domestic and foreign investor confidence. Recent policy and regulatory developments, including the partial ban on mineral exports, have increased uncertainty, may weigh on investment across the economy, and compound the usual difficulty of predicting policy ahead of elections. Given rising fiscal pressures from slower revenue growth and higher fuel subsidy costs, the second priority is to broaden the revenue base and improve the quality of spending, notably by reducing energy subsidy expenditure. These measures would also increase available fiscal space for more equitable, pro-growth spending. Third, credible progress is needed on addressing structural impediments to stronger and more inclusive growth, namely infrastructure and worker skills gaps, and factor and product market constraints. The policy environment is naturally constrained ahead of legislative elections in April and the presidential election in July. However, in light of ongoing economic risks and Indonesia's ambitious development agenda, laying the groundwork for future reforms, minimizing policy uncertainty, and making continued reform progress in some areas, should remain a priority.

Global economic conditions are also shifting, bringing challenges for Indonesia

The global economy continues to strengthen gradually, led by the ongoing recovery in high-income economies, notably the US and the Euro Area. This is broadly positive for emerging market economies (EMEs) including Indonesia, since it means a general strengthening in trade flows. However, the price trajectories of many commodities, which together account for about two-thirds of Indonesia's goods exports, remain subdued, and downward price

pressures may continue due to supply-side factors, and China's continued rebalancing away from credit-fueled investment. In addition, the pricing-in of a gradual withdrawal of extraordinarily accommodative monetary policy in the US is placing upward pressure on global interest rates. Portfolio investment inflows to EMEs have slumped as investors assess adjustment risks and longer-term relative growth prospects, with markets appearing increasingly to differentiate amongst countries on the basis of domestic vulnerabilities.

Indonesia's economic rebalancing continued through the end of 2013, visible in moderating fixed investment and rising net export volumes…

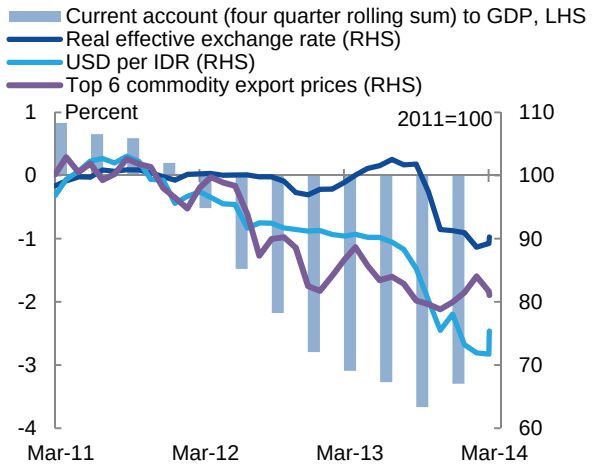
Indonesia's economy continued to rebalance in the fourth quarter of 2013, adjusting to weaker terms of trade and external financing constraints through tighter monetary policy and currency depreciation. Net exports provided a significant boost to growth, due to a moderation in import volume growth and pick up in exports. Fixed investment maintained its below-average pace of growth, pulling down growth and dampening import demand. Private consumption indicators have been more mixed, with some signs that this too is moderating, but election-related spending may well provide a short-term fillip.

…and the current account narrowed, although in part due to temporary factors

The speed and extent of Indonesia's external balance adjustment (Figure 1) has remained in focus for policymakers and investors. Indonesia's current account deficit narrowed sharply in the fourth quarter of 2013, to USD 4.0 billion (2.0 percent of GDP), from USD 8.5 billion in the third quarter, supporting investor sentiment and the Rupiah, which has climbed 7 percent against the US Dollar so far in 2014. The narrowing in the current account deficit was driven by a solid rise in the goods trade balance, partly, but not only, on account of increased mineral exports ahead of the mineral export ban in January.

Figure 1: Recent current account, commodity price, and exchange rate developments offer some relief

(Current account deficit, exchange rates and commodity prices)



Note: "Top 6 commodity prices" is an export-weighted index of USD coal, gas, palm oil, crude oil, rubber and copper prices
Source: BI; BPS; World Bank staff calculations

Import compression continued on the back of subdued capital and intermediate goods imports. However, the basic balance, the sum of the current account balance and net FDI, is projected to stay negative in the near term, implying that Indonesia will continue to rely on potentially volatile portfolio and other investment inflows. Gross external financing needs beyond current account financing also remain significant, with short-term external debt standing at USD 56.7 billion as of December, according to Bank Indonesia (BI). Consequently, Indonesia remains susceptible to any renewed tightening in external financing conditions.

Credit growth has weakened, and seasonal factors and exchange rate pass-through are affecting inflation

The adjustment of Indonesia's external balances has been the explicit focus of BI since mid-2013. The tighter monetary policy stance in the second half of last year, as well as the more subdued investment outlook, has contributed to a marked slowdown in credit growth. Weaker deposit growth and limited loan-to-deposit ratio headroom, especially for some smaller banks, indicate that this is likely to persist for some time. In terms of the near-term outlook for inflation, the recent appreciation of the Rupiah, and the lags in the pass-through effect to the economy of earlier interest rate increases, should combine to keep inflationary pressures in check.

While 2013 saw a moderate fiscal deficit of 2.2 percent of GDP, nominal revenue growth has slowed and fiscal pressures are increasing

Indonesia's fiscal sector faces pressures from weaker nominal revenue growth and higher energy subsidy costs. The provisional 2013 Budget outturn showed a fiscal deficit of 2.2 percent of GDP, a better-than-expected result, which was due to expenditure shortfalls rather than higher than projected revenues. Nominal revenue growth, having declined markedly to 6.8 percent in 2013 from 10.5 percent in 2012 and 21.6 percent in 2011, is expected to remain soft in 2014, reflecting the moderation in economic, and import, growth, and the absence of significant new measures to boost revenue collections. On the expenditure side, fuel subsidy spending continues to be poorly targeted, distortionary and to impose high opportunity costs and fiscal risks. For example, higher Rupiah-denominated fuel costs are projected by the World Bank to push up fuel subsidy spending to IDR 267 trillion in 2014 (2.6 percent of GDP) from IDR 210 trillion in 2013 (2.2 percent of GDP), and above the original 2014 Budget allocation of IDR 211 trillion. Reform, such as a move from a discretionary to rule-based fuel price adjustment, is clearly important and should aim to reduce budget uncertainty and subsidy spending and to ensure that the poor and vulnerable are protected from higher prices.

The World Bank projects GDP growth to slow moderately to 5.3 percent in 2014, and the current account deficit to narrow to 2.9 percent of GDP…

The baseline World Bank projection for Indonesia's GDP growth in 2014 remains unchanged from the December 2013 *IEQ*, at 5.3 percent year-on-year (yoy) (Table 1). Private consumption is expected to receive a temporary boost ahead of the April and July elections, but tighter credit conditions for households may be an offsetting factor for 2014 as a whole. Similarly, investment growth is expected to remain subdued on account of higher borrowing costs, lower commodity prices, and higher Rupiah-denominated prices of imported capital goods compared with recent years. Export growth is projected to rise gradually along with external demand, contributing to a modest rise in GDP growth, to 5.6 percent in 2015. By the end of the year, monthly CPI inflation is expected to fall just below the ceiling of BI's target band of 3.5-5.5 percent yoy and to remain there until end-2015. The current account deficit is projected at 2.9 percent of GDP for 2014. Moving into 2015, the current account balance is expected to improve further but to remain in deficit, with the impact of the mineral export ban likely to delay the return of the trade balance to surplus, and persistent structural deficits in the income and services accounts.

Table 1: Under the baseline scenario, Indonesia's growth is projected at 5.3 percent in 2014

		2012	2013	2014	2015
Real GDP*	(Annual percent change)	6.2	5.8	5.3	5.6
Consumer price index*	(Annual percent change)	4.3	6.9	6.2	5.2
Current account balance	(Percent of GDP)	-2.8	-3.3	-2.9	-2.1
Budget balance**	(Percent of GDP)	-1.9	-2.2	-2.6	n.a.
Major trading partner GDP	(Annual percent change)	3.4	3.5	4.0	4.1

Note: Figures for 2014 and 2015 are World Bank projections. *Annual average. **2013 is unaudited outturn
Source: BI; BPS; Ministry of Finance; World Bank staff calculations

…but external financing constraints may re-intensify…

The baseline projection of only a relatively modest further reduction in growth is predicated on the continued availability of external financing to meet significant gross financing needs. Investor sentiment has recently improved and, year-to-date, the Rupiah has gained approximately 7 percent against the US Dollar, domestic equities are up 9 percent, and domestic currency government bond yields have declined by about 30 basis points. Nevertheless, a resumption of heightened volatility in external financing conditions remains a risk, particularly as the US Federal Reserve (Fed) continues to "taper". In addition, should the US recovery surprise to the upside, this would be positive for Indonesia's trade prospects, but would also likely cause markets to re-evaluate the timing of Fed policy rate increases, potentially pressuring investment flows to major EMEs such as Indonesia. There also remains a risk of weaker-than-projected external demand, in particular from the trade impact of China's rate and composition of growth, which may also affect commodity prices.

…and recent policy developments add uncertainties…

Notwithstanding the political noise ahead of the April and July elections, it will be especially important, to the extent possible, to make continued progress on improving Indonesia's economic resilience and sustainable growth rate. However, some recent policy and regulatory developments, including the partial ban on unprocessed mineral exports, new

trade and foreign ownership laws, and the delay in implementing the revised negative investment list, are in fact increasing policy uncertainties. The January ban on unprocessed mineral exports has been a particularly prominent recent policy change, with potentially far-reaching implications for the mining sector and wider economy. The policy process leading to the introduction of the revised regulations in January 2014, and the subsequent legal challenges, has further weakened perceptions of Indonesia's mining investment climate, which is already rated one of the poorest in the world.

…with the mineral export ban policy expected to have a significant, negative near-term impact on trade and fiscal revenues

Through the imposition of the partial ban and new export tax on unprocessed mineral exports, Indonesia is seeking to boost domestic value-addition in the mineral sector. It is hoped that this will lead to higher growth, employment and fiscal revenues. Whether these outcomes will be achieved depends on the extent to which the policy can stimulate development of new smelting and refining capacity, on the degree to which increased processing increases value-addition, and on achieving sufficient gains in export and fiscal revenues from processed minerals to offset losses from reduced unprocessed exports and higher import requirements from building and operating smelters. International experience highlights that such policies often fail to achieve their aims. Focusing on the short to medium-term impacts, the World Bank estimates that there will be a negative impact on net trade of USD 12.5 billion and a total loss in fiscal revenues (royalties, export taxes and corporate income tax) of USD 6.5 billion from the current (as written, *de jure*) policy in 2014-17, including a USD 5.5 to 6.5 billion drag on the trade balance in 2014 alone. While the quantum remains uncertain, negative impacts of this order from the ban, along with the broader economic issues the policy raises, suggest it is worthwhile to evaluate a wider set of policy options to ensure that Indonesia benefits to the maximum extent possible from its considerable mineral wealth in a socially and environmentally sustainable manner.

A forthcoming World Bank report, *Indonesia: Avoiding the Trap,* argues that Indonesia can achieve its ambitious longer-term development goals with the right productivity-focused growth strategy and by implementing high-priority structural reforms…

While near-term macroeconomic adjustments, and the debate over value-addition in the minerals sector, have understandably captured much of the attention in recent policy debates, an election year is also an opportune time to re-examine Indonesia's wider, longer-term economic development aspirations. Within the next two decades Indonesia aspires to generate prosperity, avoid a middle-income trap and leave no one behind as it tries to catch up with high-income economies. These are ambitious goals. Realizing them requires sustained high growth and job creation, as well as reduced inequality. Can Indonesia achieve them? This edition of the *IEQ* provides a summary of the World Bank's forthcoming report, *Indonesia: Avoiding the Trap*. This argues that Indonesia has the potential to rise and become more prosperous and equitable. But the risk of "floating in the middle" is also real. Which pathway the economy will take depends on: (i) the adoption of a growth strategy that unleashes the productivity potential of the economy; and (ii) the consistent implementation of a few, long-standing, high-priority structural reforms to boost growth and share prosperity more widely. Indonesia is fortunate to have options in financing these reforms without threatening its long-term fiscal outlook. The difficulties lie in getting the reforms implemented in a complex, and decentralized, institutional framework. But Indonesia, given the high stakes, cannot afford to not try hard.

…as well as putting in place policies to mitigate disaster and climate change risks that are likely to grow as Indonesia continues to urbanize

In light of the repeated flooding in urban areas seen again in this year's wet season, this *IEQ* also focuses in on the disaster and climate risks that Indonesia faces as it continues to urbanize, and how these risks are likely to grow as a consequence of this urbanization trend. Indonesia is leading the world as the most rapidly urbanizing country, surpassing even China, India and Thailand. However, many urban centers are located in hazardous zones. Recent research emphasizes the importance of aligning infrastructure development with disaster and climate change impacts to build resilience, particularly in mid-sized cities. In Indonesia, these are the very cities that will be driving economic development in the coming decades. Without strategically planned investments, policy interventions, and stronger institutional capacity, poorly managed urbanization could act as a constraint on sustainable and inclusive growth. Even more worrying, this could also expose Indonesians to undue disaster and climate change-risks, highlighting the need to mitigate such risks through controlled and well-managed spatial planning.

A. Economic and fiscal update

1. A shifting global economy brings new challenges

Shift in global economic conditions brings opportunities and challenges for emerging economies, including Indonesia

The global economy continues gradually to strengthen, led by the ongoing recovery in high income economies, notably the US and the Euro Area. This is broadly positive for emerging market economies (EMEs) including Indonesia, since it means a general strengthening in trade flows. However, international developments also pose significant challenges. First , the shifting composition of global growth in favor of high income economies, China's continued efforts to rebalance its economy away from credit-fueled investment, and supply-side factors, mean that the price trajectories of many commodities, which together account for about two-thirds of Indonesia's goods exports, remain subdued. Second, the pricing-in of a gradual withdrawal of extraordinarily accommodative monetary policy in the US and other high income economies is placing upward pressure on global interest rates, and portfolio investment inflows to EMEs have slumped as global investors assess adjustment risks and longer-term, relative growth prospects.

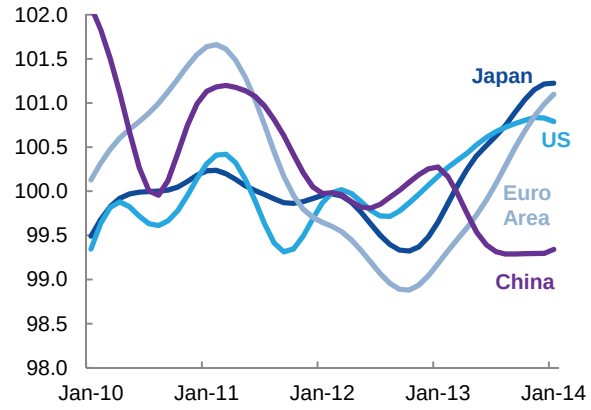
The global economy remains on track for stronger growth…

While recent global economic performance has been somewhat uneven, the overall pattern has been one of increasing growth, and the outlook for most of Indonesia's major trading partners is positive. GDP decelerated in the US and Japan in the final quarter of 2013, but accelerated slightly in the Euro Area, and across high income economies as a whole, industrial production picked up notably through the end of 2013. Weather disruptions in early 2014 have complicated assessments of the momentum of the US economy, but the most recent payrolls data and leading indicators suggest that its recovery continues, as is also the case in the Euro Area. Looking ahead, the baseline scenario is for the global economy to strengthen over 2014 and 2015, led by the expansion of high income economies (Figure 2). Developing economies are expected to record trend-like growth, notably including solid growth in China of close to the official growth target of 7.5 percent in 2014. Thus, the international economic backdrop should continue to be broadly supportive for the demand for Indonesia's exports.

…and the terms of trade have stabilized

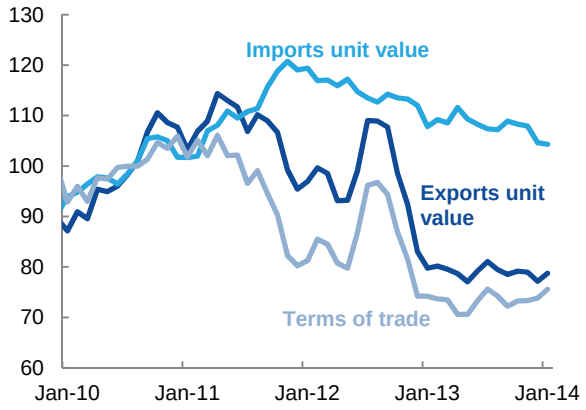
Indonesia's terms of trade have stabilized in recent months, consistent with a modest strengthening in external demand due to a gradual pick-up in global economic activity. As measured by average unit export and import values, the terms of trade troughed in August 2013 and have since picked up somewhat, though remaining approximately 30 percent below the level when export prices peaked three years ago (Figure 3). This stabilization of relative export and import prices has supported the trade balance and is broadly positive for the economy, but there have been no signs of a broad-based lift in commodity prices. Rather, price developments for Indonesia's key commodity exports remain mixed so far in 2014, with natural gas prices rising 6 percent over the first two months of the year, but coal falling approximately 10 percent, while palm oil and crude oil prices were broadly flat. The price of Indonesia's single largest mineral export product, copper (about 2.5 percent of total export value), was little-changed through end-February.

Figure 2: Global economic activity is broadly on track to keep strengthening, led by high income economies…
(OECD composite leading indicators)



Source: OECD

Figure 3: …and Indonesia's terms of trade have stabilized for now, albeit at levels well below their previous peaks
(index, 2010 average=100, 3-month moving average)



Source: BPS; World Bank staff calculations

Emerging market economy financial assets have underperformed

Global benchmark interest rates have fluctuated in a fairly narrow range (e.g. US 10-year yields between 2.6-3.0 percent), following the start of "tapering" of quantitative easing measures by the US Federal Reserve last December. Against this backdrop, many emerging market currencies and equity markets have either lost ground or lagged the gains seen in some high income economy markets; for example, the MSCI Standard EM equities index weakened by 5.9 percent in US Dollar terms in 2014 through 13 March, against a flat S&P 500 index (of major US stocks). The underperformance of EME assets likely reflects continued investor concerns over the required economic or policy adjustments and potentially weaker growth prospects in the context of gradually normalizing monetary policy in high income economies, and, ultimately, higher global interest rates. These are very relevant concerns for Indonesia as well, but so far in 2014 Indonesian financial markets have performed relatively strongly.

2. Fixed investment has led the economic adjustment

Indonesia's economic rebalancing continued through the end of 2013, with fixed investment moderating and net export volumes rising

Indonesia's economy continued to rebalance in the fourth quarter of 2013, adjusting to weaker terms of trade and external financing constraints through tighter monetary policy and currency depreciation. Net exports provided a significant boost to real GDP growth, reflecting a moderation in import volume growth and acceleration in exports. Fixed capital formation maintained its below-average pace of growth, dampening import demand and accounting for a significant part of the growth adjustment. At the same time, consumption spending remained resilient. The process of economic adjustment is expected to continue in the short term, causing growth to moderate further over 2014. Over the medium term, growth momentum is projected to pick-up somewhat, but the rate of growth is likely to stay below 6 percent.

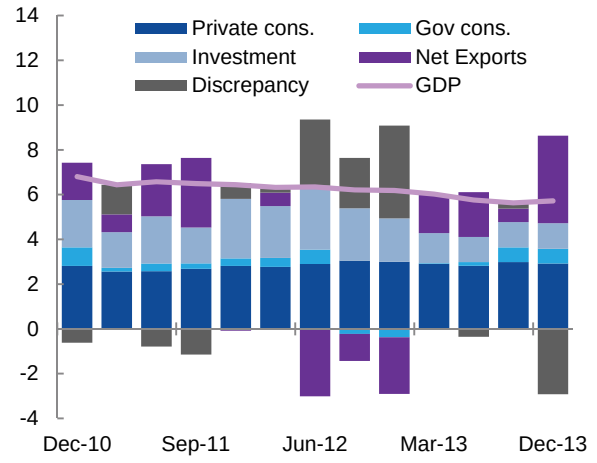
Economic activity maintained a relatively moderate pace of year-on-year growth in Q4 2013

GDP growth in Indonesia remained broadly stable at 5.7 percent yoy in the final quarter of 2013 compared with 5.6 percent yoy in Q3 (Figure 4). In sequential terms, output growth picked up to 6.3 percent qoq saar in Q4 from 5.5 percent in the previous quarter. Nominal GDP accelerated over the same period, to 13.2 percent yoy, as a result of a rise in the GDP deflator of 7.1 percent yoy. For 2013 as a whole, real GDP growth moderated to 5.8 percent from 6.3 percent in 2012, owing to somewhat weaker domestic demand.

Strong net exports supported real GDP growth in Q4 2013…

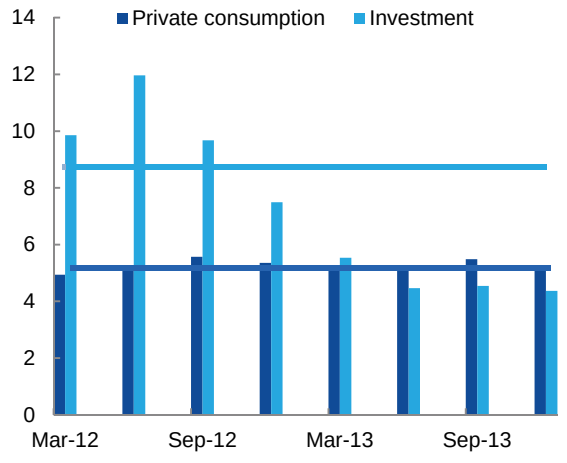
Net exports provided the largest contribution, of 3.9 percentage points, to year on year real GDP growth in Q4, the fourth consecutive quarter of positive contribution in 2013 (Figure 4). Temporarily boosted by large export volumes of mineral ores, real exports of goods and services increased by 7.4 percent yoy in the fourth quarter, compared with 5.2 percent in the previous quarter. Annual export growth went up from 2.0 percent in 2012 to 5.3 percent in 2013. By contrast, in Q4 2013 imports declined by 0.6 percent yoy after growing by 5.1 percent in Q3. Partly as a result of the deceleration in fixed investment growth and the Rupiah depreciation, annual import growth dropped from 6.7 percent in 2012 to 1.2 percent last year (see Box 1 for more detailed discussion).

Figure 4: Net exports drove real GDP growth in 2013 Q4
(expenditure components' contribution to real GDP growth yoy, percentage points)



Source: BPS; World Bank staff calculations

Figure 5: Domestic demand adjustment remained concentrated in fixed investment
(real growth yoy, percent)



Note: Lines indicate Q1 2010 – Q4 2013 average
Source: BPS; World Bank staff calculations

… while domestic demand grew at a more moderate rate

Domestic demand growth slowed down to 5.1 percent yoy in Q4, from 5.5 percent in Q3. Private consumption lost momentum in the final quarter of 2013, increasing by 3.9 percent qoq saar (versus 7.0 percent in Q3) and by 5.3 percent yoy (versus 5.5 percent in Q3) (Figure 5). Household spending may have been affected by the slowdown in consumer credit growth to 15 percent yoy in December and a Rupiah depreciation of almost 7 percent in Q4. The growth of gross fixed capital formation stood at 4.4 percent yoy in Q4, remaining relatively weak at half of the average growth rate of 8.8 percent observed in 2010-2012. In particular, spending on foreign machinery and equipment declined in the fourth quarter, broadly in line with the relatively weak commodity sector, tighter financing conditions, and higher imported capital goods prices due to the depreciation of the Rupiah. Building investment rose by 6.7 percent yoy in Q4, matching its average post-global financial crisis rate.

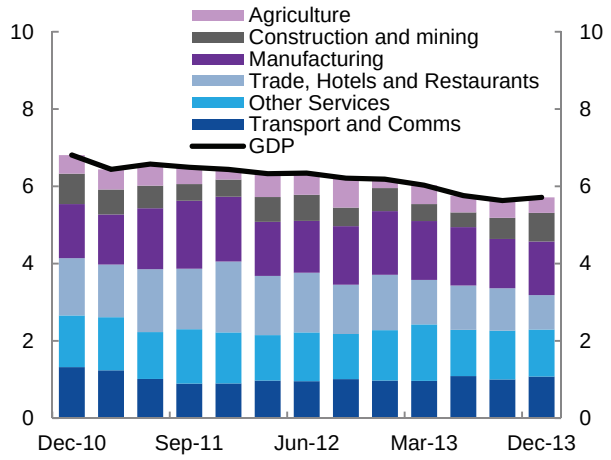
The mining sector recorded above-average growth, while services lost momentum

From the production perspective, in 2013 Q4 agricultural and industrial sector growth picked up to 3.8 and 5.3 percent yoy, respectively. Within industrial production, mining, excluding petroleum and gas, rose by 8.2 percent yoy, the highest growth rate since Q1 2011 and considerably higher than the post- global financial crisis average of 5.7 percent. Thus, the data are consistent with front-loading of mineral ore production ahead of the January 2014 ban, as discussed further in Section 4. Manufacturing and construction growth was 5.3 percent yoy and 6.7 percent yoy, respectively, in Q4, both somewhat higher than in the

preceding quarter. In contrast, the services sector grew at its slowest pace since the global financial crisis (6.5 percent yoy versus a post-crisis average of 8.0 percent). Thus, in terms of contribution to real GDP growth, that of construction and mining increased, while that of services, especially trade, hotel and restaurant sector, declined (Figure 6).

Figure 6: The GDP growth contribution of construction and mining rose at the expense of trade, hotel and restaurant services

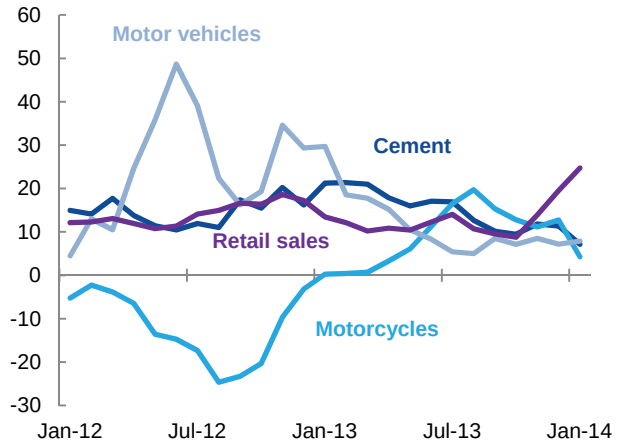
(contributions to real GDP growth yoy, percent)



Source: BPS; World Bank staff calculations

Figure 7: The latest indicators provide mixed signals regarding 2014 Q1 domestic demand

(BI retail sales index, vehicle sales and cement volumes, 3mma yoy growth, percent)



Source: CEIC; World Bank staff calculations

Recent high frequency data are mixed but consistent with a small election-related increase in private consumption

Several high frequency economic activity indicators, except retail sales, suggest a loss of momentum in domestic demand in the first month of 2014. Motorcycle sales, in particular, declined sharply by 11.3 percent yoy in January (or an increase of only 4.3 percent yoy if smoothed over three months), possibly affected by prolonged flooding in Java (Figure 7). The HSBC Purchasing Managers Index (PMI) for Indonesia's manufacturing sector, at 50.5 in February, remains in marginally expansionary territory. However, BI's survey measure of retail sales increased significantly to 26.6 and 28.8 percent yoy in December and January, respectively. The high retail sales readings point to a pick-up in private consumption spending in the first quarter of 2014, likely supported by early campaign-related activity.

Relatively moderate output growth is projected over the medium term

The baseline World Bank projections for Indonesia's GDP growth remain unchanged at 5.3 percent in 2014 (Table 2). Private consumption is expected to receive a temporary boost ahead of the April and July elections. Nevertheless, tighter credit conditions are likely to affect somewhat household spending in 2014. Similarly, investment growth is expected to remain subdued in the short term on account of higher borrowing costs, lower commodity prices and higher import costs driven by the weaker Rupiah. Export growth is projected to rise gradually as external demand conditions improve (see Section 1). However, the contribution of net exports to growth is expected to decline somewhat over the forecast horizon as import growth recovers in line with the projected increase in domestic demand.

Table 2: In the base case, GDP is expected to grow at 5.3 percent in 2014 and 5.6 percent in 2015
(percentage change, unless otherwise indicated)

	Annual			YoY in Fourth Quarter			Revision to Annual
	2013	2014	2015	2013	2014	2015	2014
1. Main economic indicators							
Total Consumption expenditure	5.2	4.8	4.9	5.4	5.2	5.2	0.0
Private consumption expenditure	5.3	4.9	5.1	5.3	5.4	5.2	0.0
Government consumption	4.9	4.4	3.7	6.4	4.2	4.9	0.0
Gross fixed capital formation	4.7	4.5	6.6	4.4	5.9	6.8	0.1
Exports of goods and services	5.3	5.3	7.0	7.4	7.4	7.0	-0.1
Imports of goods and services	1.2	3.4	5.4	-0.6	4.4	5.7	0.0
Gross Domestic Product	**5.8**	**5.3**	**5.6**	**5.7**	**5.5**	**5.7**	**0.0**
2. External indicators							
Balance of payments (USD bn)	-7.3	-2.9	1.7	-	-	-	9.9
Current account balance (USD bn)	-28.5	-24.4	-20.2	-	-	-	-1.6
As share of GDP (percent)	*-3.3*	*-2.9*	*-2.1*	-	-	-	-0.3
Trade balance (USD bn)	-5.3	-2.9	2.7	-	-	-	-0.4
Financial account balance (USD bn)	22.7	21.5	21.9	-	-	-	11.5
3. Fiscal indicators							
Central gov. revenue (% of GDP)	15.3	15.5	-	-	-	-	-0.2
Central gov. expenditure (% of GDP)	17.5	18.1	-	-	-	-	0.3
Fiscal balance (% of GDP)	-2.2	-2.6	-	-	-	-	-0.5
Primary balance (% of GDP)	-1.0	-1.4	-	-	-	-	0.5
4. Other economic measures							
Consumer price index	6.9	6.2	5.2	8.1	5.4	5.2	0.1
GDP Deflator	4.3	6.6	5.3	7.1	5.2	5.3	0.2
Nominal GDP	10.4	12.2	11.2	13.2	11.0	11.3	0.2
5. Economic assumptions							
Exchange rate (IDR/USD)	10563	12000	12000	-	-	-	200.0
Indonesian crude price (USD/bl)	106	105	102	-	-	-	2.0
Major trading partner growth	3.5	4.0	4.1	4.1	3.7	4.4	0.1

Note: Export and import figures refer to volumes from the national accounts. Exchange rate is an assumption based on recent averages. Revisions are relative to projections in the December 2013 IEQ.
Source: MoF; BPS; BI; CEIC; World Bank projections

3. Core inflation has been gradually rising

Upward inflationary pressures have mostly faded, except the pass-through from Rupiah depreciation

Having risen sharply after the June 2013 increase in subsidized fuel prices, monthly consumer price inflation declined substantially in the final months of 2013, but has recently increased again on the back of seasonal factors. At the same time, core inflation declined towards the end of 2013 but has recently pushed higher, partly in delayed response to a weaker Rupiah. In the short term, the lags in the pass-through effect to the economy of earlier rate increases should keep inflationary pressures in check.

Seasonal factors pushed up headline inflation in recent months…

Consumer price pressures subsided in the second half of 2013, after the 33 percent average increase in subsidized fuel prices which took effect on June 22 (Figure 8). Weakening domestic demand contributed to the deceleration in monthly inflation. An additional factor was the tighter financing conditions caused by foreign capital outflows in the second half of last year and the increase in the Bank Indonesia's (BI) policy rate from 5.75 percent in May to 7.50 percent in December. In December 2013 and January 2014, at the height of the rainy season, consumer prices rose again sequentially. In year-on-year terms, CPI inflation stood at 8.2 percent in January 2014 and declined to 7.7 percent in February.

…while food price inflation continued to ease…

Food price inflation continued to decline to 8.8 percent yoy in February 2014 from a high of 15.1 percent yoy in August last year, during Ramadan. The lower food price pressures observed in recent months were caused by price deflation in some key foods such as red chilies and onions in some cities in Sumatra and the eastern Indonesian regions, which compensated for increases in the prices of foods such as rice, flour and beef. Heavy rains since December and the disruption caused by the eruption of the Mount Kelud volcano in East Java in February do not seem to have had a significant impact on national food price inflation.

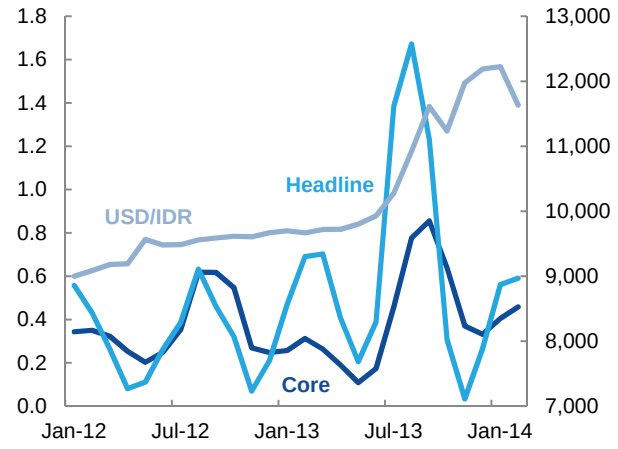
… but the gap between domestic and international rice prices has widened

In contrast, a weaker rice harvest on account of heavy floods in Indonesia has resulted in a larger gap between domestic and international rice prices. In December 2013, comparable international rice prices (represented by the Vietnam medium quality benchmark) were 41-52 percent cheaper than domestic wholesale rice prices, and the gap rose to 70-83 percent in February 2014. Recent developments in the price gap were driven by three factors: falling international rice prices due to over-supply of rice in the international market, increasing domestic rice prices (up by 7.3-10.3 percent yoy), and the depreciation of the Rupiah against the US Dollar.

Core inflation has risen, partly as a result of Rupiah depreciation

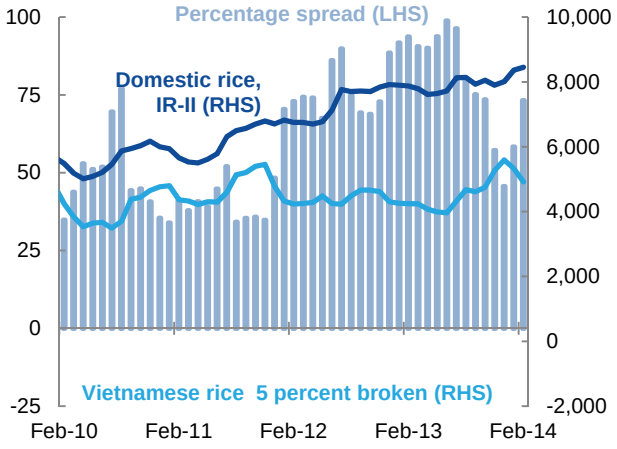
Core inflation, which excludes volatile items such as food and energy, declined in the fourth quarter of 2013 but has risen again early this year. In year-on-year terms, core CPI inflation has increased from 4.0 percent yoy in June 2013 to 5.3 percent yoy in February 2014, its highest monthly reading since June 2009. This was due in part to the pass-through to domestic prices of the weaker Rupiah, which depreciated by 25 percent between May 2013 and January 2014 before appreciating by around 5 percent in February (Figure 8).

Figure 8: Inflationary pressures have risen in recent months, a lagged response to the weaker Rupiah and seasonal factors
(3-month/3-month change, percent (LHS), Rupiah per US Dollar (RHS))



Source: BPS; World Bank staff calculations

Figure 9: The gap between Indonesian and international rice prices has widened
(price difference, percent; wholesale rice price, IDR per kg)



Source: Cipinang Wholesale Rice Principle Market; Food and Agriculture Organization; World Bank staff calculations

Headline inflation is expected to fall just below BI's target ceiling by end-2014

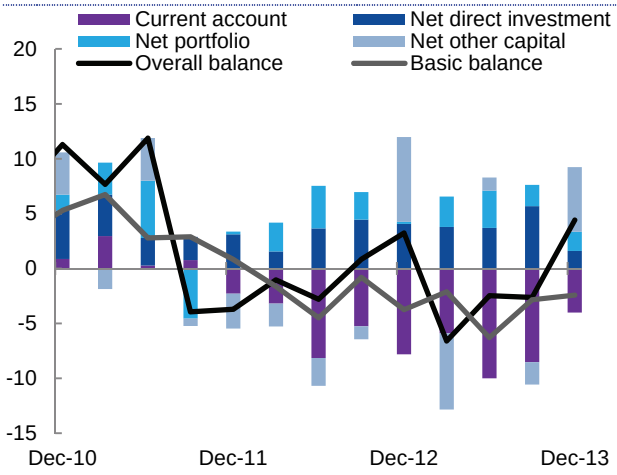
Looking forward, year-on-year headline inflation is expected to peak in the second quarter of 2014. Afterwards, inflationary pressures are projected to decline on account of favorable base effects and weaker growth. By the end of 2014, monthly CPI inflation is expected to fall just below the ceiling of the BI's current target band of 3.5-5.5 percent yoy and to remain there until end-2015. Core inflation is expected to follow broadly the same trajectory, as the adverse effects of the exchange rate depreciation diminish. The risks to the base case projections are balanced and are related to the likelihood of further Rupiah weakness and future administered price increases, the size of the impact of higher election-related spending, set against weaker domestic demand and credit growth.

4. Strong balance of payments performance in Q4, but risks lie ahead

Indonesia's current account balance improved in Q4 but this was in part due to temporary factors

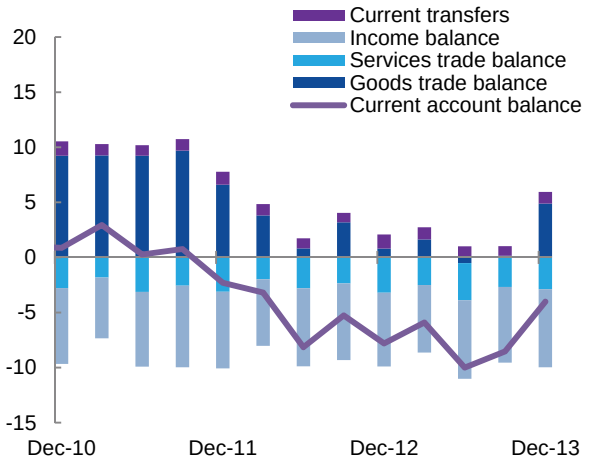
Indonesia's balance of payments turned positive in the last quarter of 2014 after three consecutive quarters of deficit, replenishing reserves (Figure 10). The strong performance was driven by a solid outturn in the goods trade balance, partly, but not only, on the back of increased mineral exports ahead of the introduction of the mineral export ban in January. Import compression continued, with capital and intermediate goods imports leveling off and consumption goods growing weakly. Government debt issuance and foreign private borrowing, and repatriation of currency and deposits, helped finance the USD 4 billion current account deficit. Despite the improvement in the last quarter of 2013, the basic balance, defined as the sum of the current account balance and net direct investment, is projected to remain negative in the near term, implying that Indonesia's net external financing will likely continue to rely on potentially volatile portfolio and other investment inflows.

Figure 10: The balance of payments turned positive in Q4…
(account balances, USD billion)



Note: Basic balance = net FDI + current account balance
Source: CEIC; World Bank staff calculations

Figure 11: …after a marked improvement in the goods trade balance caused the overall current account deficit to contract
(account balances, USD billion)

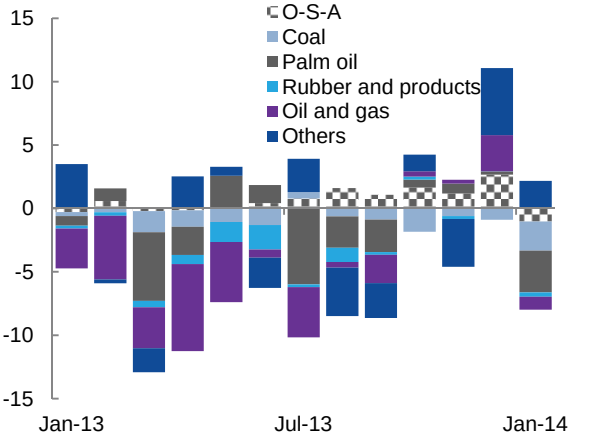


Source: CEIC; World Bank staff calculations

External developments in Q4 were driven by robust export growth, only partly explained by the front-loading of raw mineral exports

The goods trade balance recorded a surplus of close to USD 5 billion in Q4 2013, the highest since Q4 2011 (Figure 11). Increased exports accounted for 94 percent of the rise in the trade balance. This was partly supported by the one-off event of increased mineral ore exports in advance of the enforcement of the mineral export ban in mid-January 2014. Increased exports of ores, slag and ash – an approximation providing an upper bound for exports of raw minerals affected by the ban – contributed 2.7 percentage points to the strong 10.2 percent yoy export growth in the month of

Figure 12: Ores, slag and ash (O-S-A) contributed materially to export growth in Q4 and to a fall in exports in Jan 2014
(contribution to export revenue growth yoy, percentage points)



Source: CEIC; World Bank staff calculations

December, before contracting in January, contributing to 1 percentage point to the 5.8 percent of the year-on-year fall in exports in the first month of 2014 (Figure 12). The value of ores, slag and ash exports declined from USD 970 million in December 2013 to USD 290 million January 2014. The World Bank estimates export losses associated with the raw mineral export ban, relative to a base line of no ban and no export tax, of USD 5.3-7 billion for the full year. The impact of the mineral export ban is being compounded by delays in issuing export permits for processed minerals. For further discussion of the mineral export ban and its impact, see Section B.1.

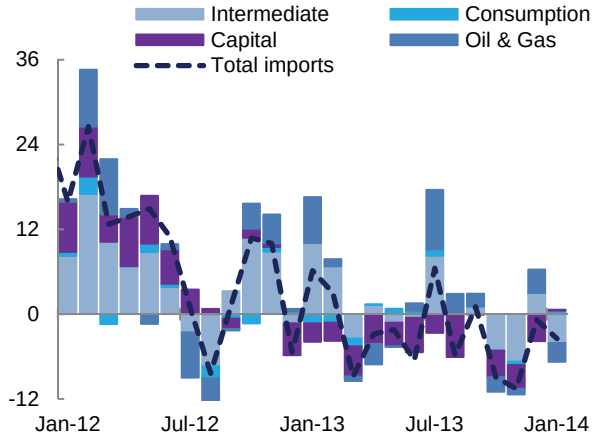
Subdued capital and intermediate goods imports also contributed to the improvement in the trade balance

Import compression has also been a clear recent feature of trade dynamics, although less so in Q4. For example, while reduced imports accounted for only 6 percent of the positive quarterly swing in the value of the trade balance in Q4 relative to Q3 2014, they accounted for 60 percent of the improvement in the trade balance from a year earlier. Imports of capital and intermediate goods have been soft, with the former in particular averaging 16 percent lower than their year-ago levels in the second half of 2013. Consumer goods imports have made virtually zero contribution to total import growth (Figure 13). Falling capital imports are related to the marked slowdown in investment (see also Box 1). Little relief appears in the oil and gas trade balance where, despite decreasing imports and slowly rising exports, the deficit (of USD 1 billion in Q4) remained a sizable drag on the overall goods trade balance.

Financial account inflows rebounded on significant private borrowing and repatriation of offshore capital

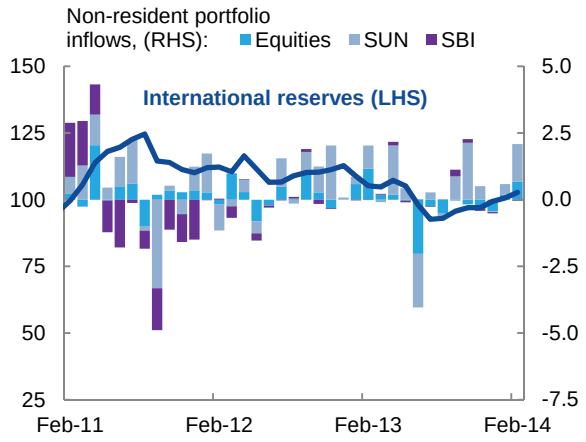
Capital and financial account inflows increased sharply, from USD 5.6 billion in Q3 2013 to USD 9.2 billion in Q4, largely driven by flows in the "other investments" sub-account. Here, repatriation of offshore assets increased to USD 1.4 billion, reversing the outflow of USD 2.3 billion in 2013 Q3. Strong drawings of offshore loans by domestic corporates contributed to USD 4.1 billion of private sector other investment liability inflows, up from an outflow of USD 133 million in Q3. Inbound FDI remained in line with the 3 year average of approximately USD 4 billion per quarter. Pertamina's acquisition of oil fields in Algeria worth approximately USD 2.5 billion contributed to a reduction in net direct investment, to USD 1.6 billion from USD 5.6 billion in Q3. As a result, the basic balance remained negative despite the large current account deficit contraction. Net portfolio investment remained broadly stable at USD 1.8 billion in Q4, helped by substantial net foreign purchases of domestic government bonds (Figure 14). Conversely, equities saw persistent outflows in the second half of 2013, before turning positive again in January.

Figure 13: Imports weakened in Q4, with capital goods imports subdued and intermediate goods dropping
(value of imports growth yoy , percent)



Source: CEIC; World Bank staff calculations

Figure 14: Net inflows to domestic bonds since September have supported portfolio investment
(official reserves and portfolio inflows, USD billion)



Source: CEIC; World Bank staff calculations

The current account deficit is projected to remain just above 2 percent of GDP in 2014 and to persist over the medium term

Despite the significant narrowing of the deficit in the last quarter of 2014, the current account balance is projected to remain just above 2 percent of GDP in 2014 (Table 3). As mentioned, the introduction of the raw mineral export ban, in combination with delays in issuing export permits for processed minerals, is expected to weigh heavily on the first quarter trade balance in particular. Moving into 2015, a positive trade balance is expected to contribute to a smaller current account deficit in 2015, but sizable structural deficits on the income and services sub-accounts will persist. These projections are contingent on external financing conditions remaining sufficiently supportive and are subject to a number of risks, as discussed in Section 7.

Table 3: In the base case, a current account deficit of 2.9 percent of GDP is projected

(USD billion unless otherwise indicated)

	2013	2014	2015
Overall Balance of Payments	**-7.3**	**-2.9**	**1.7**
As percent of GDP	**-0.8**	**-0.3**	**0.2**
Current Account	-28.5	-24.4	-20.2
As percent of GDP	*-3.3*	*-2.9*	*-2.1*
Trade	-5.3	-2.9	2.7
Income	-27.2	-25.7	-27.0
Transfers	4.1	4.2	4.2
Capital & Financial Accounts	22.7	21.5	21.9
As percent of GDP	*2.6*	*2.5*	*2.3*
Direct Inv.	14.8	12.0	11.9
Portfolio Inv.	9.8	10.8	10.6
Other Inv.	-1.9	-1.3	-0.7
Memo:			
Basic Balance	-13.7	-12.4	-8.2
As percent of GDP	*-1.6*	*-1.5*	*-0.9*

Note: Basic balance = current account balance + net FDI
Source: CEIC; World Bank staff calculations

Box 1: The determinants of Indonesia's import demand: investment and exports are important

Import volume growth in Indonesia declined significantly in 2013. Estimates from an error correction model (ECM) suggest that a significant part of the decrease in import demand can be explained by the considerable slowdown in fixed investment (which is consistent with the observed decline in capital goods imports) and the increase in the price of imported goods relative to domestic goods. Historically, household consumption has not been a significant determinant of import growth.

As is standard practice in the literature, an ECM model can be used to study both the short- and long-term effect on real import demand of three demand components from the national accounts and relative prices, the latter defined as the ratio of the import deflator to the consumer price index (CPI). All variables are transformed into logarithms and the sample period is Q1 1993 – Q4 2013. The results indicate that private consumption is not a statistically significant determinant of import growth (Table 4). In the short run, a one percent increase in investment adds around 0.5 percentage points to import demand. Similarly, a one percent rise in exports is associated with 0.6 percentage points import growth as imported goods are used in the production of exports (see the March 2012 *IEQ* for more details on the important role of imports in export value-added in Indonesia). The long-term effect of investment appears weaker, whereas that of exports remains strong. As expected, a rise in the price of imported goods relative to domestic goods results in lower import demand.

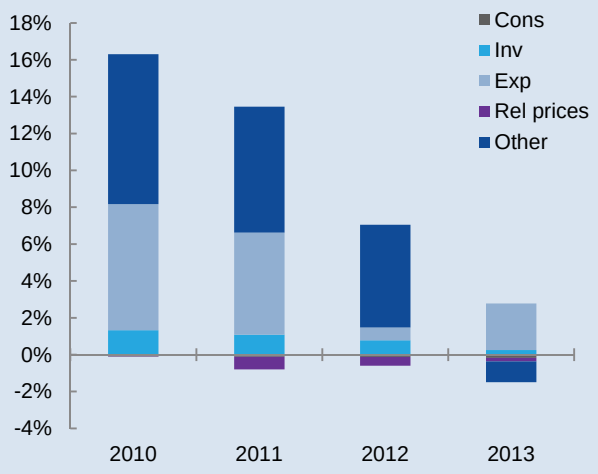
A decomposition of the annual growth of real imports shows that the slowdown in exports explains a large portion of the decline in 2012, while the demand for imported inputs to export production is estimated to have contributed almost all import growth in 2013. These findings suggest that import compression does not necessarily lead to an improvement in the trade balance, as it may be related to lower exports. The significant decline in investment growth, as discussed in Section 2, is also reflected in the composition of import demand in 2013. Finally, higher import prices, in part caused by the weaker Rupiah in 2013, have also negatively affected imports.

Table 4: Investment and exports drive the demand for real imports

	Δ Ln Imports
Short-term effect:	
Δ Ln Consumption	-0.11
	(0.16)
Δ Ln Investment	0.49**
	(0.21)
Δ Ln Exports	0.59***
	(0.10)
Δ Ln Relative prices	-0.15(*)
	(0.10)
Long-term effect:	
Ln Consumption	-0.05
	(0.31)
Ln Investment	0.22*
	(0.11)
Ln Exports	0.87***
	(0.17)
Δ Ln Relative prices	-0.28*
	(0.16)
Coefficient on error correction term:	
	-0.51***
	(0.10)
Number of observations	83
R-squared	0.73

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1, (*) p<0.15
Source: BPS; World Bank staff calculations

Figure 15: Weakening exports reduced import growth in 2012, and exports contributed to most import growth in 2013
(estimated contribution to import volume growth, percentage points)



Note: "Other" includes the impact of lagged import growth and the regression residual
Source: BPS; World Bank staff calculations

5. Following the tightening of monetary policy, credit growth is cooling

Monetary policy has been tightened…

In the second half of last year, Bank Indonesia (BI) adopted a clear focus on facilitating the adjustment of Indonesia's external balances, which is proceeding as described in Section 4 above. Monetary policy was tightened over June-November 2013, with BI raising the lower bound of its interest rate corridor (the overnight deposit facility, FASBI, rate) and reference rate by a cumulative 175 basis points, to 5.75 percent and 7.5 percent, respectively. In addition, BI also increased the secondary reserve requirement from 2.5 percent in September to 4 percent in December, and the foreign exchange reserve requirement from 1 to 8 percent over the same period. Box 2 provides additional perspective on the monetary policy stance. A tighter monetary policy stance in the second half of last year, as well as lower credit demand stemming from moderate fixed investment growth, has contributed to a slowdown in credit growth. Moderating deposit growth and limited loan-to-deposit ratio (LDR) headroom, especially for some smaller banks, indicate that weaker credit growth is likely to persist in the near term.

…while currency market conditions have improved

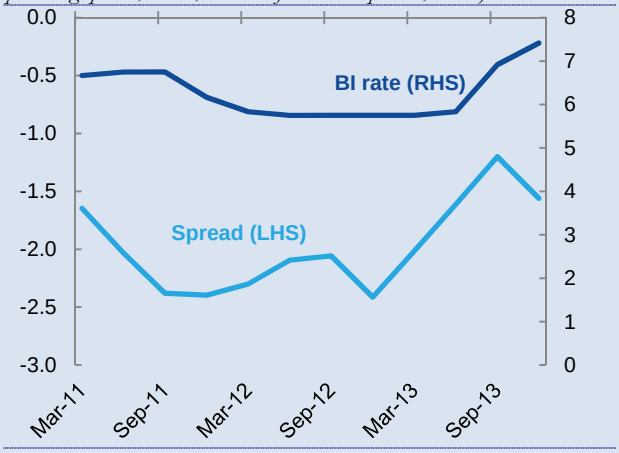
Turning to currency market conditions, there have been several positive developments in recent months. The Rupiah has strengthened by more than 6 percent from IDR 12,242 per US Dollar at the beginning of 2014 to 11,449 on March 10 2014. International reserves increased from USD 95 billion in September 2013 to USD 100 billion in January 2014. In addition, on March 6, 2014 Bank Indonesia and the Bank of Korea established a bilateral currency swap arrangement for up to KRW 10.7 trillion (IDR 115 trillion) for an initial period of three years. Finally, on February 19, 2014 the Association of Banks in Singapore adopted the Jakarta Interbank Spot Dollar Rate (JISDOR) as the fixing for non-deliverable forwards (NDFs), which followed the convergence of offshore and onshore Rupiah exchange rates since October 2013. The move sends a positive signal of market confidence in price transparency in the onshore spot foreign exchange market as overseen by Bank Indonesia, and should facilitate currency hedging by foreign investors using NDFs, potentially supporting portfolio inflows.

Box 2: A Taylor Rule perspective on Indonesia's monetary policy stance

The Taylor rule* provides additional perspective on the monetary policy stance, by evaluating the nominal interest rate relative to deviations in inflation from target and output from potential output. Using recent IMF (2012) coefficient estimates, the difference between the BI policy rate (i.e. the reference rate) and the Taylor rule-based optimal policy rate can be calculated (Figure 16). In this estimate core CPI is used as the inflation gauge, since headline CPI rose significantly and temporarily due to the impact of the one-time increase in administered fuel prices in June 2013. The negative spread seen over 2011 and 2012 indicates that the policy rate was less than that predicated by the above specification of the Taylor rule. This spread, while remaining negative, declined significantly in absolute value in 2013 as BI raised the reference rate leading to tighter monetary conditions.

Figure 16: After recent rate hikes, the BI policy rate is close to a Taylor-rule estimate based on core inflation

(spread between the BI rate and the Taylor rule-based optimal rate, percentage points, LHS; the BI reference rate percent, RHS)



Source: BI; World Bank staff calculations based on IMF (2012) estimates

However, actual overall liquidity conditions are likely to be tighter than suggested by an assessment focusing narrowly on the BI policy rate for two reasons. First, since 2012 BI has undertaken important prudential measures with a tightening bias: lower loan-to-value (June 2012) and loan-to-deposit ratios (August 2013), increased down-payments for residential property beyond the primary residence (September 2013), and higher secondary reserve requirement ratios (December 2013). Second, money market rates, which had been lower than the BI reference rate for more than two years, rose above the policy rate in November 2013, introducing additional liquidity tightness.

Note: *Taylor, John B., 1993, "Discretion Versus Policy Rules in Practice", Carnegie-Rochester Conference Series on Public Policy, 39, pp. 195-214. ** For methodological details and coefficient estimates, see IMF, 2012, "Indonesia: Selected Issues", Country Report No. 12/278

Credit growth has decelerated further…

Nominal bank credit growth has fallen from 23.1 percent yoy at the beginning of 2013 to 21.6 percent in December. In real terms (deflated using CPI inflation), credit growth went down from 18 percent yoy in January 2013 to 12.2 percent in December. Since foreign currency-denominated credit accounts for 16 percent of total outstanding credit, the nominal credit figures were inflated by the Rupiah depreciation seen during 2013. Hence, excluding currency effects, the credit growth reduction is more significant than the above numbers suggest, with nominal credit up 17.4 yoy in December on this basis, according to BI.

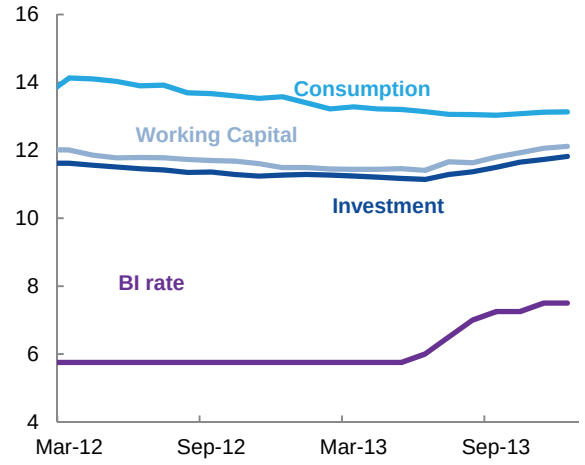
.. mostly owing to the slowdown in consumer credit…

Consumer credit, which accounts for a quarter of total credit, drove the slowdown in nominal credit growth. Consumer credit growth decreased from 20 percent yoy in mid-2013 to 13.7 percent at the end of the year. Although household consumption has so far remained resilient, financing constraints may yet weaken spending in the near term, suggesting additional downward pressure on real consumption, as discussed in Section 2. At the same time, the growth rates of working capital credit, which constitutes almost 50 percent of total credit, and investment credit have remained stable at 20 and 32 percent yoy, respectively, since June last year.

Weaker credit conditions are likely to persist, given slowing deposit growth and limited LDR headroom

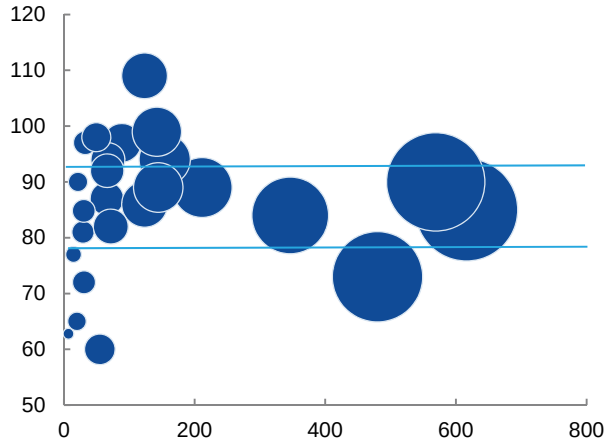
Deposit growth continued to ease at a faster rate than lending growth, causing higher Loan-to-Deposit Ratios (LDRs), which may further constrain credit growth. Deposit growth in December was 13.3 percent yoy, down from 15.6 percent yoy a year earlier. The aggregate LDR of commercial banks was 89.7 percent in December 2013, up from 83.6 percent at end-2012 and close to the ceiling of the BI target band of 92 percent. The five biggest banks' LDRs were below the BI upper limit. However, across a sample of 25 banks accounting for 75 percent of bank assets, the LDRs of smaller banks, i.e. those with asset size of less than 200 trillion Rupiah, varied considerably from 60 to 109 percent (Figure 17). About 30 percent of banks in this category had LDRs above the ceiling of BI's target band.

Figure 17: Commercial bank lending rates have risen by less than the BI policy rate
(percent)



Source: CEIC; World Bank staff calculations

Figure 18: Smaller banks are more vulnerable to the slowdown in deposit growth
(bank assets, IDR trillion, x-axis and bubble size; LDRs, percent)



Note: sample of 25 banks accounting for 75 percent of total banking sector assets; lines represent BI loan to deposit target band
Source: CEIC; World Bank staff calculations

Aggregate banking risk metrics remain healthy, with some pressure on the liquidity of smaller banks

Indonesia's banking sector health indicators remain sound, with some pressure on liquidity for banks with smaller asset sizes. The aggregate non-performing loan ratio improved to 1.8 percent at the end of 2013 from 2 percent at the beginning of the year. The capital adequacy ratio has remained stable at just below 19 percent since April last year. There has been a small decrease in the average net interest margin, as increases in the policy rate have not been fully passed on to consumers.

The establishment of a mini repo master agreement should support liquidity in the banking system

Interbank money market liquidity conditions are expected to improve after a mini repo master agreement was established between eight banks last December and an additional thirty-eight banks in February. This new agreement is expected to increase money market trading volumes and to complement the unsecured transactions which currently dominate the interbank market in Indonesia.

Property price growth has also slowed down

Property sector lending (about 15 percent of total bank lending) and price growth have decelerated since mid-2013. This is in line with tighter monetary conditions, and the imposition of more stringent property loan-to-value ratios adopted last year may have also had an impact. The deceleration in lending in Q4 appears marked; in December, lending growth for property was down to 26.5 percent yoy or 1.1 percent qoq from 30.6 percent yoy or 4.9 percent yoy in September. Residential house prices increased by 1.8 percent qoq in December compared with a recent high of 4.8 percent qoq in March 2013. Smaller residential house prices experienced the largest slowdown, from 8.6 percent qoq in March to 1.8 percent in December. Residential apartment price growth peaked at 12 percent qoq in June and slowed down to 9 percent in September and 3.5 percent in December. Industrial land price growth also decreased from 13 percent qoq in June to 0.9 percent in December.

6. Much less fiscal room to maneuver in 2014

Fiscal pressure from revenue moderation and fuel subsidy spending call for further fiscal reforms

The Government's 2013 fiscal deficit outturn was lower than projected, mostly due to shortfalls in expenditure disbursements rather than improvement in the revenue collection. Marked moderation in revenue growth is expected to continue in 2014, while on the expenditure side, fuel subsidy spending continues to impose significant fiscal pressure on the budget, emphasizing the importance of additional reform measures.

The provisional fiscal deficit for 2013 was 2.2 percent of GDP

According to the currently available unaudited figures, the 2013 Budget recorded a deficit of IDR 209.5 trillion (2.2 percent of GDP), which was below the projected 2.4 percent in the revised 2013 Budget and the World Bank's projections in the December 2013 edition of the IEQ of 2.5 percent of GDP. The lower than projected budget deficit for 2013, despite weaker than budgeted revenue growth, primarily reflects recorded expenditure disbursement shortfalls relative to the revised Budget allocations.

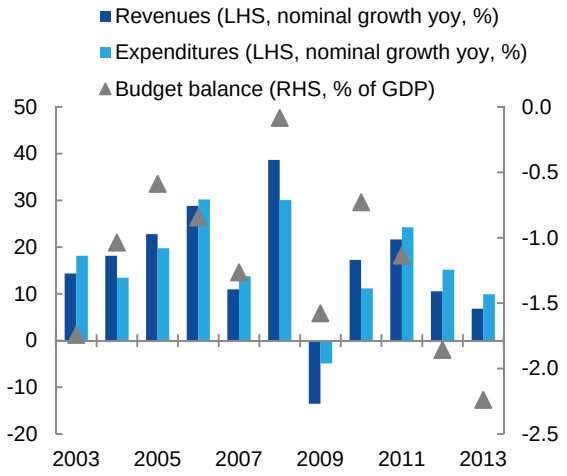
Revenue collection and nominal growth in 2013 was significantly below that in previous years…

Revenue collection reached only 95.2 percent of the 2013 revised Budget projection of IDR 1,502 trillion. This was mostly driven by the weaker realization of tax revenues at 93.4 percent of the 2013 target. In comparison with previous years, this was the lowest realization of the revised revenue target since 2006. Non-tax revenue collection was in line with Budget projections, supported by strong oil and gas revenue outcomes resulting from the weaker Rupiah. Overall, total revenues recorded only moderate nominal growth of 6.8 percent yoy in 2013, well below average nominal growth of 16.5 percent over 2010-2012 (Figure 19). Below-average growth was observed for all major types of revenues (Figure 20).

… while energy subsidy costs again overshot the revised Budget target

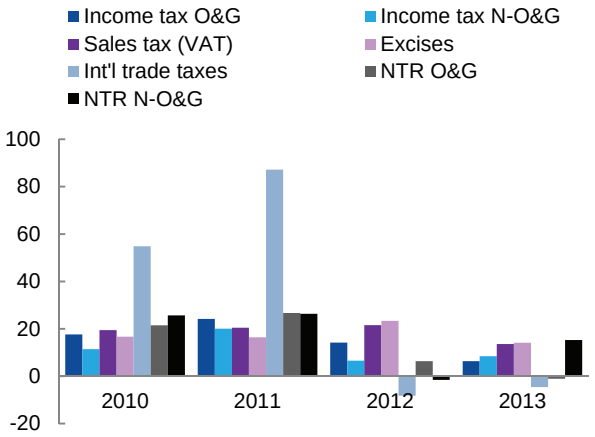
By the end of 2013, total expenditure disbursements reached 95 percent of the revised Budget plan of IDR 1,726 trillion, lower than the outcome of 96.3 percent in 2012. Nevertheless, the disbursement of the core spending categories, namely capital and social spending, increased compared with previous years, at 89.1 percent for capital (82.4 percent in 2012) and 95.9 percent for social spending (87.9 percent in 2012). The improvement in the disbursement rate of capital spending is notable, although the nominal growth rate of capital spending was down slightly on 2013 at 18 percent (versus 23 percent in 2012). Material spending disbursement was slightly lower in 2013 (85.5 percent of the plan) than in 2012 (87.0 percent of the annual target). Finally, 2013 saw another overshooting of the revised Budget target for fuel subsidy spending, by IDR 10 trillion (5 percent more than planned), to IDR 210 trillion. In addition, fuel subsidy obligations of IDR 40 trillion were incurred towards the end of the year but not paid and therefore not included in the cash based 2013 Budget outturn. These would take the accrued fuel subsidy expenses in 2013 to IDR 240-250 trillion. The additional IDR 40 trillion, or about 20 percent of the fuel subsidy budget, is likely to be paid in 2014. This represents about 0.3 percent of GDP and would impose additional fiscal pressure on the 2014 budget.

Figure 19: Nominal revenue growth has decelerated faster than expenditure growth over the last three years …
(nominal growth yoy, percent, and percent of GDP)



Source: Ministry of Finance; World Bank staff calculations

Figure 20: …on the back of a broad-based fall in collection across revenue sources
(yoy nominal growth, percent)



Note: NTR denotes non-tax revenues, O&G denotes oil and gas, N-O&G denotes non-oil and gas
Source: Ministry of Finance; World Bank staff calculations

Table 5: The World Bank's fiscal deficit projection for 2014 has been revised up on weaker revenues and higher subsidy spending
(IDR trillion, unless otherwise indicated)

	2013 Preliminary actual	2014 Budget	2014 WB IEQ Q4 2013	2014 WB IEQ Q1 2014
A. State Revenues and Grants	**1,429**	**1,667**	**1,603**	**1,581**
1. Tax Revenues	1,072	1,280	1,245	1,216
2. Non-Tax Revenues	353	385	353	362
B. Expenditures	**1,639**	**1,842**	**1,819**	**1,845**
1. Central Government, o/w	1,126	1,250	1,234	1,259
Personnel	221	263	261	261
Material	168	216	184	184
Capital	172	184	185	185
Subsidies, o/w	355	334	391	416
Fuel Subsidies*	210	211	239	267
Electricity Subsidies	100	71	100	103
2. Transfers to the Regions	513	593	585	586
C. Primary Balance	**-97**	**-54**	**-88**	**-138**
D. Surplus/Deficit	**-210**	**-175**	**-216**	**-264**
as percent of GDP	**-2.2**	**-1.7**	**-2.1**	**-2.6**
E. Net Financing	**230**	**175**	**n.a.**	**n.a.**
1. Domestic Financing	243	196	n.a.	n.a.
2. Foreign Financing	-17	-21	n.a.	n.a.
Key Economic Assumptions				
Economic growth (percent)	5.7	6.0	5.3	5.3
CPI (yoy, percent)	8.4	5.5	6.8	6.2
Exchange rate (IDR/USD)	10,542	10,500	11,800	12,000
Crude oil price (USD/barrel)	106	105	103	105
Oil production ('000 barrels/day)	825	870	n.a.	n.a.

Note: *For 2013, excluding subsidy costs incurred towards the end of the year, but not yet paid by Government
Source: Ministry of Finance; World Bank staff calculations

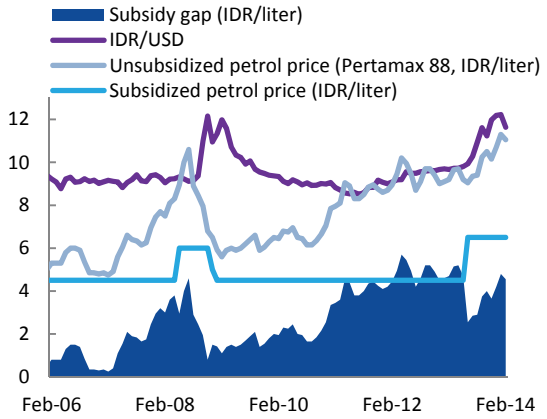
In the absence of revisions, the 2014 budget deficit is projected to be 2.6 percent of GDP

Taking into account World Bank macro assumptions for 2014, previous trends, as well as the expected effect of the minerals export ban on revenues (see Section B1), the World Bank projects a fiscal deficit of 2.6 percent of GDP for 2014 (Table 5), more than the 2.1 percent of GDP deficit projected in the previous December *IEQ*. The revision is primarily a result of a downward-revision in the forecast for tax revenue collection. Lower tax revenues are projected for two reasons: an expected slowdown in VAT collection due to lower private consumption and import growth, and a reduction of the corporate income tax collection due to the mineral export ban (see Section B.1). In addition to moderation in revenue collection, the World Bank has revised up its projection of fiscal spending by 1.4 percent, mostly due to higher expected energy subsidy spending at the exchange rate prevailing in Q1 through March 7 (see Box 3 for a further discussion of fuel subsidy spending and reform options).

The Government is considering revisions to the 2014 Budget to align macroeconomic assumptions with recent developments

The Government has announced that the targets set in the 2014 Budget will likely be hard to reach and has released less optimistic macroeconomic assumptions for 2014 (Table 6).[1] The Government will likely revise the 2014 Budget (possibly in May), likely entailing a reduced revenue target, in line with weaker than expected revenue performance in 2013, and given that no policy changes have been announced to improve collection in 2014. In addition, projected oil lifting will be revised down from 870 to 800-830 thousand barrels per day (bpd), posing an additional fiscal risk, although likely to be offset to some degree by exchange rate effects. The World Bank estimates that reduction of oil lifting of 10,000 bpd would reduce revenue collection by IDR 3 trillion, mostly through non-tax revenues (about IDR 2.4 trillion), all else constant. Given the continuing significant fiscal pressure from fuel subsidies, amplified by the weakening of the Rupiah in H2 2013 that widened the gap between regulated and market prices (Figure 21), the revised Budget may provide an opportunity for fuel subsidy reform, building on last year's price increase. The Government is exploring the option of a fixed fuel subsidy per liter.[2] An additional option is to set a fixed total nominal subsidy cost limit, enhancing the Government's ability to control spending; Box 3 examines these options. Another rise in electricity tariffs for large businesses and industrial groups has been approved by Parliament, likely effective in May.[3]

Figure 21: Fuel subsidies continue to expose the budget to Rupiah-denominated market fuel price pressures
(thousand IDR per liter)



Source: CEIC; World Bank staff calculations

Gross financing for 2014 has been front-loaded

As of March 10, 2014, 44.5 percent of gross security financing requirements for 2014 (IDR 370.4 trillion) had already been met, helped by the front-loading of external issuance, including a record-size tying USD 4 billion issue for an Asian emerging economy in January.

Table 6: The Government has adopted less optimistic macroeconomic assumptions for 2014

	Budget (APBN)	Ministry of Finance Revised outlook	WB IEQ Q4 2013	WB IEQ Q1 2014
Economic growth (percent)	6.0	5.8 - 6.0	5.3	5.3
CPI (yoy, percent)	5.5	5.4 - 5.7	6.8	6.2
Exchange rate (IDR/USD)	10,500	11,500 - 12,000	11,800	12,000
Crude oil price (USD/bbl)	105	103 - 105	103	105
Oil production ('000 bbl/day)	870	800 - 830	n.a.	n.a.

Source: Ministry of Finance

[1] http://www.kemenkeu.go.id/Berita/pemerintah-kaji-kemungkinan-revisi-apbn-2014
[2] http://www.kemenkeu.go.id/en/Berita/fixed-subsidy-alternative-energy-reform
[3] http://www.kemenkeu.go.id/Berita/kenaikan-ttl-hemat-anggaran-subsidi-hingga-rp8-triliun

Box 3: Following last year's subsidized fuel price increase, more fuel subsidy reform is needed

Substantial fuel subsidy overspending in 2013 highlights the need for further and sustained reform to reduce budget uncertainty and limit budget spending exposure, in addition to reducing the opportunity costs of such poorly-targeted and distortionary spending. Despite the 44 percent and 22 percent increase in subsidized petrol and diesel prices, respectively in June 2013, fuel subsidy spending again overshot the revised budgeted level on the back of subsequent Rupiah depreciation, accounting for nearly one fifth of central government spending or 2.2 percent of GDP. This experience shows that ad-hoc price adjustment cannot protect fuel subsidy spending from volatility in oil prices and the Rupiah exchange rate, and does not guarantee sustained fiscal gains.

Fuel subsidy spending therefore continues to pose significant downside risks to the fiscal position in 2014, which remains highly sensitive through fuel subsidy costs to the exchange rate and crude oil price. The World Bank's baseline projections for fuel subsidy spending in 2014 assume an average US Dollar/Rupiah exchange rate of 12,000 and an Indonesian crude oil price of 105 USD per barrel. Thus, without reform, the fiscal deficit in 2014 is projected to reach 2.6 percent of GDP. If 2013 fuel subsidy payment arrears were to be carried forward to 2014 without a commensurate rolling over into 2015 of current year subsidy costs, the fiscal deficit may reach as high as 3.0 percent.

For illustrative purpose, two reform scenarios are simulated to examine potential impact on fiscal deficit and saving that can be allocated for much needed development priorities such infrastructure and social security. Two scenarios are assumed to be effective in July 1st, 2014:

Scenario I: assumes a similar nominal Rupiah per liter increase as in June 2013, of IDR 2,000 per liter for gasoline and IDR 1,000 per liter for diesel. All else equal, this would reduce the fiscal deficit to 2.1 percent of GDP, generating a fiscal saving of about IDR 45 trillion in 2014, and IDR 97 trillion in 2015. As discussed previously, this one-off price adjustment still exposes the budget to future exchange rate and international energy price volatility.

Scenario II: assumes an increase in subsidized gasoline and diesel prices by closing the gap between current subsidized prices and market prices by half. This would mean a 30 percent and 50 percent nominal price increase for gasoline and diesel. Under this scenario, all else equal, the projected fiscal deficit in 2014 is 1.9 percent of GDP and the estimated fiscal savings are IDR 69 trillion, increasing to IDR 144 trillion in 2015.

Table 7: Further fuel subsidy reform is needed to ease fiscal pressures

	Projected fiscal deficit (percent of GDP)	Estimated fiscal saving (IDR trillion)	
	2014	2014	2015
2014 Budget	1.7	n.a	n.a
Baseline/no reform	2.6	n.a	n.a
Scenario I: Increasing subsidized gasoline and diesel prices by IDR 2,000 and IDR 1,000 per liter respectively, as in June 2013	2.1	45.2	97.2
Scenario II: Increasing subsidized gasoline and diesel prices by closing half of the gaps to economic prices	1.9	68.8	144.2

In addition to the above indicative scenarios, to reduce the amount and uncertainty of the fuel subsidy, the alternative fuel pricing policy should strive for simplicity, transparency and predictability to ensure better public understanding and easy implementation. A wide range of approaches have been tried in various countries. While all of them have advantages and disadvantages, there are two potential realistic options for the Indonesian context, which involve a move from discretionary to rule-based price adjustments:

- Option 1: Indexation (with threshold). Periodically moving prices through a pre-agreed rule. Under this option, prices can move both up and down. Domestic prices are reviewed on a periodic basis (monthly, quarterly, etc). A pre-agreed rule is used to set a new domestic price (or keep it the same), with reference to recent world prices.
- Option 2. Quarterly subsidy spending limits. Announce subsidy limits for the coming budget year by quarter, and then adjust prices in subsequent quarters when there is a breach in the target, which would limit the fiscal exposure of the Budget. The quarterly limits would be based on observed fuel consumption patterns and assumed prices, converted into Rupiah. This would allow adjustment of prices in the subsequent quarter based on the prior quarter's total subsidy spending. The basis upon which this could be done would be transparent and rule-based, aiming to depoliticize the price adjustment process.

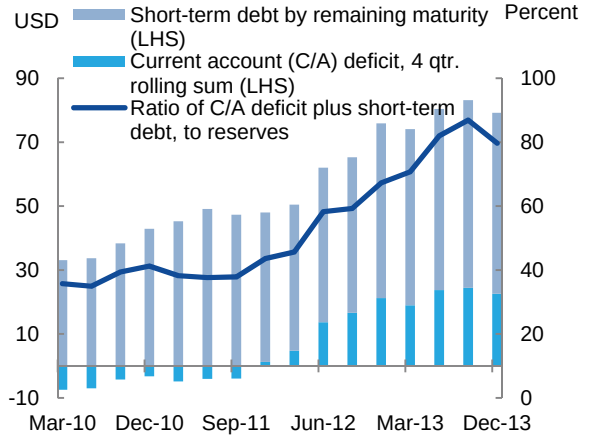
7. As external risks abate, longer-term reforms regain priority

External pressures have subsided for now, but may re-intensify…

The World Bank's baseline projection is of continuing adjustment of Indonesia's external balances and of only a relatively modest further reduction in economic growth. This base case is predicated on the continued availability of sufficient external financing, in light of Indonesia's significant gross external financing needs, stemming not only from its current account deficit (expected to be approximately USD 24.4 billion in 2014), but also sizable external debt repayments (with external debt with a remaining maturity of one year or less totaling USD 56.7 billion as of December, according to BI) (Figure 22). Investor sentiment has recently improved, as highlighted above, but, nevertheless, a resumption of heightened volatility in external financing conditions remains a risk, particularly as the US Federal Reserve continues to "taper". Similarly, the expected improvement in Indonesia's trading partner growth is supportive of exports, but there is still a risk of weaker than projected external demand, in particular in relation to the trade impact of China's economic rebalancing. China's economic trajectory may also further impact commodity prices, decreases in which pose another external downside risk to the outlook.

Figure 22: Gross external financing needs and liquidity risks remain substantial

(USD billion (LHS), percent (RHS))



Source: CEIC, World Bank staff calculations

…while uncertainty remains around the path of macroeconomic adjustment…

Until now most of the macroeconomic adjustment in Indonesia has come from fixed investment, while private consumption has continued to grow at a robust rate. There is a risk that slower credit and property price growth (see Section 5) and higher real interest rates, could have a more negative than anticipated impact on investment, including building investment and construction (which have so far remained resilient), and consumption. Further exchange rate depreciation or volatility may also weigh on the economy, by raising the domestic prices of imported goods (both investment and consumption goods), the Rupiah costs of foreign-currency debt on private and public sector balance sheets, as well as through the fiscal burden of fuel subsidies (see Box 3). In addition to these downside risks, the effect of the upcoming national elections on consumption, through campaign-related spending, and on investment, through heightened policy uncertainty, is another risk factor.

... with vulnerabilities rising considerably in the export sector

The World Bank's base case projections include a considerable improvement in Indonesia's trade balance in 2014. However, this scenario is subject to several risks, all of which relate to the export sector. On the upside, Section 4 showed that non-commodity exports have not yet responded to the more competitive exchange rate, and could therefore provide a positive surprise if not held back by structural constraints. On the downside, recent policies limiting the export of minerals, constraining foreign ownership, raising export taxes, and suppressing imports are likely to reduce exporters' margins, and may also weigh on future FDI.

The macroeconomic stabilization of recent months needs to be reinforced by trade and investment policy certainty, and more fiscal reforms…

While Indonesia's economy continues to adjust in a favorable direction for safeguarding near-term macroeconomic stability, driven mainly by monetary policy and helped by Indonesia's flexible exchange rate, some recent trade and investment policy and regulatory developments increase uncertainty and may weigh on investment, both domestic and foreign, and hence external financing and growth. With political noise increasing ahead of legislative elections in April, and presidential elections in July, it will be particularly important to minimize policy uncertainties, and to the extent to possible make continued progress on strengthening Indonesia's economic resilience and sustainable growth (as focused on in Section C). However, recent policy and regulatory developments, including the partial ban on mineral exports (as discussed next, in Section B.1), and also new trade and foreign ownership laws, and the delay in implementing the revised negative investment list, are having the opposite effect. More fiscal sector reforms to safeguard stability and enhance the use of fiscal policy as a macroeconomic management tool, and support long-run growth, also remain urgent.

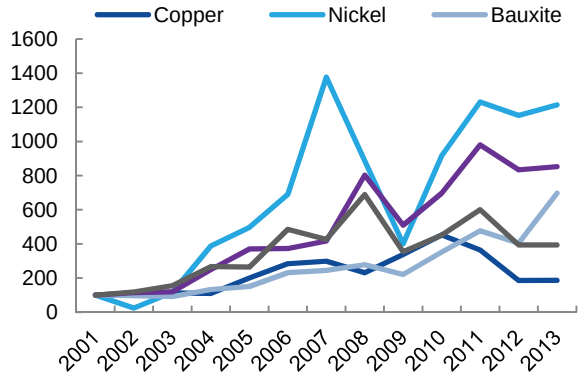
B.Some recent developments in Indonesia's economy

1. A closer look at Indonesia's unprocessed mineral export ban

The recent ban on unprocessed mineral exports has focused attention on policy in Indonesia's important minerals sector, with concerns over the ban's near-term impact on trade and fiscal revenues and its longer-term economic implications

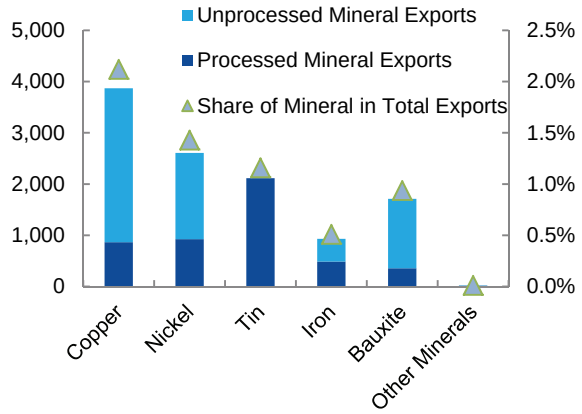
Indonesia is rich in minerals and in the top ten countries in the world for proven reserves of copper, nickel, tin, bauxite and gold. Total mineral export value more than tripled from USD 3 billion to USD 11.2 billion between 2001 and 2013, driven by historically high commodity prices and increasing production (Figure 23). Mineral exports constituted 6.2 percent of total exports in 2013 with copper, nickel, tin, iron and bauxite the largest contributors. By value, approximately forty percent of total mineral exports are currently processed; all tin exports are processed, while most copper, nickel and bauxite exports are unprocessed. The recent imposition of a partial ban and export tax on unprocessed mineral exports has triggered intense debate on its potential impact, and has important implications for the overall mining sector and wider economic outlook. This Section examines the policy rationale, the estimated near- and medium-term trade and fiscal implications, and options for future policy discussions.

Figure 23: Indonesia's mineral exports increased significantly in the 2000s
(US Dollar value of mineral exports, index, 2001 = 100)



Source: World Integrated Trade Solution (WITS) database; World bank staff estimates

Figure 24: Close to 40 percent of mineral exports are processed
(2013 share of total exports, percent, and processed and unprocessed exports, USD million)



Source: WITS database; World Bank staff calculations

a. Background and current status of regulations

The 2009 Mining Law established the policy of adding value in the mineral sector through domestic processing but the first implementing regulation was only issued in 2012

The 2009 Mining Law (*Undang Undang* /2009) requires all mining business permit (*Izin Usaha Pertambangan*, IUP) and Contract of Work (CoW) holders to 'add value' to mining products through domestic refining and processing within five years, i.e. by January 2014. More than three years after the Mining Law, the Ministry of Energy and Mineral Resources (MEMR) Regulation 7/2012 explicitly compelled producers to formulate smelting plans, defined minimum standards for domestic processing and refining, and imposed a ban on the export of raw mineral ores within three months of the regulation (by May 2012). Three months later, MEMR 11/2012 postponed the May 2012 export ban until January 2014. In the interim period, producers were allowed to export unprocessed minerals, but IUP holders were subject to a 20 percent export duty.

The government enacted a ban on unprocessed mineral exports in January 2014, although last minute revisions exempted certain minerals and imposed an unanticipated export tax on them instead

On January 11, 2014, a day before the export ban was due to take effect, the Government announced a new regulation, GR 1/2014, which upheld the ban on unprocessed exports of nickel and bauxite but permitted the continued export of semi-processed 'concentrates' for the other minerals, including copper, until 2017. However, in an unanticipated development, all producers, including CoW holders, are now subject to an export tax on unprocessed and semi-processed mineral exports as specified in Ministry of Finance (MoF) Regulation 6/2014. The export tax rates, starting at 20-25 percent of sales revenues[4] in 2014 and increasing to 60 percent by 2016, have been described by the Government as a fiscal instrument to compel companies to build smelters, rather than as a revenue generating tool[5] (Table 8). It is assumed, in the scenario analysis below, based on an analysis of aggregate profit margins for Indonesian mining companies[6], that once the tax rate climbs to 40 percent companies will cease to export unprocessed minerals as it will no longer be profitable.

There is still considerable policy uncertainty in light of current and potential

The implementation of the ban may still be subject to change given current and potential legal challenges and negotiations. For example, the Indonesian Mineral Entrepreneurs Association (*Asosiasi Pengusaha Mineral Indonesia*, APEMINDO) has already filed a legal challenge in Indonesia's constitutional court over the differential treatment of different

[4] Interpreting "% tax applicable" in the MoF regulation as percentage of sales revenues. Source: "The Export Ban as Finally Introduced – A Grand Compromise with much Residual Uncertainty", Bill Sullivan, Coal Asia, Vol. 39 (Jan 23 2014)
[5] Source: "Indonesia Defies Freeport on Export Tax", Jakarta Post, January 30 2014 (http://www.thejakartapost.com/news/2014/01/30/indonesia-defies-freeport-export-tax.html)
[6] Source: "mineIndonesia 2013: 11th Annual Review of Trends in the Indonesian Mining Industry", Pricewaterhouse Coopers Indonesia (PwC Indonesia)

legal challenges by producers; in the meantime mineral exports have been severely impacted

minerals.[7] CoW holders have objected to the new export tax, maintaining that they are only liable for those taxes specifically included in their contracts, and have voiced the possibility of going to international arbitration.[8] The ongoing debate on the validity of the regulations and how to apply them have delayed the issuance of export permits for both processed and unprocessed minerals with reports that some producers have halted exports in objection to the export tax.[9] The latest trade data show that mineral exports (including copper concentrate) were very low in January.

Table 8: Current regulations impose a partial ban with an increasing export tax on remaining unprocessed mineral exports

Mineral	Unprocessed exports banned?	Export tax on unprocessed exports?	Export tax on unprocessed exports as percent of sales revenue					
			2014		2015		2016	
			H1	H2	H1	H2	H1	H2
Nickel	Yes	n.a. as exports banned	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Bauxite	Yes	n.a. as exports banned	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Copper	No	Yes, for IUP and CoW	25	25	35	40	50	60
Iron Ore	No	Yes, for IUP and CoW	20	25	35	40	50	60
Lead	No	Yes, for IUP and CoW	20	25	35	40	50	60
Zinc	No	Yes, for IUP and CoW	20	25	35	40	50	60
Tin	n.a. as all Indonesian tin exports are currently processed		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: GoI Regulations (GR 1/2014, MoF 6/2014); World Bank Staff Summary.

b. Examining the rationale and assumptions behind the unprocessed mineral export ban

The policy rationale for the ban rests on a number of key assumptions, some of which may not hold

The underlying economic rationale put forward by the Government for the ban is that it (and also the new export tax) will stimulate domestic smelting and processing capacity, which will lead to significantly higher value-addition in mineral exports.[10] Higher value-added mineral exports will contribute to higher GDP, an improved trade balance, enhanced fiscal revenues and job creation. While recognizing that the ultimate goals of enhancing GDP growth and employment generation are clearly at the center of any country's development agenda, it is important to highlight that the above logic rests on a number of key assumptions.

The ban may stimulate few new investments in domestic smelting and refining, except for in nickel, due to a lack of economic viability and global market power…

First, that the ban will stimulate new investment in smelters and refineries. The extent to which this is true depends on their economic viability and Indonesia's share of global ore production, both of which vary across minerals. For copper, lead and zinc, additional investments in processing appear unlikely to be economically viable in current conditions given low margins from global overcapacity in smelting and refining. In addition, overseas processors are less compelled to invest as they can secure ore supplies elsewhere (Indonesia accounted for less than 2 percent of global production in copper, lead and zinc in 2012 and does not have a major share of reserves for any of these commodities.[11]) Investments in bauxite and iron ore are more likely to be viable if the raw ore can be accessed cheaply, although bauxite refining is input-intensive (especially for energy), placing Indonesia at a disadvantage compared to other countries such as China. If construction of smelters is not viable in its own right, there will be pressure for government subsidies - mineral producers have already started to call for government financial support to build smelters.[12]

[7] "Indonesian Mining Group Challenges Ore Export Ban in Court", Reuters, January 22 2014 http://uk.reuters.com/article/2014/01/22/indonesia-minerals-court-idUKL3N0KW3JB20140122

[8] "More Pain for Miners as Government Demands Surety Bonds", Jakarta Post, February 7 2014 http://www.thejakartapost.com/news/2014/02/07/more-pain-miners-govt-demands-surety-bond.html

[9] "Miners hold up exports due to higher duties", Jakarta Post, February 5 2014. http://www.thejakartapost.com/news/2014/02/04/miners-hold-exports-due-higher-duties.html

[10] "Exporting Ore = Illegal", Ministry of Energy and Mineral Resource Press Statement, February 25 2014, http://www.esdm.go.id/news-archives/mineral/48-mineral-en/6730-exporting-ore-illegal.html

[11] US Geological Survey of Metals and Minerals (2013)

[12] Indonesian Government Must Offer Incentives to Build Smelters – PT Indosmelt, Reuters, February 4 2014. http://uk.reuters.com/article/2014/02/04/indonesia-indosmelt-idUKL3N0L91D920140204

Nickel smelters are likely to be the most viable, as Indonesia is the world's second largest exporter of nickel ore[13], and the largest supplier of low-grade nickel ore for Chinese Nickel Pig Iron (NPI) producers[14]. The ban on export of nickel ore may prompt an increase in smelter investment from Chinese NPI producers in Indonesia in the short term, provided that the considerable energy requirements for a smelter are satisfied.[15] However, in the medium to long term, new NPI smelter investments in Indonesia may be limited if Chinese NPI producers secure other low sources of low grade nickel ore, such as the Philippines[16], and Chinese stainless steel manufacturers substitute away from NPI.

…Increased mineral processing may not necessarily raise domestic value-addition by as much given the high input costs…

A second key assumption is that increased smelting and refining will increase the share of value added in mineral exports. In reality, mineral processing is input, especially energy, intensive so the actual value-addition is far less than the difference in the market prices of ore and processed minerals. For instance, copper downstream processing has three steps: concentrating the mined copper ore to increase copper content from 3 to 30 percent; smelting concentrate into blister, which is 99 percent copper; refining blister into copper. About 96 percent of copper's market value is derived from the first step of concentration, and this is already done on mine site in Indonesia, with only 4 percent of final value generated in copper smelting.[17]

… The overall impact on net trade and fiscal revenues could be negative due to high import costs of building new smelters…

A third assumption is that increases in processed mineral exports will be sufficient to offset lower unprocessed ore exports (for example, because there will be a gain from an increase in unprocessed ore prices due to Indonesia lowering global supply). Higher net exports will, in turn, lead to higher mineral tax revenues and royalties. However, as highlighted, apart from nickel, Indonesia does not have global market power to drive international mineral ore prices up by reducing its supply. Moreover, the substantial import requirements to build and operate smelters could offset trade balance gains from increased exports, and the construction costs, and later depreciation charges, of smelters will lower corporate profits and hence income taxes (which constitute two-thirds of mining fiscal revenues). The overall impact on net trade and fiscal revenues could therefore be negative, as discussed below.

… Some better jobs, but unlikely to be more jobs in the sector

Finally, although increased domestic processing may well create some better quality jobs in the sector, the number of new jobs is likely to be limited given that processing is very capital, not labor, intensive. Net job creation (new processing jobs minus lost mineral production jobs) due to this policy is uncertain, but could be negative. Mineral producers have already stated that the reduction in unprocessed mineral exports from the ban will result in thousands of job losses.[18]

c. Estimating the short- to medium-term fiscal and trade impacts

The current de jure policy is likely to lead to both short *and* medium-term negative impacts on Indonesia's trade balance and fiscal revenues

This section presents the findings of the World Bank's analysis of the impact of the unprocessed mineral export ban and tax in the period 2014-17. Overall, the World Bank estimates that there will be a negative impact on net trade of USD 12.5 billion and a total loss in fiscal revenues of USD 6.5 billion from the current (as written, *de jure*) policy during this period. The negative impact is driven by the increase in imports of smelter/refining equipment and the fall in unprocessed mineral exports, more than offsetting the potential increase in processed mineral exports.

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[13] Ibid.

[14] Macquarie Private Wealth Commodities Comment entitled "The Indonesian ore ban – a summary of common questions and answers", January 14, 2014

[15] Source: "Opportunities and Challenges in Indonesia's Mineral Mining Industry", Presentation by Indonesian Mineral Entrepreneurs Association (APEMINDO) at the Ministry of Trade (February 18 2014)

[16] JP Morgan Global Commodities Research Comment entitled "Nickel: Outlook improving, but it is not a one-way street" dated March 7, 2014

[17] "The Economic Effects of Indonesia's Mineral-Processing Requirements for Export" USAID, 2013. Henceforth referred to as the Support for Economic Analysis Development in Indonesia (SEADI) report

A simple trade and revenue model was developed to analyze the near-term trade and fiscal impacts

A simple trade and fiscal revenue model has been used to analyze the impact, through 2017, of the current policies on the trade balance and fiscal revenues.[19] The model covers all minerals subject to regulation but, given their magnitude and the fact that tin exports are already 100 percent processed, the results are driven by copper, nickel, bauxite and iron. In the model, baseline growth in unprocessed and processed mineral exports is linked to an increase in Chinese import demand for commodities (as China is Indonesia's main buyer of mineral exports) and commodity price forecasts by the World Bank global commodities research group. The change in unprocessed and processed mineral exports (and subsequently revenue), compared with the baseline, is driven by assumptions of changes in smelter capacity to process additional minerals and the impact of the ban and export tax on unprocessed mineral exports. Table 9 summarizes the impact channels in the model. In terms of the overall balance of payments impact, it is important to note that this analysis does not incorporate the impact on profit repatriation (through the income line of the current account balance) or the direct impact on foreign direct investment flows, or indirect impact on broader capital flows. The analysis also does not include the potential impact on indirect taxes such as VAT on account of lower economic activity or other indirect fiscal effects via the cost of capital. Moreover, it is a partial equilibrium analysis with limited incorporation of second-round effects.

Table 9: Both export and import channels are modeled as well as export duties/taxes, royalties and income taxes

Trade channels	Expected impact of the ban on the channel	Expected contribution to net trade
Exports of unprocessed minerals	Decrease	Negative
Exports of processed minerals	Increase in line with new processing capacity.	Positive
Imports of intermediate capital goods to build and operate additional smelters	Increase in line with new smelter investments.	Negative
Fiscal channels	**Expected impact of the ban on the channel**	**Expected contribution to revenues**
Export duties (20 percent of sales revenue) from unprocessed exports by IUP holders	Decrease in line with decline in unprocessed exports.	Negative
Export tax (20-25 percent increasing to 60 percent of sales revenue) on unprocessed exports by IUP and CoWs	Increase (as new tax to accompany the ban); the amount raised will depend on unprocessed exports.	Positive at low tax rates; Negative at high tax rates
Royalties on unprocessed mineral exports	Decrease in line with decline in unprocessed exports.	Negative
Royalties on processed mineral exports	Increase in line with increased processed exports.	Positive
Corporate income tax	Decrease in line with profit decline and increased depreciation costs associated with smelters.	Negative

The key driver of the results is the number of smelters assumed to come on stream during this period, their capacity and required capital expenditures

The additional processing capacity assumed to be stimulated by the unprocessed mineral export ban during the period 2014-17 from new smelter investments in the trade model is shown in Table 10. These new smelter investments in nickel, bauxite and iron are those that are considered viable and realistic by the Support for Economic Analysis Development in Indonesia (SEADI) study[20] and have already been financed and have or are about to commence construction.[21] A recent MEMR assessment suggests that 63 new smelting and refining facilities, including 40 for nickel, will become operational by 2017. Based on the available evidence this assessment of smelters achieving production by 2017 appears very optimistic, given three factors: firstly, some of these investments are unlikely to be

[19] The revenue model for export duties and taxes and royalties builds on the trade model as revenues foregone (or extra revenue collected) is simply a function of projected changes in the value of mineral exports multiplied by the export duty/tax/royalty rate. The collection of corporate taxes is a function of company profits, and thus changes in corporate income tax revenues is driven by changes in sales revenues, production costs and depreciation charges. In the absence of detailed information on balance sheets of major companies, these are calculated on the basis of aggregate mineral sector profitability numbers.

[20] *SEADI (*2013)

[21] The Weda Bay Phase I project, financed by the French holding company Eramet is an exception. While the project was expected to commence production in 2014, Eramet announced an indefinite delay in the final investment decision in February 2014 thus increasing the risk that the project will not be completed by 2017. Therefore, the estimates presented are subject to the downside risk that the Weda Bay project does not commence production in 2017.

economically viable from a company's perspective[22]; secondly, smelter projects on average have a long lead time, in the range of 3-5 years, on account of approvals, feasibility studies, environmental clearances and potential delays due to land acquisition[23]; and finally, for smelters to be operational, they would require complementary inputs such as access to electricity which may not be available in the time-frame.[24]

Table 10: No new copper smelters are assumed to come on stream through to end 2017
(list of new nickel, bauxite and iron smelter investments stimulated by the policy included in this analysis)

Operational year	Smelter company	Metal	Initial Capex (USD billion)	Smelter capacity for raw ore (million ton)	Smelter output of processed ore (million ton)
June 2014	CGA PT Antam	Bauxite	1.54	1.1	1.1
June 2014	FeNi PT Antam	Nickel (FerroNickel)	3.30	3.0	3.0
June 2014	Various Iron Smelters (inc. POSCO)	Iron	4.88	5.5	5.5
Jan 2015	Harita Prima Abadi	Bauxite	2.80	2.0	2.0
Jan 2016	PT Antam	Nickel (Nickel Pig Iron)	0.50	0.9	0.9
Jan 2017	Weda Bay Phase 1	Nickel	3.30	3.0	3.0

Source: SEADI (2013) updated with World Bank staff assessment on the expected delay in Weda Bay Phase I nickel project.

Given the uncertainty regarding the implementation of the regulations, three policy scenarios were analyzed

The analysis estimates the impact of the de jure policy, and two other scenarios, against the base case of no unprocessed mineral export ban and no export tax:

- ***De Jure* Policy (Partial Ban with Export Tax):** This scenario reflects a full implementation of the current *de jure* policy regulations outlined in Table 8.
- **Full Export Ban Scenario**: This was the original policy to be implemented from January 2014: a ban on unprocessed exports for all minerals. This would also describe the de facto situation if significant unprocessed exports of minerals currently not banned are halted due to wrangling over the regulations, as is currently the case. It is assumed in the model that by 2016 the export tax is high enough to become binding with companies ceasing unprocessed mineral exports as it is no longer profitable to do so. Thus, the *de jure* policy scenario effectively becomes a full export ban from 2016 onwards.
- **Partial Ban, No Export Tax Scenario**: This is an alternative policy scenario: a ban on nickel and bauxite, without the export tax on the remaining minerals. Compared to the *de jure* policy scenario, this scenario provides an estimate of the marginal effect of the export tax.

Under all scenarios, there is a significant negative impact on the trade balance in 2014-15 and the impact remains negative through to 2017 under the *de jure* policy and full export ban scenario

Under all three policy scenarios in 2014-2015 there will likely be a significant negative impact on net trade (Figure 29). The negative impact on net trade relative to the baseline in 2014 is estimated to be USD 5.3 billion under the de jure policy scenario and could be as high as USD 7 billion under the full ban scenario. This compares to the World Bank's current baseline current account deficit projection of USD 24.4 billion or 2.9 percent of GDP in 2014, i.e. a sizeable contribution to external financing needs at a time of tightening external financing conditions. The negative impact on net trade in 2015 is estimated to be between USD 1.3 and USD 4.1 billion, depending on the scenario. Under the de jure policy and the full export ban scenarios, the impact on net trade remains negative through to 2017, while under the scenario of a partial ban with no export tax the impact on net trade turns positive in 2017.

The negative trade impact is driven by the loss of unprocessed

The negative impact on net trade is driven partly by a decline in export earnings, with the loss in unprocessed mineral export earnings associated with the ban or a fall in production due to the export tax offsetting the earnings from additional processed mineral exports until

[22] SEADI (2013)
[23] "Smelter – Land Acquisition and Approval Process" Presentation by Julian Hill, Deloitte Indonesia at the Jakarta Foreign Correspondents Club, February 12 2014
[24] "Opportunities and Challenges in Indonesia's Mineral Mining Industry", Presentation by Indonesian Mineral Entrepreneurs Association (APEMINDO) at the Ministry of Trade, February 18 2014

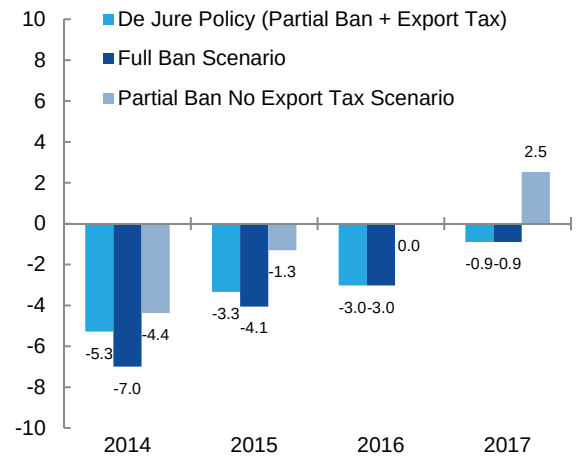
mineral exports offsetting the gain in processed mineral exports…

2017 under the *de jure* policy and full export ban scenarios (Figure 25). The impact on exports only turns positive for all scenarios in 2017 when additional nickel smelting capacity is scheduled to come on board through the Weda Bay project. Should Weda Bay not come into production at this time, then the impact of the current policy or a full ban on exports is projected to remain negative.

… and the extremely high import costs associated with capital-intensive smelter investments and operations

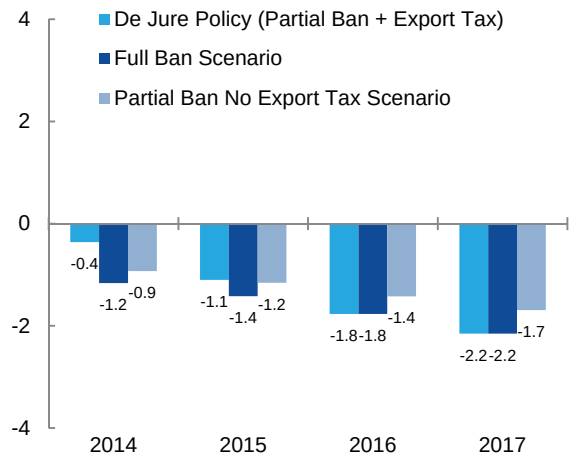
On the import side, it is estimated for all three scenarios that the increase in imports will reach USD 3.8 billion in 2014, and will remain over USD 2 billion through to 2017 (Figure 27) from the imports of intermediate capital goods used to build and operate additional smelting capacity in nickel, bauxite and iron. Smelters are extremely capital intensive and expensive to build and operate: one of the proposed ferro-nickel smelters with capacity to process 3 million tons of nickel (10 percent of Indonesia's current nickel ore production) has a capital cost of USD 3.3 billion with annual operating costs of USD 300 million.[25]

Figure 25: Estimates show a significant negative impact on the trade balance in 2014-15 under all scenarios…
(estimated impact on net trade, USD billion)



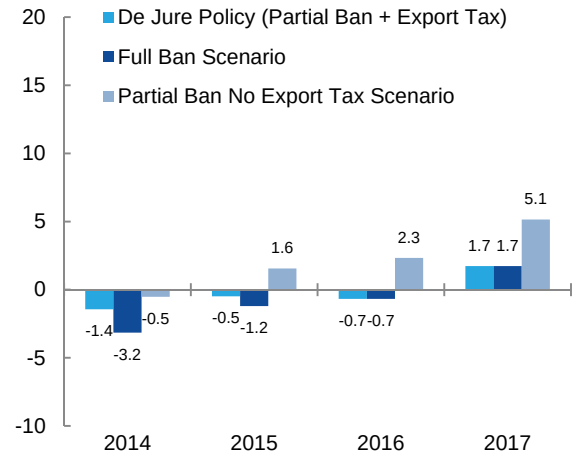
Source: World Bank staff calculations

Figure 26:...as well as a negative impact on collection of fiscal revenues, which increases over time
(estimated impact on fiscal revenues, USD billion)



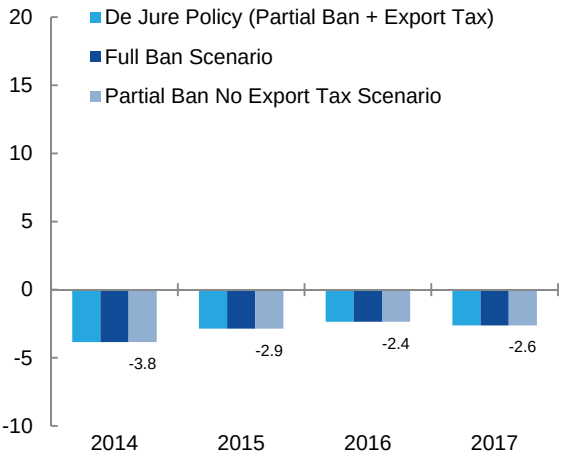
Source: World Bank staff calculations

Figure 27: The negative trade impact is driven by a decline in exports, particularly in 2014…
(estimated impact on exports, USD billion)



Source: World Bank staff calculations

Figure 28: ...and a significant increase in imports through to 2017 from capital intensive smelter investments
(estimated impact on net trade through imports, USD billion)



Source: World Bank staff calculations

[25] SEADI (2013)

The negative impact on exports and the cost of smelters lead to a significant short- to medium-term negative impact on fiscal revenues

The decline in exports and the costs of building smelters lead to a significant negative impact on government revenues. Revenue loss, relative to the baseline in 2014, is estimated to be between USD 0.4 billion under the *de jure* policy scenario and USD 1.2 billion under the full ban scenario. This adds pressure to a projected fiscal deficit of approximately USD 22 billion in 2014, which is already vulnerable to slower revenue growth and higher subsidy spending with the rupiah's depreciation. The negative impact under all scenarios increases over time through to 2017 (Figure 25). Two-thirds of the estimated revenue lost is due to lower corporate income taxes as the industry experiences negative profits before tax from lower export revenues and higher smelter-related operational expenses and depreciation charges.

d. Policy implications and the way forward

Under the scenario that some form of an unprocessed mineral export ban remains in place, the policy is likely to add significant pressures on Indonesia's trade and fiscal balances…

Within the scenarios considered, a full ban on all unprocessed mineral exports generates the most negative estimated impact on net trade and fiscal revenues in the short to medium term. A partial ban on nickel and bauxite (minerals that have additional smelting capacity coming on stream) with an export tax on other minerals, as per the current *de jure* policy, is estimated to have a lower negative impact than a full ban initially, but when the export tax becomes binding (which is likely at a rate of 40 percent or above) the current *de jure* policy effectively becomes a full ban. Removing the export tax will reduce the negative impact, but even a partial ban without any export tax is likely to result in a negative impact on net trade and revenues, compared with the base case, over the short and medium term. These negative impacts come at a time when there remains considerable investor focus on Indonesia's trade balance and the performance of fiscal revenues has weakened.

... other policy options should be evaluated, looking at broader economic impacts, second-round effects and overall efficiency and welfare gains and losses

The fact that a partial export ban, with no export taxes, results in the least negative net trade and fiscal impact of the scenarios considered does not mean that it is good public policy. Other policies, such as public infrastructure investments in energy, may be more effective in increasing domestic processing with lower efficiency costs. Given the likely sizeable negative impact on trade and fiscal revenues of the ban, it is worthwhile to evaluate a wider set of policy options. A thorough evaluation of a wider set of policy options requires deeper analyses and consultation with all stakeholders, including assessing the broader, interrelated economic impacts (on the wider external balances through exchange rate and investment effects, on output and employment, and on corporate balance sheet effects due to possible debt financing, and profitability); differentiating between the minerals as the economic viability of processing differs across minerals; incorporating second-round effects on production and investment decisions; and analyzing overall efficiency and net welfare impact through general equilibrium analysis. Although it is not covered in this piece, the negative impact on the environment of mineral extraction and processing should also be taken into account.

The overall strategy of increasing processing to raise mineral value addition would benefit from being reviewed…

Further analysis should also involve an assessment of the overall strategy of increasing domestic mineral processing in order to increase the share of domestic value-addition. Other strategies to increase domestic value-addition, and more generally the benefits to society, from the mineral sector should be considered. As discussed in Section b, the strategy of domestic mineral processing may not be very successful in the context of Indonesia.

…factoring in the cautionary tales from international experience

The strategy of using export restrictions and export taxes to increase domestic mineral processing has been tried in many countries, including Australia and South Africa[26] (Box 4). However, a recent global assessment by Hausman et al. (2007[27]) emphasizes that increasing downstream processing for primary commodities in general has had limited impact in helping a country to move to a higher value-added export basket. Driven by a fall in transport costs and the fact that mining and processing require different inputs (and can be viewed as distinct industries), mining and processing of minerals are increasingly fragmented

[26] "The Economic Impact of Export Restrictions on Raw Materials", OECD (2010). http://dx.doi.org/10.1787/9789264096448-en

[27] "Examining Beneficiation" Hausman, Klinger and Lawrence (2007), Center for International Development, Kennedy School of Government, Harvard University

across different countries. Moreover, some countries have succeeded in benefiting from mining primary commodities without adding value domestically, as demonstrated in the case of Chile with copper. Box 4 provides more details on the international experience.

Any further policy analyses and developments should avoid further increasing policy uncertainty in the sector

The policy process leading to the introduction of the revised regulations in January 2014, and the subsequent legal challenges, has increased policy uncertainty in the mining sector, further weakening Indonesia's mining investment climate, which is already perceived as one of the weakest in the world.[28] Over the longer term, this could prove to be the biggest obstacle in increasing domestic value-addition, as it increases investor risk perceptions at a time when economy-wide investment has already decelerated (as discussed in Part A), and is set against a backdrop of election-related policy uncertainty and tighter global financing and domestic credit conditions. The additional economic analysis suggested above can support evidence-based future policy development for the sector but if any further policy adjustments are proposed they should be carried out in a way that avoids adding to policy uncertainty.

[28] Indonesia was ranked last among 96 major mineral producing countries and jurisdictions in the *Mining Policy Index*, according to global mining investors, as per the latest Fraser Institute Global Survey of Mining Investors (2013)

Box 4: International experience in promoting downstream mineral processing

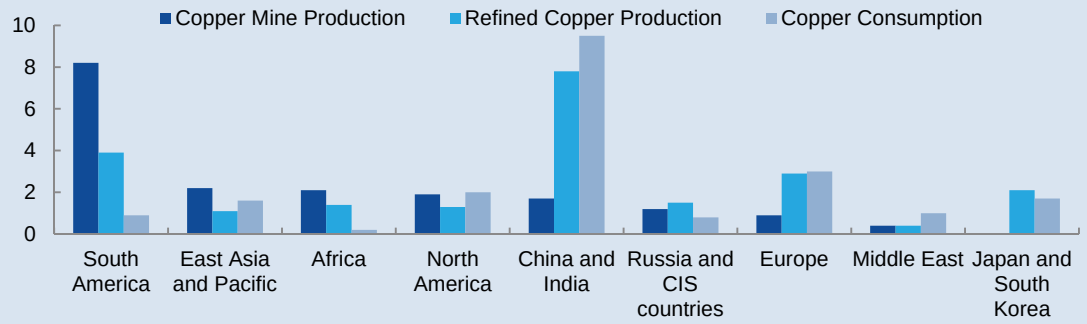
Policies to encourage downstream mineral processing are gaining popularity internationally and have taken various forms, from restricting exports of unprocessed commodities in one part of the value chain to providing subsidies for downstream processing and refining industries. For example, South Africa has imposed export controls on many unprocessed minerals and created financing programs to promote value-addition in mineral industries. Several other African countries have taken a similar path, such as Botswana in diamonds, Zambia in copper, Ghana in oil, and Mozambique in natural gas and coal. In Australia, tax incentives and energy subsidies have been used to promote the downstream steel industry.

While the policy of promoting forward linkages in the mineral sector has gained popularity, there remains a considerable debate on its impact, with a recent cross-country empirical study failing to find positive effects in promoting value-addition in exports. Across a wide range of industries, shrinking transport costs have driven a general trend towards global fragmentation of supply chains. This trend is also seen in the mineral sector where only a very small number of countries that export unprocessed minerals also export the same processed minerals (Figure 29). Hausman et al (2007) investigate the efficacy of mineral downstream processing policies on improving value addition in exports using trade data for the period 1975–2000 for all countries and input-output data describing supply-chain linkages for 241 products. They find that increases in value added in primary commodities are not associated with increases in the share of value added in the country's export basket in the medium to long term.

Mining and mineral processing are distinct industries requiring different capabilities; a country with a major mining sector may not be able to move profitably into downstream processing. Hausman et al's research highlights that the development of mineral processing capabilities in a country has historically been linked to comparative advantages in other factors (such as energy) rather than access to raw mineral ore. Key determinants of the location of smelters or refineries for many minerals revolve around the need for complementary inputs like low-cost power, access to land, pollution controls and other regulatory requirements, access to low-cost finance, external economies such as markets for by-products, and so on, rather than simply access to nearby minerals.

Moreover, it is possible to enhance growth performance by focusing on mining and exporting of unprocessed minerals and using the associated revenues to make productivity-enhancing investments, with Chile's experience in managing the copper industry a case in point. Chile is the world's largest exporter of copper, accounting for over 40 percent of total global exports in 2012, and it also has the largest copper reserves in the world. Since the 1980s, Chile has not focused on processing copper within the country and exports the bulk of its copper as concentrate to China and India where it is smelted further (Figure 29); today copper still contributes 50 percent of Chile's exports. Chile has focused on maximizing revenues from its copper concentrate exports and using the proceeds to build a strong human capital base. During this period (1982-2012), when there were also considerable political and institutional changes happening, Chile's per capita income increased dramatically from USD 5,000 to USD 16,000 (in real 2005 USD), while poverty rates declined from more than 40 percent in 1990 to 13 percent in 2013.

Figure 29: Copper is mined primarily in Chile, while refining and consumption is concentrated in China and India
(2013 copper production, refining and consumption, in million metric tons)



Note: East Asia and Pacific excludes China, Japan and South Korea
Source: DG Mineral and Coal, Ministry of Energy and Mineral Resources, Indonesia, based on data provided by Wood MacKenzie*

Source: See OECD (2010) ibid, SEADI (2013), "Fragmentation of Trade in Value Added Over Four Decades." Johnson and Noguera (2012), NBER Working Paper No. 18186., "Examining Beneficiation" Hausman, Klinger and Lawrence (2007), Center for International Development, Kennedy School of Government, Harvard University, SEADI (2013), US Geological Survey of Metals and Minerals (2013). All figures from World Development Indicators (WDI) for Chile.
Note: * Presentation made by DG, Mineral and Coal at Ministry of Trade dissemination event on the Mineral Export Ban titled "*Implementatiasi UU RI Nomor 4 Tahum 2009 Dan Dampaknya Terhadap Kebijakan Hilirisasi Pertambagan Mineral Dan Batubara*" (February 18 2014)

2. Applying a rapid risk diagnostic approach for building disaster and climate resilience in Indonesia's growing cities

a. Increasing urban risks in East Asia-Pacific and Indonesian cities

East Asia-Pacific is leading the world in the rate of rapid urbanization and exposure to climate and disaster impacts

Disaster- and climate-related risks in East Asia and the Pacific will continue to rise due to increasing populations in cities. Most future urban growth will occur in developing countries across this region, especially small- and medium-sized cities where urbanization will have the most impact. From 1980 to 2010, Asia added more than one billion people to its cities—more than all other regions combined—and another one billion inhabitants are expected to live in urban areas by 2040.[29] Focusing on the Indonesian experience, this Section examines the challenge of making cities more resilient.

Many urban centers are located in hazardous zones

Cities are traditional engines of development, concentrating businesses, knowledge, technology, and diverse labor opportunities. However, many urban centers are located in hazardous zones: zones that lie at sites of agricultural surplus, such as fertile volcanic soils, or in seismic fault zones, or along major trade and transportation routes, which align with coasts and river systems that are prone to flooding, storm surges, and coastal erosion (Dilley et al. 2005; see also Hallegatte 2011). The increasing concentrations of people and assets in hazardous areas is the largest driver of disaster risk and the greatest challenge in building resilience at global, national and local levels.[30]

Indonesia's cities are among the most prone to disaster and climate risks…

Indonesia is leading the rapid urbanization experienced across East Asia. With an average annual urbanization rate estimated at 4.1 percent between 2000 and 2010, Indonesia is urbanizing faster than its Asian counterparts, such as China (3.8 percent), India (3.1 percent) and Thailand (2.8 percent). This has made Indonesia one of the most urbanized countries in Asia, with an urban population share of 54 percent in 2010. Projections of urbanization suggest that this figure will increase to 68 percent by 2025. However, Indonesia has yet to achieve the economic returns to urbanization of other countries. For every additional 1 percent that Indonesia urbanizes, it achieves just 2 percent of additional GDP, whereas other countries in the region have achieved a 6-10 percent increase in GDP per 1 percent of urbanization.[31]

…highlighting the need to align infrastructure development with such risks to build resilience

Over 110 million people in about 60 Indonesian cities are exposed to natural hazards, including tsunamis, earthquakes, flooding and impacts of climate change. Recent analysis suggests that Indonesia is highly vulnerable to the consequences of a warming climate.[32] In particular, the eastern and western areas of densely-populated Java, the coastal regions of much of Sumatra, parts of western and northern Sulawesi, and Southeastern Papua islands all rank highly on climate hazard maps. Scenarios show that higher temperatures, changes in precipitation patterns and rising sea levels could result in inundation of productive coastal zones and more frequent weather-related disasters, which will have increasing negative impacts on agriculture, and food and water supplies. Currently it is estimated that only 20 percent of local governments have committed sufficient funding towards infrastructure. Meanwhile, recent studies emphasize the importance of aligning infrastructure development and disaster and climate change impacts to build resilience in mid-sized cities.[33]

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[29] Asian Development Bank, 2012, "Key Indicators for Asia and the Pacific 2012: Green Urbanization in Asia", special chapter, Mandaluyong City, Philippines

[30] Jha, Abhas K. and Zuzana Stanton-Geddes, eds. , 2013, "Strong, Safe, and Resilient: A Strategic Policy Guide for Disaster Risk Management in East Asia and the Pacific" in "Directions in Development", Washington, DC: World Bank

[31] World Bank, 2013, "City Planning Labs: A Concept for Strengthening City Planning Capacity in Indonesia"

[32] Yusuf, Anshori and H. Francisco, 2009, "Climate Change Vulnerability Mapping for Southeast Asia. Economy and Environment Program for Southeast Asia"

[33] World Bank, 2012, Indonesia – "The rise of metropolitan regions: towards inclusive and sustainable regional development", Washington, DC, World Bank

Agglomeration leads to concentrations of rapidly built physical assets, often without proper land use planning and controls

While urbanization increases efficiency and promotes growth, agglomeration also leads to concentrations of rapidly-built physical assets, often without proper land use planning and controls. This has not only become an underlying factor in urban congestion, but is also a cause of the increased exposure of people to hazards in Indonesia. The cities that emerge from this rapid urban transition will lead Indonesia's development in coming decades. However, without strategically planned investments, policy interventions, and stronger institutional capacity, poorly managed urbanization could act as a constraint to sustainable and inclusive growth, and expose Indonesians to climate change and disaster risks.

b. A framework for building urban resilience

Three important steps towards building urban resilience include land-use and infrastructure investment planning, urban infrastructure upgrading and urban ecosystem management

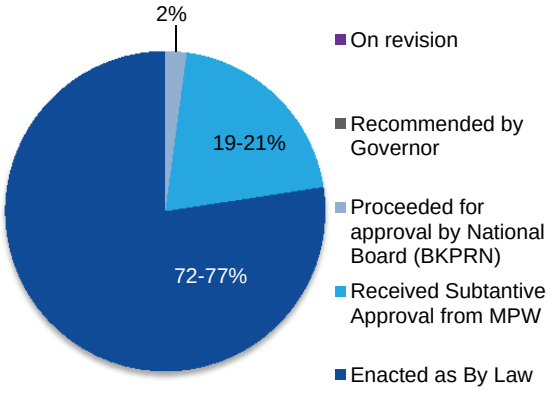
The World Bank has introduced a practical framework for building urban resilience in the East Asia and Pacific region. Three approaches are essential and of particular relevance to cities in Indonesia.

- First is risk-based Land-use and Infrastructure Investment Planning that identifies and prioritizes investments to improve urban resilience over projected risks. When enacted and enforced, land-use plans can control development in hazard-prone zones, facilitate rescue operations, and provide sites for safe emergency evacuation centers.
- Second is Urban Infrastructure Upgrading. Slum settlements are often found in disaster-prone areas. The typical characteristics of urban slums (over-crowded, poorly-built structures, narrow streets or alleys, lack of basic services) make the urban poor more vulnerable to disaster risks. In order to formulate the appropriate strategy for improving urban settlements, locations prone to high risks need to be identified and existing assets in these areas upgraded. For the identified locations, one or more of the strategic urban upgrading instruments could be applied, such as: (i) applying zoning regulations in disaster-prone areas (e.g. allowable activities and building codes); (ii) implementing structural and non-structural instruments for mitigation and evacuation; and (iii) upgrading the slum's infrastructure in accordance with the citywide spatial plan.
- Third is Urban Ecosystem Management, which combines investment planning with ecosystem restoration. This is essential in reducing disaster risks triggered by development investments. A number of ecosystem management procedures are relevant to urban resilience, including watershed management (riverbank area management, water catchment area management, etc.), coastal zone management, environmental buffer zones, green infrastructure, and urban landscape design.

Yet, Indonesian cities face difficult challenges in undertaking land use zoning for resilience

Within Indonesia's planning hierarchy, the main instrument for managing development is the detailed spatial plan; responsibility lies with local governments. Under Spatial Planning Law No. 26/2007, detailed spatial plans (*Rencana Detail Tata Ruang*, RDTR) form the basis for zoning regulation, including management of activities in areas prone to disasters, or with rapid growth and high density usage. The RDTR is formulated based on, and after, the regional spatial plan (*Rencana Tata Ruang* Wilayah, RTRW) has been enacted as a local bylaw. To date, over 70 percent of Indonesian cities have enacted bylaws on RTRW (Figure 30), allowing city governments to formulate detailed spatial plans and zoning regulations and to start to build resilience.

Figure 30: Status of city spatial plans (February 2014)
(share of Indonesian cities, percent)



Source: Directorate of Spatial Planning, Ministry of Public Work (MPW) (2014)

Detailed spatial plans have to be based on maps with a scale corresponding to the span of critical focal areas

Following Government Regulation No. 8/2013 on the scale and accuracy of maps for spatial planning, detailed spatial plans have to be based on maps with a scale corresponding to the span of critical focal areas, as well as the size of objects of importance being planned. In the case of risk zoning, this may range from 1:5000 to 1:1000 scale maps, which are typically not readily available in government agencies. Where such data are unavailable, use of high-resolution satellite and aerial images and participatory ground survey approaches can be considered. This should be supported by proper data validation procedures to ensure that the geospatial information produced is acceptable as a formal basis for legal zoning.

Failure of local governments to undertake concrete measures will result in new vulnerabilities

Addressing disaster and climate risks in hazard prone areas with existing settlements and assets is an urgent task. Failure of local governments to undertake concrete measures will result in new vulnerabilities continuing to arise. The complex issues of informal settlements along Jakarta's flood-prone rivers is an example of the absence of detailed zoning, which forces local authorities to constantly bear the costs of floods without any clear instrument to start restoring waterways and upgrade affected neighborhoods.

c. A rapid risk diagnostic approach is useful to identify practical options for investing in disaster and climate resilience in Indonesian cities

The initial focus for interventions to support urban resilience should be on major and mid-sized urban areas

As Indonesia has many growing urban centers, it is important to start looking at urban resilience in places where interventions have the potential to have the greatest impact. Using a hierarchy of Indonesian cities, from small to medium, large, metropolitan and megapolitan, Indonesia can start to view RTRWs as the defining criteria on where to intervene to promote urban resilience. As highlighted in Table 11, most medium and large cities have had their RTRWs enacted, hence are ready to work on RDTRs for their priority development areas and high risk corridors.

Table 11: Status of city regional spatial planning (RTRW) as of February 2014

City typology by population size	Total number	Legislative steps				
		Under revision	Recommended by governor	Proceeded for approval by National Board (BKPRN)*	Received substantive approval from MPW	Enacted as by-Law
Megapolitan (more than one urban center)	11	-	-	1	1	9
Metropolitan (population > 1 million)	8	-	-	-	1	7
Large city (pop 500,000-1 million)	23	-	-	1	5	17
Mid-sized city (pop 100,000-500,000)	44	-	-	-	10	34
Small-sized city (pop < 100,000)	7	-	-	-	2	5
Total	93	-	-	2	19	72

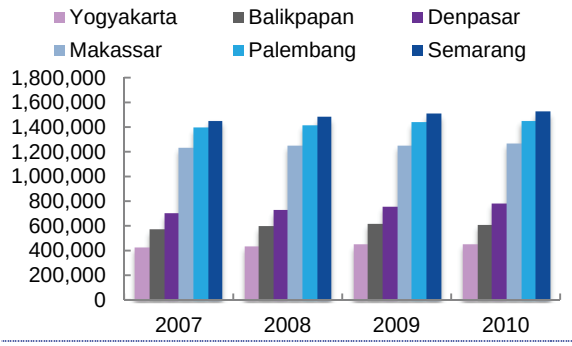
Source: Ministry of Public Works, compiled by World Bank staff
Note: * Some city RTRWs which cover nationally strategic zones require the approval of BKPRN

Six cities have been selected for the rapid risk diagnostic exercise

Working with various national and sub-national partners in urban development, conversations with metropolitan and large cities on disaster and climate risk profiles have started through a rapid risk diagnostic exercise. Six cities, namely Palembang, Balikpapan, Makassar, Semarang, Yogyakarta and Denpasar, have been preliminarily selected. These six cities are all experiencing population growth (Figure 31), and have occasionally been confronted by disasters.

Figure 31: The six pilot cities vary in size but have growing populations

(population level in pilot cities)



Source: BPS, compiled by World Bank staff

Five cities have enacted their RTRW

These six cities have also advanced their RTRWs. With the exception of Makassar, all have already enacted the RTRW into local bylaws, providing the legal ground for them to start work on the RDTR and zoning regulation processes (Table 12).

Table 12: Status of regional spatial plans (RTRWs) of cities under study

No.	City	Category	Status of RTRW
1	Denpasar	Metropolitan	enacted as by Law
2	Makassar	Metropolitan	Received substantive approval from MPW
3	Palembang	Metropolitan	enacted as by Law
4	Yogyakarta	Metropolitan	enacted as by Law
5	Semarang	Metropolitan	enacted as by Law
6	Balikpapan	Large city	enacted as by Law

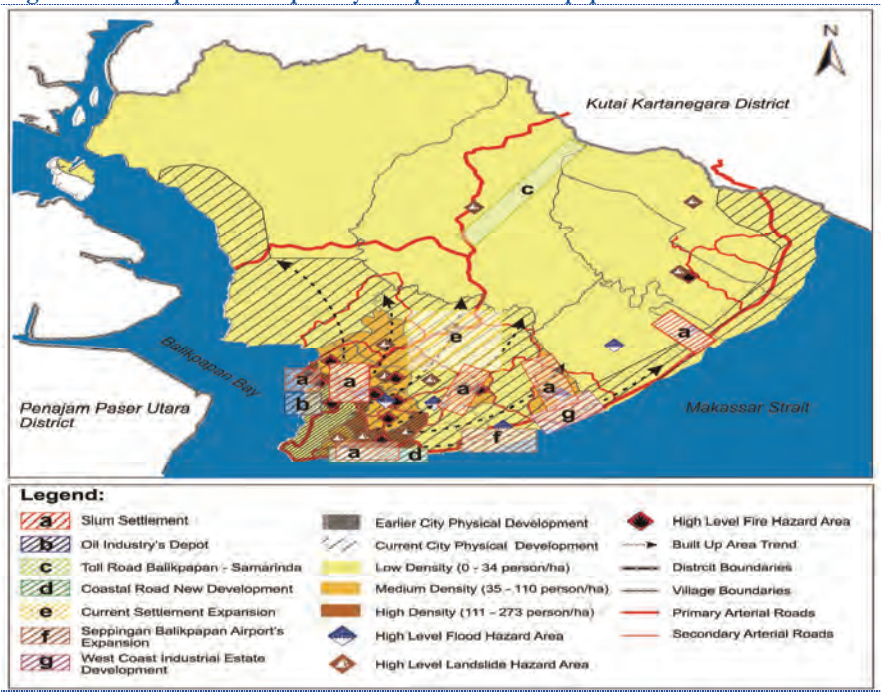
Rapid diagnostics allow disaster and climate risks and corresponding priorities for resilience to be clearly identified…

In each of the six cities, a risk profile was developed through rapid risk diagnostics to outline the story line of each city's overall spatial structure and growth trends, the pattern of disaster occurrence and the main affected areas, together with all existing urban investment being undertaken (Figure 32). The story line provides a snapshot of how the cities could consider incorporating a resilience component in their public investment. For instance, Balikpapan is prone to coastal flooding and is about to build a new coastal road. This investment could become part of a coastal zone redevelopment, integrating a water management feature, such as lagoon retention with multi-functions for both flood control and tourism.

… and common themes emerge across the cities

Common themes emerge across the cities, including issues of urban poverty with slum-dwelling populations, and traditional disaster risk management challenges for persistent urban hazards of flooding and fires. With the exception of Yogyakarta, all the cities are in coastal zones and face difficult decisions to balance economic development and protection of coastal ecosystems in these delicate environments. The rapid risk diagnostic highlights opportunities for the six cities to respond to these challenges and start increasing resilience.

Figure 32: Example of a simple city risk profile in Balikpapan



Source: Balikpapan City Risk Profile, World Bank (2013)

d. Building resilience with risk sensitive land-use zoning and infrastructure planning

Existing RTRWs form the basis for risk-sensitive RDTRs

Detailed spatial and infrastructure planning processes allow cities to incorporate risk mitigation measures into existing practices. For instance, existing RTRWs that have recognized disaster and climate risks, such as those in Balikpapan, Denpasar and Yogyakarta, can be further translated into risk-sensitive RDTRs.

Balikpapan is implementing several flooding countermeasures

Balikpapan, under the current RTRW, is implementing several flooding countermeasures, including river normalization, drainage system development and maintenance, as well as construction of a small dam. Public investment has been allocated towards resilience activities, such as river basin area revitalization, protected forest conservation and drainage system improvements, both at the city and at the residential area level. Similarly, the city is implementing zoning control measures, including strict construction permit issuance for landslide-prone areas. These efforts could be consolidated into risk-sensitive land-use zoning as the basis for investment planning in infrastructure, and the rehabilitation and protection of green space and waterways.

Denpasar could establish development controls in flood- and tsunami-prone areas

In Denpasar, risk-based infrastructure investment planning options include accelerating the implementation of comprehensive flood and tsunami disaster mitigation by establishing development controls in flood- and tsunami-prone areas. With many new hotel developments occurring in the Sanur area, for example, the city government could use building and site permits as an instrument to re-arrange the coastal layout to open more evacuation access to the beach areas as part of its "Tourist-safe Denpasar" campaign.

Yogyakarta has planned for evacuation sites in its RTRW

Yogyakarta, which is confronted with serious hazards from flooding, lahars, landslides and earthquakes, has planned for evacuation sites in its RTRW. These have been identified throughout the city, including green spaces, city squares and sport centers. Planning measures have restricted development in some zones along the river, with substantial investments in flood, lahar, landslide prevention and control infrastructure. Upgrading informal settlement along the river could be further used as a way to open a buffer zone to mitigate flood impact, but also with multiple functions to develop "*kampung* walk" tourism potentially benefitting the lower income population from the city's large tourism market.

e. Building resilience with urban infrastructure upgrading

Opportunities to build resilience arise with major urban projects

Reclamation has become a popular choice for development in coastal cities. While often ambitious, such major urban projects present opportunities to build resilience via urban infrastructure upgrading, for example where urban upgrading can be incorporated into land reclamation, as in Makassar and Balikpapan.

Makassar can use its plan to incorporate slum upgrading and adopt water-sensitive development

Makassar has a significant number of slum areas including those located in riverbank and tidal prone regions. The city has an ambitious plan for coastal reclamation along the Losari beach, revitalization of the Tallo river tributaries and reclamation along its coastal delta. This grand plan can account for resilience by incorporating slum upgrading and adopting the concept of water sensitive development, to ensure that adequate drainage and sanitation systems are developed and risks are mitigated from coastal as well as inland flooding.

In Balikpapan a new coastal road can be used to upgrade slum areas

Balikpapan has six major slum villages containing floating wooden structures along the south and west coastal zones. These settlements are highly vulnerable to coastal hazards including rising sea levels. As the city is also working on a plan for coastal road development, which includes reclamation, this project could also be used as the basis to carry out upgrading of nearby slum neighborhoods, drainage improvements for flood mitigation, and revitalization of water retention systems for both water supply and flood control.

f. Building resilience with ecosystem restoration and management

Cities with rivers and wetlands are more dependent on the ecosystem and can consider restoration and conservation as a development approach

Both Makassar and Palembang demonstrate the importance of building resilience with improved ecosystem management and restoration, particularly relevant in Indonesian cities with rivers and wetlands. In Makassar, urban ecosystem management is needed to revitalize mangrove forests, as well as conserving forests and water catchment areas in the upstream regions. The aim is to reduce sedimentation in estuaries, particularly the Tallo estuary, which has increased due to land conversion and resulting landslides. Ecosystem management may offer a more effective land subsidence mitigation approach through the planting of vegetation in recharge areas that would increase water reserve capacity along the coastal areas in order to prevent seawater intrusion. In Palembang, flooding from the Musi river and its tributaries is a chronic issue. In 2012, the city enacted a local regulation to control development of the wetland. This regulation classifies areas for strict conservation and regions available for farming, fishery, plantation, and settlement. Reclamation will provide alternative retention pools and/or water storage to preserve the environmental balance and maintain water quality and flood prevention. This effort could be further expanded to use an ecosystem approach in land and real estate development along the Musi river.

g. Now is the time for Indonesia to prioritize urban disaster and climate risk resilience

It is time to invest in risk-sensitive detailed spatial plans

As most Indonesian cities are about to embark on a process of detailed spatial planning in the next 1-2 years, there is an opportunity to seize the momentum to build urban resilience. Applying rapid risk diagnostics have proven useful as a means to start the conversation on risks and risk mitigation options with city leaders and stakeholders and in identifying the most significant disaster and climate risks. The diagnostics have also identified practical risk mitigation alternatives that cities can undertake through adjustments to on-going urban investment programs.

Granular scale maps on city assets, population centers, natural hazards and vulnerabilities are needed

However, to carry out this process more systematically, granular scale geospatial data on city assets, population centers, natural hazards and vulnerabilities are urgently needed for accurate diagnostics. Also, systems need to be put in place to ensure that rapid diagnostics translate into formal zoning requirements in the RDTR spatial plans to control and manage spatial development, as well as major urban investment and upgrading projects. These should include planning for ecosystem restoration to promote improved urban resilience in Indonesian cities and reduced exposure to disaster and climate hazards.

C. Indonesia 2015 and beyond: A selective look

1. Indonesia: Avoiding the trap

Indonesia's development goals over the next 20 years are very ambitious, but they can be achieved with the right growth strategy and a few high priority structural reforms

Within the next two decades Indonesia aspires to generate prosperity, avoid a middle-income trap and leave no one behind as it tries to catch up with high-income economies. These are ambitious goals. Realizing them requires sustained high growth and job creation, as well as reduced inequality. Can Indonesia achieve them? The World Bank's forthcoming Development Policy Review, titled "Indonesia: Avoiding the Trap" argues that the country has the potential to rise and become more prosperous and equitable. But the risk of "floating in the middle" is real. Which pathway the economy will take depends on: (i) the adoption of a growth strategy that unleashes the productivity potential of the economy; and (ii) consistent implementation of a few, long-standing, high-priority structural reforms to boost growth and share prosperity more widely. Indonesia is fortunate to have options in financing these reforms without threatening its long-term fiscal outlook. The difficulties lie in getting the reforms implemented in a complex, and decentralized, institutional framework. But Indonesia cannot afford to not try hard. The stakes—both in terms of the payoff from reform and the cost of no reform—are high. "Indonesia: Avoiding the Trap" aims to contribute to the crucial debate over Indonesia's economic development policy priorities and challenges, and this Section provides a brief summary of its key findings.

a. The next decade brings risks and opportunities

Four domestic and external factors will shape economic prospects

Over the next decade, four domestic and external factors—which good policies can turn into powerful drivers of growth, or "pull factors"—will shape economic prospects. These factors are Indonesia's demographics and ongoing urbanization trend, and the international outlook for commodity prices and developments in China.

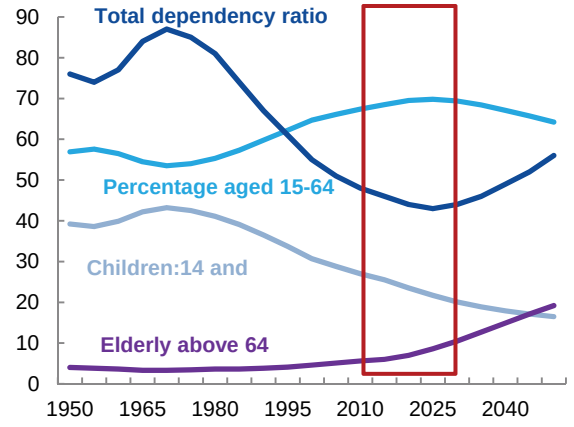
Indonesia has the potential to benefit from a demographic "dividend" thanks to its young population...

Indonesia is blessed with abundant labor. Between 2013 and 2020, the population of working age will increase by 14.8 million, reaching 189 million from the current 174 million. Today, 50 percent of the population is under the age of 30. This increasingly educated and IT-savvy youth is an asset that can be used to boost overall productivity and economic growth. With the right policies in place to utilize this labor, Indonesia is poised to benefit from a demographic "dividend", before the population starts to age in 2025-30.

…and from its pace of urbanization, one of the most rapid in the world

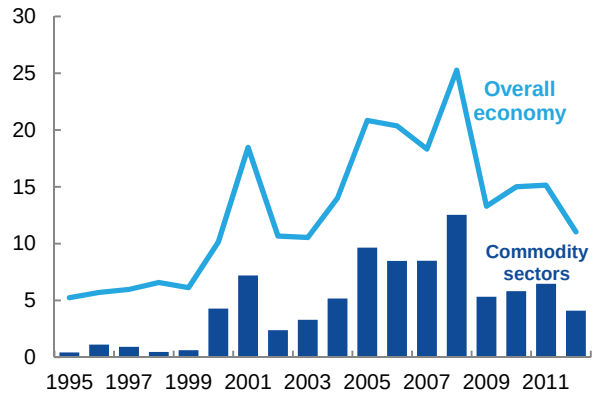
Urbanization is increasing at an annual pace of about 4 percent, making Indonesia one of the most rapidly urbanizing countries in the world. By 2025, 68 percent of the population is projected to live in urban areas against 52 percent in 2012 (according to UN projections). As income rises and existing large metropolitan areas such as Jakarta and Surabaya become saturated, the demand for consumer durables, shopping space and housing will increase significantly in smaller cities. Connecting these cities and their inhabitants to rural areas, metropolitan areas and the global economy will be essential to attracting firms and achieving shared prosperity. Empirical evidence shows that urbanization supports growth and poverty reduction in Indonesia only in the presence of adequate infrastructure (Lewis, 2012).

Figure 33: Demography provides a boost: Indonesia's dependency ratio will likely fall until 2025-30…
(contribution to nominal GDP growth yoy, percent)



Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2010 Revision

Figure 34: …but the boost from commodities, an important growth engine of nominal incomes, is now fading…
(contribution to nominal GDP growth yoy, percent)



Source: Source: BPS; World Bank staff calculations

Weaker international commodity prices may be a blessing in disguise for some segments of the manufacturing sector…

The softening of global commodity prices since 2011 poses challenges for Indonesia in the short term, as seen in their impact on Indonesia's trade balance, but it offers an opportunity to enhance the quality and diversity of investments in Indonesia. Over the past decade, high commodity prices tilted investment incentives in favor of the resource sector and non-tradable sectors (e.g., the real estate sector) against manufacturing and other tradable sectors. The share of manufacturing in total investment dropped to 12 percent in 2002-11 against almost one-fifth in 1990-96. Going forward, lower commodity prices should increase the relative profitability and attractiveness of (non-commodity-related) manufacturing and can help Indonesia develop its industrial base. Commodity price falls over the past two years, through their impact on the current account, are now translating into depreciation in the real effective exchange rate, helping manufacturing exports and competitiveness. With reforms to reduce the constraints faced by manufacturing firms (see below), weaker commodity prices may therefore be a blessing in disguise.

…while rapidly rising wages in China give Indonesia a potential "second chance" in

China's rapidly rising wages present Indonesia with a potential second chance in regaining a comparative advantage in labor-intensive export sectors. China's nominal wages have grown by an annual average of almost 15 percent since 2001 which, together with slowing productivity growth in low-skilled sectors in recent years, has seen Chinese unit labor costs

manufacturing exports

grow by almost 70 percent since 2005 (Economist Intelligence Unit, 2012). Meanwhile, ongoing Yuan appreciation, with the real effective exchange rate up 30 percent since 2005, is further eroding China's competitiveness in manufactured goods. These pressures, combined with slower overall economic growth as China rebalances, are likely to prompt investors to look beyond China's coastal areas. These dynamics offer ASEAN countries, including Indonesia, an opportunity to attract more investments in their manufacturing industries.

But there are two key risks

However, while none of these potentially favorable factors will be captured without reforms, there are two risks: a risk of a slowdown in long-term growth and a risk of growth not becoming inclusive enough.

First, without structural reforms, there is a material risk of a growth slowdown in Indonesia

International experience shows that growth slowdowns can occur at all levels of income (Bulman et al, 2012). Recent evidence suggests that their frequency is higher for middle-income countries (IMF, 2013). As an example, Brazil grew fast in the 1960s and 1970s. Then from 1981, when its GDP per capita stood at USD 3,939 (slightly above Indonesia's GDP per capita today), it embarked in a prolonged relative growth slowdown, until 2004.[34] Similarly, Mexico experienced more than 20 years of a prolonged growth slowdown past 1981 when its GDP per capita was USD 6,965. These experiences suggest that Indonesia cannot take its solid growth performance for granted. In fact, this growth was driven by a very favorable external environment: the commodity boom experienced in 2003-11 combined with low global interest rates since 2009 supported corporate revenues, household incomes and government revenues, and led to a significant jump in domestic demand.[35] Going forward, Indonesia can no longer count on any growth stimulus from external factors. As mentioned above, since 2011, commodity prices have softened significantly. With the normalization of US growth, the US Federal Reserve's quantitative easing policy—which led to low global interest rates—is being gradually unwound, increasing financing costs, with knock-on implications for investment. As these external support factors fade, without structural reforms, the material risk of a growth slowdown exists for Indonesia.

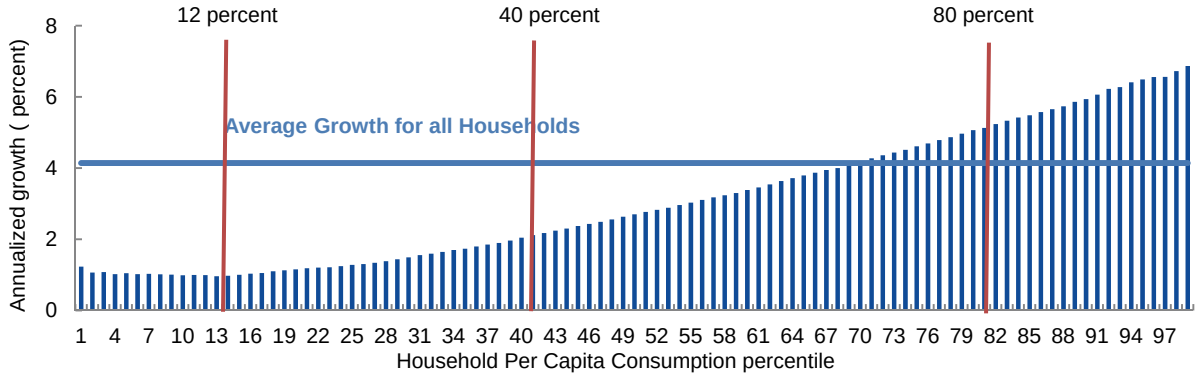
Second, there is also a risk that growth may not be equitable enough; so inclusive growth needs to be fostered and not taken as granted

Even if Indonesia manages to avoid a prolonged growth slowdown, growth may not be inclusive, i.e. the benefits and opportunities are not accessible across the population. From 1999 to 2012, poverty was cut by half: from 24 percent to 12 percent. However, in 2012, about 65 million people hovered between the national poverty line and 50 percent above it. Along with the poor, this group remains highly vulnerable to food price increases, health shocks and natural disasters. One reason for the persistent vulnerability is that the poorest households experienced a small increase in real incomes compared with richer ones. In 2003-10, real growth of per capita consumption was 1.3 percent per annum for the poorest 40 percent of households, compared with 3.5 percent for the next 40 percent, and 5.9 percent for the top 20 percent (Figure 35). Moreover, an increasing amount of consumption inequality in Indonesia is explained by differences amongst people in access to opportunities. In 2002, 27 percent of child consumption inequality was due to differences in their gender, the gender and employment status of the head of their household, their parents' education, and their region and location of birth. By 2012, this reached 37 percent. Thus going forward, equitable growth needs to be fostered and not taken as granted.

[34] A commodity-rich country similar to Indonesia, Brazil benefitted significantly from a commodity boom in 2004-11. This favorable external factor explains parts of the strong growth recovery in that country in that period.

[35] More specifically, the direct rise in the value of resource assets (palm oil, rubber, coal, gas, etc.), as well as the value of other assets purchased on the back of commodity incomes or wealth (real estate properties, land and securities), significantly encouraged consumption and investment against these assets and generated multiplier effects in the economy.

Figure 35: Poorer households experienced lower than average growth in their real consumption over 2003-10



Note. A Growth Incidence Curve (GIC) shows the annual growth rate in consumption between two periods for each percentile of the distribution. Thus, the GIC indicates how the average consumption growth for all households is distributed across the distribution.
Source: Susenas and World Bank calculations

b. What strategy is needed for strong and inclusive growth in Indonesia?

Indonesia can only become richer by improving labor productivity, which is also the only way to accommodate higher wages

Given the opportunities and risks discussed above, and Indonesia's aspiration of shared prosperity, what would be the country's best growth strategy going forward? Quite simply, a country can increase its income per capita by a combination of improving labor productivity or increasing the share of the population employed.[36] Because the latter increases very slowly over time, cross-country evidence shows that 92 percent of the differences in GDP per capita across nations (a proxy of prosperity) are explained by differences in aggregate labor productivity (IMF, 2013). Thus, for Indonesia's GDP per capita to converge rapidly to high-income economies, boosting economic growth through increasing labor productivity will be crucial. A productivity-driven growth strategy is also important for Indonesia to reduce vulnerability and enhance firms' competitiveness. Indeed, the political pressure for increasing wages is unlikely to weaken in Indonesia. In this context, the only way to accommodate wage increases without jeopardizing competitiveness is to increase labor productivity.

At over 50 percent of the workforce, too many Indonesian are in low productivity jobs in agriculture and low-end services

Moving to a productivity-driven growth model will be a significant switch for Indonesia. Over past decades, growth has in large part been supported by capital accumulation and employment growth with limited contribution of total factor productivity (TFP). Van Der Eng (2008)[37] finds that TFP explained only 33 percent of growth in 2000-07 and played no role in growth prior to 2000. This is to be contrasted with China and the Republic of Korea, where TFP explained more than 50 percent of growth during that period. The aggregate productivity level of Indonesia—measured by average value-added per worker—is also low by regional standards. For instance, Malaysia's average productivity per worker is more than five times Indonesia's. Average labor productivity in Indonesia is also lower than in Thailand, the Philippines and China. Differences in productivity reflect the structure of economies. In Indonesia, more than 50 percent of workers are in two low productivity sectors, agriculture and the low-end services subsector (retail trade, hotels & restaurants) and this weighs heavily on average productivity.

[36] This proceeds the decomposition of GDP per capita as follows: $\frac{GDP}{population} = \frac{GDP}{workers} * \frac{Workers}{population}$. $\frac{GDP}{workers}$ is the aggregate labor productivity and $\frac{Workers}{population}$ the proportion of the total population employed.

[37] Van der Eng, Pierre, 2008, "Capital Formation and Capital Stock in Indonesia, 1950-2007" Working Papers in Trade and Development No.24. Canberra: School of Economics, ANU College of Business and Economics, Australian National University

To increase aggregate labor productivity Indonesia needs to improve both productivity "within sectors" and facilitate the movement of resources from low to high productivity sectors

Aggregate labor productivity growth has two sources. First, productivity growth within economic sectors, e.g., higher yields in agriculture thanks to the use of higher-yielding seeds. This type of "within sector" productivity growth typically results from greater use of capital by workers (more modern machines and equipment), improvements in the quality of labor (better trained workers), adoption of new technology and competition within sectors that lead to a larger number of efficient firms. Second, aggregate productivity growth can be achieved by the movement of labor (and capital or other inputs to production) from low to higher productivity growth sectors (a "structural-transformation effect", McMillan and Rodrik, 2011). For instance, when workers leave agriculture and work in higher productivity sectors (e.g., as a result of investment in agriculture that increases yields), the aggregate productivity of the economy increases. Policies that typically facilitate such movements are improvements in transport infrastructure and labor market flexibility.

The next phase of Indonesia's structural transformation should expand job creation in manufacturing and high-end services and the movement of labor into these higher productivity sectors

The good news is that there is large scope for boosting Indonesia's productivity through a faster structural transformation. Table 13 shows the gap in labor productivity levels between agriculture and other sectors of the economy, measured as the ratio of sectoral productivity to agriculture. Moving a worker from agriculture to the low-end services subsectors (wholesale and retail trade and personal, social services and construction) leads to a doubling of productivity on average. This movement has largely occurred over the past decade and has been the key driver of poverty reduction. Seventeen of the 20 million jobs created in 2001-11 occurred in services, mostly in the low-end segment. The next phase of Indonesia's structural transformation should seek to expand the movement of labor and job creation in the manufacturing sector and high-end services.[38] Despite the sharp decline in manufacturing productivity growth in the past decade, the average productivity of workers in manufacturing industries remains fully five times higher than that in agriculture.[39] Job creation in manufacturing and high-end services is clearly a recipe for increasing productivity and reducing vulnerability in Indonesia.

Table 13: Labor productivity differences across sectors remain significant

(sector labor productivity compared with labor productivity in agriculture)

Sector	2000-03	2005-08	2009-12
Agriculture	1.0	1.0	1.0
Low-end services	2.4	2.5	2.2
Manufacturing industries	5.7	5.8	5.0
Transport and communication	2.8	3.5	5.5
Financial services	21.5	20.5	14.6
Mining and quarrying	46.8	26.7	18.0

Source: BPS and World Bank staff calculations.

c. Policy priorities to support productivity growth: first, infrastructure

There are three priority areas: infrastructure, skills and improving the functioning of markets

"Indonesia: Avoiding the Trap" identifies three priority areas to foster productivity-driven growth: (i) closing the infrastructure gap; (ii) closing the skills gap; and (iii) improving the functioning of product, labor and capital markets. These are long-standing, well-known priorities, but progress in addressing them has been uneven. Decentralized decision-making since the early 2000s has complicated and slowed implementation, especially in infrastructure development and labor market functioning (such as minimum wage setting). Yet, there are a few key policies that can make a big difference under each of these priority areas.

[38] The skills requirement for entering the high-end services sector is however higher, implying that the scope for job creation in manufacturing is much larger given the average levels of skills in the labor force.

[39] In the past decade, labor productivity growth in agriculture increased (driven by rubber, palm oil, coffee and tea) and dropped to almost zero in manufacturing. The sharpest decline in labor productivity growth occurred however in mining and quarrying.

Improving the quality of public spending will be critical for addressing Indonesia's infrastructure needs

Improving the quality of public spending will be critical for infrastructure development and infrastructure service delivery in Indonesia.[40] Total infrastructure investment—that is, investment by the central government, sub-national governments, state-owned enterprises and the private sector—has remained at only 3 percent to 4 percent of GDP over the past decade (Figure 36). This is far below the rates of above 7 percent of GDP before the 1997 Asian financial crisis and the 10 percent and 7.5 percent spent by China and India, respectively. Scaling up infrastructure spending, both on new investments but also, importantly, on operation and maintenance, rests on improving the quality of public spending at the central and sub-national government levels.

Fuel subsidy reform would greatly help towards better quality spending

At the central government level, large fuel subsidy spending (2.6 percent of GDP and 21 percent of the central government budget after transfers to the regions and interest payments) is almost double the spending on infrastructure, which stands at 1 percent of GDP. Improving the quality of spending can be greatly supported by fuel subsidy reform. A more-than-doubling of government-wide infrastructure spending (from 2.5 percent of GDP) can come from reducing energy subsidies. Any such reallocation would need to be accompanied by further improvements in the areas of budget planning and execution so as to improve absorptive capacity and ensure the quality of infrastructure investment management and implementation.

Sub-national governments need to be incentivized to spend less on personnel and more on infrastructure

Sub-national governments spend more on infrastructure than the central government (1.5 percent of GDP versus 1 percent of GDP). But sub-national governments could spend much more to improve roads, water and sanitation and health infrastructure (both in terms of new investments and maintenance) if their budgets were not tied up by excessive spending on personnel and if they could raise more revenues themselves. Over 40 percent of sub-national government spending is on personnel and about 90 percent of their budgets come from the central government (fiscal transfers). Improving the fiscal transfer system to incentivize greater reallocation of spending to infrastructure requires moving to some form of performance-based transfers and increasing the share of the transfers tied to spending on sectors or areas of national priorities.[41] For municipalities that meet fiscal prudence and fiduciary risk criteria, alternative means of financing, such as PPPs, municipal bonds, and intermediary financing can be promoted.

Four other complementary reforms will also be needed to reduce the infrastructure gap

For increased spending to be effective in reducing the infrastructure gap, however, the following complementary reforms will be needed: (i) stronger coordination within the central government and across levels of government; (ii) a reform of the government and state-owned utility companies' processes to enhance project selection and planning; (iii) an effective implementation of the new land law; and (iv) strong partnership with private domestic and foreign investors to bridge the funding gap.

The payoffs from improving infrastructure investment in terms of

The growth payoff of greater investment in infrastructure is large. Under-investment in infrastructure has been a substantial drag on Indonesia's growth over the past decade.[42] The consequent slow growth in the infrastructure capital stock relative to the pace of economic and urbanization growth has contributed to serious capacity gaps, congestion problems and

[40] Infrastructure development is not only about money. Land acquisition, coordination between different levels of government and project selection process are all equally important constraints. The Government is aware of this and is working on each of them. For instance a new land bill is under discussion at the Parliament. This land bill is expected to facilitate access to land for public purposes.

[41] Fiscal transfers to sub-national governments are dominated by a "block grant" component (DAU) relative to transfers tied to special purposes. Block grant transfers are untied, facilitating excessive subnational personnel expenditure, leaving little space for transfers that could be tied to front-line service provider levels. In 2012, the DAU made up almost 60 percent of central government transfers to subnational governments. The specific purpose grant (DAK), allocated to certain regions with the aim of funding special activities of the region in accordance with national priorities, only cover 6 percent of these transfers and is highly fragmented (covers too many sectors).

[42] If Indonesia's real infrastructure capital stock had growth by 5 percent annually over 2001-11 versus the actual growth rate of 3 percent it is estimated that annual real GDP growth would have been 0.5 percentage points higher. See the October 2013 *IEQ* for further details.

higher growth and better access to services are significant

poor logistics performance, undermining productivity growth. Firm surveys show that problems with transportation are among the worst business constraints for urban manufacturing firms while rural producers find themselves unable to compete with imports in urban areas. Thus, clearly, connective infrastructure development can help leverage agglomeration economies in urban areas and unleash the growth and productivity potential of agriculture, rural non-farm industries and urban manufacturing sectors. Furthermore, because one-quarter of urban populations and more than half of rural dwellers have poor access to transport services, improving infrastructure is key in enhancing overall economic and social well-being in Indonesia.

d. Policy priorities to support productivity growth: second, skills

Indonesia needs to improve the quality of education and the functioning of training centers if it is to close the skills gap.

Enhancing the quality of education and the functioning of training centers will be crucial in closing Indonesia's skills gap. Today, two-thirds of firms complain that finding suitable employees for professional and managerial positions is either "difficult" or "very difficult"; and almost 70 percent of employers in manufacturing report finding it "very difficult" to fill skilled professional-level positions (engineers). There are two types of mismatch. Some sectors report insufficient graduates as the reason (for example, in textiles), whereas other sectors complain about the skills of existing graduates (for example, in rubber and plastics). Meanwhile, firms in Indonesia are much less likely to offer training to their employees than in other countries in the region. Most existing training-providers are concentrated in low-value-added areas (such as beauty salon and spa skills and basic computer skills). Finally, in terms of the level of core academic skills, Indonesia compares unfavorably with other middle-income economies and East Asian neighbors in learning assessments such as PISA. For instance, 15-year-old students in Indonesia have learning levels far below their peers in Vietnam, even though per-capita income is higher.

Indonesia has already made significant progress in improving access to education and enrollment rates

Public policy has so far focused on access to education and enrollment. Thanks to strong government commitment Indonesia will probably boast one of the largest numbers of college-goers in the world in years to come.[43] Over the past five years, the labor force with tertiary and secondary levels of education has increased by more than 1 million and more than 2 million annually, respectively. If recent trends in enrollment continue, the number of Indonesians with tertiary education can more than double in the next decade.[44]

Now it needs to focus on a three-pronged strategy to improve the skills of the labor force

Thus, going forward the focus should be on equipping graduates and workers with the right technical and employer-valued behavioral skills (discipline, reliability, teamwork and leadership) to support/enable large investments in key sectors such as manufacturing. This requires a three-pronged reform strategy. First, improve the quality of basic education to build a stronger base of cognitive skills necessary to acquire the higher-level skills that will be needed by the workforce. A single key measure that could support this is strengthening the quality assurance system to ensure that quality assessments are followed-up and education institutions have the incentive to implement corrective actions.

But it is essential to find short- and medium-term solutions to the skills gap

However, even if the educational system could be perfected instantly, the first graduates would only join the workforce in about 10-20 years' time. It is therefore essential to find short- and medium-term solutions for the current skills constraints: the second and third prongs of the strategy are thus improving the relevance of feeders into the labor market (technical and vocational education, and tertiary education) and upgrading the skills of the existing workforce (reform of the training system). Improving the relevance of vocational and tertiary education calls for (i) supplying students and graduates with more information on labor market opportunities, and (ii) making the system more responsive to the market's

[43] This commitment is seen in the Constitutional mandate that 20 percent of the budget should be allocated to education.

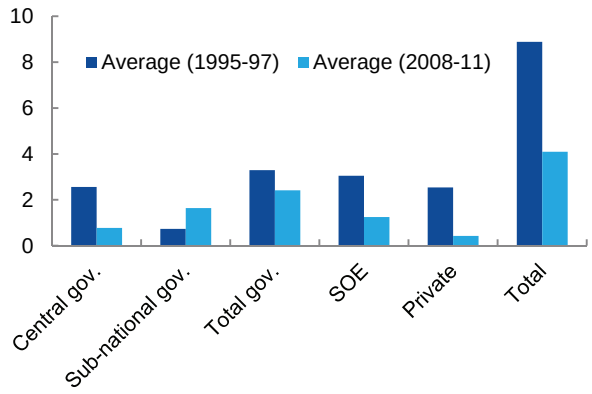
[44] The Government's objective is to provide universal access to senior secondary education through a compulsory 12 years of education and to double enrollment in higher education by 2020. The share of individuals with tertiary education in the labor force stood at 8 percent in 2012.

needs. The training system, on the other hand, would serve the economy better if more training institutions were created to deliver relevant training and specific skills in higher value-added, strategic sectors (such as textiles, food products and other key manufacturing branches).

Developing skills will help Indonesia meet demand from the expanding middle-class and also withstand competition

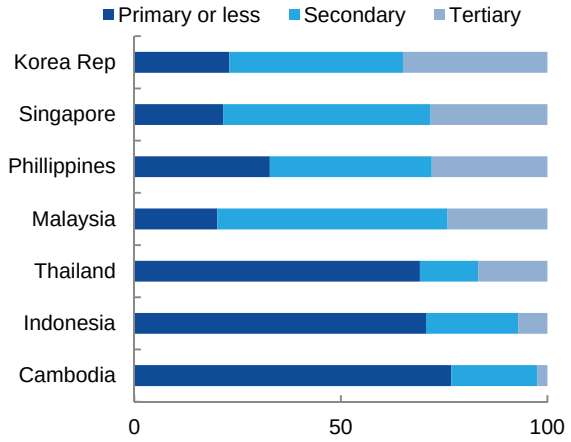
The growth payoff of skills development is large, if difficult to quantify. Because more than 60 percent of Indonesian firms report that skills are a constraint, relaxing this constraint will help them expand and become more competitive. This could increase aggregate productivity and growth through "within sector" productivity growth (e.g. if workers in manufacturing acquire more skills) and/or labor movement from low-end services to manufacturing (see above). Developing skills should also help Indonesia to leverage the opportunities coming from increasing middle-class demand and withstand competition from ASEAN partners. Without the right skill sets among those entering the workforce, imports may remain more competitive than domestic production in satisfying the demand for higher quality products and services from Indonesia's growing middle-class.

Figure 36: More and higher quality spending is needed to close the infrastructure gap…
(infrastructure spending as share of GDP, percent)



Source: World Bank

Figure 37: Indonesia faces the challenge of improving its labor force skills mix
(education composition of labor force, percent)



Note: Cambodia (2011), India (2010), Indonesia (2008), Malaysia (2010), Philippines (2008), Singapore (2011), Thailand (2011), Korea Republic (2007)
Source: World Bank Education Statistics

e. Policy priorities to support productivity growth: third, markets

If Indonesia is to achieve a rapid structural transformation it will need to improve the way product, labor, capital and land markets function

Boosting investment and the flow of talent in manufacturing and other Indonesia's high productivity sectors—crucial for fast structural transformation—requires improving the functioning of product, labor, capital and land markets.[45] Even as Indonesia implements reforms to facilitate investment and licensing in some sectors, the laws and regulations governing business conduct in many sectors have, in recent years, sent mixed signals to investors and increased uncertainty for businesses. For instance, a number of sector-specific laws and measures announced recently are either inconsistent with previous laws or create confusion about the direction of reforms (e.g. conflicts between the horticulture law versus the investment law). In the mining sector, irrespective of how the new regulation banning exports of mineral ores is ultimately applied, the repeated policy shifts have increased uncertainty (as highlighted in the preceding section). The new industry and trade laws provide ministerial authorities with new, sweeping authority to intervene in the market, increasing uncertainty and the cost of doing business.

[45] The land market is also very important for public and private investment. A comprehensive land law, currently being discussed by the Parliament, is expected to address some of the key issues that have constrained investments in recent years.

Strengthened policy formation should help to improve the investment climate

The upside in the investment climate area is that some of the uncertainty created by recent laws and regulations can be addressed by strengthening the quality of the policy formation process for economic policies and regulations. Some countries have done this by empowering ministries or government agencies to play a "policy integrator" function. A strengthened and integrated policy formation process can help ensure that market competition is fostered and anti-competitive practices are limited, and that the policy environment supports inward FDI and frontier technology knowledge flows, and the potential benefits they can bring. A strengthened policy formation should also better address genuine concerns of Indonesians that the public interest be protected, and should enable the Government to push back against more narrow rent-seeking activities and self-centered business interests. This is all the more important given that Indonesian law courts, local governments and politicians poorly in terms of the corruption perception index (for example, in 2012, Transparency International ranked Indonesia 100 out of 183 countries reviewed).

Revising the labor law, to make it more flexible and inclusive, would greatly support Indonesia's structural transformation

Usefully complementing efforts to clarify rules for business conduct would be measures to ameliorate the functioning of labor and capital markets. Indonesia's labor market presents an insider-outsider feature, with a minority of workers formally protected and a large majority of workers obliged to work in the informal sector. This divide reflects levels of employment protection similar to several European countries (e.g. high level of severance pay) and relatively high statutory minimum wages. In addition, the minimum-wage-setting process has become uncertain in recent years although the recent introduction of a new formula indexed on CPI inflation and productivity can help address this.[46]

Although the labor legislation does not apply to most workers (as there are many possible exclusions for employers and the Government's enforcement ability is limited), it impedes productivity growth and structural transformation. For instance, workers' entry into fully formal sectors is restricted because employers in these sectors account for the high potential cost of dismissal when making hiring decisions. As a result, most workers operate informally or semi-informally, work on short-term contracts and are not trained as a long-term asset for firms. Thus, workers leaving for instance farm or rural non-farm activities are stuck into slightly higher but still low-productivity sectors and do not gain significant social mobility. A revision of the labor law, in view of making it more flexible and inclusive, would greatly support Indonesia's structural transformation objectives. Such revision requires an agreement between employers, workers and the Government. Similarly, the adoption of a new minimum-wage-setting formula based on inflation and productivity by these parties would support competitiveness and jobs.

Meanwhile, Indonesia's capital markets are thin, impeding the provision of financing to new investments

As regards the capital markets, there is ample evidence that enterprises in Indonesia are credit constrained (IMF, 2012)[47]. Firms, to a large extent, tend to rely more on retained earnings than on bank credit for the expansion of their activities, which in turn means that current cash flow becomes the major factor in investment decisions. This has significant implications for the types of investments taking place in the economy, particularly in innovative firms that usually have negative cash flows in the early stages of operation, and need bank or non-bank financing to grow and create high-quality jobs.

The credit constraint faced by firms reflects the lack of depth of Indonesia's financial market. The financial sector is dominated by banks (78 percent of assets) and its claims to the private sector stand at only 35 percent compared with close to 100 percent on average

[46] The minimum wage-setting process is complex. Negotiations and final agreements take place at the province and sectoral level (and often at the district and subsector level), making communication and compliance with new formula-based adjustments more difficult. More generally, ensuring the compliance of firms and employers to minimum wage regulations is not easy, and requires monitoring and coordination at the central level, between the Ministry of Manpower and relevant ministries for effective implementation, as well as between central and local governments and relevant actors (District Governors and Wage Councils).

[47] IMF, Indonesia: Selected Issues, "What determines investment in Indonesia", September 2012

for Malaysia, Thailand and the Philippines. Capital markets are thin with corporate domestic debt securities (outstanding) accounting for less than 5 percent of GDP, similar to Thailand and the Philippines but much lower than the 45 percent for Malaysia. Pension fund assets are also relatively low compared with the size of the economy (5 percent compared with 10 percent-15 percent in the Philippines and Thailand and 40 percent in Malaysia).

Improving the legal system would facilitate the operation of markets and intermediaries

A part of the shallowness of Indonesia's financial market will be difficult to overcome because it reflects deep risk aversion behavior. For example, following the 1997-98 financial crisis, both savers and investors moved into the shorter end of the maturity spectrum. Insurance, investment funds, and corporate bonds issuance, for example, have grown in recent years but still do not contribute significantly to the pool of domestic long-term savings and investments.[48] Public policy can however nudge the system towards greater financial depth. For instance, the development of the corporate bond market appears particularly constrained by strict investment requirements, high underwriting costs and weaknesses in the execution regime. Besides this, international experience emphasizes the role of building a credible legal system that allows for the effective enforcement of contracts and property rights and provides investor protection. Financial contracts are defined and made more or less effective by legal rights and enforcement mechanisms. From this perspective, improving Indonesia's legal system would facilitate the operations of markets and intermediaries. This relates to improving the quality of the business environment more broadly, as financial sector actors, just as investors themselves, need a minimum level of certainty when making long-term financing decisions.

f. What policy priorities to ensure that prosperity is shared more widely?

Policies need to ensure that prosperity is shared more widely

Indonesia's public policy challenge is not only to support policies that generate prosperity. Another challenge facing policymakers is that of sharing prosperity more widely. Indeed, a large number of households classified as non-poor in terms of income/ consumption are poor in many other dimensions, including access to decent housing, transportation, water, sanitation, health and education. At the same time, despite Indonesia's success in reducing poverty, the slowing pace of progress in recent years and high vulnerability remain a concern. Finally, Indonesia's hard-fought poverty reduction outcomes are constantly under threat, due to the country's vulnerability to natural disasters such as earthquakes, tsunamis, volcanic eruptions, floods, landslides and forest fires. The last part of "Indonesia: Avoiding the Trap" discusses three key priority areas to address these challenges.

Access to key services needs to be improved

For the poor, the vulnerable and some in the middle-class, higher income and prosperity will not translate fully into enhanced living standards if access to key services is not improved. The hopes placed on decentralization reforms to improve public services have yet to materialize and decisive reforms will be necessary to improve service delivery.
Priority reform options include: (i) clarifying missions, refocusing the bureaucracy to be accountable for results; (ii) providing more resources to front-line services and less on personnel and administration, which requires amending the central government transfer system to increase the proportion of local governments' budgets tied to specific sectors and performance and; (iii) strengthening of community-driven programs and demand-side accountability through stronger partnership with agents of change at the village level.

Strengthening social protection will require strong leadership for effective implementation

Indonesia's social security system is set to undergo significant transformations. Indeed, universal social insurance is legally mandated for health (by 2014) and employment (by 2015) under the 2004 National Social Security Law and the 2011 Social Security Administrators Law. Whether the desired results will be obtained will crucially depend on the quality of implementation. To be effective and sustainable, the system will require appropriate benefit levels, sound fiscal risk management, sound institutional development and management, and non-contributory coverage of the poor and vulnerable, while at the same time collecting

[48] A significant share of high-wealth savers have actually chosen to intermediate their resources offshore.

contributions from those who can afford to pay. But this transformative reform requires above all strong leadership for effective implementation due to the large number of stakeholders with diverging interests and the significant potential impact on the state budget, the labor market and the macro economy.

The Government should continue its efforts to eliminate fragmentation and duplication across programs

Alongside social insurance, strengthening existing social assistance programs is the other essential component of a comprehensive social protection framework. Indonesia needs to reform current programs, fill in existing gaps, and integrate the programs into a system. Again, leadership and coordination will be crucial. Central government spending is currently distributed among roughly 12 ministries, 22 programs, and 87 activities. In order to ensure services are delivered appropriately, the Government should continue its efforts to eliminate fragmentation and duplication across programs. The oversight and coordination under National Team for the Acceleration of Poverty Reduction (*Tim Nasional Percepatan Penanggulangan Kemiskinan*, TNP2K) has played a crucial role in devising the poverty assistance strategy, integrating poverty programs and coordinating implementation with various ministries. Going forward, it will be important to keep a unified oversight and coordination model for effective implementation.

Safeguarding reductions in poverty requires management of disaster risks…

Indonesia is situated in one of the world's most active disaster zones, prone to earthquakes, tsunamis, volcanic eruptions, floods, landslides and forest fires. Over decades of rapid urbanization, non-compliance with building codes and zoning regulations, and the occupation of dedicated drainage "open" spaces, have not only made Indonesian cities more vulnerable to natural disasters but also created new hazards such as seawater inundation in low-lying coastal areas and flooding. Urbanization-induced land subsidence poses a bigger threat to Jakarta than climate change associated with rising sea levels. Safeguarding hard-fought poverty reduction in Indonesia calls for continuously enhancing the management of disaster risks and further building resilience.

…and implementation of policy reforms to boost resilience to disasters

Three priority reform options could be adopted in order to enhance resilience to disasters. These include (i) a national program on hazardous micro-zoning providing detailed instruments for incorporating resilience into site design and construction standards; (ii) financing framework for both urban, housing and property development that incentivizes investment with built-in resilience linked to disaster insurance; and (iii) a national program on urban upgrading and ecosystem rehabilitation to increase the resilience of existing settlement and urban infrastructure.

g. The stakes are high: the payoffs to reform and the costs of no reform

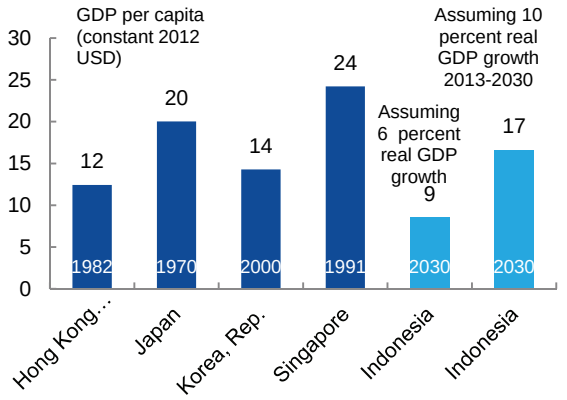
If Indonesia can grow by 6.5 percent annually it could create 12.4 million new jobs by 2020

The costs of no reform are as high as the potential rewards for well implemented reforms. First, the population of working age is projected to increase significantly in the next 10 years before peaking as a share of the total population around 2025. Most of the additional 14.8 million individuals that will join the population of working age by 2020 will seek jobs and absorbing them will require fast economic growth. Based on the sensitivity of employment to growth for the period 1990-2012, if Indonesia grows by 6.5 percent annually the country would create 12.4 million new jobs by 2020. This compares favorably with the employment creation if the country grows by only 5.0 percent per annum: 10.2 more million jobs by 2020. Thus, the difference between growing by 5.0 percent and 6.5 percent is a significant 2.2 million jobs over the eight years, which is significant.

Serious reforms are required if Indonesia is to boost its growth rate and deliver on the challenge of climbing up the income ladder to high-income status in the coming decades

Looking longer term, faster economic growth (than 5 percent) is also required if Indonesia is to climb the income ladder and position itself well to become a high-income economy within the next two decades. For Indonesia to reach high-income status by 2030—i.e. a per-capita income of USD 12,000—it will need to grow by some 9 percent annually over the next 16 years.[49] Short of this exceptionally high rate of growth, growing at least above the current 5 percent-6 percent "trend" growth would be required to position the country well to escape a middle-income trap. The income per capita of Singapore, South Korea, Japan and Hong Kong all were above USD 12,000 when the population of these countries started to age (Figure 38). For Indonesia, it will take really fast growth to realize that. Fortunately, the country can do it, with serious reforms.

Figure 38: Income per capita reached by when demographic dividend ended, versus Indonesia (2030)
(GDP per capita, thousands of constant 2012 US Dollars)

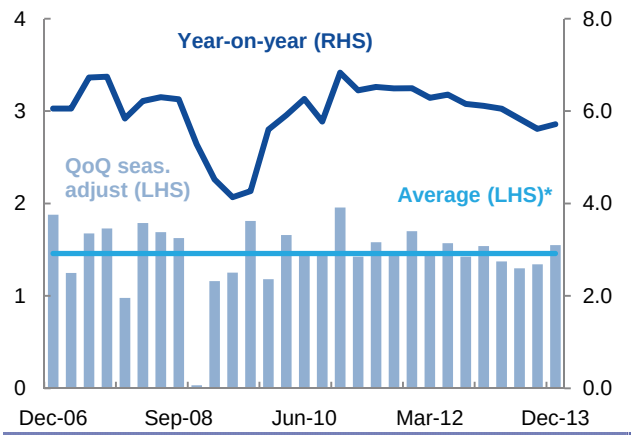


Note: dates indicate estimated end-point of demographic dividend period
Source: World Bank

[49] Using constant 2013 US dollars.

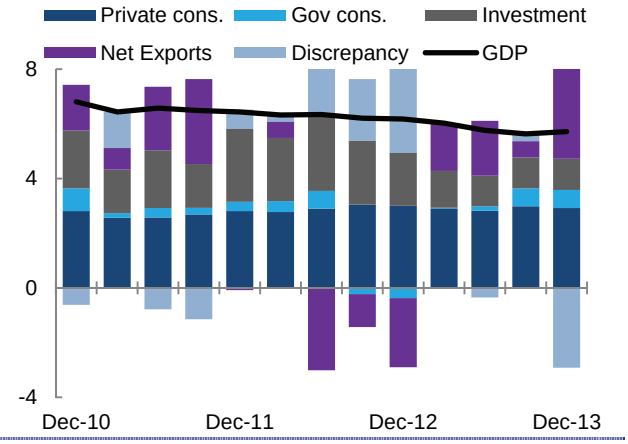
APPENDIX: A SNAPSHOT OF INDONESIAN ECONOMIC INDICATORS

Appendix Figure 1: Quarterly and annual GDP growth
(real GDP growth, percent)



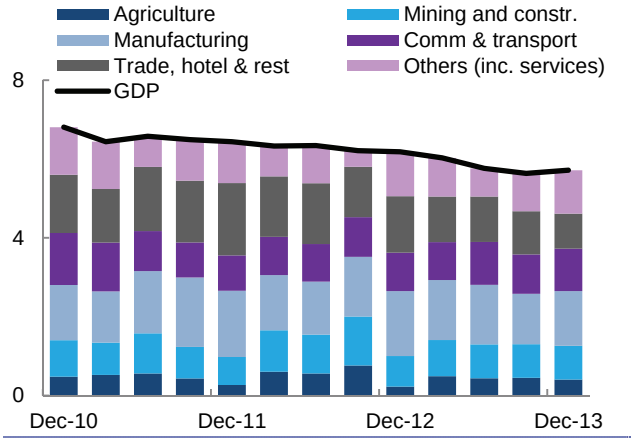
Note: *Average QoQ growth between Q4 2006 – Q4 2013
Source: BPS; World Bank staff calculations

Appendix Figure 2: Contributions to GDP expenditures
(contribution to real GDP growth yoy, percent)



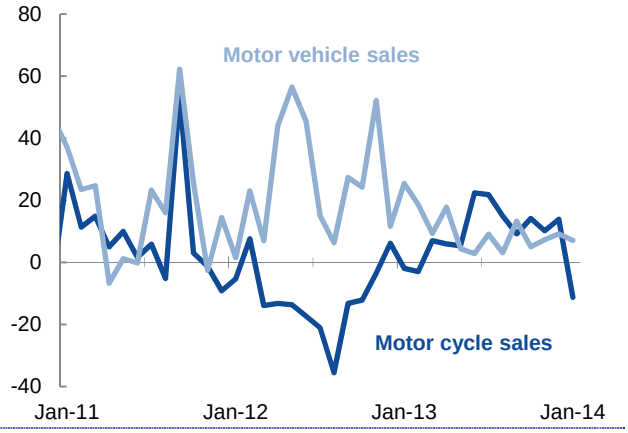
Source: BPS; World Bank staff calculations

Appendix Figure 3: Contributions to GDP production
(contribution to real GDP growth yoy, percent)



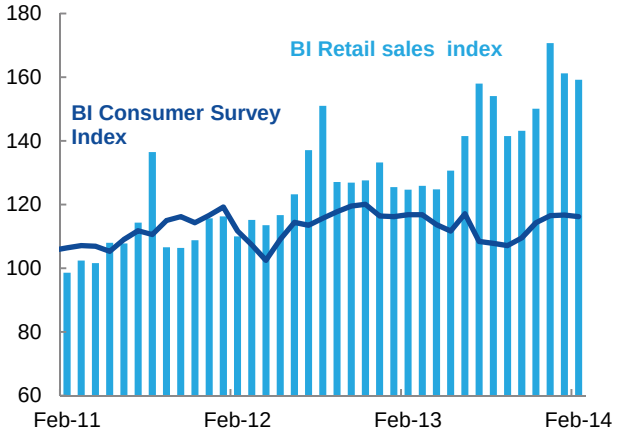
Source: BPS; World Bank staff calculations

Appendix Figure 4: Motor cycle and motor vehicle sales
(seasonally-adjusted sales growth yoy, percent)



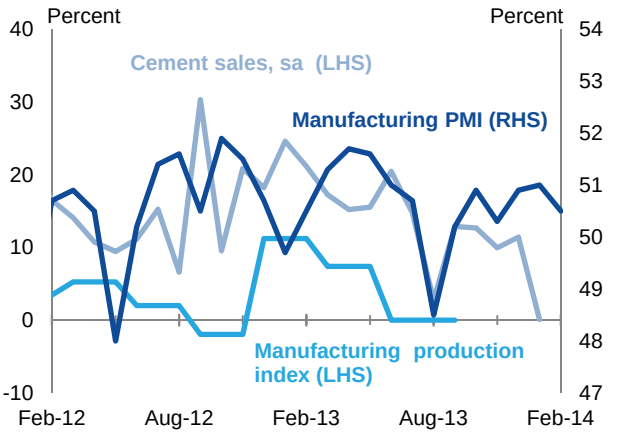
Source: CEIC

Appendix Figure 5: Consumer indicators
(index)



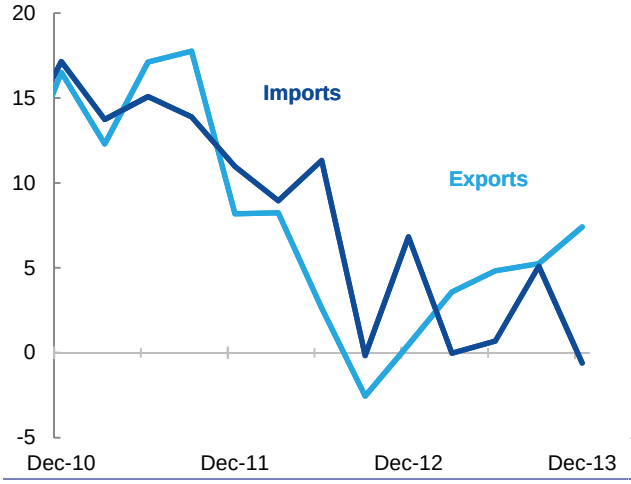
Source: BI

Appendix Figure 6: Industrial production indicators
(growth yoy, percent)



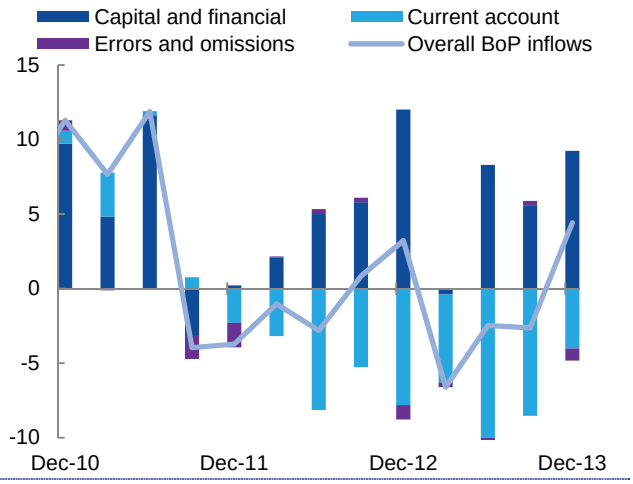
Source: BPS; Markit HSBC Purchasing Manager's Index

Appendix Figure 7: Trade volumes
(growth yoy, percent)



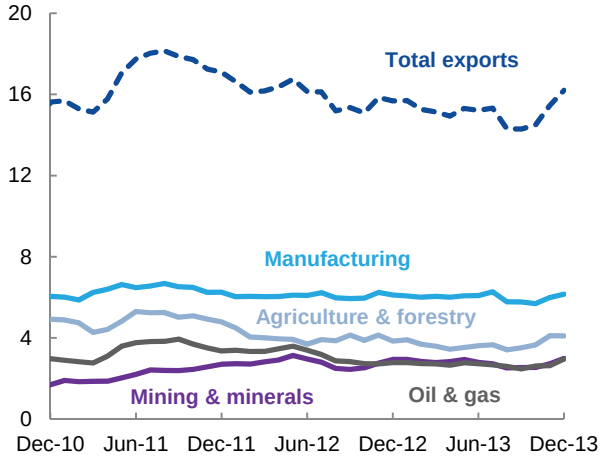
Source: BPS

Appendix Figure 8: Balance of payments
(USD billion)



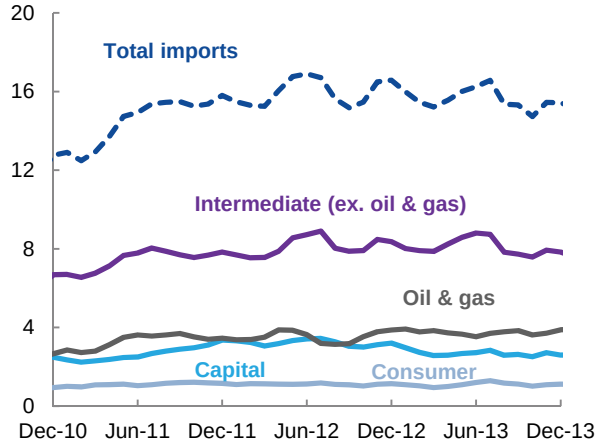
Source: BI

Appendix Figure 9: Exports of goods
(3 month moving average, USD billion)



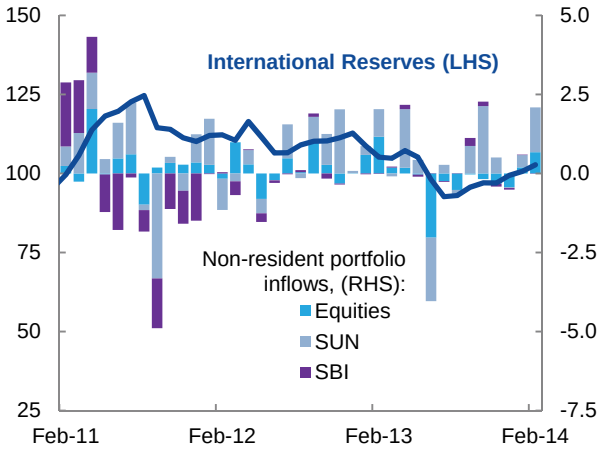
Source: BPS

Appendix Figure 10: Imports of goods
(3 month moving average, USD billion)



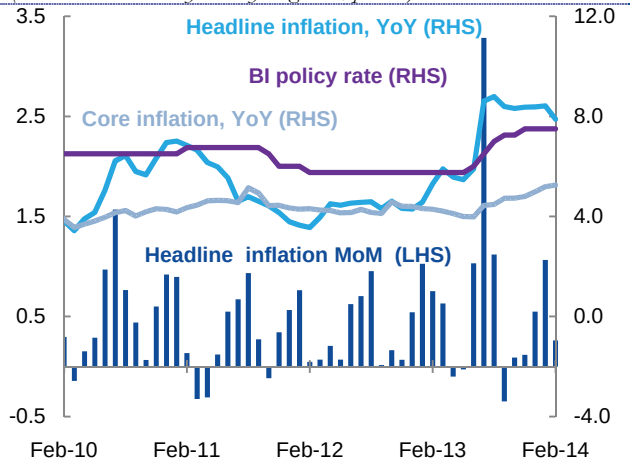
Source: BPS

Appendix Figure 11: Reserves and capital inflows
(USD billion)



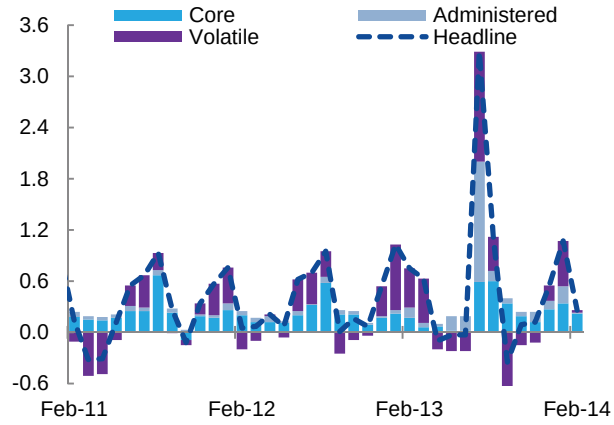
Source: BI; CEIC; World Bank staff calculations

Appendix Figure 12: Inflation and monetary policy
(month-on-month and year-on-year growth, percent)



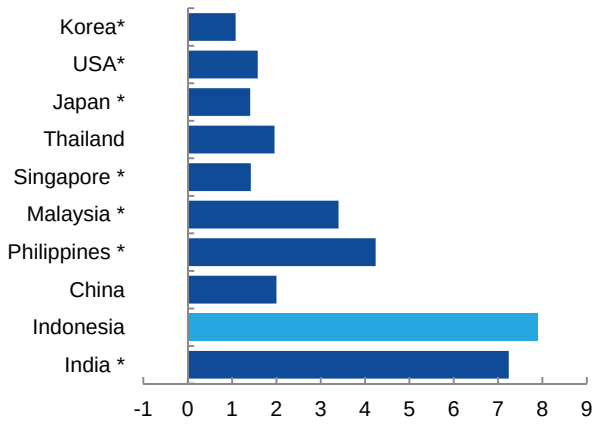
Source: BPS; World Bank staff calculations

Appendix Figure 13: Monthly breakdown of CPI
(percentage point contributions to monthly growth)



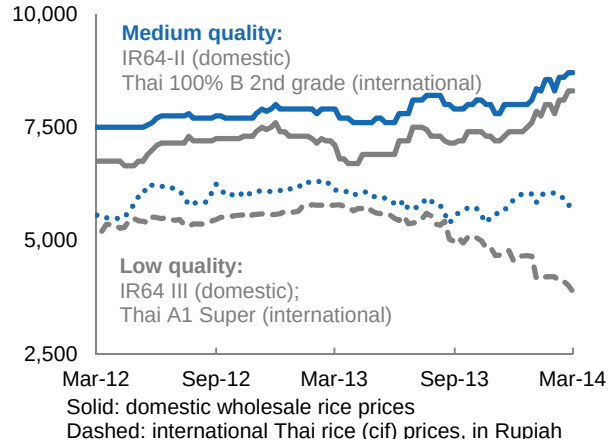
Source: BPS; World Bank staff calculations

Appendix Figure 14: Inflation comparison across countries
(year-on-year, February 2014)



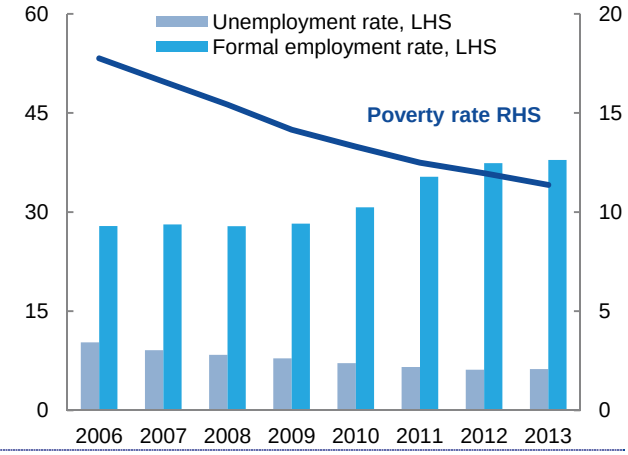
*January is the latest available month
Source: National statistical agencies via CEIC; BPS

Appendix Figure 15: Domestic and international rice prices
(wholesale price, in IDR per kg)



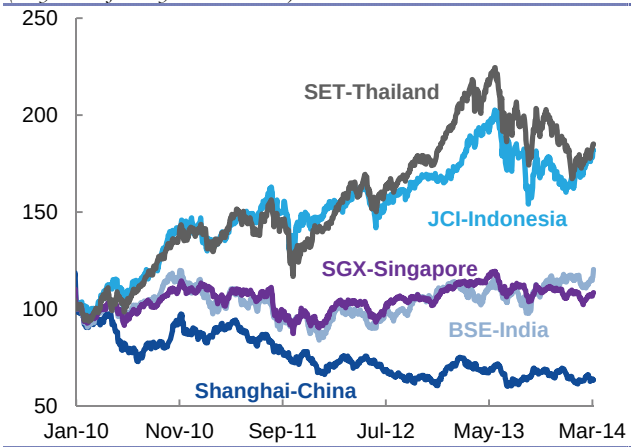
Source: Cipinang wholesale rice market; FAO; World Bank

Appendix Figure 16: Poverty and unemployment rate
(percent)



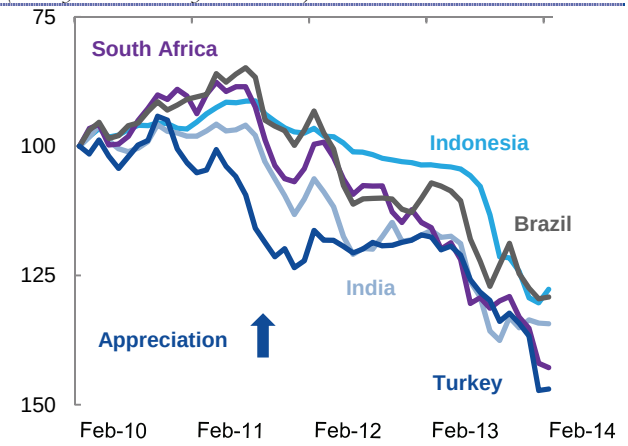
Source: BPS

Appendix Figure 17: Regional equity indices
(daily index January 4 2010=100)



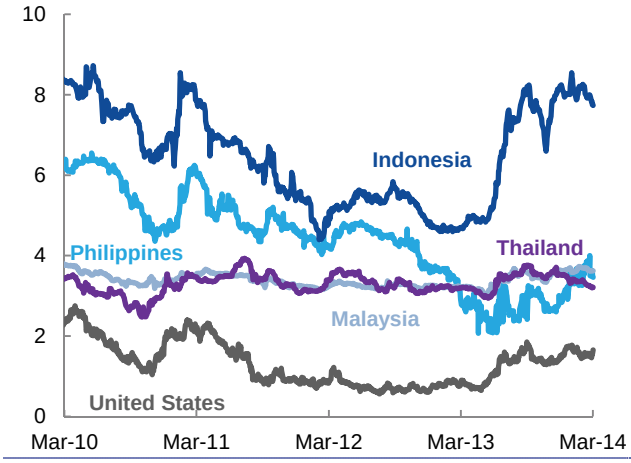
Source: CEIC; World Bank staff calculations

Appendix Figure 18: Selected currencies against USD
(monthly index February 2010=100)



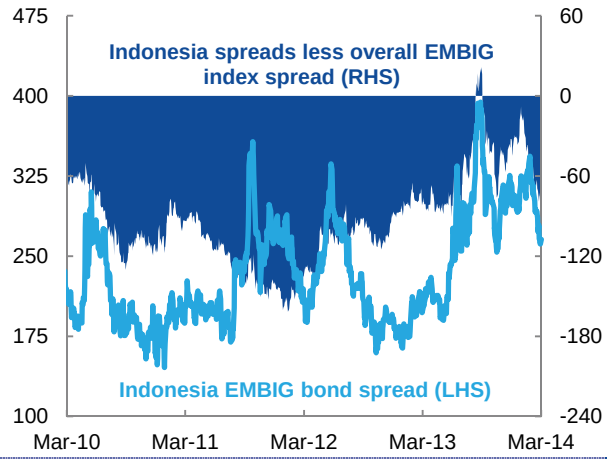
Source: CEIC; World Bank staff calculations

Appendix Figure 19: 5-year local currency govt. bond yields
(daily, percent)



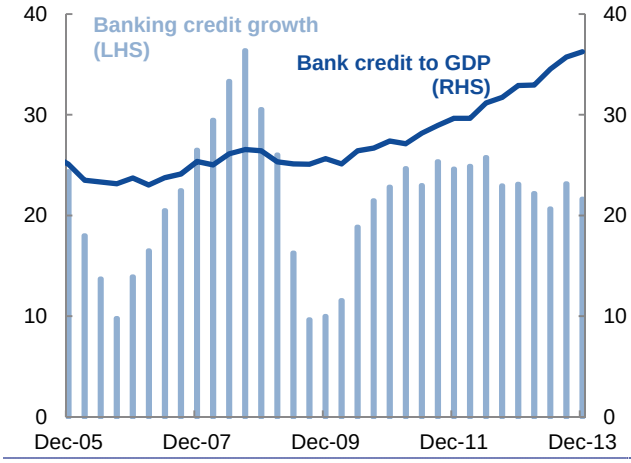
Source: CEIC

Appendix Figure 20: Sovereign USD bond EMBIG spread
(daily, basis points)



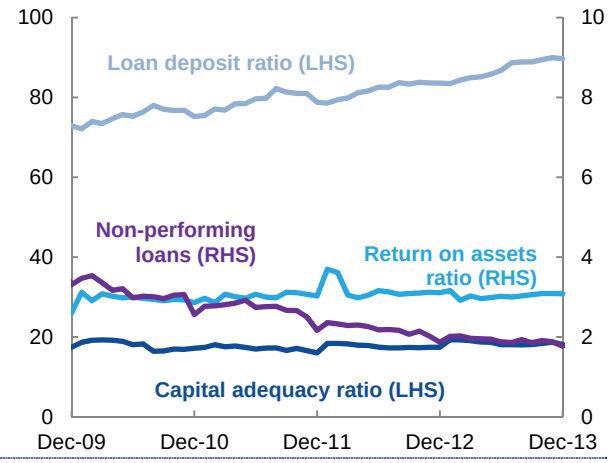
Source: JP Morgan; World Bank staff calculations

Appendix Figure 21: Commercial bank credit growth
(quarterly, percent)



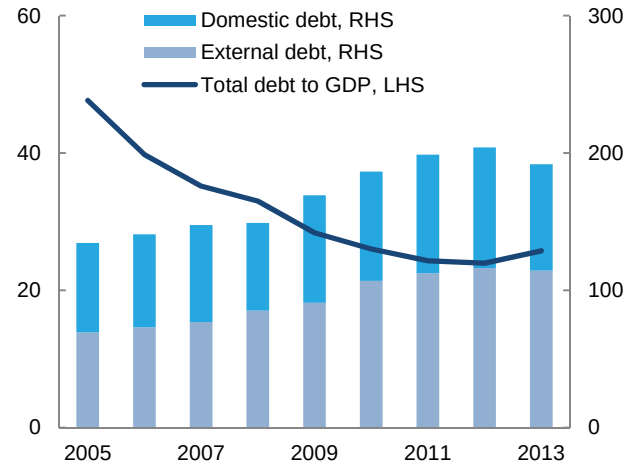
Source: CEIC; World Bank staff calculations

Appendix Figure 22: Banking sector indicators
(monthly, percent)



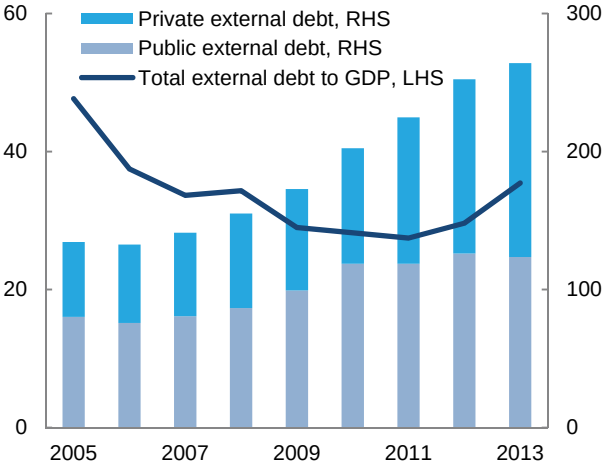
Source: BI

Appendix Figure 23: Government debt
(percent of GDP; USD billion)



Source: MoF; BI; World Bank staff calculations

Appendix Figure 24: External debt
(percent of GDP; USD billion)



Source: BI; World Bank staff calculations

Appendix Table 1: Budget outcomes and projections

(IDR trillion)

	2009	2010	2011	2012	2013	2014
	Outcome	Outcome	Outcome	Outcome	Preliminary outcome	Approved budget
A. State revenue and grants	**849**	**995**	**1,211**	**1,338**	**1,430**	**1,667**
1. Tax revenue	620	723	874	981	1,072	1,280
2. Non-tax revenue	227	269	331	352	353	385
B. Expenditure	**937**	**1,042**	**1,295**	**1,491**	**1,639**	**1,842**
1. Central government	629	697	884	1,011	1,126	1,250
2. Transfers to the regions	309	345	411	481	513	593
C. Primary balance	**5**	**42**	**9**	**-53**	**-97**	**-54**
D. SURPLUS / DEFICIT	-89	-47	-84	-153	-210	-175
(percent of GDP)	-1.6	-0.7	-1.1	-1.9	-2.2	-1.7

Source: MoF

Appendix Table 2: Balance of payments

(USD billion)

	2011	2012	2013	2012			2013			
				Q2	Q3	Q4	Q1	Q2	Q3	Q4
Balance of payments	**11.9**	**-0.2**	**16.1**	**2.8**	**-0.8**	**-3.2**	**-6.6**	**-2.5**	**-2.6**	**4.4**
Percent of GDP	1.4	0.0	1.9	1.3	-0.4	-1.5	-3.0	-1.1	-1.2	2.2
Current account	**1.7**	**-24.4**	**-28.5**	**-8.1**	**-5.3**	**-7.8**	**-5.9**	**-10.0**	**-8.5**	**-4.0**
Percent of GDP	0.2	-2.8	-3.3	-3.7	-2.4	-3.6	-2.7	-4.4	-4.0	-2.0
Trade balance	24.2	-1.7	-5.3	-2.0	0.8	-2.4	-0.9	-3.9	-2.5	2.0
Net income & current transfers	-22.5	-22.7	-23.2	-6.2	-6.1	-5.4	-5.0	-6.1	-6.0	-6.0
Capital & Financial Account	**13.6**	**24.9**	**22.7**	**5.0**	**5.8**	**12.0**	**-0.4**	**8.3**	**5.6**	**9.2**
Percent of GDP	1.6	2.8	2.6	2.3	2.6	5.5	-0.2	3.7	2.6	4.6
Direct investment	11.5	13.7	14.8	3.7	4.5	4.1	3.8	3.7	5.7	1.6
Portfolio investment	3.8	9.2	9.8	3.9	2.5	0.2	2.8	3.4	1.9	1.8
Other investment	-1.8	1.9	-1.9	-2.5	-1.2	7.7	-6.9	1.2	-2.0	5.9
Errors & omissions	**-3.4**	**-0.3**	**-1.6**	**0.3**	**0.3**	**-1.0**	**-0.3**	**-0.8**	**0.3**	**-0.8**
Foreign reserves*	**110.1**	**112.8**	**99.4**	**106.5**	**110.2**	**112.8**	**104.8**	**98.1**	**95.7**	**99.4**

Note: * Reserves at end-period
Source: BI; BPS

Appendix Table 3: Indonesia's historical macroeconomic indicators at a glance

	1990	1995	2000	2005	2010	2011	2012	2013
National Accounts (% change)[1]								
Real GDP	9.0	8.4	4.9	5.7	6.2	6.5	6.3	5.8
Real investment	25.3	22.6	11.4	10.9	8.5	8.3	9.7	4.7
Real consumption	23.2	21.7	4.6	4.3	4.1	4.5	4.8	5.2
Private	23.9	22.7	3.7	0.9	4.7	4.7	5.3	5.3
Government	18.8	14.7	14.2	6.6	0.3	3.2	1.3	4.9
Real exports, GNFS	22.5	18.0	30.6	16.6	15.3	13.6	2.0	5.3
Real imports, GNFS	30.2	29.6	26.6	17.8	17.3	13.3	6.7	1.2
Investment (% GDP)	28	28	20	24	32	32	33	32
Nominal GDP (USD billion)	114	202	165	286	709	846	877	868
GDP per capita (USD)	636	1035	804	1,300	2,984	3,466	3,548	3,468
Central Government budget (% GDP)[2]								
Revenue and grant	18.8	15.2	20.8	17.8	15.5	16.3	16.2	15.3
Non-tax revenue	1.0	4.8	9.0	5.3	4.2	4.5	4.3	3.8
Tax revenue	17.8	10.3	11.7	12.5	11.3	11.8	11.9	11.5
Expenditure	11.8	13.9	22.4	18.4	16.2	17.4	18.1	17.5
Consumption	..	3.9	4.0	3.0	3.8	4.0	4.1	4.2
Capital	..	4.6	2.6	1.2	1.3	1.6	1.8	1.8
Interest	..	1.4	5.1	2.3	1.4	1.3	1.2	1.2
Subsidies	..	..	6.3	4.3	3.0	4.0	4.2	3.8
Budget balance	0.4	1.3	-1.6	-0.6	-0.7	-1.1	-1.9	-2.2
Government debt	41.9	32.3	97.9	47.6	26.0	24.3	24.0	25.7
o/w external government debt	41.9	32.3	51.4	22.3	9.5	8.3	7.4	7.8
Total external debt (including private sector)	61.0	61.5	87.1	47.7	28.2	27.5	29.7	35.4
Balance of Payments (% GDP)[3]								
Overall balance of payments	..	..	..	0.2	4.3	1.4	0.0	-0.8
Current account balance	-2.6	3.2	4.8	0.1	0.7	0.2	-2.8	-3.3
Exports GNFS	25.6	26.2	42.8	35.0	24.7	26.2	24.1	23.7
Imports GNFS	24.0	26.9	33.9	32.0	21.6	23.3	24.3	24.3
Trade balance	1.6	-0.8	8.9	2.9	3.0	2.9	-0.2	-0.6
Financial account balance	..	..	..	0.0	3.7	1.6	2.8	2.6
Net direct investment	1.0	2.2	-2.8	1.8	1.6	1.4	1.6	1.7
Gross official reserves (USD billion)	8.7	14.9	29.4	34.7	96.2	110.1	112.8	99.4
Monetary (% change)[3]								
GDP deflator[1]	7.7	9.9	20.4	14.3	8.3	8.1	4.4	4.4
Bank Indonesia interest key rate (%)	..	..	..	9.1	6.5	6.6	5.8	6.5
Domestic credit	..	..	..	28.7	17.5	24.4	24.2	22.1
Nominal exchange rate (average, IDR/USD)[4]	1,843	2,249	8,422	9,705	9,090	8,770	9,387	10,461
Prices (% change)[1]								
Consumer price Index (eop)	9.9	9.0	9.4	17.1	7.0	3.8	4.3	8.4
Consumer price Index (average)	7.7	9.4	3.7	10.5	5.1	5.4	4.3	7.0
Poverty basket inflation (average)	..	..	..	10.8	8.7	8.2	6.5	7.5
Indonesia crude oil price (USD per barrel)[5]	..	17	28	53	79	112	113	107

Source: 1 BPS and World Bank staff calculation, 2 MoF and World Bank staff calculation (for 1995 is FY 1995/1996, for 2000 covers 9 months), 3 Bank Indonesia, 4 IMF, 5 CEIC

Appendix Table 4: Indonesia's development indicators at a glance

	1990	1995	2000	2005	2010	2011	2012
Demographics[1]							
Population (million)	184	199	213	227	241	244	247
Population growth rate (%)	1.7	1.5	1.3	1.2	1.3	1.3	1.2
Urban population (% of total)	31	36	42	46	50	51	51
Dependency ratio (% of working-age population)	67	61	55	54	53	53	52
Labor Force[2]							
Labor force, total (million)	75	84	98	106	117	117	118
Male	46	54	60	68	72	72	73
Female	29	31	38	38	45	45	45
Agriculture share of employment (%)	55	43	45	44	38	36	35
Industry share of employment (%)	14	19	17	19	19	21	22
Services share of employment (%)	31	38	37	37	42	44	43
Unemployment, total (% of labor force)	2.5	7.0	8.1	11.2	7.1	6.6	6.1
Poverty and Income Distribution[3]							
Median household consumption (IDR 000)	..	..	104	211	374	421	446
National poverty line (IDR 000)	..	..	73	129	212	234	249
Population below national poverty line (million)	..	..	38	35	31	30	29
Poverty (% of population below national poverty line)	..	..	19	16	13	12	12
Urban (% of population below urban poverty line)	..	..	14.6	11.7	9.9	9.2	8.8
Rural (% of population below rural poverty line)	..	..	22.4	20.0	16.6	15.7	15.1
Male-headed households	..	..	15.5	13.3	11.0	10.2	9.5
Female-headed households	..	..	12.6	12.8	9.5	9.7	8.8
Gini index	..	..	0.30	0.35	0.38	0.41	0.41
Percentage share of consumption: lowest 20%	..	..	9.6	8.7	7.9	7.4	7.5
Percentage share of consumption: highest 20%	..	..	38.6	41.4	43.5	46.5	46.7
Public expenditure on social security & welfare (% of GDP)[4]	..	..	..	4.4	3.9	3.9	4.2
Health and Nutrition[1]							
Physicians (per 1,000 people)	0.14	0.16	0.16	0.13	0.29	..	0.20
Child malnutrition weight for age (% of children under 5)	..	27.4	24.8	24.4	18.6	..	..
Under five mortality rate (per 1000 children under 5 year)	98	67	52	42	34	32	31.0
Neonatal mortality rate (per 1000 live births)	27	26	22	19	16	15.5	15.0
Infant mortality (per 1000 live births)	67	51	41	34	28	26.7	25.8
Maternal mortality ratio (estimate, per 100,000 live births)	600	420	340	270	220	..	..
Skilled birth attendance (% of total births)	36	..	66	..	82	..	..
Measles vaccination (% of children under 2 year)	..	63	74	77	75	74.0	80.0
Total health expenditure (% of GDP)	..	1.8	77.0	2.8	2.8	2.7	..
Public health expenditure (% of GDP)	..	0.7	89.0	89.0	1.0	0.9	..
Education[3]							
Primary net enrollment rate, (%)	..	..	..	92	92	92	93
Female (% of total net enrolment)	..	..	..	48	48	49	49
Secondary net enrollment rate, (%)	..	..	..	52	61	60	60
Female (% of total net enrolment)	..	..	..	50	50	50	49
Tertiary net enrollment rate, (%)	..	..	..	9	16	14	15
Female (% of total net enrolment)	..	..	..	55	53	50	54
Adult literacy rate (%)	..	..	..	91	91	91	92
Public spending on education (% of GDP)[4]	..	..	..	2.7	3.4	3.5	3.5
Public spending on education (% of spending)[4]	..	..	..	14.5	19.7	19.8	18.9
Water and Sanitation[1]							
Access to an improved water source (% of population)	70	74	78	81	84	84	..
Urban (% of urban population)	91	91	91	92	93	93	..
Rural (% of rural population)	61	65	68	71	75	76	..
Access to improved sanitation facilities (% of population)	32	38	44	53	58	59	..
Urban (% of urban population)	56	60	64	70	73	73	..
Rural (% of rural population)	21	26	30	38	43	44	..
Others[1]							
Disaster risk reduction progress score (1-5 scale; 5=best)	..	..	..	..	..	3.3	..
Proportion of seats held by women in national parliament (%)[5]	..	..	8	11	18	18.2	18.6

Source: 1 World Development Indicators; 2 BPS (Sakernas); 3 BPS (Susenas) and World Bank; 4 MoF and World Bank staff calculation, only includes spending on Raskin, Jamkesmas, BLT, BSM, PKH and actuals (except 2012 from revised budget); 5 Inter-Parliamentary Union

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