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INDONESIA ECONOMIC QUARTERLY

Continuity amidst volatility

June 2010

THE WORLD BANK | BANK DUNIA

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Investing in Indonesia's Institutions

for Inclusive and Sustainable Development

Preface

The Indonesian Economic Quarterly reports on and synthesizes the past three months' key developments in Indonesia's economy. It places them in a longer-term and global context, and assesses the implications of these developments and other changes in policy for the outlook for Indonesia's economic and social welfare. Its coverage ranges from the macroeconomy to financial markets to indicators of human welfare and development. It is intended for a wide audience, including policy makers, business leaders, financial market participants, and the community of analysts and professionals engaged in Indonesia's evolving economy.

This Indonesian Economic Quarterly was prepared and compiled by the macroeconomic analysis team at the World Bank's Jakarta office, under the guidance of Lead Economist Shubham Chaudhuri and Senior Country Economist Enrique Blanco Armas: Andrew Blackman (trade flows, balance of payments), Andrew Carter (government revenues and deflators), Andrew Ceber (national accounts and domestic demand), Fitria Fitrani (trade flows), Faya Hayati (prices, commodity prices and deflators), Ahya Ihsan (government expenditure), Telisa Falianty (monetary conditions), Neni Lestari (banking sector), Diva Singh (financial markets, monetary conditions, banking sector), Djauhari Sitorus (banking sector). Tim Bulman (executive summary, labor, government financing, and GDP deflators) and Andrew Ceber shared the editing and production. Enrique Blanco Armas, Ashley Taylor, Nathan Dal Bon and Peter Milne, provided detailed comments on earlier drafts.

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Executive Summary: Continuity amidst volatility

Indonesia continues to consolidate its robust economic performance, but risks remain large and tilted to the downside

Through an uncertain environment, Indonesia's economy continued to consolidate its recovery from the global economic and financial crisis. As expected, growth moderated in the first quarter of 2010, but remained above pre-crisis averages, and appears to have accelerated in the second. Price growth remained relatively modest for the most part, supporting consumers' spending power. International financial flows remained large but volatile, continuing to challenge policy makers. Further large flows in March and April into liquid Indonesian financial assets reversed during the volatility in global financial markets in May. But the authorities appear to have managed this well and the impact on local financial markets was comparatively small. The economy is expected to gradually accelerate through 2011, largely due to domestic demand. The renewed volatility in global financial conditions and uncertain developed economy outlook has increased the near-term downside risks to forecasts, while domestic political developments appear to be increasing the longer-term risk that the government falls short of its ambitious reform agenda required to lift growth above 7 percent by mid-decade.

Capital flows and financial markets were especially volatile in May, and policy makers appear to have managed this adeptly

Developments in May made stark how the fragile global environment creates risks for Indonesia's economic outlook. After months of large capital inflows, the rise in global financial market volatility in the first weeks of May prompted non-resident investors to withdraw USD 5.1 billion net from their holdings of SBIs (short-term central bank certificates). The outflow saw much of April's increase in reserves drawn down, and the exchange rate weakened from IDR 9000 to IDR 9375 per USD. Investments in other financial market assets (equities and government bonds) seemed less footloose, at least through May's round of increased risk aversion. In contrast to other major emerging economies, Bank Indonesia continued to eschew explicit capital controls, instead changing regulations in a way that is not explicitly discriminatory against non-residents, for example to make investments in the shortest term central bank instruments less attractive and to encourage banks to use the interbank market rather than BI for intermediation.

Growth, while milder than late 2009, remains solid

Quarterly growth in moderated in Q1 from the strength of late 2009 by a little more than expected, to 1.3 percent. This was still stronger than Q1 2009, lifting the year-on-year (YoY) growth rate to 5.7 percent. Indonesia's trading partners generally showed greater moderation in their growth after the larger rebounds of mid and late 2009 – but overall growth has generally been stronger than had been expected. The government's weaker disbursement performance in Q1 helps to explain Indonesia's slowdown – the economy would have grown around ½ percentage points faster in the quarter had the government spent its capital budget at the same pace as 2009. Investment in machinery & equipment offset some of this slowdown. And a pause in private consumption growth appears to have been transitory with indications of a reacceleration into mid 2010. Imports (particularly of refined oil) also outpaced that of exports, narrowing the trade surplus, as had been expected for some time.

…and inflation moderate

Overall, inflation has remained moderate relative to Indonesia's historical rates. Core inflation reached historical lows by March and was only lifted by higher global gold prices in May, to 3.8 percent. Food prices, however, have been volatile and shown unexpectedly strong growth, contrasting with the second half of 2009, lifting the headline rate to 4.3 percent in the year to May. As usual, these increases have a greater impact on poor households' cost of living, lifting their inflation rate to 5.9 percent. Indonesian inflation has increased by less than its major neighbors' since the mid-2009 trough. Partly this is because of the regulation of Indonesian energy prices, which has disconnected Indonesian consumers from the recovery in globally energy prices since early 2009; and partly because of the recovery in the exchange rate and, on balance, favorable domestic supply conditions and weak monetary growth.

Consumer prices continue to grow less quickly than economy-wide prices, potentially biasing down government revenue projections

Prices across the rest of the economy have also been weaker than recent years', but have shown stronger growth than the CPI. The two have diverged since 2004, largely due to accelerating construction costs with the rise in commodity and other input prices. This divergence matters for how the size of total nominal activity is projected – using CPI inflation forecasts risks under-projecting the size of the nominal economy. As the government's non oil & gas tax revenues in particular move more closely with economy-wide prices than with just consumer prices, this divergence means that government

revenues will be under-forecast if they are based on the lower forecasts for CPI inflation. In turn, this means the budget deficit will be over-projected and advantage will not be taken of potential fiscal space.

…suggesting, with poor disbursement in early 2009, the budget deficit will be smaller than projected

Indeed, this is likely to be the case again in 2010 and 2011. The government's spending performance in the first 5 months of 2010 deteriorated relative to 2009, particularly on discretionary capital and material items. The government's 10 percent average increase in electricity tariffs will make a very small (one or two tenths of a percentage point) impact on inflation. Meanwhile, the projected recovery in global commodity prices, and domestic investment demand, suggest the GDP deflator is likely to again accelerate ahead of the CPI, and the nominal economy, may expand faster than the government's projections, implying that revenues may also rise faster. Together, these developments suggest that the budget deficit may be substantially smaller than the government's projections, especially in 2011.

Forecasts of growth, and inflation in 2011, have been raised

The pickup in commodity prices is one of several factors likely to support faster inflation into 2011. Others include the waning of the pass-through of the lower exchange rate, the government's initial 10 percent average adjustment in electricity tariffs, the projected continued acceleration in credit and money growth, and accelerating demand. This last factor is projected to occur a little sooner than previously projected, with the 2010 GDP forecast revised higher, despite the larger and more negative risks to the forecasts.

Table 1: The outlook remains for gradual recovery in growth

		2009	2010	2011
Gross domestic product	*(Annual per cent change)*	4.5	5.9	6.2
Consumer price index	*(Annual per cent change)*	4.8	5.1	6.3
Balance of payments	*(USD bn)*	12.5	6.1	5.1
Budget balance	*(Per cent of GDP)*	-1.6	-1.0	-0.4
Major trading partner growth	*(Annual per cent change)*	-0.9	5.0	4.3

Sources: Ministry of Finance, BPS and other national statistical agencies via CEIC, Consensus Forecasts Inc., and World Bank

But these projections are sensitive to the uncertain outlook for commodity prices

These projections, indeed Indonesia's economic outlook generally, are dependent on developments in global commodity prices. These prices are volatile, with large movements following often relatively minor and unpredictable disruptions to supply and demand. In the short term (over a one- to two-year horizon) generalized shocks of historically typical magnitudes mainly affect domestic price and government revenue projections. On balance, a moderate positive surprise in commodity prices (non-energy prices are 15 percent higher the forecast, and energy prices are 30 percent higher), appears likely to raise GDP growth by around ¼ of a percentage point. For poorer households, on balance, the growth in incomes may more than offset the increase in their cost of living, reducing the poverty rate slightly. Similarly the increase in government revenues (which are particularly sensitive to energy price movements) should more-than offset the increase in energy subsidy costs and subnational transfer obligations, to reduce the budget deficit. (These projections assume other variables, including policy and exchange rates, do not change through the shock.)

Longer-term structural issues need to be addressed to ensure that economic growth can improve…and leads to sustainable improvements in Indonesians' quality of life

Policy reform is critical to ensuring Indonesia's economic outlook improves into the longer-term, and that its citizens' quality of life will benefit from this growth. The policy challenges are multi-dimensional. While employment growth kept pace with the labor force, it was exclusively informal recently, rather than in the form of better quality jobs in the formal sector. Supporting jobs growth in part requires supporting smaller firms' access to finance. Currently that is constrained by an oligopolistic banking sector, with relatively high costs and limited competition from non-bank lending sources. Meanwhile growth should bring improved living standards, yet maternal mortality rates remain unacceptably high, due to weaknesses in Indonesia's provision of health services, and financial constraints on many household's access to these services. This will partly be resolved through improvements in the financing of subnational governments, which provide many of these services. However Indonesia has shown its commitment to tackling an ambitious climate change agenda, arguably the fundamental issue for longer-term global prosperity.

A. ECONOMIC AND FISCAL UPDATE

1. Indonesia's economy continues to grow solidly

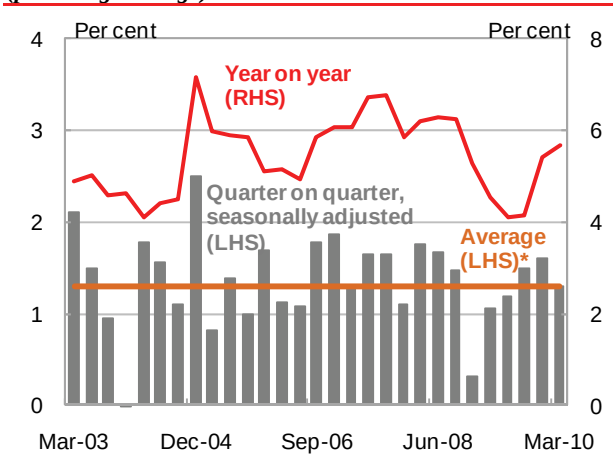
GDP growth in Indonesia in Q1 2010 consolidated last year's recovery, and is expected to gradually accelerate through the remainder of 2010 and 2011

Indonesia's economy grew in line with decade-averages in Q1 2010, slightly less than in the second half of 2009. (Figure 1) Year-on-year growth rose to 5.7 percent in Q1 and is expected to continue to rise this year, to 6 percent in Q2 and to be approaching 6.5 percent by the fourth quarter. Such an acceleration will see Indonesia's economy expand by 5.9 percent in 2010 as a whole, 0.3 percentage points more than was projected earlier in the year, and by around 6.2 percent in 2011.

Indonesia's external environment was stronger than expected early in 2010, and the outlook has generally improved, but the risks remain significant as illustrated by May's financial market instability and the European public finance issues

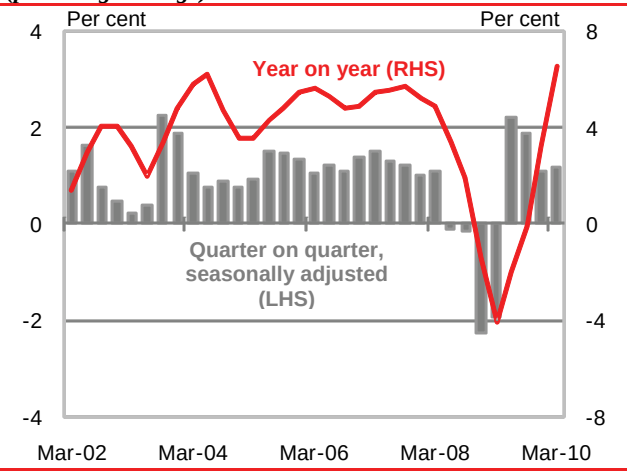
Growth across Indonesia's major trading partners has continued to rebound, more quickly than expected in Q1 in China, Japan, South Korea and the US. (Figure 2) Consensus forecasts of Indonesia's major trading partner growth have been revised up to 5.0 percent in 2010. International commodity prices were also generally a little stronger than expected in the first part of the year, and projections have also been raised, with non-energy commodity prices in 2010 expected to be on average near 20 percent and energy prices 30 percent above 2009 levels and to remain around those levels through 2011. While the outlook for the international economy has improved, the downside risks to these forecasts remain significant, as illustrated by the renewed volatility in global financial markets in May and the increasing concerns around the health of developed economies' public finances.

Figure 1: Quarterly GDP growth remains at or above average rates
(percentage change)



* Average QoQ growth between Q1 2000 and Q4 2009.
Source: BPS, World Bank seasonal adjustment

Figure 2: Major trading partner growth continued to recover in Q1
(percentage change)



Sources: BPS, national statistical agencies via CEIC, Consensus Forecasts Inc. projections, and World Bank

a. Private demand accelerated in the first part of 2010, offsetting a slowdown in government spending

Weak government consumption subtracted significantly from growth in Q1

Strong private demand was led by the investment spending returning to pre-downturn growth rates. This acceleration largely offset the largest QoQ fall in government consumption on record (since 1993). (Figure 3) In part this reflects an unwinding of stimulus 2009's stimulus spending, and to slower disbursement of the capital and materials budget in the first months of 2010. (see Section A-6). This contrasts with the focus on disbursement in early 2009 amidst the global economic downturn, and the additional spending on election materials before last year's parliamentary elections. Spending the capital budget at 2009's rate would have directly contributed an additional ½ percentage points to GDP growth in Q1.

…partly offset by recovery in machinery and equipment investment

Over the three quarters to Q1 2010 investment spending has grown solidly, expanding by 7.9 percent in the year to Q1 2010, as equipment & machinery investment recovered; in contrast, private consumption spending growth has tracked sideways and by early 2010 was below the aggregate economy. (Figure 4) Importantly, nominal investment (the value

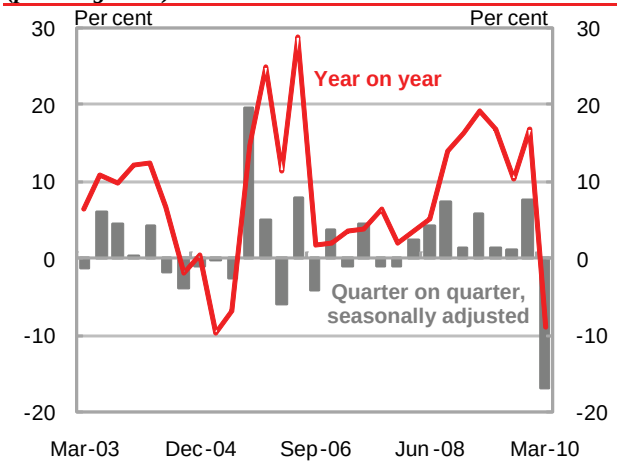
of rupiah spent on investment items) has been growing far more rapidly than real investment (the quantity of buildings, machinery, equipment and so forth those rupiah purchase) due largely to fast growth in construction costs (see Section B-2). The recovery in real investment has therefore been slower than the share of nominal spending dedicated to that investment in recent years. Around the turn of 2010 this divergence appears to have stabilized. (Figure 4)

The improvement in investment since mid-2009 can be attributed to the recovery in investment conditions, including the appreciating exchange rate supporting imports of capital equipment, improved access to finance such as the small fall in lending rates and pickup in new loans, and more recently the recovery in inflows of foreign direct investment (FDI) (see Section A-3). Along with the growth in capital imports and cement sales into Q2 these inflows suggest investment is likely to continue to accelerate into mid-2010.

Private demand growth appears to have remained robust into mid-2010

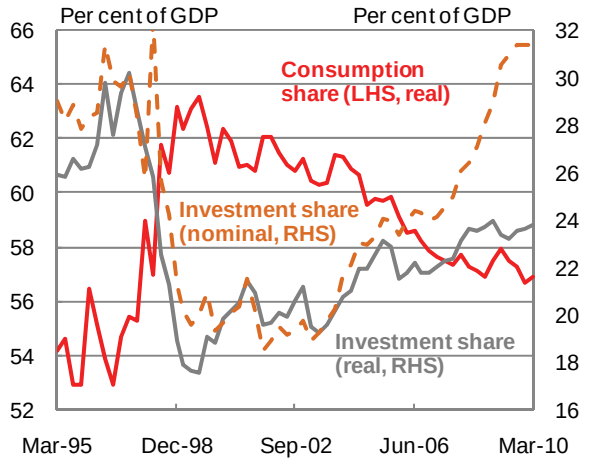
The robust private demand growth appears to have continued into mid-year. Motorcycle and motor vehicle sales increased strongly into Q2 - April motorcycle sales were nearly 70 percent higher than a year earlier, the strongest growth since the peaks of mid-2008. (Appendix) Other consumer measures also remain strong or at high levels. BI's retail sales index increased strongly in March, and various surveys report that consumer confidence remains high. This is all on top of robust investment indicators. (Appendix)

Figure 3: Government consumption recorded its largest fall on record in Q1
(percent growth)



Sources: BPS and World Bank calculations

Figure 4: The recovery in investment takes its share of total spending in the economy to near-record highs
(percent of GDP)



Sources: BPS and World Bank calculations

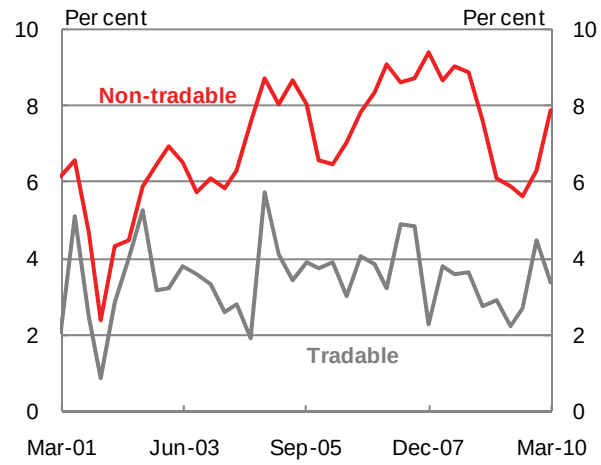
Growth continues to be driven by domestically orientated sectors, with 'tradable' output unusually weak

'Non-tradable' output continued to grow strongly in Q1, driven by strong increases in wholesale and retail trade, which had been particularly weak during the downturn a year earlier. (Figure 5) Growth rates across most other 'non-tradable' sectors were stable or weaker in Q1. 'Tradable' output remained weak across the board, with mining, manufacturing and agricultural production all falling in Q1, the first fall since the trough in the global economy in late 2008. Higher frequency indicators suggest output growth remained robust into mid-2010, with cement sales at their highest growth rates since 2008, industrial electricity consumption growing solidly. (Appendix)

…particularly manufacturing

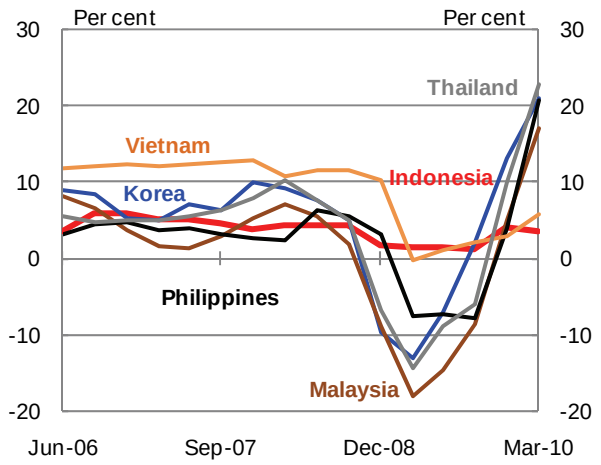
The weaker 'tradable' output was driven by the manufacturing sector, with growth weakening to 3.6 percent in the year to Q1 and remaining below pre-crisis rates. This contrasts with other countries in the region, where manufacturing output fell sharply during the downturn but has since rebounded strongly. (Figure 6). The recent weakness of manufacturing continues the past decade's trend, manufacturing falling from 28 percent of total output in early 2000 to around 26 percent of GDP by the beginning of 2010.

Figure 5: 'Non-tradable' output continues to expand ahead of the 'tradables' sector
(percentage change, year-on-year)



'Non-tradables' includes services sectors that may have tradable components such as health and education; 'tradables' are largely goods-producing sectors (agriculture, mining and manufacturing). Source: BPS and World Bank calculations

Figure 6: Indonesia's manufacturing output growth is tracking sideways, contrasting with its neighbors'
(percentage change, year-on-year)



Source: National statistical agencies via CEIC

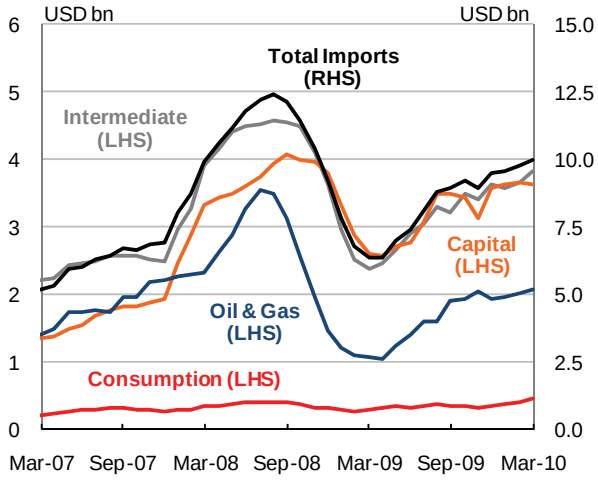
b. Imports are now growing faster than exports, narrowing the trade and current account surpluses

Imports continue to recover more quickly than exports, leading to a narrowing of the trade and current account surpluses

Growth in real imports continued to outpace that of exports in Q1. After rebounding more slowly than exports through mid-2009, imports have begun to climb more quickly from late in 2009. Robust domestic demand and a recovery in export processing demand were the drivers of increased imports of mineral fuels, vehicles, electronics and plastics. (Figure 7) The surge in imports for capital and intermediate inputs has contributed to increases recorded for investment in Q1. The recovery in exports has slowed, following the strong rebound during the early phase of the global recovery. (Figure 8) This recovery was driven by mining and mineral exports — particularly to China, India, Japan and South Korea — which have surged well above 2008 levels. While these exports continued to perform well, Indonesia's agriculture, forestry, and oil & gas export values began to decline again in late 2009 driven by a moderation in CPO exports to China and Europe, following restocking earlier in the year. Exports to China and the Euro area of fats and oils, wood products, and mineral fuels all retreated somewhat into the second quarter of 2010.

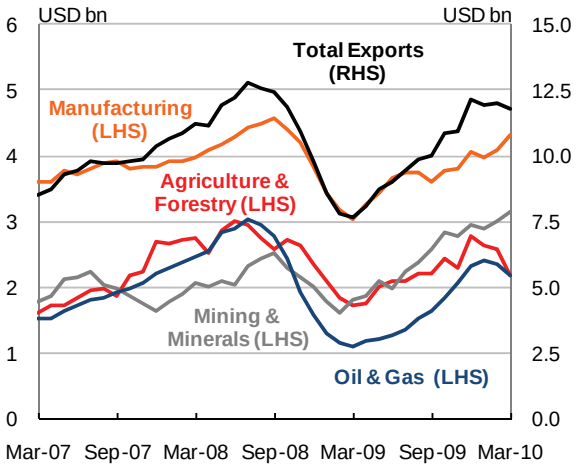
The faster pace of real imports growth saw net exports subtracted 0.2 percentage points from GDP growth in Q1. This, combined with a slight decline in the price of Indonesia's exports relative to import prices (the terms of trade) saw a narrowing of the trade surplus by USD 2.5 billion. (Appendix) The lower trade surplus more than offset a slight contraction in Indonesia's net income deficit, reducing the current account surplus by almost USD 2 billion in Q1.

Figure 7: The recovery in import values continues…
(billions of USD, 3 month moving average)



Source: BPS and World Bank calculations

Figure 8: …while export values have stagnated
(billions of USD, 3 month moving average)



Source: BPS and World Bank calculations

c. Indonesia's economic growth is likely to continue to accelerate, and projections for 2010 have been raised

Growth projections for 2010 have been raised with the faster-than-expected acceleration in investment; and domestic demand is expected to continue to support growth

Indonesia's economy is expected to grow by at least 5.9 percent in 2010, increasing to around 6.2 percent in 2011. 2010's growth forecast has been raised from 5.6 percent due to improved domestic and international conditions into the second quarter, while recognizing the downside risks associated with volatile financial markets and uncertain developed economy growth prospects..

Domestic demand is expected to drive the overall economy's acceleration, offsetting the drag from imports outpacing export growth. Private consumption is expected to gradually accelerate, growing by around 5.1 percent in 2010 and 5.3 percent in 2011, with continued support from rising real incomes, as consumer price growth remains moderate and employment stable. Sectors focused on domestic demand (transport, communications, various retail, consumer and business services) are likely to continue to perform better than those more externally oriented (manufacturing and resource-related). Investment is also expected to accelerate in 2010, stimulated by increasing commodity prices, gradual improvements in the investment climate, and the attractiveness of the growing domestic market. Projected improvements in domestic financing conditions and some return of foreign direct investment are expected to fund the rising domestic investment. Weaker government consumption seen in the first quarter is likely to continue through the year, although core and developmental government programs are likely to increase their share of overall spending.

Indonesia's external economic outlook has strengthened in the past three months… but so have the downside risks

Projections for major trading partner growth for 2010 have been raised by half a percentage point to 5.0 percent. At the same time, developments in the global economy in May have magnified the downside risks to this forecast, particularly if issues of developed economy sovereign debt management and fiscal consolidation significantly affect the global economic and financial outlook.

These trends are expected to continue through 2011, narrowing the trade surplus, and bringing the current account towards balance

Despite this improvement in projected external demand, the outlook remains for import growth to outpace exports growth through 2010 and 2011, as robust domestic demand exceeds the growth in Indonesia's export destinations and commodity prices. Imports are expected to be led by capital and machinery imports, feeding robust growth in domestic investment. Meanwhile, increasing demand for raw materials from China and India may see commodity exports continue to accelerate ahead of other exports in 2011. The trade surplus is now expected to contract by almost USD 7 billion to around USD 14 billion in 2010, and a little further in 2011. Meanwhile, the income deficit is expected to widen, as higher commodity prices result in greater profit repatriation, particularly by oil & gas companies. Together these forecasts suggest the current account surplus is likely to fall from USD 10.6 billion in 2009 towards balance by 2011..

Table 2: Domestic demand is projected to continue to support a gradual acceleration in Indonesia's economy
(percentage change, unless otherwise indicated)

	Annual			Year to December quarter			Revision to Annual	
	2009	2010	2011	2009	2010	2011	2010	2011
1. Main economic indicators								
Total Consumption expenditure	6.2	5.1	5.5	5.9	6.0	4.3	-0.6	0.1
Private consumption expenditure	4.9	5.1	5.3	4.0	5.6	5.6	-0.2	0.1
Government consumption	15.7	5.4	6.3	17.0	8.0	-2.0	-2.7	0.2
Gross fixed capital formation	3.3	9.6	8.3	4.2	10.1	7.3	1.2	1.1
Exports of goods and services	-9.7	14.9	11.1	3.7	9.6	11.4	-0.8	0.4
Imports of goods and services	-15.0	17.4	11.7	1.6	10.1	12.7	-1.0	-0.4
Gross Domestic Product	**4.5**	**5.9**	**6.2**	**5.4**	**6.0**	**6.4**	**0.3**	**0.1**
Agriculture	4.3	2.2	4.3	4.6	2.5	3.3	n/a	n/a
Industry	3.5	4.3	5.4	5.1	4.4	5.4	n/a	n/a
Services	5.7	8.2	7.9	5.9	8.4	8.0	n/a	n/a
2. External indicators								
Balance of payments (USD bn)	12.5	6.1	5.1	n/a	n/a	n/a	-0.1	0.4
Current account balance (USD bn)	10.5	2.5	0.5	n/a	n/a	n/a	-0.2	-0.4
Trade balance (USD bn)	21.0	14.2	13.2	n/a	n/a	n/a	0.2	-0.5
Financial account balance (USD bn)	3.6	2.8	4.6	n/a	n/a	n/a	-0.4	1.1
3. Other economic measures								
Consumer price index	4.8	5.1	6.3	2.6	6.4	6.0	-0.2	0.2
Poverty basket Index	5.8	6.8	7.2	2.9	8.1	7.3	0.8	0.9
GDP Deflator	8.5	9.4	12.2	6.6	11.0	12.0	-0.8	0.2
Nominal GDP	13.4	15.9	19.2	12	17.7	19.2	-0.4	0.3
4. Economic assumptions								
Exchange rate (IDR/USD)	10356	9218	9200	9475	9200	9200	-182.1	-200.0
Interest rate (SBI, 1 month)	7.3	6.5	6.5	6.5	6.5	6.5	0.0	0.0
Indonesian crude price (USD/bl)	61.6	77.7	78.0	75.1	78.0	78.0	-0.7	-3.3
Major trading partner growth	-0.9	5.0	4.3	3.2	4.1	4.6	0.7	0.3

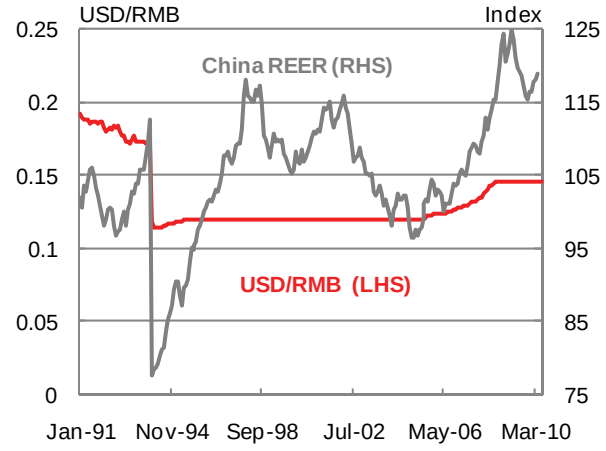
Note: Projected trade flows relate to the national accounts, which may overstate the true movement in trade volumes and understate the movement in prices due to differences in price series.

Box 1: How a stronger Chinese Renminbi would impact Indonesia's economy

Global imbalances stemming from the exchange rate policies of developing countries have been topical for some time. In particular, the size of China's current account surplus and foreign reserves are often singled out by some observers as a source of global instability. It is argued by the trading partners of these surplus countries that the exchange rate is artificially boosting exports, at the expense of expanding domestic sources of growth. Because of this increased attention, there has been speculation that China may revalue its currency, the Renminbi (RMB). The transmission mechanisms of a potential RMB revaluation and the impact on Indonesia's economy are discussed below.

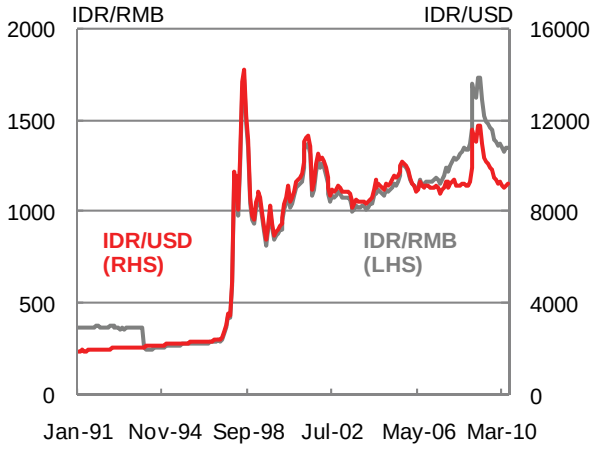
The RMB has been steady around 6.8 yuan per US dollar since August 2008, around the time the global economy entered into recession. Between 2005 and August 2008 the RMB appreciated by around 20 percent against the USD from around 8.3 RMB/USD to 6.8 where it is today. Various market analysts suggest the rise in the RMB against the USD may be as low as 5 percent a year. Contrast this with the volatility in major floating exchange rates: in the first five months of 2010, the Euro depreciated against the USD by around 20 percent, increasing China's real effective exchange rate (REER, which reflects movements in a basket of bilateral exchange rates). (Figure 9) A range of studies suggest that the RMB may be between 12 and 50 percent undervalued (these estimates generally pre-date the RMB's effective appreciation with this year's weakening in the Euro), with an average estimate of around 30 percent. Because the rupiah has tended to stay level with the USD at around the 9,000-10000 range, the RMB has appreciated against the rupiah as well since 2005. (Figure 10)

Figure 9: The RMB increased by around 20 percent against the USD



Sources: CEIC and World Bank calculations

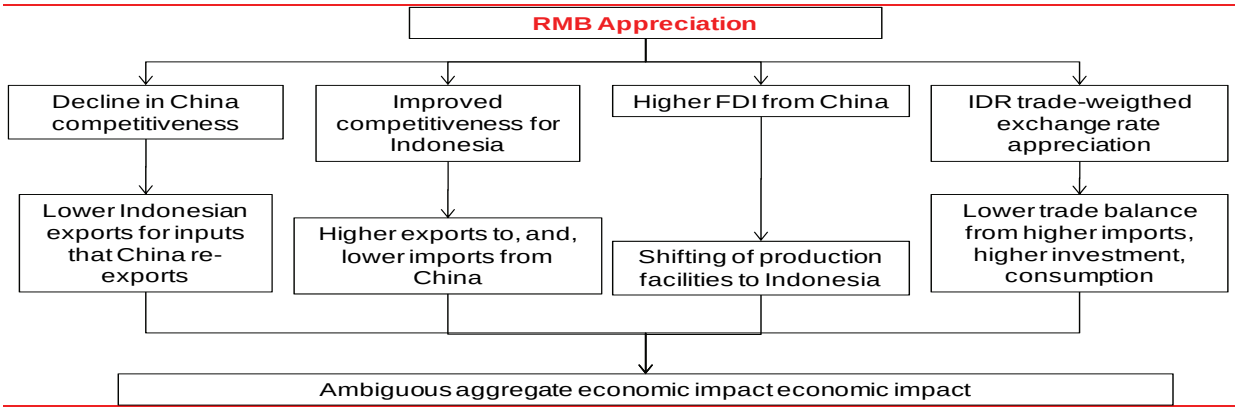
Figure 10: … and has also appreciated relative to the rupiah



Sources: BPS and World Bank calculations

An appreciation of the RMB could impact Indonesia's economy through a number of different channels, with potentially offsetting impacts. (Figure 11) Focusing on the bilateral trade channel, an appreciation of the RMB relative to the rupiah leads to the prices of Indonesia's export goods being more attractive to Chinese buyers in the short term. It also makes Chinese goods more expensive in Indonesia, potentially raising Indonesia's trade balance with China. In terms of the impact via third-party trade, to the extent that Indonesia's exports are vertically integrated with China's production processes, Indonesia's exports could deteriorate as China's exports decline. There may also be implications via shifting patterns of FDI with a higher RMB potentially also making Indonesia a more attractive investment destination for Chinese investors. This could encourage the shifting of production facilities to Indonesia, increasing domestic investment. In the longer-term the improved competitiveness may also lead to an increase in Indonesia's exchange rate which will mitigate any further improvement in export competitiveness. If the RMB were to appreciate, it may also encourage central banks in the region to allow their own currencies to appreciate, without the fear of losing competitiveness. Given all these linkages, along with the likely appreciation of the RMB being small, there is no clear answer to the direction of the impact on Indonesia, though it is likely to be small.

Figure 11: Transmission mechanisms of an appreciation of the Rupiah



There have been a number of recent studies that focused on the economic impact of an RMB appreciation on China's trade balance. The most recent Asian Development Bank (ADB) *Economic Outlook* discussed the issue of East Asian exchange rate regimes. The report outlines how a significant part of East Asia's production processes are vertically separate at stages, and are carried out by different countries. It points out that China has been established as an assembly point, importing many of its components from other regional countries, then exporting them to the developed world. For these goods, an RMB appreciation may, overall, have little impact, as only the cost of the good's Chinese reprocessing component would increase, meaning possibly some increase in the goods' non-Chinese component. Thorbecke and Smith (2010) find that a 10 percent appreciation of the RMB against the USD would reduce China's processed exports (assembling imported components) by 4 percent and ordinary (labor-intensive) exports by 12 percent, assuming regional exchange rates do not adjust. Overall, given Indonesia's export share to China was around 9 percent in 2009, with energy and other commodities used for domestic consumption making up a large share of this, appreciation of the RMB may have a limited impact on Indonesia's exports to China.

2. Indonesian financial markets fell in May on the back of Europe's debt crisis

a. Indonesian equities and bonds weakened in May due to large capital outflows that also put pressure on the rupiah

Triggered by events in Europe, the JCI fell by 5.5 percent in May but is still up 6 percent year-to-date, making it a top global performer

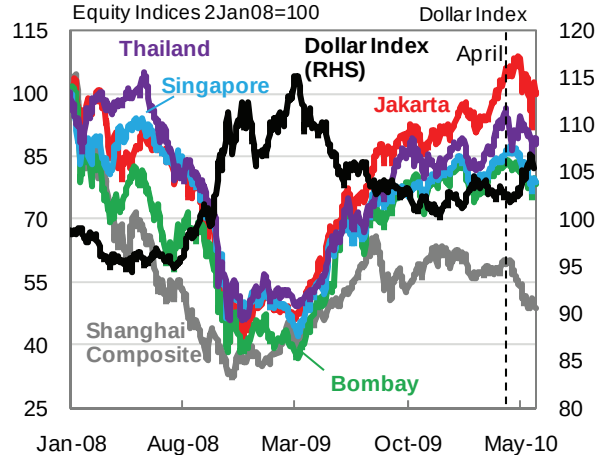
After posting a solid Q1 performance and rising to all time highs in late April to early May, events in Europe triggered a selloff in the Indonesian equity market for most of May. The resignation of Minister of Finance Sri Mulyani Indrawati on May 5 coincided with accelerating developments in the Euro zone, adding to investor's uncertainties and rising risk aversion. The market recovered somewhat in the final week of May to post a 5.5 percent overall decline for the month. Given that most global markets were down 5 to 10 percent in May, the JCI's performance was not out of the ordinary. Moreover, by early June the JCI had risen 6 percent from the start of the year, while a benchmark average of 10 major global indices was down 5 percent on the year (for example, Shanghai's Composite Index and Brazil's Bovespa Index had fallen by 20 and 10 percent, respectively). (Figure 12)

Yields on IDR sovereign bonds rose slightly in May, unlike others in the region, showing Indonesia remains more vulnerable than most to external shocks that affect global risk appetite

On the fixed income front, yields on 5-year IDR sovereign bonds (SUNs) rose by over 50 basis points in May, after dropping to all time lows below 8 percent in late April, as markets felt the impact of the Greek crisis on investors' risk appetite (Figure 13). In contrast to Indonesia, yields on other regional local currency sovereigns were flat to negative, and in the US, 5-year bond yields dropped by 8 percent in May. There may be a few reasons for this: first, Indonesia's high yielding bonds are still considered a "risky asset" relative to safe haven investments such as US Treasuries, even given recent upward adjustments in agencies' ratings of Indonesia's debt; and second, a higher percentage of Indonesia's sovereign bonds are owned by foreigners relative to other countries in the region, leaving SUN yields more vulnerable to volatility from external shocks. As of May 2010, 25 percent of total SUNs outstanding were owned by foreigners (compared with 3 percent foreign ownership in Thailand).

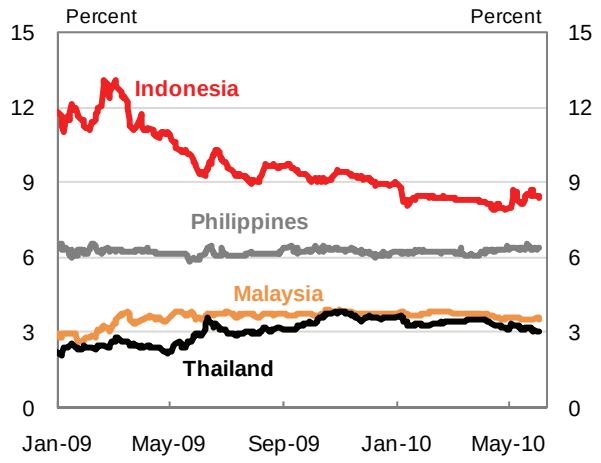
Indonesian EMBI USD bond spreads, which serve as a proxy for 'country risk' and had been declining steadily since March 2009, also started rising in early May and widened by almost 100 basis points over the course of the month to reach 296 basis points.

Figure 12: The IDX and other equity indices fell in May as nervous investors switched to USD cash
(equity indices indexed to 100 on 2 January 2008; Broad Dollar Index indexed to 100 on 21 Jan 1997)



Sources: FRB, CEIC and World Bank

Figure 13:…and rupiah sovereign bond yields rose slightly while others in the region did not, exposing Indonesia's vulnerability to external demand shocks
(5 year local currency sovereign bond yields in percent)



Sources: CEIC and World Bank

The reduction in investors' risk appetites stemming from Europe's woes has led to a strengthening of the USD, similar to late 2008…

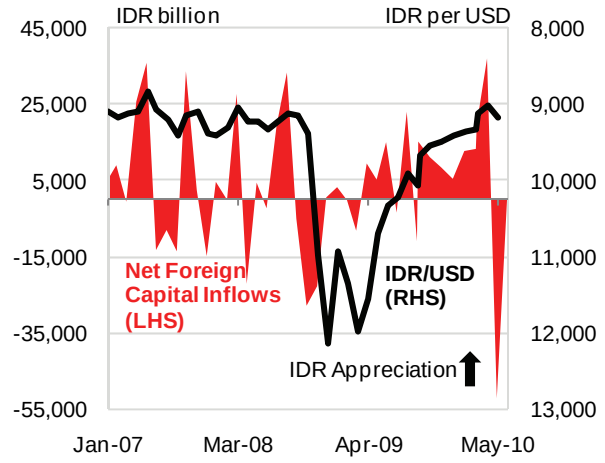
The flip side of this sell-off in equities and bonds stemming from Europe's problems has been a strengthening of the US dollar (USD). Similar to the late 2008 financial crisis, as investors in May became increasingly nervous about the situation in Europe and its potential consequences, they started selling off "risky assets" in exchange for the safety of holding USD cash. The Federal Reserve Board's Broad Dollar Index (which includes 26

currencies representing America's major trading partners) rose by nearly 3 percent in April-May, 2.25 percent of the increase in May alone (Figure 12).

…and to a slight weakening of the rupiah as sales of foreign holdings of Indonesian financial assets, mostly SBI, led to capital outflows of USD 5.7 billion in May

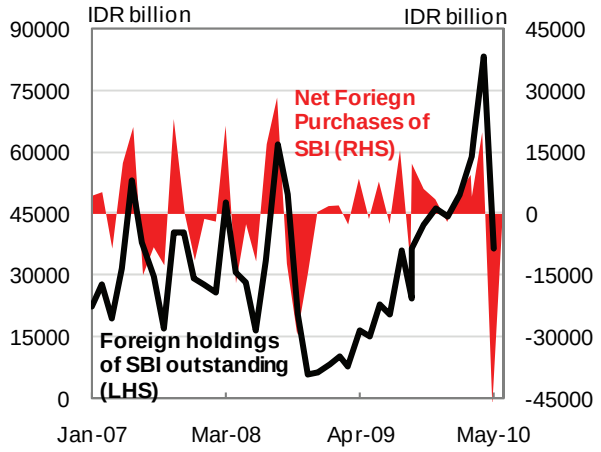
The selloff in Indonesian equities and bonds, together with a massive unloading of short-term money market instruments (SBI) by foreigners, put the IDR/USD exchange rate under pressure in May. Net capital inflows of USD 9 billion into Indonesian financial assets from January-April kept the rupiah well supported in the first four months of the year. May saw a huge reversal of these inflows, with USD 5.7 billion in net foreign capital flowing out over the course of the month (**90 percent** of this in SBI sales, 7 percent in sales of SUNs, and 3 percent in equities). As a result of these large capital outflows, the rupiah weakened by 1.8 percent in May. (Figure 14 and Figure 15) Indeed, the depreciation could have been much larger if the central bank had not intervened actively to support the currency (foreign exchange reserves dropped by USD 4 billion in May as BI bought rupiah and sold foreign currency).

Figure 14: The rupiah weakened slightly in May after large foreign capital outflows wiped off over 60 percent of year to date net capital inflows…
(net inflows into Indonesian equities, government bonds and money market instruments in billions of IDR)



Sources: BI, CEIC and World Bank

Figure 15: …with sales of foreign holdings of SBIs representing 90 percent of the exodus
(non-residents' holdings of short term money market instruments (SBIs) and net purchases of the same, in billions of IDR)



Sources: CEIC and World Bank

May's large capital outflows, following heavy inflows in April, demonstrate the volatility of these flows and the benefits of a large reserves cushion

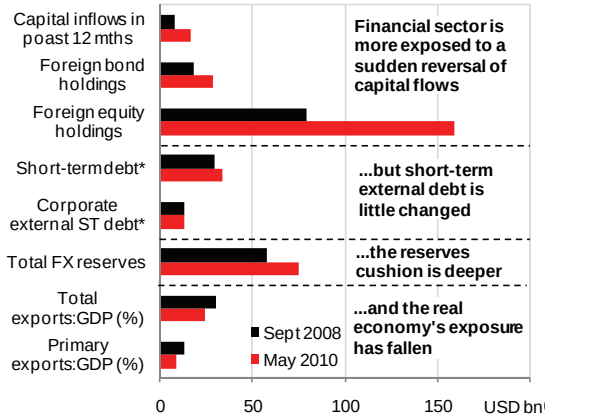
The foreign capital outflows of May followed a record month of USD 4 billion in *inflows* in April, illustrating Indonesia's exposure to volatile capital flows and confirming the "hot money" status conferred to SBI investments in particular. This heightened vulnerability to capital flows is partly owing to Indonesia's open capital account, and makes it important for the country to have a deep enough reserves cushion to be able to stem excessive currency volatility that can destabilize other segments of the economy.

Compared with late 2008, Indonesia's financial sector is more vulnerable now to a sudden reversal in risk appetite… although real economy exposure is little changed

A comparison of Indonesia's current vulnerability to instability in global financial markets relative to the country's vulnerability to the global crisis in late 2008 is depicted in Figure 5. The main difference is that large capital inflows over the past year have left financial markets much more exposed now than in 2008 to a risk of sudden reversals or capital flight. Even though foreign exchange reserves have increased by USD 17.5 billion since September 2008, a big selloff in foreign holdings of financial assets, particularly equities which are currently 66 percent owned by foreigners, could reduce reserves quickly if BI intervenes heavily in the foreign exchange market. (Figure 16)

The exposure of the government and corporate sector, through short-term external debt, is much the same as it was in late 2008 and looks relatively benign compared to financial market risks. As of March, reserves were twice short-term external debt, and equivalent to 6 months of imports and official debt repayments. Meanwhile the real economy's exposure, through exports and particularly reliance on commodity exports, fell between August 2008 and mid-2009.

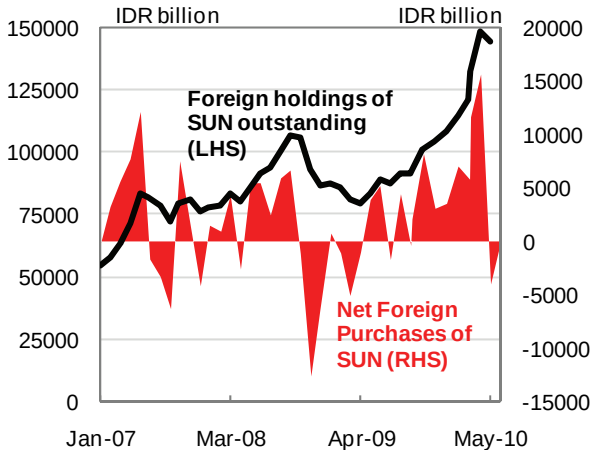
Figure 16: Compared with late 2008, Indonesia's financial sector is more exposed to reversals that may arise from Europe's debt crisis …
(net capital inflows, foreign holdings of bonds and stocks, short-term external debt and reserves in billions of USD)



* For 2010, short-term debt and corporate external short term debt reflect March numbers

Sources: BI, CEIC and World Bank

Figure 17: …but foreign investments in SUNs have held their ground relatively well this year, so perhaps not all inflows are "hot money"
(non-residents' holdings of SUNs and net purchases of the same, in billions of IDR)



Sources: CEIC and World Bank

Despite the big sell-off of SBIs in May, foreign holdings of SUNs held up relatively well, suggesting bond investors may be less capricious than in the past

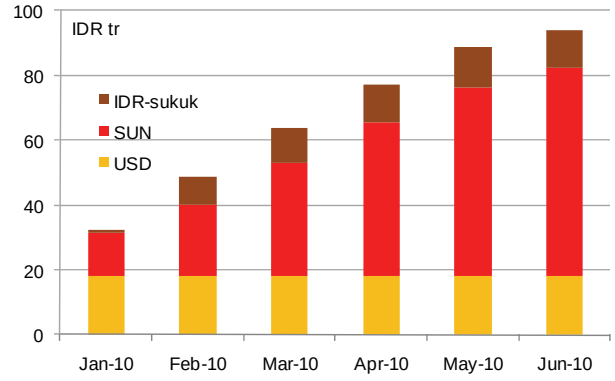
Despite the enhanced financial market exposure to capital outflows and the increase in investors' risk aversion, real money investments in government bonds declined little through May. Even after May's selloff, net foreign inflows into SUNs totaled USD 3.92 billion for the year, and now account for 120 percent of total year-to-date net inflows into financial assets. (Figure 17) That foreign investments in SUNs were not liquidated at the rate of SBI holdings in May could be an indication that investors in government bonds do believe in a positive fundamental story for Indonesia and will not be as quick to withdraw their money as in the past. Still, it is worth noting that the short maturities on SBIs facilitate the fast withdrawal of these investments compared to SUNs (which would likely face a liquidity crunch if many investors decided to sell).

Rather than imposing explicit capital controls BI has instead adjusted regulations to make the preferred destinations of the most volatile flows less attractive and to generally deepen liquidity

In mid June, BI adjusted the regulations around the SBI market, generally aimed towards improving the monetary policy transmission mechanism, reducing the volatility in portfolio flows and encouraging longer-term investments, and raising the liquidity of the local interbank market. These including requiring a minimum 1-month holding of SBIs, introducing 9- and 12-month SBIs, doubling the interest margin to 100 bps from the policy rate on overnight borrowings and deposits with the central bank, and creating a term-deposit facility.

Without being an explicit capital control focused at non-residents, the SBI minimum holding requirement, by making SBIs a less liquid instrument, is expected to reduce their attraction as a carry-trade instrument. This will reduce the number BI needs to issue, hence their weight on its balance sheet (on these costs, see Part B, March 2010 *Indonesia Economic Quarterly*). The term deposit facility will also have the effect of reducing carry trade and cut the number of short-term SBIs BI needs to issue. Investors seeking a term investment facility and not requiring an 'underlying transaction' to support foreign exchange purchases will be able to switch to term deposits. Issuing longer-term SBIs is also consistent with seeking less footloose investments, and will help the development of a well-defined yield curve. Finally, widening the interest rate corridor, at least during normal times, is likely to encourage banks to lend and borrowing from each other directly rather than relying on BI for intermediation.

Figure 18: The government has filled over half of its 2010 bond issuance target, mostly from conventional, rupiah-denominated bonds
(new bond issuance; USD bonds converted at exchange rate at the time of issuance)



* June data to June 15. Source: Ministry of Finance

By early June 2010, the government had issued IDR 94 trillion of government bonds (IDR and non-IDR denominated), or over half of the year's gross bond issuance target of IDR 175 trillion. Average terms lengthened slightly in Q2 from Q1, and sale yields have been in line with the historically low yields in the secondary market. An IDR-denominated sukuk (Islamic bond) offering was withdrawn from auction during the week in May of greatest weakness in global financial markets, but that withdrawal appears to relate more to factors specific to that auction, with bids generally well below prevailing market bond prices.

Indonesia's strong fiscal position (especially in light of Europe's debt crisis), positive growth outlook and continuing moderate inflation numbers, combined with the highest yields in the region, and relatively open capital account, should keep demand for Indonesian government bonds buoyant through the rest of the year. Meanwhile the likelihood of the 2010 deficit being smaller than the government's projections suggest overall financing needs are also likely to be smaller than the government's projections. The government has indicated that it plans another samurai issuance in July or August, and substantial USD Islamic offering later in Q3.

b. Muted money supply growth and benign inflation led BI to hold the policy rate unchanged at 6.5 percent

From January-April, BI contained the impact of capital inflows on base money through increased SBI issuance and currency appreciation…

Despite over USD 9 billion of capital inflows from January-April, which enabled the central bank to increase foreign exchange reserves by USD 9 billion, growth in the money base was only 0.32 percent in the first four months of the year. This was largely due to BI's policy of neutralizing reserve increases through increased issuance of SBIs (sterilization) and rupiah appreciation. Between January and April, the total amount of SBIs outstanding increased by over USD 5.5 billion and the rupiah appreciated by 3.5 percent against the USD. (Figure 19).

…and did the opposite to contain the impact of outflows in May

In May, when inflows reversed and USD 5.7 billion of capital flowed out of the country, total reserves dropped by USD 4 billion (as BI bought rupiah to reduce the exchange rate's volatility). This time, the effect on the money base was counterbalanced by a *reduction* in SBIs outstanding of USD 4.8 billion as some paper expired and BI decreased new issuance—hence M0 actually increased slightly in May. Figure 19 shows the close correlation between the level of SBIs outstanding and reserves.

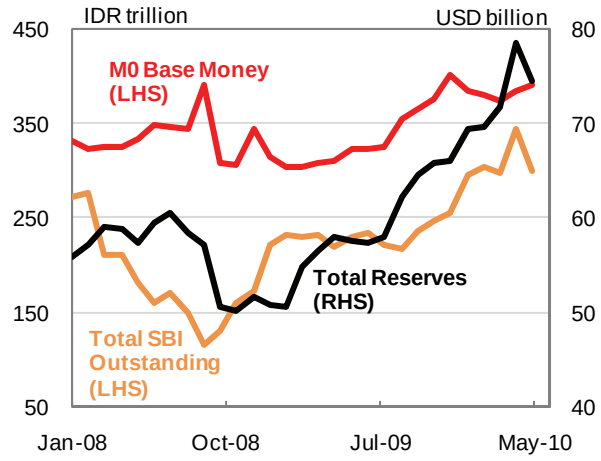
M1 and M2 growth were unusually muted in Q1 this year…

In addition to base money, M1 and M2 growth have been very subdued since the start of the year. M2 grew by 0.39 percent from January to March, corresponding to an annual growth rate of only 1.6 percent. M1 fell by 0.3 percent in the first quarter, or -1.3 percent in annualized terms. Although the slowdown in M1 could have been due to seasonal factors such as income tax payments, both M1 and M2 currently look to be well below their 2006-08 annual growth averages of 24 percent and 18 percent, respectively. Year-on-year money supply growth has been near 10 percent since late 2009, with a downward trend (Figure 20).

… and together with low inflation and high lending rates, this has kept BI from hiking its policy rate

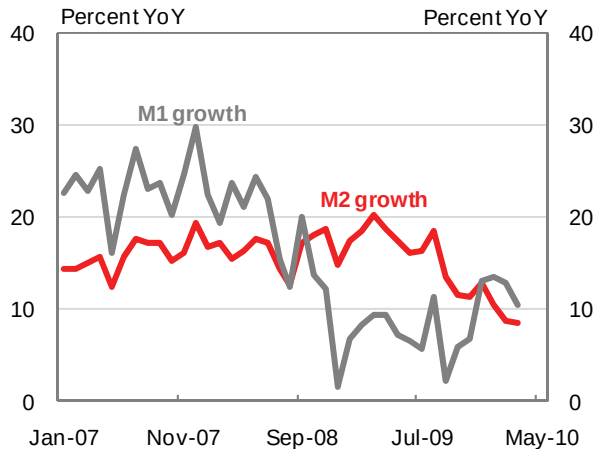
In line with muted growth in money supply, relatively limited growth in consumer prices and core inflation, and continued high lending rates, BI has kept its policy rate at 6.5 percent. In effect, however, there has been a slight monetary loosening, as liquid money markets and high demand for SBIs have caused overnight interbank lending rates and 1 month SBI rates to fall below 6.5 percent since September last year. In the absence of any major shock, most market participants do not expect rate hikes before the second half of 2010, with some predicting the first hikes will only be in Q1 2011.

Figure 19: BI has curbed the impact of reserves fluctuations on base money through open market operations using SBI
(base money and SBI outstanding in trillions of IDR; reserves in billions of USD)



Sources: BI, CEIC and World Bank

Figure 20: Growth rates for M1 and M2 remain highly subdued compared to historic levels
(M1 and M2 growth in year-on-year percentage change)



Sources: BI, CEIC and World Bank

c. Credit growth has continued to pick up, driven by consumer loans, but lending rates and net interest margins are still high

Year-on-year credit growth picked up in Q1, driven mostly by consumer loans…

Three-month credit growth was positive for a fourth consecutive quarter in Q1, although down slightly compared with Q4 2009 (Figure 21). In the first three months of 2010 lending grew by 3.5 percent, or by 11.5 percent in the year to March. Much of Q1 credit growth was driven by consumer loans, but working capital loans (which represent 48 percent of total loans) finally seem to have turned the corner and grew by 8 percent month-on-month in March — the largest monthly increase in years (Figure 22).

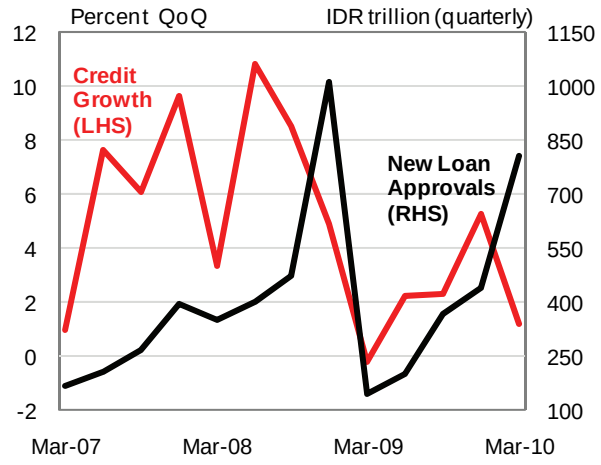
…but real lending rates and interest margins remain high

Going forward, high lending rates and net interest margins (NIMs) are likely to continue to limit lending growth. January saw the average NIM across the banking sector jump to 6.2 percent, as loans to consumers (which are charged higher interest rates) jumped by 10 percent month-on-month while total deposits were down in January. Whereas consumer loans in Indonesia tend to be relatively inelastic to interest rates, demand for working capital and investment loans could be getting squeezed due to persistently high lending rates. In order to encourage banks to lend more, BI announced a plan in April to penalize banks with loan-to-deposit ratios below 75-80 percent by increasing their statutory reserve requirements. (A more detailed analysis of lending rates and NIMs can be found in Section B-1.)

Capital adequacy ratios increased in Q1 as banks added capital in preparation for Basel II

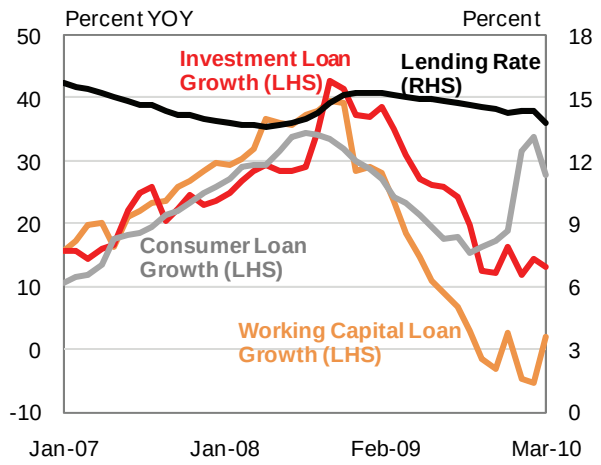
Q1 also saw a rise in the average capital adequacy ratio (CAR) of almost 2 percentage points, from 17.4 percent in December to 19.3 percent in March. This is mainly due to preparation for the implementation of Basel II later this year, which stipulates greater operational risk provisioning requirements (compelling banks to increase their tier 1 and tier 2 capital stocks).

Figure 21: QoQ credit growth was still positive in Q1, with new loan approvals up over 100 percent since December…
(new loan approvals in IDR trillion; credit growth in quarter-on-quarter percentage change)



Sources: BI and World Bank

Figure 22: …and consumer loans leading, despite high average lending rates
(investment, consumer and working capital loan growth in year-on-year percentage change; lending rate in percent)



Sources: BI and World Bank

3. The balance of payments surplus increased in Q1, but is expected to narrow over the next two years

The BoP surplus expanded in Q1, as the increase in the financial account surplus more than offset the narrowing in the trade surplus

The balance of payments (BoP) surplus increased to USD 6.6 billion in Q1 as foreign investors moved into both bonds and short-term paper, and direct investment inflows rose. These factors more than offset the narrowing in the trade surplus, and further capital outflows from Indonesian residents continuing to expand their offshore deposits. (Appendix) The surplus on the overall BoP saw Indonesia's foreign reserves rise to USD71.8 billion at the end of March. Reserves were further boosted in April, with record portfolio investment inflows pushing reserves to record highs of USD 78.6 billion. In May reserves fell to USD 74.6 billion due to financial market instability.

The BoP is expected to narrow in 2010 and 2011, as the trade surplus narrows while the financial account remains in surplus

The BoP surplus is expected to narrow through 2010 and 2011, as the current account approaches balance. Net capital inflows to Indonesia are expected to continue over the medium term, although the uncertainty over the size of flows increased with the renewed instability in financial markets in May. Ongoing BoP surpluses should support the continued accumulation of reserves. The regular fluctuations in public debt issuances and loans drawings and repayments will continue to create volatility in the quarterly BoP.

The outlook for direct investment inflows has improved

The outlook remains for an increase in net direct investment over 2010 and 2011, as the global economic recovery and improved long-term financing conditions sees firms scale up investment, combined with the government's renewed focus on improving the investment climate generally and in particular expanding private sector involvement in an expanded infrastructure investment program. The projected 2010 surplus on portfolio investment has been increased due to the very large inflows in Q1 which were only partially tempered by the outflows in Q2. The second half of 2010 should see more muted net inflows. An increase in trade credits, combined with Indonesian residents (both individuals and businesses) building their deposits in overseas bank accounts, has seen projected 'other investment' outflows raised. The BOP surplus combined with continued high roll-over rates on private short-term debt suggest there remain sufficient foreign capital inflows to fund Indonesia's external financing requirements. Risks to the downside have increased since March (section A-6).

4. Inflation remained mild overall, but is likely to pick up

a. Core inflation has been limited, while food prices have been unusually volatile

Prices began a slow upward recovery in the first months of 2010 from the lows of late 2009

Prices continued a modest recovery across all key measures. Year-on-year growth rates for consumer and upstream prices had risen to their highest rates in a year by May. Headline inflation was 4.2 percent, with most of the recent increase due to volatile food prices. The GDP deflators accelerated in Q1 from their Q3 2009 trough. (Figure 23) Despite these increases, inflation rates remained well below pre-crisis levels and have been lower than expected. With these weaker outcomes, forecasters have progressively revised down their 2010 inflation projections.

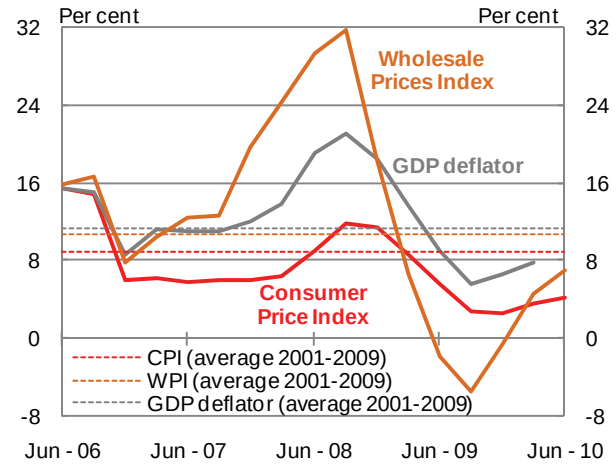
Core inflation remains weak as the economy continues to under-utilize capacity and the exchange rate restricts imported inflation

Core inflation, which excludes volatile and administered prices, continued to be low into mid 2010 with only a modest pickup in May to 3.8 percent, largely because of higher gold prices increasing jewelry costs (contributing around one-third of the increase in May – the highest of the 35 subcomponents). The prices of services in the economy, a good measure of underlying inflation, including health, education, transport and finance have been flat in 2010 keeping core inflation at historic lows. This weakness in core inflation is partially explained by capacity utilization not having returned to pre-crisis levels. Consumers and producers have also been insulated from increases in import prices through the rupiah's 10 percent appreciation against the US dollar in successive months from August 2009 to April 2010. This is estimated to have subtracted as much as 1 percentage point from the May YoY inflation rate.

Food prices were the only component of the CPI to grow above historical averages in the first months of 2010

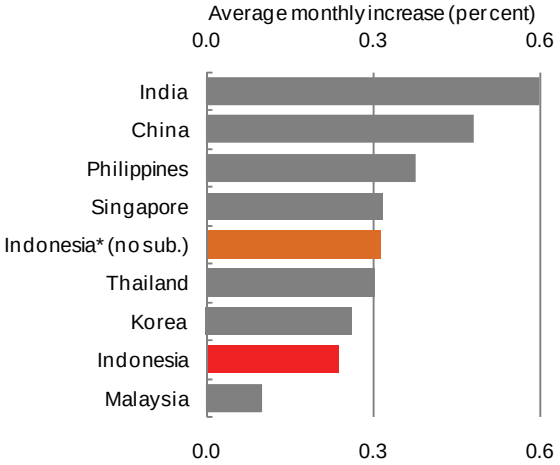
Sings in food prices drove headline inflation relative above the core rate. Indeed, across all the components of the CPI, only food prices grew faster than their historical average in the first 5 months of 2010 (6.6 percent in May YoY, more than double the rest of the CPI. Higher food prices have stemmed from higher-than-usual rice price rises in early 2010 due to problems with distribution and a delayed harvest. As the harvest brought lower cereal prices in March through May, spice prices jumped with poor growing conditions – for example, red chili prices rose by 40 percent between April and May contributing around one-quarter of the total increase in prices in this period.

Figure 23: Price growth starts to recover, but remains below average
(year-on-year percentage change)



Sources: BPS and World Bank

Figure 24: Since troughing in mid-2009, Indonesia's consumer prices have grown by less than most of its trading partners', only partly due to regulated energy prices
(average monthly inflation since September 2009)



* Scenario of Indonesia's inflation had regulated fuel prices moved with the economic cost of fuel from February 2009.
Sources: CEIC and World Bank

Higher food prices more than offset the weakness in other consumer prices for poor households

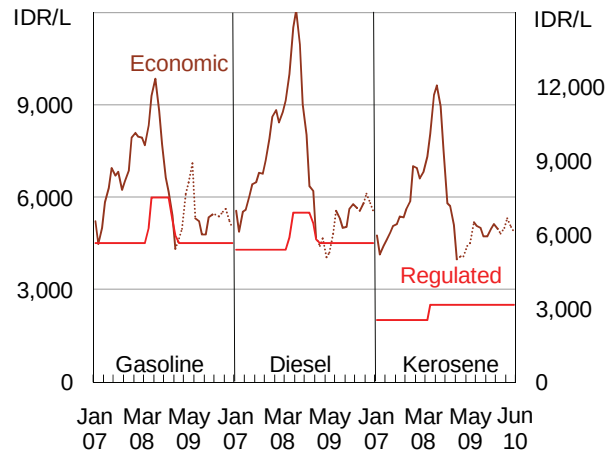
Increases in these basic food prices particularly affect poor households. Food items make up 63 percent of poor households' consumption basket on average, and the relatively strong growth in these prices have contributed 95 percent of the increase in their cost of living in the first five months of 2010, lifting the poverty basket inflation rate to 5.9 percent, well above the headline rate. (Appendix)

Indonesia's consumer prices have grown by less than its neighbors' since inflation troughed in September 2009, only partly because of fixed fuel prices

Inflation rates reached their trough in September 2009. Since then Indonesia's consumer prices have increased by less than most of its regional trading partners'. (Figure 24) Its neighbors relatively greater inflation partly reflects their significantly stronger rebounds in economic activity, their more stable exchange rates, and the greater pass through of the recovery in global energy prices in those economies. Indonesia's regulated energy prices meant consumers only experienced part of the fall in energy prices in the second half of 2008, but also did not experience the 30 percent rise in the economic cost of fuel from early 2009 (by May 2010 the economic cost of fuel was more than one-third above the administered price). (Figure 25)

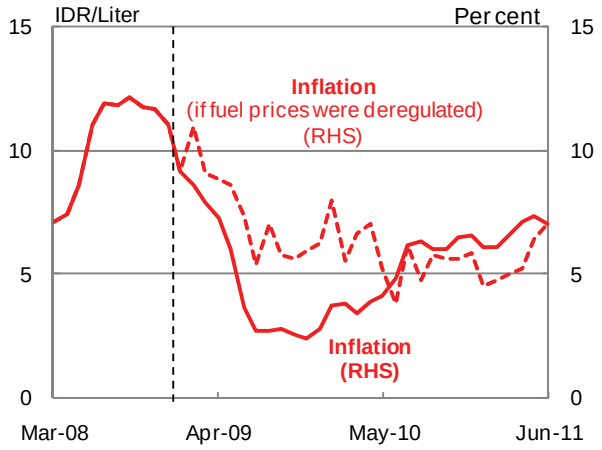
Had diesel and gasoline transportation fuel prices been deregulated when the regulated price matched the economic cost in February 2009, Indonesia's disinflation would have been smaller in 2009. By May 2010 inflation under this scenario and actual inflation would have converged: once exchange rates and international fuel prices stabilized (the extra fiscal space would be permanent). (Figure 26) (Box 1 describes how movements in regulated energy prices pass into the CPI.) Monthly inflation rates under this scenario would have been on average less than 0.1 percentage points higher between September 2009 and May 2010, or 0.6 percentage points over the full 8 months. Over this period Indonesia's consumer prices would still have grown by less than most of its regional trading partners', suggesting that the weakness in Indonesia's inflation is not solely from the regulation of fuel prices but also reflects limited price pressures in the economy overall. (Figure 24) Nonetheless, under both scenarios, Indonesia's headline rate remains higher than most of its trading partners' (Appendix).

Figure 25: The wedge between the economic cost of fuel in Indonesia and the regulated price has been stable
(IDR per liter)



Dotted lines indicate Ministry of Energy market prices are imputed from movements in Singapore refinery prices and the IDR exchange rate. Sources: CEIC, Ministry of Energy and World Bank.

Figure 26: If fuel prices were deregulated `the impact on inflation would phase out in the short-term but there would be permanent budget savings
(headline inflation)



Sources: BPS and World Bank

Economy-wide price growth has also been below trend

Weak prices growth also occurred across the national accounts implicit price deflators (IPD) in Q1. Investment prices continued to decelerate sharply, growing by 1.1 percent QoQ, around the lowest in 8 years, as building costs fell with the first falls in cement prices in 3 years. This weakness kept the wedge between growth in the CPI and the GDP deflator low in late 2009 and early 2010. However, with metals and minerals prices forecasts to rise 30 percent in 2010 from 2009 levels, investment cost are likely to reaccelerate by the end of 2010.

Indonesia's terms of trade (as implied by the national accounts) were slightly lower in Q1 and year-on-year, driven by stronger import prices (goods and services). Despite the fall, export prices recorded two strong quarters of growth supported by very large increases in

global mining product prices. Wholesale export price growth was also the largest across all categories in April and May and this strength is likely to continue into mid-year. Finally, the private consumption IPD mirrored the low growth in the CPI, growing by 1.5 percent between Q4 2009 and Q1 2010. The overall weakness across the IPDs ensured the GDP deflator was also weak relative to the past decade, growing by 1.9 percent QoQ, which led to a mild increase in the YoY rate to 7.8 percent.

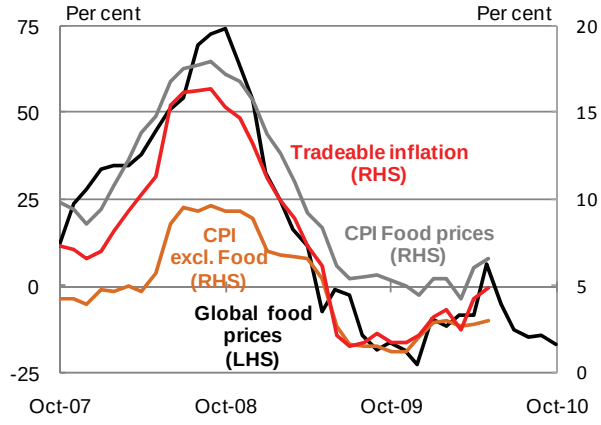
b. Weak core inflation suggests inflation in 2010 will be more subdued than previously forecast, while stronger economic growth, commodity prices and monetary expansion are expected to lift inflation in 2011

Inflation is expected to accelerate in the second half of 2010, as demand and credit growth continue to recover, administered energy prices are moved closer to economic costs, and pass-through of the stronger exchange rate into consumer prices wanes

The outlook for the second half of 2010 remains that consumer price growth will accelerate, with inflation double the mild Q1 and Q2 rates. Some domestic capacity constraints are likely to reemerge, with demand stronger, particularly given more favorable lending conditions including strong growth in consumer loans. Meanwhile Parliament's approval of a 10 percent average increase in electricity tariffs effective July is a first step in connecting administered energy prices with the economic cost of that energy. While the largest tariff increases are among commercial and a few higher-ended residential, and the tariff for more residential consumers will not change, meaning the tariff increase will have minimal direct impact on the CPI, higher input costs will make a small contribution to core inflation.

However, unexpected weakness in the first half of 2010, and the volatile nature of food prices, leads to a lowering in the projection of full-year inflation for 2010 to 5.1 percent (down 0.2 percentage points), with a downward revisions to GDP deflator growth projections too. Accelerating prices in the second half of 2010 are expected to raise the YoY inflation to rate to 6.4 percent by year's end, above BI's inflation target of 5.0 percent (± 1 percent).

Figure 27: Global food prices indicate Indonesia's food prices will decelerate over the next five months
(global food prices, in IDR terms, advanced 5 months, year-on-year percentage change)



Sources: BPS and World Bank

Forecasts are for global food prices to be flat in 2010 and 4 percent lower in 2011. Domestic prices of food are broadly integrated with world markets, with movements in global prices taking up to 12 months to pass into retail prices. Global food prices tend to lead domestic prices by about five months and, if the relationship continues, the recent developments on global food markets indicate that domestic food prices will retreat over the coming months (Figure 27) This is also supported by wholesale prices of agriculture which have showed the greatest weakness of all the components of wholesale prices over the past three months. This is consistent with higher inflation expected by July, particularly as due to a possible over-estimate of the impact of the well-publicized electricity tariff increase on housing costs.

Upward revisions of the forecasts for GDP, MTP and commodity prices drive up the inflation forecasts for 2011 to 6.5 percent

The gradual acceleration in the economy absorbing spare capacity, and the projected pickup in lending, should spur demand-pull inflation from early 2011. Similarly, higher-than-previously-expected global demand for inputs such as raw materials, metals and oil, which have already led to upward revisions of forecasts for global commodity price indices, should translate to higher supply costs for businesses and flow through to consumer goods from early 2011. These forces have strengthened the inflation outlook for 2011 with projected inflation raised by 0.3 percentage points to 6.3 percent. GDP deflator growth, at 12.2 percent, is expected to again pull well ahead of the CPI in 2011 as investment prices continue to drive a wedge between the two series.

5. Employment growth kept pace with the labor force in the first half of 2009, but the new jobs were all informal

The latest labor market data, to August 2009, show informal employment expanded faster than the labor force, but there were fewer better quality formal employment fell

The latest labor market survey, for August 2009, report employment continued to grow faster than the labor force as Indonesian economy's recovered from the downturn at the turn of 2009. Employment growth was entirely informal, however. The number of formal sector workers (narrowly defined) fell by 3.2 percent, or by over 1 million, in the year to August 2009.[1] In particular, the number of 'employees' fell by 3.5 percent, and the number of employers with permanent staff also fell slightly. On the other hand, the number of casual workers in agriculture, often a refuge for workers who lose their jobs in the formal or urban sectors, also fell, by 3.6 percent. The overall 2.3 million additional workers found jobs among employers with temporary workers (up by 660,000 to 24.7 million), unpaid workers, and casual workers not in agriculture (all are considered informal).

The open unemployment rate fell to 7.9 percent, from 8.4 percent a year earlier and 8.1 percent at the previous survey in February 2009. Unemployment fell for both men and women, and for those with lower levels of education, but rose for those who had graduated high school or university. (Appendix)

Job creation was not necessarily in the fastest growing sectors. Employment grew most in social services (by almost 1 million, or 7.1 percent) in the year to August 2009. Yet transport & communications reportedly shed jobs, despite the sector's dramatic growth in

activity. On the other hand, while manufacturing output was stagnant and retail & wholesale trade value added rose weakly, employment in these sectors grew by 2.3 percent and 3.4 percent respectively, over the year, in total creating over 1 million new jobs.

6. Higher revenues and weaker spending are expected to narrow the budget deficit

a. The budget deficit for 2010 is expected to be lower than previously anticipated, and in 2011 the deficit is expected to be as low as 0.4 percent of GDP

The government is projecting deficits of 2.1 and 1.7 percent of GDP in 2010 and 2011 respectively

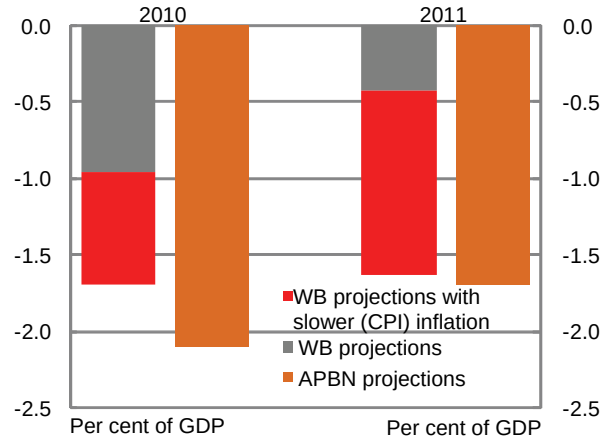
The government has widened its budget deficit projections in 2010 and 2011 to 2.1 percent 1.7 percent of GDP respectively. The government's 2010 projection has not been revised since March and does not take into account revenue collections and disbursement realizations into the second quarter of 2010. Based on its projection of CPI growth, the government forecasts the nominal economy to grow by around 11 percent in both 2010 and 2011. Government revenue is projected to grow at 14 percent in 2010 and 10 percent in 2011, compared with expenditure growth of 18 percent in 2010 and 7 percent in 2011.

Alternative projections of economic growth and projected weaker disbursement suggest the budget deficit will be significantly smaller, near 1.0 percent of GDP in 2010 and as low as 0.4 percent in 2011

However, assuming faster nominal GDP growth and higher oil prices supporting revenues and Q1's weak disbursements continuing through the year suggests that the budget deficit in 2010 will be near 1.0 percent of GDP, and narrowing further in 2011 to around 0.4 percent of GDP, largely due to faster projected growth in the nominal economy supporting tax revenues (this projection for 2011 assumes that core government expenditure remains constant as a share of nominal GDP, after allowing for a lower oil price assumption than the government).

[1] The formal sector covers those reporting to working as employers with permanent employees, or as employees. The informal sector covers own account workers, employers with temporary workers, and casual and unpaid workers. These distinctions are approximate, and conditions vary considerably among both 'forma' and 'informal' sector workers (Part C, September 2009 *IEQ*).

Figure 28: Basing projected nominal GDP growth on the GDP deflator, rather than the slower-growing CPI, suggests revenues may be significantly stronger, and the budget deficit smaller, in 2010 and 2011



Sources: Ministry of Finance, World Bank

Much of the difference in projections between the World Bank and the government reflects how the tax base of the value of economic activity is projected. The government's current methodology assumes that the nominal economy will expand with projected growth in the CPI plus the growth in real activity. The faster projected nominal revenue growth projected here reflects the use of the nominal GDP deflator, which in recent years has risen faster than the CPI (see Part B-2). Also important is the government's higher oil price projection. The broad trends of under spending are also expected to continue. Core government expenditure in 2011 is assumed to remain constant as a share of nominal GDP, with some adjustment based on the lower oil price assumption.

b. Government revenues are expected to be slightly stronger than previously projected

The pickup in commodity prices is likely to support slightly stronger government revenues growth in 2010

The projections for government revenues in this IEQ are little changed in aggregate on those of March 2010. Since March 2010, tax revenue realizations are a little weaker than previously expected which is being offset by some strength in non-tax revenues. In aggregate, projected growth in government revenue in 2010 has been revised up by only IDR 15 trillion, or 16.1 percent to 17.6 percent, driven by the improved outlook for non-tax revenues. In 2011 revenues are projected to grow by 17 percent, consistent with growth in nominal domestic incomes, while growth in non-tax revenues is expected to be lower due to lower receipts from the natural resources sector.

Tax revenue is expected to grow by 17.7 percent in 2010, a little less than projected in March in line with a slight downward revision to nominal economic growth. This has slowed projected growth in all tax categories, except international trade taxes which are recovering faster than had been expected earlier in the year, due to higher projected export duties with the strengthening of the price of international crude palm oil and a new tax on the raw cocoa beans exports, which is expected to contribute modestly to revenues (see Box 2: A new tax on cocoa exports).

Projected 2010 non-tax revenues are slightly stronger due to unexpected strength in 'other ' revenue categories

The outlook for non-tax revenues in 2010 improved through Q2, with annual growth expected of 17.3 percent. Non-tax revenues move with changes in commodity prices, particularly oil prices, and are less sensitive to the economy's growth. The 'other' non-tax category is responsible for the bulk of the stronger projection for aggregate revenues. This revenue category includes many miscellaneous items such as visa fees, drivers' license fees and unclaimed tax return revenues. In the first four months of 2010 these revenues showed considerable unexpected strength, with receipts of IDR 15.9 trillion. State Owned Enterprises (SOEs) paid dividends earlier than usual, and over the full year are expected to provide IDR 2.2 trillion more than previously projected as these dividends, indicating 2009 operating profits were stronger than previously projected, and that collections for the remainder of 2010 may be stronger too.

Tax revenue growth in 2011 will be slightly hindered by projected lower oil production and price expectations, and changes to tax collection arrangements for land and building related taxes

Tax revenues in 2011 are expected to grow by almost 20 percent, faster than the economy, as tax revenues fluctuate by more than the movements in nominal GDP as corporate profits, commodity and asset prices fluctuate by more over the economic cycle. Progressive income tax rates also translate into accelerating income tax receipts, but this is a relatively small factor in Indonesia as personal income tax accounts for only a very small proportion of total tax revenues.

Lower expected oil price and production, affecting oil and gas income tax revenues, are likely to slow tax receipt growth, compared with 2010. In addition, responsibility for collecting revenue for land and building taxes and transfers duties, will be progressively devolved from the central government to regional government from 2011 to 2014, lowering central government receipts.

The government continues to expect improvements in tax administration to support receipts

Tax policy reforms are expected to continue in 2010 and 2011, with the twin goals of both supporting real activity through lower tax rates, while achieving higher taxpayer compliance through improved administration. In 2010 the government legislated a decrease in the corporate income tax rate from 28 percent to 25 percent, and other reforms include the elimination of luxury sales taxes for some high-end manufacturing industries. The government expects that revenues lost through these tax cuts will be offset through improved administration. In 2011, the tax office plans to focus on administration improvements for the corporate income sector specifically, with a focus on the commodities sectors.

The government's new mining law and regulations are expected to slow non-tax revenue growth in 2011

Growth for non-tax revenues is expected to be around 9.5 percent in 2011, declining as a share of total revenues. Most revenue categories are expected to decline in 2011. In addition to the government's expectation of weaker production from natural resources in 2011, the lower growth is partly due to new domestic processing requirements, that require that after a five-year transition period all mined ore and minerals are refined locally. This will require significant capital expenditure, which will reduce some corporate non-tax liabilities, reducing the government's revenue growth. There is considerable uncertainty around the extent of impact on revenue estimates and how successful the government will be at enforcing this requirement by 2014.

Profit transfers from SOEs' dividend payments are expected to continue to grow in line with economic activity. 'Other' non-tax revenues are also expected to grow in 2011, following their projected strength in 2010.

c. Disbursements on capital, subsidy and 'other' spending have been weak in the first months of 2010, and this is likely to keep full-year spending below target

The 2010 revised budget was approved in early May 2010

The revised budget (APBN-P) did not significantly change projected core government spending in 2010. Projected energy subsidy spending was revised up with a 4 percent increase in the oil price assumption, while interest payment servicing expenditure were revised downward with a 3 percent stronger exchange rate assumption. The 'other spending' category shows a significant increase of 44 percent, which is mainly due to higher budget allocation for contingency expenditure. Higher projected government revenues raised the transfer obligations to regions.

Significantly, Parliament agreed to a 10 percent increase of the electricity tariff effective in July 2010 – but the savings are swamped by the rise in the oil price

Parliament agreed to a 10 percent electricity tariff increase, effective July 2010, the first significant adjustment in electricity tariffs since 2004. This average tariff increase is lower than the government's proposed 15 percent, but is still expected to save the government around IDR 4 trillion on electricity subsidies or 7.3 percent, of the total electricity subsidy of IDR 55.1 trillion. This saving, however, is trivial compared with the impact of the adjustment in the projected oil price from USD 65 to USD 80 between the original and revised 2010 budgets, which raised the projected subsidy cost from IDR 38 trillion to IDR 55 trillion and was the largest factor expanding the government's projected 2010 deficit from 1.6 percent to 2.1 percent. While this tariff adjustment is an important initial step, generating mechanisms to better connect tariffs with the economic cost of supply energy will be critical for containing subsidy expenditure and ensuring energy is used sustainably.

The first months' poor disbursement performance suggest actual spending in 2010 is likely to be below estimates earlier in the year

The slightly lower level of actual spending in Q1 2010 and differences in oil price assumptions suggest that total spending in 2010 is likely to be lower than had been expected in March. The government only spent 14 percent of the total revised budget in Q1 2010, somewhat below 2009 levels of 16 percent, largely because of slow disbursement of the capital budget, and lower subsidy and 'other spending'. In Q1 only 5 percent of allocated capital expenditure has been spent compared with 10 percent in 2009.

Box 2: A new tax on cocoa exports

The Indonesian government is planning to impose a tax on exports of raw cocoa. The tax aims to ensure supply for the domestic processing industry. It is set to be introduced in response to a recent report from the Indonesian Department of Industry. This report found that, in recent years, the domestic cocoa processing industry has been producing at around 50 percent of total capacity, with some factories not producing anything, due to a lack of raw cocoa beans. Indonesia is currently the world's third largest exporter of cocoa, after the Ivory Coast and Ghana, and reportedly exports around 80 percent of its cocoa as a raw material. The aim of the tax is to revitalize production and investment in the domestic processing industry through the increased supply of raw cocoa beans, and also to enhance the volume of value added exports of cocoa-related products.

Figure 29: Cocoa export duty tariffs are based on developments in the international cocoa price
(USD per metric tonne, percent)

International cocoa price (USD/MT)	Cocoa tariff (per cent)
< 2,000	0
2,000 - 2,750	5
2,750 - 3,500	10
> 3,500	15

Source: Ministry of Finance

The Indonesian government passed the new cocoa tax into law to become effective on 1 April 2010 at an initial rate of 10 percent of export values. But its start was postponed one month following complaints from the cocoa exporters and growers that they were not consulted about the tax and were not prepared for its introduction. It seems that a small amount of revenue was collected in May 2010.

The proposed framework of the tax is similar to the CPO export duty structure (see Box 2, March 2010 *IEQ)*, whereby a variable tariff is imposed on raw cocoa exports depending on the international cocoa price. (Figure 29) A simple approach to estimating the amount of revenues that may be collected is to apply the tax to historical export values. By assuming no behavioral change in production, consumption or the international price, this gives an upper threshold for the likely receipts. From 2000 to 2008, little revenue would have been collected as the international cocoa price was predominately within the tax-free threshold. (Figure 30) In 2010, around IDR 1.4 trillion may have been collected if the tax was imposed for the whole year. (Figure 31. As global cocoa prices are more stable than CPO prices, cocoa export revenues are likely to be more stable than overall export tax revenues.

There are various approaches to restricting exports. All distort market prices, and so can create inefficiencies; however export taxes are generally the least disruptive means. Assuming Indonesia is a price setter in the international market for cocoa, or can influence the international price through controlling a large share of the world supply, it will likely achieve the policy's goal of increased domestic supply and lowering domestic prices. On the international raw cocoa market, the tax may reduce supply, raising prices. However, as Indonesia is only the world's third largest producer, these effects may depend on the capacity of other countries to offset the fall in Indonesia's supply of unprocessed cocoa.

While this policy may address the issue of supply shortages to the domestic cocoa processing industry, this will be at the expense of farmers who will be paid less for their output. This may create incentives for local cocoa producers to shift to producing other commodities if they yield higher returns, even if they may not be as efficient at producing those items and have to incur new investment costs. For a country with enough market power to set the price of a commodity, the gains of export tariffs are observed though lower domestic prices and greater supply on the domestic market, through higher, easily collected government revenues, and a slight positive impact on the terms of trade due to the increase in the global price of the scarcer commodity. However, these gains are likely to be more than offset by the economic inefficiencies of export duties, as growers' incomes fall with the lower domestic price, which hurts government revenues through lower taxes paid by these producers. In addition, as the processing industry becomes less globally efficient due to the price distortion created by the export tax, and the tax can become politically difficult to unwind in later years as the industry prices in its price advantage. The impact of export duties can then also create distortions further down the supply chain while, above all, hindering the growth of an agricultural industry where Indonesia has a natural comparative advantage.

Figure 30: A new tariff on the exports of cocoa…
(USD per metric tonne)

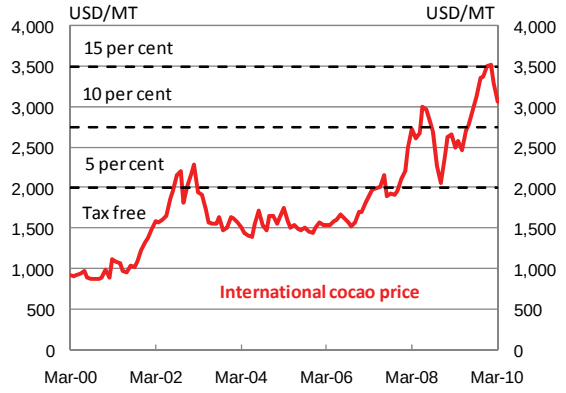
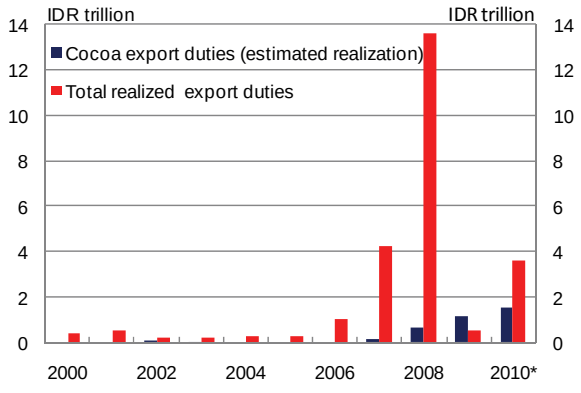


Figure 31: … leads to a small increase in potential export duty revenues
(IDR trillion)



Sources: Ministry of Finance, BPS

*2010 figures are WB projections, Sources: MoF and WB estimates

Figure 32: Higher subsidy spending is the main contributor to higher deficit in the 2010 revised budget
(2010 budget revision, IDR trillion)

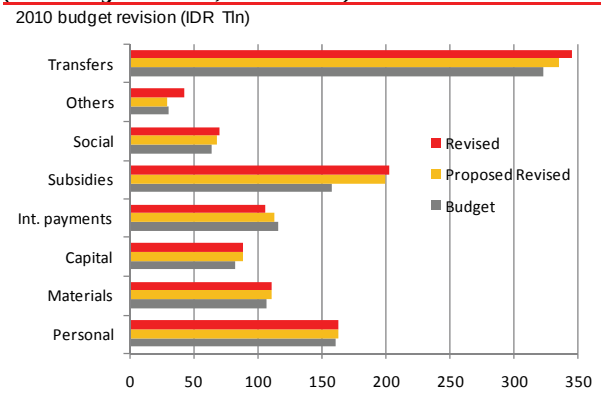
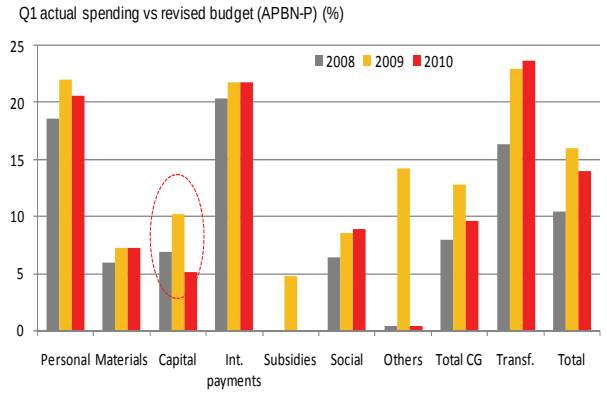


Figure 33: Q1 budget outcomes are slightly below 2009 levels
(percent of total)



Source: Ministry of Finance

The government has revealed the macroeconomic and fiscal policy framework for 2011, but is yet to announce its expenditure plans

The 2011 budget will focus on improving welfare through a *triple-track strategy* as stated in the medium-term development plan (RPJMN), namely pro-growth, pro-jobs (through tax incentive to increase investment and exports and increase capital spending for infrastructure), and pro-poor (continuing social programs and improving targeting for subsidy spending). Central government spending is directed to support the 11 national priorities as mentioned in the RPJMN (see Part C of the March 2010 *IEQ*). Total expenditure is projected to increase by 7 percent from 2010 levels – well short of projected growth in the nominal economy (ie after account for rising prices). Central government spending is estimated to grow by 7.6 percent, while transfers to sub-national government are expected to rise by 5.7 percent. The projected budget deficit is a moderate level of 1.7 percent of GDP, lower than the 2010 revised budget of 2.1 percent of GDP but above 2009's realized deficit of 1.6 percent.

7. Overall risks to Indonesia's economic outlook have increased with heightened instability in global financial markets

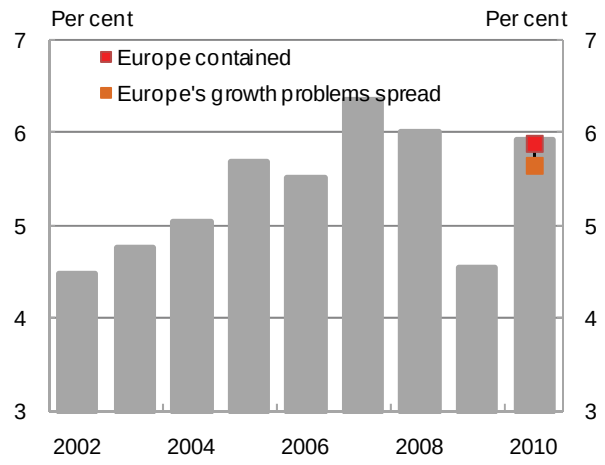
Risks to the outlook have risen and shifted somewhat to the downside in Q2

The distribution of risks to Indonesia's near-term economic outlook widened and shifted more to the downside. The volatility on global financial markets through April and May, and the rising focus on fiscal austerity across major economies, have created new uncertainty about the pace of the global recovery, and financial conditions and asset prices. Given this renewed volatility and its impact on commodity prices, this *Quarterly's* risk analysis section also presents an assessment of the risk to the baseline forecasts from the uncertainty surrounding commodity price projections. Finally, domestic political developments have created uncertainty about whether the government can achieve the ambitious reform programmed laid out in its RPJMN (see Part C of the March 2010 *Indonesia Economic Quarterly*).

Risks to the global economic recovery have increased, although Indonesia is not expected to be significantly affected

Developments in Q2 2010 highlight the near-term risks to Indonesia's economic outlook posed by the less certain external environment as the global economy recovers from the deep downturn of 2009. In March, when forecasts were last prepared, the risks to the global economic recovery appeared to be receding, with GDP outcomes and partial indicators above expectations and financial asset prices achieving sustained increases. April through June brought increased volatility and weakening in global financial prices and greater uncertainty over major economies' public finances. With Indonesia's capital accounts relatively open, the large financial outflows in the first weeks of May and associated reversal of the previous months' accumulation of reserves demonstrated how quickly conditions can shift.

Figure 34: A hypothetical European-centered economic downturn does not significantly impact Indonesia's 2010 outlook
(annual percentage change)



Sources: BPS and World Bank projections

Meanwhile, weaker recoveries across European economies, following the region's shift to fiscal austerity, are likely to have a limited impact on Indonesia's real economy. Indonesia's direct trade linkages with Europe are relatively small, as are its trade share – indeed both have fallen since mid-2008. In the extreme scenario of the European economy contracting as much as in the recession of 2009 (4 percent), then the arithmetic impact on Indonesia's major trading partner growth would only be around ½ of a percentage point. This would only slice around 0.1 percentage points off Indonesia's projected growth in 2010. (Figure 34) A downturn of this depth is likely to affect growth in other economies, including Indonesia's other trading partners. With the hypothetical of average growth across all of Indonesia's trading partners in 2010 reduced to 2.5 percent (fully half the baseline projection), then the direct, the arithmetic impact on Indonesia's GDP growth will be only 0.4 percentage points in 2010. (Figure 34) This assessment understates the impact of such extreme outcomes, with credit markets and financial flows also likely to be significantly affected, with global commodity prices falling and scarcer financing for investment in Indonesia having larger impacts of Indonesia's outlook.

Risks around the inflation outlook are more balanced: on the one hand is the uncertain recovery in global demand, on the other is energy price adjustment and the looseness of domestic monetary conditions

Global financial market and growth developments, and their implications for global commodity prices also generate significant uncertainty around the inflation outlook. On the other hand, the ongoing relatively loose stance of Indonesian monetary policy and emergent signs of a possible acceleration in credit and money supply create risks that inflation may rise faster than expected, particularly late in 2010 and into 2011. The growing consensus that Indonesia's regulated energy prices need to better reflect the cost of supplying that energy, on average, creates potential for additional increases in headline inflation, but as long as these do not lead to a sustained increase in inflation expectations this adjustment should only have a transitory impact.

The volatility in May also affected commodity prices, highlighting the difficulty of forecasting these key determinants of Indonesia's outlook

Commodity prices volatility also spiked May. For example, crude oil prices fell around 25 percent or USD 20 per barrel between late April and late May. But this is not out of line with historical volatility, and is indicative of the difficulty in accurately forecasting these key determinants of Indonesia's economic outlook. In two-thirds of 12-month periods between 1990 and 2000, average non-energy commodity prices have moved by at least 15 percent, while energy commodity prices have moved by at least 30 percent. (This volatility, recent forecast errors, and the implications for Indonesia's real economy are discussed in Section B-3.)

The baseline forecasts have global non-energy commodity prices increasing by 20 percent in 2010 (from 2009's average level) and energy prices 30 percent higher than in 2009. Lowering the 2010 baseline forecast by one and raising it by one and two 12-month standard deviations gives a sense of the sensitivity of the forecasts to plausible movements in commodity prices. (The standard deviation in annual average growth, is only a little below the standard deviation in the 12 month percentage change. In these scenarios, commodity prices are assumed to remain at these shocked levels in 2011.)

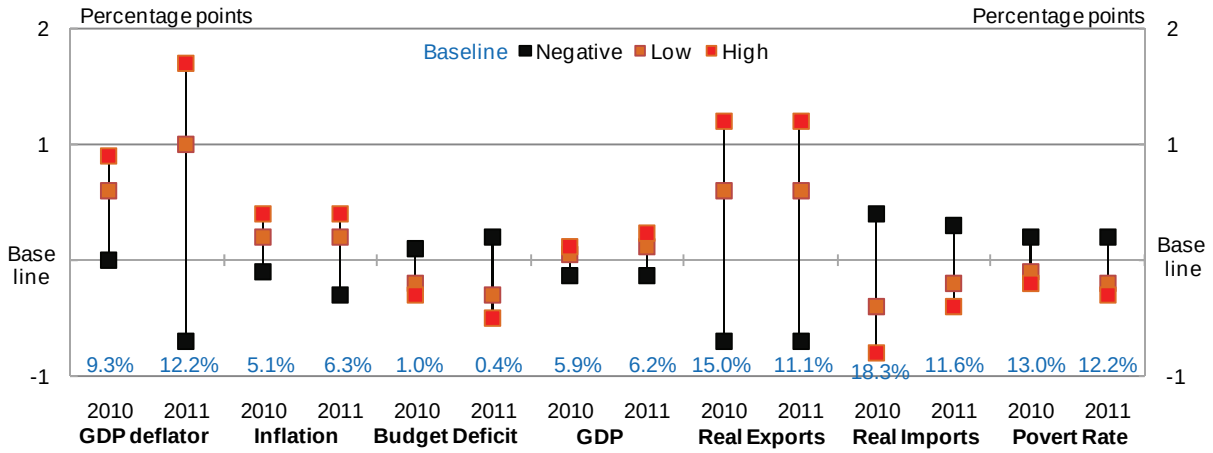
A plausible positive shocks to commodity prices suggest moderately faster GDP growth, a larger trade surplus and smaller budget deficit, but a more significant pickup in inflation

A larger shock to commodity prices (non-energy prices are 30 percent above the baseline and energy prices 60 percent higher) would raise GDP growth in 2010 by 0.2 percentage points and by 0.3 percentage points in 2011. This reflects faster growth in agriculture and mining, with this partially offsetting slower growth in construction with higher input costs.

Higher commodity prices mean faster growth in the GDP deflator, hence the nominal economy, and government revenues, which also benefit from higher non-tax income from the higher value of oil production (see Section B-2). Under these scenarios of broadly-based increases in commodity prices, revenues are projected to increase faster than the cost of energy subsidies and the government's transfer obligations to subnational

governments, reducing the budget deficit by as much as 0.5 percent of GDP by 2011. This sock to commodity prices would also increase CPI inflation, particularly for food prices which particularly affect poorer households. On balance, again with broadly-based commodity price growth, this acceleration is likely to be offset by rising incomes (particularly agricultural incomes) for poorer households, suggesting a negligible and even negative impact on the overall poverty rate. All these effects reverse under the similarly likely scenario of lower commodity prices.

Figure 35: Impact of commodity price shocks on the nominal economy and budget deficit
(percentage point difference from the baseline forecasts)



For percentage growth rates of variables see Part B. Source: World Bank

In the longer-term, sustainably raising Indonesia's growth rate requires executing an ambitious reform agenda

Into the longer term, raising Indonesia's growth rates to 7 percent, and ensuring that growth is sustainable and inclusive, requires fulfilling the ambitious reform agenda the government outlined in its RPJMN 2010-2013 (see Part C of the March 2010 *Indonesia Economic Quarterly*). Political developments since late 2009, such as the conduct of the parliamentary inquiry into the bailout of Bank Century, and the weak disbursements of the capital and materials budget in the first 5 months of 2010, suggest there are significant risks that outcomes may fall short of this agenda. This would have significant negative implications for the projected acceleration in investment and growth, although it is unclear the extent to which these developments have impacted financial market investors' perceptions.

B. SOME RECENT DEVELOPMENTS IN INDONESIA'S ECONOMY

1. High lending rates and net interest margins in Indonesia: The sky's the limit?

a. Indonesia has the highest NIMs in the region, driven by high lending rates

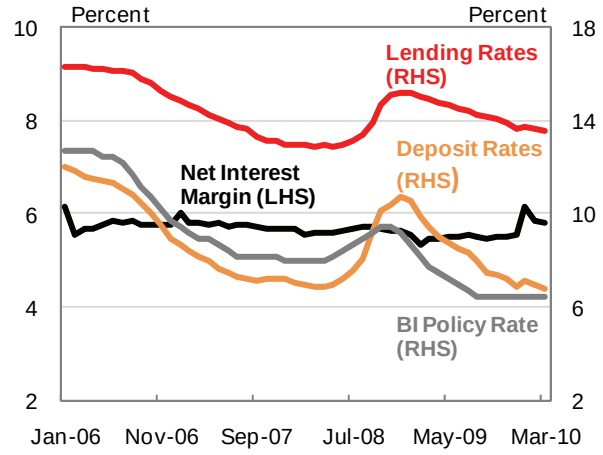
Indonesia's high NIMs are mostly a byproduct of high lending rates, which are a concern as they may be stifling investment and real economy growth

High net interest margins (NIMs) and lending rates in Indonesia have attracted a fair amount of attention in the past year, given the slowdown in credit growth in 2009, and the fact that lending rates did not decrease much despite BI's 300 basis points of rate cuts from late 2008 to August 2009 (Figure 12). NIMs are a measure of banks' profitability, calculated as the ratio of net interest income (the difference between interest earned and interest expenses) to total interest earning assets, expressed as a percentage. High NIMs are therefore either a function of high lending rates or low deposit rates, or both. At close to 6 percent, Indonesia has the highest NIMs of any country in the region (Figure 37). Since average deposit rates in Indonesia are quite high relative to regional peers, the wide NIMs in Indonesia are mostly a byproduct of high lending rates. Taken on their own, high NIMs offer a positive story, as they make Indonesian banks some of the most profitable in the region. However, if the high lending rates that produce such burgeoning NIMs are potentially stifling investment in the real sector and thus limiting economic growth, this is a problem worth studying.

We analyze market structure, risk premium and efficiency as factors contributing to high lending rates and NIMs

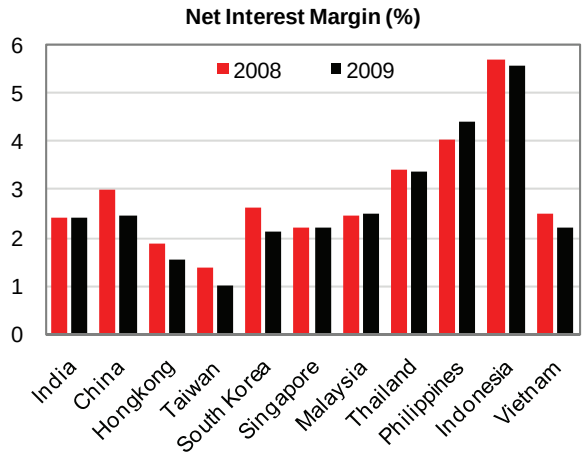
This paper examines three factors that may contribute to the high lending rates and NIMs in Indonesia: market structure, risk premium and efficiency. Understanding these factors may help in the formulation of policies that lead to more pareto efficient outcomes for the economy.

Figure 36: Lending rates have decreased by less than deposit rates after BI's policy rate cuts in 2008-2009…
(net interest margin,lending, deposit and policy rates, percent)



Sources: BI and CEIC

Figure 37: …keeping Indonesia's NIMs the widest in the region by a large margin
(average net interest margins for 2008 and 2009 in percent)



Source: Fitch Ratings

b. Market Structure: Banks are oligopolistic and dominate the financial sector

Concentration ratio analysis reveals that Indonesia's banking sector is oligopolistic…

A simple way to gauge the structure and level of competition within an industry is through concentration ratio analysis. Concentration ratios measure the percentage of market share of an industry held by a given number of firms within the industry. Ratios of 0-50 percent signify low concentration industries, ranging from perfect competition to oligopolies. Medium concentration industries are characterized by ratios of 50-80 percent, and are usually oligopolies. High concentration industries have ratios between 80-100 percent, and range from oligopolies to full-fledged monopolies.

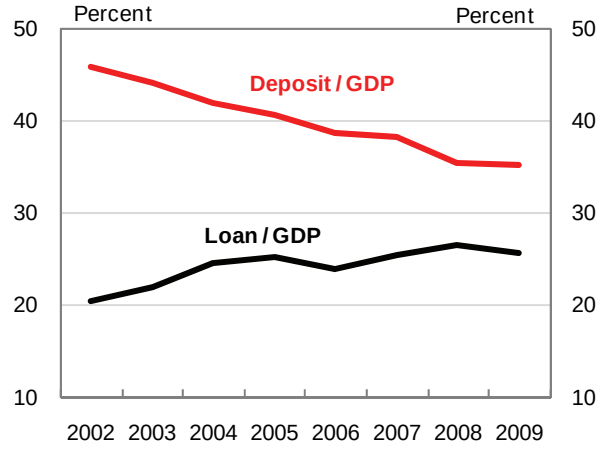
We looked at the credit concentration ratio for the 14 largest banks in Indonesia in 2009 and found that it was 71 percent, indicating the industry is a medium concentration

oligopoly. The credit concentration ratio for the top 8 banks was 60 percent, and for the top 4 it was 44 percent, further confirming oligopolistic status. These results were not surprising, considering the largest 14 banks hold 80 percent of the total assets of Indonesia's banking sector. Lerner and Herfindahl Index analyses conducted by the central bank have found similar results, corroborating our findings. In an oligopolistic industry of this nature, supply side market interactions and prices are heavily controlled by the largest firms. Therefore, it is likely that Indonesia's top 14 banks wield a great deal of power in setting rates and norms for the entire 121 bank sector.

…but banking sector oligopolies exist in other countries with lower lending rates and NIMs so in addition to competition between banks, we must examine the competitive dynamics of Indonesia's financial sector at large

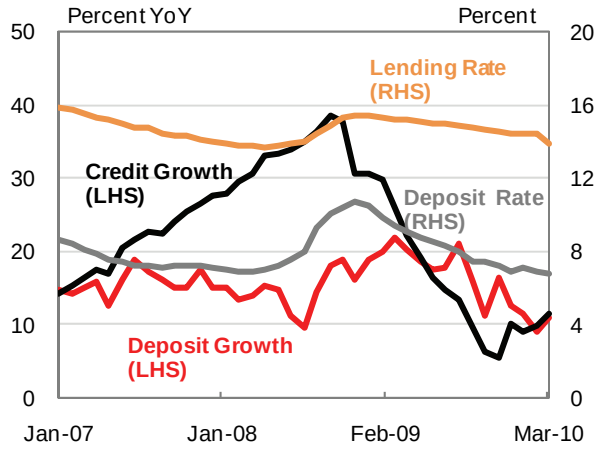
Cross-country comparisons show that oligopolistic banking sectors are not uncommon though. The credit concentration ratios for the largest 4 banks in Malaysia and Thailand in 2009 were 48 percent and 50 percent, respectively. In addition, Bank of Thailand statistics suggest that the largest 6 banks in Thailand control over 80 percent of the total assets of the industry. From this it would appear that Thailand and Malaysia's banking sectors are at least as concentrated as Indonesia's, but average lending rates and NIMs are lower in these countries. An oligopolistic banking sector on its own therefore does not explain why lending rates and NIMs are so high in Indonesia relative to other countries. Moreover, competition in a mature financial sector is not just between banks, but also between banks and non-bank financial institutions and capital markets. In order to understand the full scope of competitive dynamics in Indonesia's financial sector, we must also consider other supply and demand factors that affect the level of interbank competition in setting deposit and lending rates.

Figure 38: Deposits have dropped as a proportion to GDP over the past decade while loans have risen…
(deposit to GDP and loan to GDP ratios in percent)



Sources: BI and CEIC

Figure 39: …owing to high credit growth in the years preceding 2009, but sluggish deposit growth
(deposit and credit growth in percent change year-on-year; lending and deposit rates in percent)



Sources: BI and CEIC

Stagnant deposit growth and high-yielding alternatives to bank deposits increase interbank competition for deposits, pushing deposit rates upwards…

Here, we find a marked difference between deposit-side and lending-side dynamics in Indonesia. The deposit to GDP ratio has been falling steadily over the past decade, from 46 percent in 2002 to 35 percent in 2009 (Figure 38). In addition, the average monthly growth of deposits has been relatively slow, hitting a low of 9 percent (in year-on-year terms) in February this year (Figure 39). Against this backdrop of stagnating deposit growth, depositors have many attractive alternatives to bank deposits in which they can invest their money, such as high-yielding products offered by non-bank financial institutions and government bonds. The combination of sluggish demand for deposits and other high-yielding investment choices available to depositors makes interbank competition for deposits in Indonesia quite high, pushing time deposit rates up towards 5 year government bond yields. The average 1 month time deposit rate in Indonesia between January 2006 and March 2010 was 8.7 percent, compared to 2.3 percent, 2.8 percent and 3.6 percent in Thailand, Malaysia and the Philippines, respectively (Figure 43).

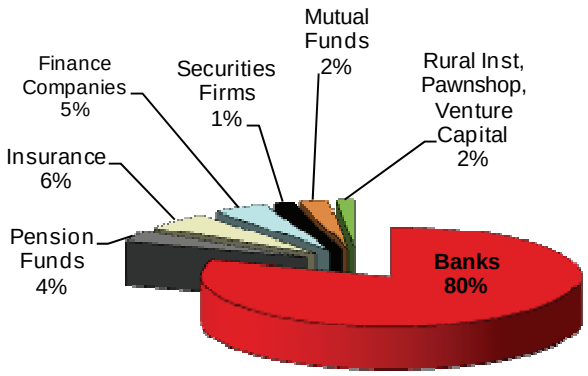
…while high loan growth and limited alternatives to bank loans due to underdeveloped capital markets lead to low interbank competition for loans and high flexibility in setting lending rates

In contrast to deposits, the loan to GDP ratio in Indonesia has been rising over the past decade, from 20 percent in 2002 to 26 percent in 2009 (Figure 38). Average year-on-year monthly loan growth from January 2007 to March 2010 was 23 percent, and this was after a major post-crisis slowdown in lending in 2009 (Figure 39). Unlike depositors, however, the majority of borrowers in Indonesia have limited options to raise money other than taking out bank loans. Equity and debt capital markets are still relatively underdeveloped, with almost no venture capital and a very small proportion of corporate bonds (Figure 41). Banks represent 80 percent of the overall financial sector in terms of assets and are still the major source of financing for most borrowers (Figure 40). Furthermore, over 50 percent of total loans in Indonesia currently go to micro-and small-and-medium enterprises (MSMEs), which due to lack of other financing options, tend to have demand that is particularly insensitive to interest rates. As a result, banks enjoy a captive and healthy demand for their loans, and have a much greater degree of flexibility in setting lending rates, compared to deposit rates, due to low competition from other products and sources. Needless to say, this pushes lending rates upwards. The average lending rate in Indonesia between January 2006 and March 2010 was 15 percent, compared to 6.8 percent, 6 percent and 8.9 percent in Thailand, Malaysia and the Philippines over the same period (Figure 43).

Although banks are still the primary source of financing in Thailand and Malaysia also, these countries have seen a significant deepening of capital markets in the past decade, making them relatively less dependent on bank loans

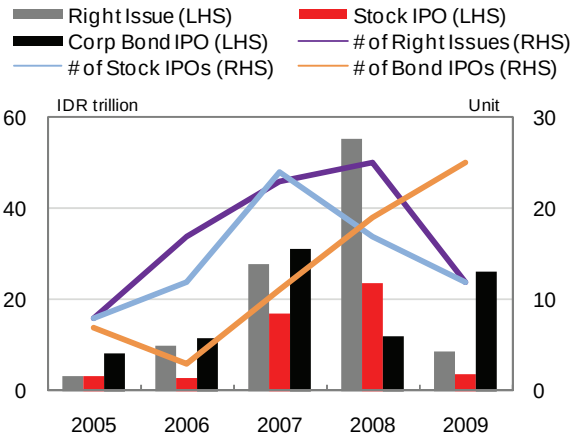
As a quick comparison, while banks remain the primary source of financing in regional peers as well, countries such as Thailand and Malaysia have witnessed a considerable deepening of their equity and debt capital markets over the past decade, as well as an expansion of non-bank financial institutions. In Thailand, the ratio of bonds outstanding to GDP went from 10 percent in 1997 to 66 percent in 2009, while stock market capitalization as a proportion of GDP went from 23 percent in 1997 to 67 percent in 2009. In Malaysia, the ratios of bonds outstanding and stock market capitalization to GDP in 2009 were 88 percent and 140 percent, respectively. As capital markets expand in this manner, the dependence of overall economic activity on commercial bank loans decreases. In contrast to Thailand and Malaysia, Indonesia's ratio of total bonds outstanding to GDP was about 17 percent in 2009, and stock market capitalization to GDP was 36 percent.

Figure 40: Banks are by and large the only source of financing in Indonesia's fledgling financial sector…
(breakdown of financial sector institutions by percentage of total assets)



Sources: BAPEPAM and World Bank

Figure 41: …with corporate bonds, stock IPOs and right issues playing a minimal role so far in raising capital
(value of corporate bond IPOs, stock IPOs and right issues in IDR trillion; unit numbers of the same)



Source: BAPEPAM and World Bank

High interbank competition for deposits and low competition for loans leads to high deposit rates and therefore even higher lending rates in Indonesia as banks lock in high NIMs

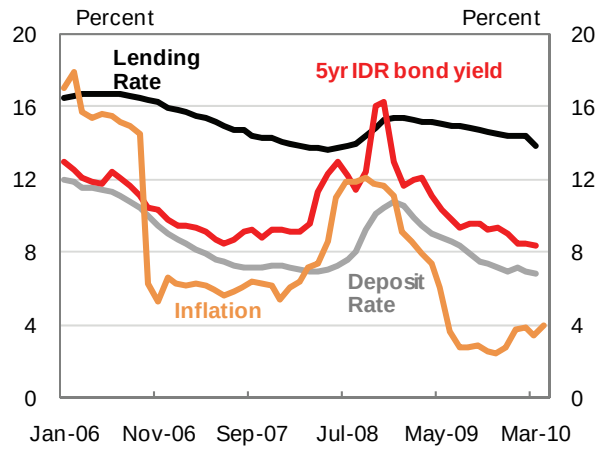
Taken together, the high interbank competition and low flexibility in setting deposit rates, and low competition and high flexibility in setting lending rates, lead to high deposit rates in Indonesia relative to other countries, and even higher lending rates as banks try to lock in high NIMs. In September 2009, BI tried to curb some of the upward pressure on lending rates coming from high deposit rates by encouraging the top 14 banks to agree to "cap" deposit rates. While this may have helped bring down deposit rates slightly (from 8 percent in August 2009 to 6.8 percent in March 2010), there was no tangible pressure for banks to reduce lending rates aggressively, and therefore these have remained relatively high, widening NIMs further.

c. Risk Premium: High and volatile historical inflation and bond yields raise risk

Indonesia's risk premium tends to be higher than elsewhere, driven by high and volatile historical inflation

Interest rates on loans incorporate a risk-free cost of capital plus a risk premium, which includes factors such as inflation expectations, default risk, term risk, and so on. In Indonesia, this risk premium tends to be higher than in other countries, primarily due to high and volatile historical inflation.

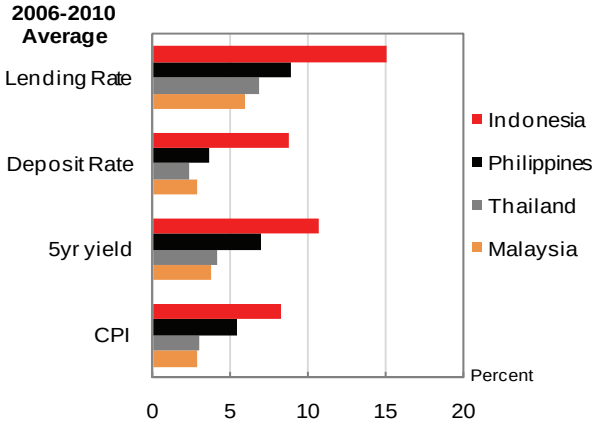
Figure 42: Private lending rates in Indonesia incorporate a premium for high and volatile historical inflation and yields ***(lending and deposit rates, monthly YoY CPI inflation and 5 year bond yields in percent)***



Sources: BI and CEIC

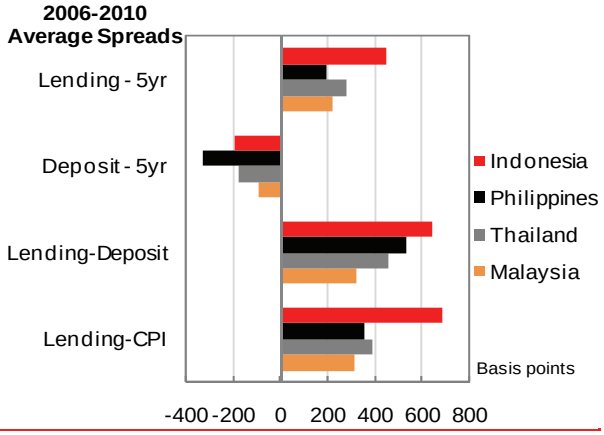
Lenders will always add a premium to interest rates on loans based on inflation expectations over the period of the loan. In Indonesia, since historical inflation has been very high and also volatile, formulating inflation expectations is tricky, and this is a major contributor to high lending rates as banks try to build in enough of a buffer to compensate for sudden and unexpected spikes in inflation. From January 2006 to March 2010, average monthly inflation in Indonesia (in year-on-year terms) was 8.2 percent, ranging from a high of 18 percent in February 2006 to a more recent low of 2.4 percent in November 2009 (Figure 42, Figure 43). By contrast, average inflation levels in Thailand, Malaysia and the Philippines over this period were 2.9 percent, 2.8 percent and 5.4 percent, respectively. Furthermore, inflation volatility in these countries was considerably lower, with peak inflation of 9.2 percent and 8.5 percent for Thailand and Malaysia, and 12.4 percent for the Philippines (Figure 45). Consequently, the average lending rate and the average spread between lending rates and inflation in Indonesia over this period were much higher than in these countries (Figure 43, Figure 44).

Figure 43: Average rates, inflation and sovereign yields in Indonesia are significantly higher than in other countries… ***(average 5 year government bond yields, CPI, lending and deposit rates in percent)***



Sources: BI and CEIC

Figure 44: …as are spreads between Indonesia's lending and deposit rates, and 5 year yields and inflation ***(average spreads in basis points)***



Sources: BI and CEIC

High and volatile government bond yields in Indonesia also feed into higher private lending rates…

In addition to private sector lending rates, government bond yields in Indonesia also tend to be higher (and more volatile) than in regional peers, again largely owing to high inflation levels and inflation uncertainty. Between 2006 and 2010, the average 5 year local currency sovereign bond yield in Indonesia was 10.6 percent, compared to average yields of 4 percent, 3.7 percent and 7 percent in Thailand, Malaysia and the Philippines, respectively (Figure 43, Figure 46). Since government bond yields serve as an anchor for private sector lending rates, high and volatile sovereign yields also feed into Indonesia's high lending rates—not least because they drive up deposit rates as banks try to compete with high-yielding bonds.

…as do asymmetric information problems which increase default risk

Apart from high inflation, asymmetric information problems also contribute to Indonesia's higher risk premium. Poor corporate report quality due to inadequate accounting and disclosure practices, collateral problems and a poor legal system make lending in Indonesia a riskier business than in many other countries. Banks factor this into their lending rates, pushing rates and NIMs higher.

d. Efficiency: Banking competence may not be what's driving high NIMs

Regression results for the 14 largest banks show a positive relationship between high efficiency ratios, low cost of funding ratios and NIMs…

At a more micro level, there are firm-specific factors that affect NIMs. Results of panel regressions we conducted using data for the 14 largest banks in Indonesia from 2007 to 2009 show that high efficiency (as measured through a low operating costs to operating revenue ratio) and loan to deposit ratios (LDRs), and a low cost of funds (as measured through a high ratio of demand deposits plus savings deposits to total deposits) are all positively and significantly associated with NIMs. These results are not surprising as NIMs are a profitability measure, calculated as a ratio of net interest income to total interest-earning assets, and therefore theoretically we would expect them to rise together with efficiency, LDRs and a lower cost of funding. We also find that size (as measured through total assets) is inversely associated with NIMs. This is a little surprising and while it could be a result of the larger banks in the sample having a higher cost of funding or lower yielding assets, it might simply be due to the fact that we only use data for the largest 14 banks in Indonesia, leading to a slightly biased result here.

…but also a positive association between operating costs and NIMs, indicating that banks transfer some of these costs to borrowers

One outcome of particular interest that stands out from our regressions as being initially counterintuitive is a positive relationship between operating costs and NIMs. This is consistent with the results of previous analysis on NIMs in Southeast Asia (Indonesia, Thailand, Malaysia and the Philippines) conducted by Jude Doliente in 2005. Doliente found that operating costs were positively associated with NIMs in these countries as banks transferred a portion of their operating costs onto their borrowers and depositors. We can surmise that banks in Indonesia and these other Southeast Asian countries are able to do this due to factors such as non-competitive market structure, discussed earlier. The result suggests that reducing NIMs in Indonesia would either require a reduction in banks' operating costs, or a more competitive market structure that didn't allow banks to pass on these costs to their customers.

e. Main findings and ways forward

Lending and deposit dynamics in Indonesia's relatively shallow financial sector, together with high and volatile historical inflation, asymmetric information and micro-level inefficiencies lead to high lending rates and NIMs in Indonesia

This note analyzes market structure, risk premium and efficiency as key factors contributing to high lending rates and NIMs in Indonesia.

- We find that the oligopolistic banking sector in Indonesia combined with relatively limited non-bank financial institutions and underdeveloped equity and debt capital markets, leads to few options for borrowers other than bank loans, and therefore low interbank competition and high flexibility in setting lending rates. On the other hand, Indonesia's high-yielding government bonds and dwindling deposit base tighten interbank competition on the deposit-side, driving deposit rates upwards. Taken together, these lending and deposit-side dynamics contribute to high deposit and lending rates in Indonesia, as well as high NIMs.

- High and volatile historical inflation and bond yields serve to heighten Indonesia's risk premium and increase private sector lending rates and NIMs as banks try to build in enough of a buffer against inflation and interest rate volatility. Asymmetric information problems increase default risk, adding further to the risk premium.

- At the micro-level, our regression analysis shows that while NIMs for the top 14 banks are positively associated with high efficiency ratios and low funding costs, they are also positively associated with operating costs. This finding suggests that banks in Indonesia may be transferring some of their operating costs to borrowers, and is consistent with previous studies on NIMs in the region.

A deeper financial sector and capital markets, along with lower inflation volatility, improved corporate reporting, a better legal system, and higher firm-level efficiency could help reduce lending rates and NIMs going forward

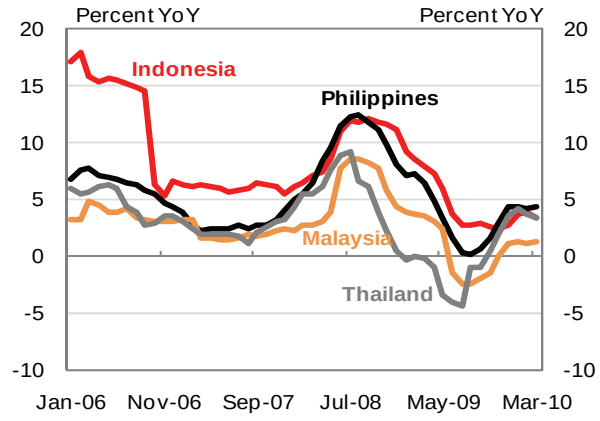
These findings suggest that Indonesia could achieve a reduction in lending rates and NIMs through:

1) A deepening of the financial sector and capital markets in order to give borrowers more financing options and increase interbank competition in setting lending rates;
2) A reduction in the level and volatility of inflation, which would in turn lead to lower and less volatile bond yields as well;
3) An improvement in corporate reporting and disclosure practices (that would enable banks to rely less on collateral and more on credit assessment and cash flow analysis), and better legal practices;
4) A reduction in banks' operating costs, or a change in market structure that reduced monopoly power of banks.

Table 3: Factors affecting Net Interest Margins
(GLS panel regression results for Indonesia's largest 14 banks, 2007-14)

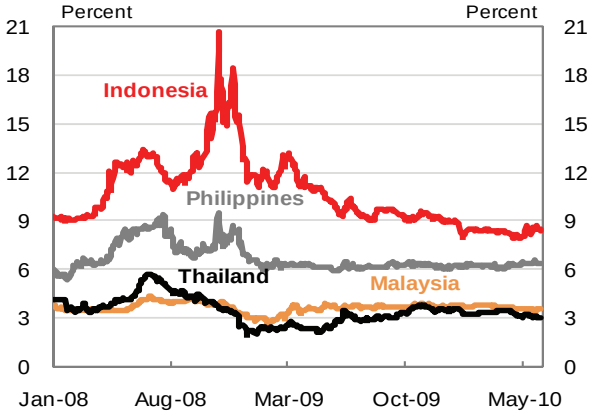
Dependent Variable: NIMs			
Independent Variable	*Coefficient*	*R Square*	*T-Statistic*
(1) Operating Costs / Operating Revenue	-0.101	0.77	-4.4
Loan to Deposit Ratio	0.031		1.7
Demand and Savings Deposits / Total Depsoits	0.060		2.8
Total Assets (as a proxy for size)	-2.787		-2.3
Operating Costs	3.220		2.6
(2) Operating Costs / Operating Revenue	-0.094	0.72	-4.1
Loan to Deposit Ratio	0.055		2.9
Demand and Savings Deposits / Total Depsoits	0.053		2.5
Total Credit (as a proxy for size)	-1.975		-1.7
Operating Costs	2.408		2.0
(3) Loan to Deposit Ratio	0.045	0.94	2.8
Demand and Savings Deposits / Total Depsoits	0.077		4.4
Operating Costs	2.878		2.7
Total Credit (as a proxy for size)	-2.756		-2.9

Figure 45: Historical inflation in Indonesia has been higher and more volatile than in other countries…
(monthly CPI in percent change year-on-year)



Source: CEIC

Figure 46: …as have been Indonesia's sovereign bond yields
(5 year local currency sovereign bond yields in percent)



Sources: BI and CEIC

2. How the GDP deflator has diverged from the CPI in the late 2000s, and what this means for projecting the government's revenues

a. Higher investment prices have driven a gap between the two key measures of prices in Indonesia

The CPI is the typical gauge of the growth of prices in an economy, but it is an incomplete measure

Most observers look to the consumer price index (CPI) for a gauge of the pace of growth in prices in an economy. This index represents the average price of the consumption bundle of the average urban consumer (weighted by their total spending). While the CPI gives a good sense of the pace of growth in the cost of living, the purchases of urban consumers do not provide a complete picture of the spending in an economy. Prices of goods upstream in the production chain, affecting the profitability of manufacturers, future price pressures, and global competitiveness, generally vary by more than final consumer prices, as the later incorporate fairly stable final distributor and retailer margins. The CPI does not directly account for the cost of investment in machinery & equipment for entrepreneurs, of providing government services, and at most indirectly reflects movements in import and export prices. Wholesale or producer price indices (WPIs or PPIs) attempt to report the movement in these prices.

The national accounts implicit price deflators offer a broader measure of prices

The national accounts report prices upstream in the production process and for the consumer. Some statisticians publish these explicitly, as indices, alongside the other national accounts inidcators. But even when they are not reported they are implicit in the accounts, as the ratio of the nominal to the real level of spending or production. The nominal measure reflects the total spending in local currency terms (generally at market prices), while the real measure reports the volume of production. The ratio of nominal to real production gives an index of the prices in that sector – the implicit price deflator (IPD).

…and offer the analytical richness of sectoral price movements

IPDs help answer many questions. At an aggregate level and sectorally, they describe the growth in the value of activity on top of the growth in the real level of activity (eg, growth in the value of the manufacturing sector approximately equals the growth in the volume of output and the rise in the price of that output); Understanding the sources of nominal growth is important in analyzing, for example, the likely growth in taxable revenue in that sector. IPDs also reveal relative price movements, with implications for competitiveness and for managers' choices over factors of production. For example if the IPD for mining is growing faster than that for manufacturing, this is likely to reflect faster growth in the prices of mining output, which may prompt relatively more resources (workers, investment funds) to flow to mining. Similarly, faster growth in the price of output of a sector than in the wages paid to the workers in that sector may lead managers to employ more workers and to make production more labor intensive. At the same time, if wages are rising faster than the CPI (or the private consumption deflator), workers will be able to purchase more with their income, enjoying improving living standards.

Technically, national accounts IPDs may also be better price measures than consumer or wholesale price indices. Most statistical agencies (Including BPS) calculate the CPI as a Laspeyres index, which holds constant the spending patterns at a given point of time. Spending weights are then held constant through the life of the index. This fails to account for consumers' substitution from spending on goods with prices increasing relatively fast towards items with relatively more stable prices. In many countries (although not yet Indonesia), the statistician constructs real GDP by updating both quantities and prices of the output or input in a sector each period, thus allow for changes in spending patterns. Over time, this substitution of spending should lead to weaker growth in the deflator than in the CPI, with the CPI overstating the rate of growth in the cost of living. (Indonesia's price indices and IPDs will not diverge in this way as the Indonesian national accounts do not currently allow for this sort of substitution in spending patterns – although, in practice, the CPI has outpaced the private consumption IPD.)

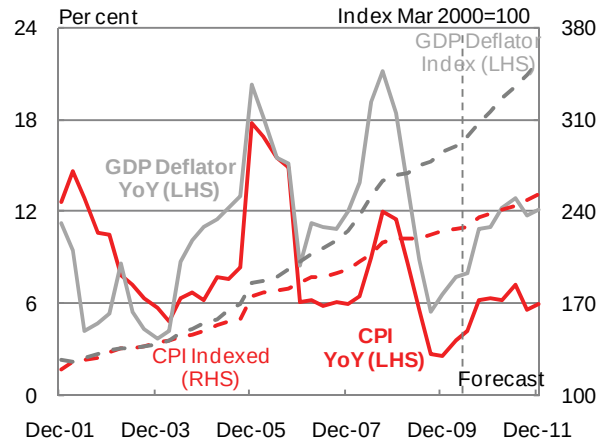
The relationship between the CPI and economy-wide prices in Indonesia weakened after 2004, with the GDP deflator accelerating ahead of the CPI

In the second half of the 2000s, Indonesia's CPI has been growing less quickly than the GDP deflator, as the GDP deflator accelerated while consumer prices maintained their average pace of growth (Figure 47). The nominal economy would have been about one-third smaller if it had only grown at the pace of consumer prices between 2005 and 2010. The broader coverage of the GDP deflator appears to explain much of this, particularly its coverage of investment goods.

The investment deflator's growth rate doubled in the second half of the 2000s, and this drove the GDP deflator above the CPI

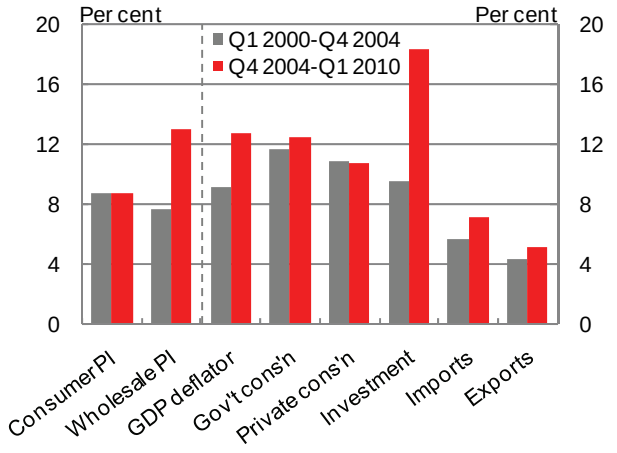
Among the GDP expenditure IPDs, only investment prices accelerated in the second half of the 2000s; other items grew near their 2000-04 rates (Figure 48). The investment deflator averaged annual growth near 9 percent in the first half of the 2000s, but this doubled to 18 percent in the second half and this drove the GDP deflator from an average annual growth rate of 9 percent (2000-2004) to 13 percent (2005-2010Q1). As CPI inflation changed little between periods, a widening gap emerged between the two price measures.

Figure 47: Economy-wide prices have out grown the consumer price index since the mid 2000s…
(year-on-year percentage change)



Sources: BPS and World Bank

Figure 48: …largely due to the acceleration in investment prices
(average annual percentage growth)



Sources: BPS and World Bank

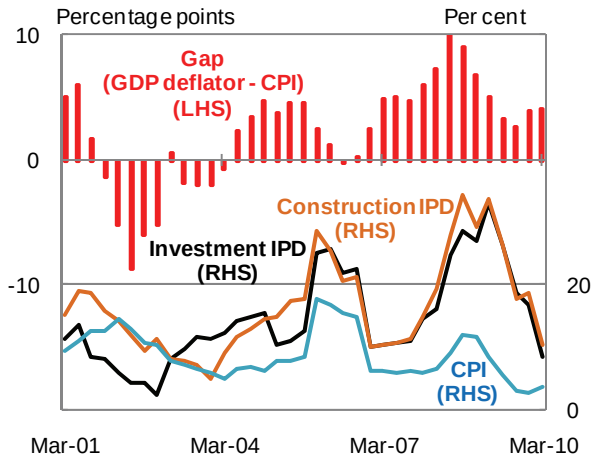
Higher construction inputs costs drove investment prices higher

The acceleration in investment prices in the second half of the 2000s appears to be due to construction costs (around four-fifths of total investment spending is on construction), and, in turn, to sharp rises in the costs of inputs to construction. (Figure 49) Between 2005 and the peak in global commodity prices in mid-2008, global metals prices rose at an annualized average of 28 percent, and coal (used in manufacturing cement) prices by 34 percent. (Figure 50) While cement prices rose on average by 8 percent over this period, there were periods of much higher growth, such as the 40 percent increase in the year to December 2008. Wages in the cement industry also reportedly increased sharply over these years. (Figure 50) Importantly, Indonesia's domestic industrial fuel prices were deregulated in early 2005, and these prices jumped almost four-fold between the start of 2005 and late 2006, with implications for the costs of industrial manufactures using these fuels. (Figure 50) The one exception to the divergence between the CPI and the GDP deflator was in late 2005 and early 2006 when the administered price of gasoline (used by households) was raised by 100 percent. (Figure 47 and Figure 49)

The strength of construction costs relative to other prices in the economy is projected to continue through 2010 and 2011

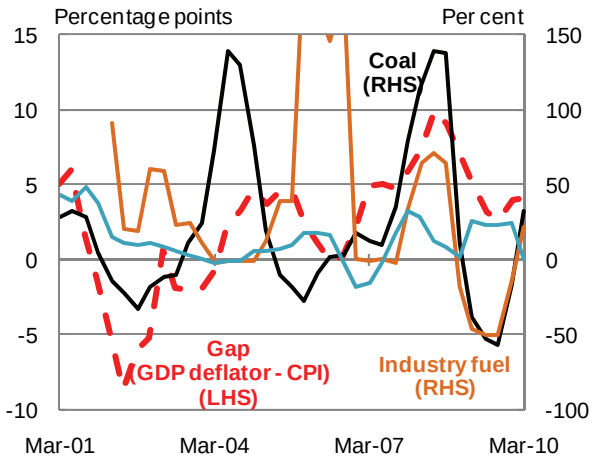
The gap between GDP deflator growth and CPI inflation, having narrowed in 2009 and early 2010, is forecast to widen again over 2010 and 2011. Construction and investment prices are expected to remain more sensitive to higher commodity prices than consumer price, global commodity prices are expected to remain at mid-2010 levels, well above 2009's averages, while construction demand may accelerate further.

Figure 49: The gap between the GDP deflator and the CPI was driven by higher investment prices with higher construction costs…
(percentage point gap between the year-on-year growth in the GDP deflator and CPI (LHS), and year-on-year percentage change (RHS))



Sources: BPS and World Bank

Figure 50: …which accelerated due to across-the-board increase input costs during the global commodity price boom
(percentage point gap between the year-on-year growth in the GDP deflator and CPI (LHS), and year-on-year percentage change (RHS))



Sources: BPS and World Bank

b. GDP deflator is a more complete measure of prices relevant for government revenue forecasting and, with its acceleration in the past half-decade may provide a more accurate outlook for the budget balance

Forecasting government revenue requires good forecasts of the relevant revenue base

Government revenues, raised through taxes and non-tax charges and levies on the value of activity, profits, turnover and so forth, are a nominal concept. Forecasting revenues requires accurate forecasts of the economic base on which those revenues are collected, as well as a robust means of linking movements in that base with changes in revenues. In turn, forecasting the nominal movements in the relevant base requires forecasting both the real level of turnover and the change in the value or price of that base.

When consumer and economy-wide prices move together, the choice of price measure with which to forecast the growth in tax bases mattered little; after 2004, when the GDP deflator accelerated ahead of CPI growth, forecasts of nominal economic growth based on forecast CPI inflation were systematically biased downwards. Under-forecasting growth of the nominal economy means the growth in the tax base, and hence government revenues, are also under-forecast, and this has been apparent in Indonesian government revenue, hence budget deficit, projections in the second half of the 2000s, especially in years when the gap between growth in GDP deflator and CPI inflation has been particularly large.

Table 4: Growth in real GDP inflated by the GDP deflator relates more closely with growth in government revenues, particularly tax revenues, than when it is inflated by the CPI
(root** mean squared error[2] improvement from actual for government revenues, 1994-2009* ***percentage change)

	Percentage point improvement of GDP deflator relationship		
	1994-2009	1994-2004	2005-2009
Total revenues	**10**	**13**	**7**
Tax revenues	26	24	27
Non-tax revenues	2	4	0

Sources: World Bank

[2] The root mean squared error summarizes the difference between two series across a number of observations. Squaring the errors penalizes larger errors more, and allows both positive and negative errors to be summed, and taking the square root of this converts the indicator back to the units being examined, in this case annual growth rates of revenues.

Growth in the GDP deflator relates more closely with growth in government revenues than CPI inflation

The relationship between government revenues and the two measures of price growth, CPI inflation and GDP deflator growth. All revenues have moved more closely with real economic growth inflated by the GDP deflator than with real economic growth inflated by the CPI. (Table 4)

The differences in the CPI and the GDP deflator lead to significant variations in the estimation of government revenues

The choice of whether to use the GDP deflator or the CPI as the price measure for nominal economic growth has a significant impact on the growth and accuracy of the government revenue projections. This point can be demonstrated by utilizing a simple econometric approach for forecasting government revenues under both price measures, controlling for other determinants of revenues. The only difference between the two approaches is the nominal GDP series; the first approach calculates it using the GDP deflator while the second approach uses the CPI. By only changing the GDP series, this allows the impact of the GDP deflator versus the CPI on the revenue estimates to be observed directly for comparison against the actual realizations in history.

The predictive power of the same model is enhanced by applying growth in the GDP deflator to the level of economy activity, rather than CPI inflation. (Table 4) This is true for both tax and non-tax revenues however tax revenues benefit most from the use of the GDP deflator as they tend to be more contemporaneously correlated with economic activity when compared with non-tax revenues, where the more relevant tax base is commodity price movements and production expectations. The closer relationship of tax revenues is shown by the relatively higher percentage point improvement in revenue projections in using the GDP deflator to inflate aggregate economic activity (the exceptions are 'land and building tax' and 'other taxes'). (Table 5) On average, the use of the GDP deflator improves the absolute error, expressed as a percentage of total tax revenues, by around 2 percent since 1995. (Figure 51) In 2008, a year with significant acceleration in the GDP deflator relative to CPI inflation, the improvement from using the GDP deflator was 6 percentage points relative to the CPI model. In 2004 and 2007 the CPI methodology yielded more accurate results, as indicated by the negative scores in Figure 2, which may reflect policy changes in those years.

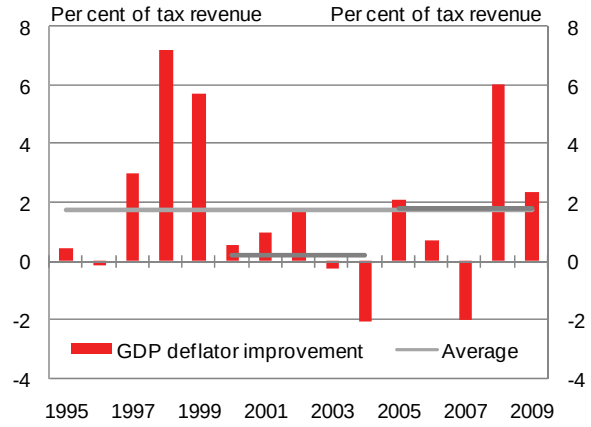
Table 5: Across tax revenue items, using the GDP deflator does most to improve forecasts of revenues most closely related with commodity prices
(estimated 1994-2009*; percentage point change in root mean squared error)

	Percentage point improvement of GDP deflator approach		
	1994-2009	1994-2004	2005-2009
Income tax: Oil & gas	55	42	121
Income tax: Non-oil & gas	20	26	5
VAT	16	-20	29
Land & building tax	-3	-3	-5
Duties on land & building tax	7	11	5
Excise	17	30	2
Other	-7	-4	-14
Imports	12	2	60
Exports	6	55	-17

*** 'Duties on land & building transfer' start in 1998. Source: World Bank**

Figure 51: Using the GDP deflator improves the forecast of all tax revenues by, on average, nearly 2 percentage points in total, particularly when growth in the GDP deflator accelerated ahead of CPI inflation

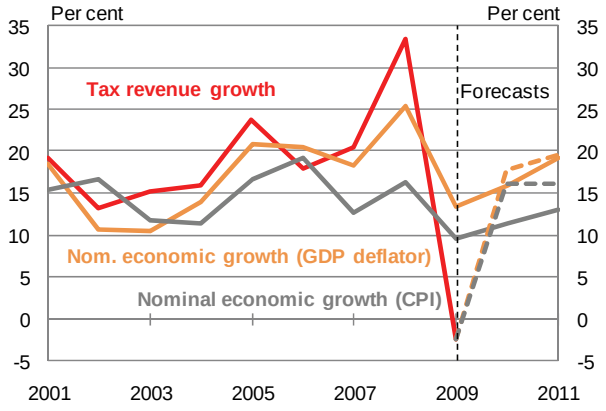
(improvement in the summed absolute error in the forecast of each tax revenue in moving from the CPI to the GDP deflator model)



Source: World Bank estimates

Figure 52: The choice of the prices measure for nominal growth has a significant impact on revenue projections

(annual percentage change)



Sources: MoF, World Bank

This analysis suggests that the Indonesian government revenues may be stronger in 2010 and 2011

For forecasts of 2010 and 2011 revenues, given projections that the GDP deflator is like to accelerate ahead of CPI inflation, projecting nominal GDP growth following the GDP deflator produces a higher tax revenue estimate than projections based on forecast CPI inflation. The projected growth in tax revenues alone is estimated to be 1.6 and 3.4 percentage points higher under the GDP deflator model in 2010 and 2011 respectively. (Figure 52) This translates to around an additional IDR 10.3 trillion and IDR 37.5 trillion, respectively, in revenues. The gap between the two forecasts expands in 2011, as the divergence in the projected size of the nominal economy (reflecting the forecast of ongoing faster growth in the GDP deflator than CPI inflation) gets wider.

3. Commodity price movements are large and hard to forecast…and matter for Indonesia's growth, inflation and public finances

Much of Indonesia's economy is devoted to producing, consuming and trading commodities, so their price movements have large implications

Commodities are unusually important for Indonesia's economy. Their production makes up a significant share of the economy's value added and exports, and of the stock market's capitalization. Taxes and charges on this production provide a sizable share of the government's revenue, and it is the source of much private wealth. And most consumers' – especially poorer consumers' – spending is on commodity-related products. (Table 6 and Figure 53)

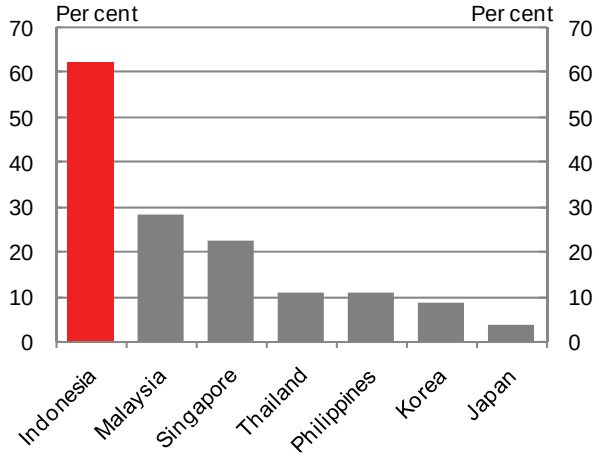
This importance, and commodities' inherently tradable nature, exposes Indonesia's economy to swings in global commodity prices. These swings are often large. Commodity prices are considered to be one of the most volatile prices on international markets, with movements greater than in key floating exchange rates or overall stock market indices. In one-third of 12 month periods between 1990 and early 2010 non-energy commodity prices moved by at least 15 percent, and energy commodity prices rose or fell at least 31 percent (standard deviations of the percentage change in the year average price were only a little smaller).

Table 6: Ten reasons why commodities matter for Indonesia's economy

Reasons	Annual
1. **Share of aggregate value added**	26%
2. **Share of total exports**	63%
3. *Share of GDP*	14%
4. **Share of total imports**	34%
5. *Share of GDP*	6%
6. **CPI weight (raw foods, h/hold energy)**	48%
7. *Poverty Basket CPI*	74%
8. **Share of total Government revenues**	23%
9. *Share of tax revenues*	8%
10. **Market capitlisation of Commodity shares on IDX***	18%

Sources: ISE, CIEC, BPS, MoF, Forbes

Figure 53: …more so than for its neighbors *(commodities' share of exports in 2009)*



Source: CIEC

a. Commodity prices are volatile and hard to forecast

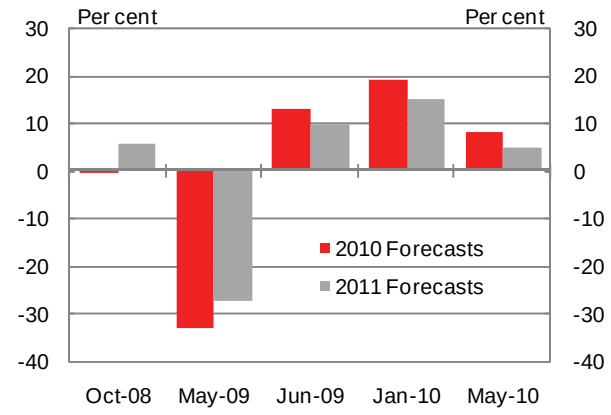
Volatility in commodity prices and their susceptibility to unpredictable shocks makes them difficult to forecast and leads to regular revisions in projections

Both commodity demand and supply are generally highly inelastic, at least in the short-term. This means large price movements will follow relatively small disturbances to supply (poor growing conditions, disruption to key supply chains) and demand (unexpected acceleration or slumps in economic activity in key consuming markets, changes in other financial asset prices, particularly the USD, or financial market participants' investment preferences). This volatility and susceptibility to unpredictable events makes forecasting commodity prices hard. The World Bank's energy and non-energy commodity price forecasts regularly undergo large adjustments. (Figure 54 and Figure 55)

Given the uncertainty surrounding the baseline commodity prices forecasts, it is worth considering alternative scenarios based on historical volatility

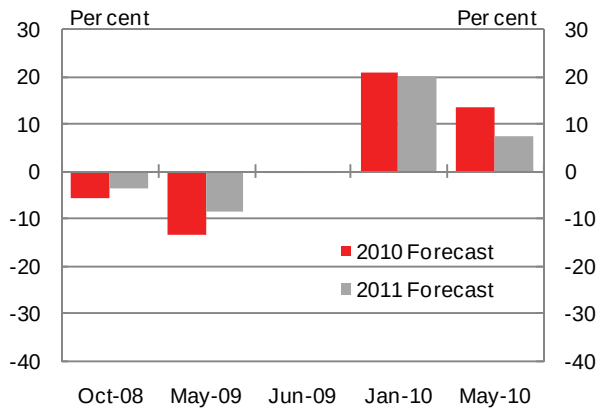
The faster-than-expected recovery in the global economy, especially of the rapidly industrializing nations, has brought renewed demand for commodities, and, with it, higher price expectations. Within the first four months of 2010, the World Bank commodity price projections for 2010 were raised a total of 28 percent and 21 percent in 2010 and 2011 for energy prices, and 37 percent and 28 percent respectively for non-energy prices. But just as these revised, stronger forecasts released in early May, global financial market volatility spiked again and uncertainty about the global economic outlook re-intensified.

Figure 54: Revisions of 2010 and 2011 forecasts for World Bank Energy Price Index
(percentage change from previous forecasts)



Sources: World Bank

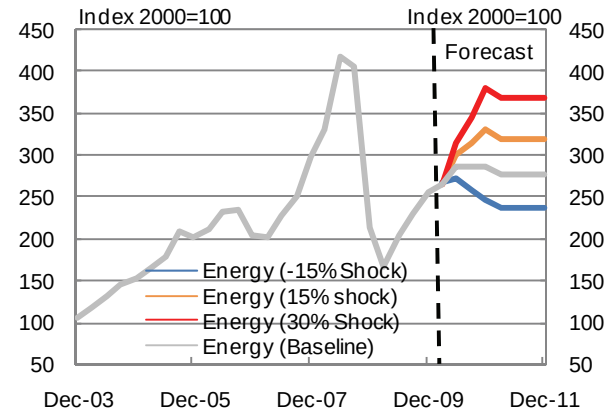
Figure 55: Revisions of 2010 and 2011 forecasts for World Bank Non-Energy Price Index
(percentage change from previous forecasts)



Sources: World Bank

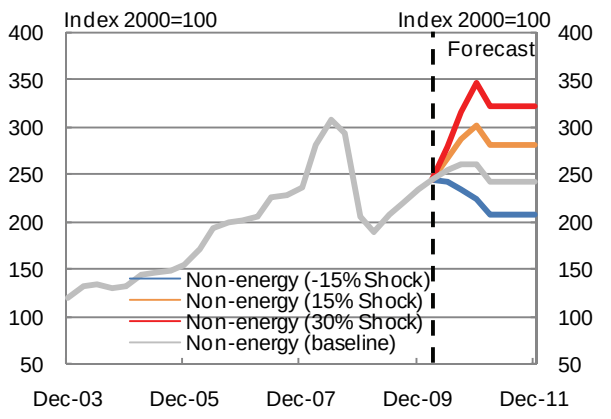
Accordingly it is worth considering what commodity prices varying from the baseline projections by historically typical amounts would mean for Indonesia's economic forecasts. A 'small shock' increases or lowers energy and non-energy prices by 15 percent through the last three quarters of 2010, and holds prices at this level in 2011; the 'high shock' scenario has double these movements. (Figure 56 and Figure 57)

Figure 56: Energy price forecast scenarios
(index levels)



Source: World Bank

Figure 57: Non-energy price forecast scenarios
(index levels)



Source: World Bank

The focus here is the short-term, direct impact on key variables of interest – general equilibrium and structural responses to shifts in relative prices are not considered here.[3] These short-term impacts are estimated using the standard suite of reduced-form OLS first difference models used in drafting the projections presented in Part A of the *Indonesia Economic Quarterly*. This analysis also ignores the likely impact of commodity price swings on other prices, particularly the exchange rate – the connections can be just as difficult to anticipate as commodity price movements themselves, and it is also a policy lever for the central bank.

[3] More detailed estimates of the effect of commodity price shocks on the structure of the Indonesian economy, aggregate economic welfare, income distribution and poverty within Indonesia can be found in World Bank (2010) "Boom, Bust and Up Again? Evolution, Drivers and Impact of Commodity Prices: Implications for Indonesia" Chapter 5 by Peter Warr, Rina Oktaviani, Enrique Aldaz-Carroll and Leonardo Iacovone (forthcoming).

b. While commodity prices fluctuations mostly affect prices and the nominal economy in the short-term, there is some response in real activity

Commodity price movements have their largest impact on economy-wide prices, hence the level of nominal activity and government revenues, and on consumer prices. The impact on government spending is smaller than the impact on revenues. There is a generally positive response in real activity, even in the short timeframe of this analysis, and this response appears to be enough to more than offset the increase in the cost of living for poorer households, so reducing the poverty rate.

Table 7: Commodity price shock Impacts on key economic and poverty indicators

	2010				2011			
	-15%	Baseline	15%	30%	-15%	Basline	15%	30%
Exports	14.3	**15.0**	15.6	16.2	10.5	**11.1**	11.7	12.3
Imports	18.7	**18.3**	17.9	17.5	11.9	**11.6**	11.4	11.2
Trade Balance	14.3	**14.2**	13.6	13.2	16.7	**13.2**	9.1	5.3
GDP	5.8	**5.9**	6.0	6.1	6.1	**6.2**	6.4	6.5
GDP Deflator	9.3	**9.3**	9.9	10.2	11.5	**12.2**	13.2	13.9
Nominal GDP	15.7	**15.9**	16.5	16.9	18.3	**19.2**	20.4	21.3
CPI	5.0	**5.1**	5.3	5.5	6.0	**6.3**	6.5	6.7
Core inflation	4.2	**4.3**	4.5	4.7	5.8	**6.0**	6.1	6.3
Poverty CPI	6.5	**6.8**	7.1	7.4	6.8	**7.2**	7.5	7.8
Poverty rate	13.2	**13.0**	12.9	12.8	12.4	**12.2**	12.0	11.9

Sources: World Bank

There is only a modest impact on GDP from an increase in commodity prices

GDP can be affected from movements in commodity prices directly and indirectly. The direct channels are through changes in production or investment owing to the changes in expected profits by firms. If the prices of commodities increase, this could induce higher production, and higher investment by commodity producing firms in order to capitalize on the higher prices. However, if commodities make up a high proportion of a firm's input costs, then an increase in commodity prices may raise the final price of the product and reduce demand, leading to a reduction value added. Industries that are mining-related increase production and exports, whereas industries with high commodity inputs, such as construction, may reduce production with the higher input costs. Overall even a full standard-deviation ('high' shock scenario) movement in commodity prices leads to a modest immediate increase in GDP growth, of 0.2 percentage points in the near term, and a little more in 2011, once production has had longer to respond to the new prices.

Real net exports are exported to increase under the high scenario as exporters increase production and higher prices dampen import demand

Indonesia's exports and imports are affected by changes in global commodity prices somewhat differently. Commodity exporters respond to an increase in prices by lifting production, increasing the volume and value of exports. Some importers respond to higher commodity prices by reducing demand, resulting in lower volumes; others demand more inputs for the commodity-producing sectors and to supply the increase in consumer demand. Further, higher commodity prices drive up the overall value of Indonesia's imports.

A general increase across both energy and non-energy commodity prices, given the greater volatility of energy prices than non-energy prices, reduces Indonesia's terms of trade (the price of Indonesia's exports relative to the price of its imports), leading to a narrowing in the trade surplus. This is due to differing composition of Indonesia's exports and imports, and the impact of the greater movement in energy than non-energy prices under the scenarios. While commodities represent around two-thirds of Indonesia's exports, in the second half of the 2000s oil and gas exports made up less than 20 percent of the total. Meanwhile, non-energy commodities are a smaller share of total imports, but oil and gas imports are over 26 percent. Thus Indonesia's import prices are more sensitive to energy price volatility.

Inflation is impacted, with a lag, through movements of global food prices while regulated consumer energy prices mutes their impact on consumers

Consumer prices are affected by movements in commodity prices through several channels. Most directly, global food costs impact the 50 percent of the average household budget spent on food (two-thirds of poor households' budgets). Retail food prices tend to move several months after global prices, particularly in remoter areas. [4] (Figure 27) Over a year, a 1.0 percent increase in world prices of maize, rice, soybeans, sugar and cooking oil leads to a 1.0 percent increase in domestic prices of these goods.

In 2010, there is a risk that global food prices could fall further than expected. In the first five months of 2010, international prices of sugar fell by 35 percent following forecasts of a large global crop, which is expected to offset last season's shortfall. Similarly, rice prices have has fallen 20 percent and wheat 9 percent. These prices are now in some cases well below 2010 forecasts. With the lag in pass-through of world food prices to domestic prices, a further fall in line with historical standard deviations ('small negative' scenario) would see inflation in 2011 at 6.0 percent, 0.3 percentage points lower than the baseline forecasts. The impact for poor households' inflation rate is greater, reducing inflation by 0.4 percentage points to 6.8 percent in 2011.

Energy price movements drive up the price of investment and industry inputs

Indonesian consumers are largely sheltered from price movements of energy prices because of the system of regulated retail energy prices. Deregulated industrial fuel prices, plus the indirect impacts of energy prices on substitutes, means they have a larger impact on the economy as measured by the GDP deflator. (See Part B-2). A full standard deviation commodity price shock would increase GDP deflator growth by 1 percentage point after a year.

Commodity price increases produce a number of offsetting factors for the poor; overall, a generalized shock to commodity prices may slightly lower the poverty rate

A generalized shock to commodity prices have a range of offsetting consequences for poor households. Higher food prices reduce real incomes, except for the few poor households who are net producers. But wages may increase by more than the increase in living costs, especially for workers in sectors that benefit from the rise in commodity prices, particularly many agricultural industries. A half-standard deviation generalized increase in global commodity prices gives a small improvement in the poverty rate of 0.1 percentage points in 2010 and 0.2 percentage points in 2011, consistent with computable general equilibrium (CGE) analysis of the short-run effects of the commodity price increases that occurred between 2005 and 2008.[5]

c. Commodity price volatility has a large impact on government revenues; on balance, higher prices reduce the budget deficit

With a large share of government revenues sourced from commodity sectors, changes in prices have a significant impact on revenues

As Indonesia is a large producer of commodities such as oil, gas and crude palm oil (CPO), it should be no surprise that government tax and non-tax revenues sourced from these sectors are particularly volatile. When commodity prices peaked in 2008, revenues from natural resource sectors contributed 32 per cent of total revenues, in 2009, with energy prices on average 37 percent lower and non energy prices almost one-quarter lower, natural resources contributed only 22 per cent of total government revenues. Relative to tax revenues, non-tax revenues are much more volatile with 70 sourced from the commodities sector, largely oil & gas. Tax revenues are less affected on commodity price movements, sourcing revenues from other sectors and have more stable revenue categories such as VAT and excise duty consumption taxes.

Tax revenues show some sensitivity to changes in commodity prices …

Tax revenues are influenced by commodity prices directly through the collection of oil and gas income tax, other corporates' profits, export revenues, and to a lesser extent import revenues. Agricultural, mining (both oil & gas and non-oil & gas) and quarrying contributed 34 percent of total income tax in 2009, down from nearly half of total revenues in 2008. In addition, nearly all export revenues are sourced from Indonesia's exports of crude palm oil (CPO), with the tax rate depending on the international CPO price, making this relatively small revenue stream extremely volatile. A change in prices across the economy (as

[4] Varela, Aldaz – Carroll, Lacovone, July 2008, 'How international Price Shocks Impact Indonesia Food Prices', Technical Note, World Bank Indonesia

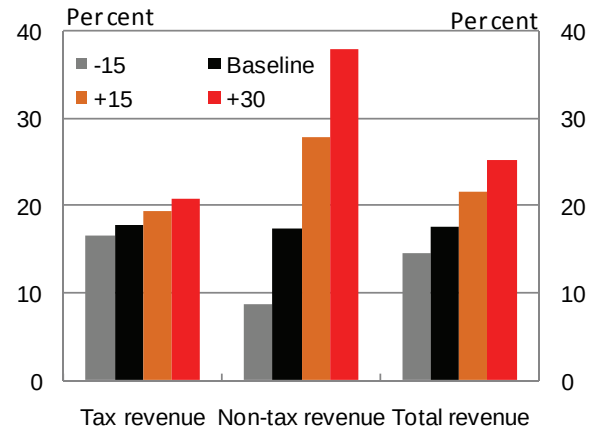
[5] World Bank (2010) "Boom, Bust and Up Again? Evolution, Drivers and Impact of Commodity Prices: Implications for Indonesia" Chapter 5 by Peter Warr, Rina Oktaviani, Enrique Aldaz-Carroll and Leonardo Iacovone.

measured by the GDP deflator) affects all tax revenues as growth in wages, profits and consumption are subject to income taxes, VAT, excise and import duties.

… however, non-tax revenues are much more sensitive to fluctuations

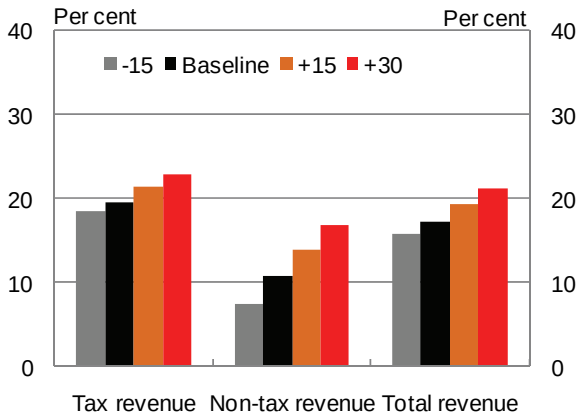
Non-tax revenues, which on average make up around a third of total revenues, are relatively more sensitive to changes in commodity prices so are much more volatile. (Figure 58 and Figure 59 illustrate how non-tax revenues are relatively more sensitive to commodity price movements over the forecast horizons.) This is because around 70 per cent of total non-tax revenues are sourced directly from the natural resources sector, largely oil & gas production, compared to around 10 per cent for tax revenues in recent years. In 2009 alone, the global slowdown and fall in commodity prices from their peaks in 2008, led to a 30.1 percent fall in non-tax revenues, compared to only 2.5 per cent fall for tax revenues. 90 percent are sourced from the oil and gas sector, with the remainder largely other mining and forestry activities.

Figure 58: The estimated impact of commodity shocks on the 2010 government estimates
(percentage change from previous forecasts)



Source: World Bank

Figure 59: The estimated impact of commodity shocks on the 2011 government estimates
(percentage change from previous forecasts)



Source: World Bank

Crude oil price fluctuations directly impact central government spending through energy subsidies and revenues sharing

Energy subsidies and oil and gas revenue sharing are the two expenditure items directly affected by movements in crude oil prices, and both absorb a considerable amount of total government expenditure. In 2008 energy subsidies consumed over a quarter of total spending, but this share more than halved in 2009 with the one-third fall in average oil prices. This volatility introduces uncertainties to the budget and stymies expenditure planning. Meanwhile, the other, more discretionary expenditure categories such as materials, capital and social spending, are less responsive to changes in commodity prices as they do not automatically respond to changes in revenue within the budget year. Rather, changes to these expenditures categories generally have to go through lengthy budget processes, with much time passing between initial discussions and project implementation. Due to the rigidity of these spending programs, opportunities to convert revenue surprises into government development programs may be missed. On the other hand, as education spending and some subnational transfers are respectively tied to total government spending and revenues, the fluctuations and uncertainties in the size of the overall budget create planning difficulties and the potential for inefficiencies in the education ministry and in subnational governments (see Part C, March 2010 *Indonesia Economic Quarterly*).

The conventional 30 percent shock to crude oil prices will only increase expenditure by around 4 to 6 percent, holding everything else constant (assuming no changes in spending policy). However, the direct impact on energy subsidies is much higher, with increases around 40 percent.

Positive commodity price shocks reduce the budget deficit, creating fiscal space

Overall, there is likely to be a substantive improvement to the budget balance given a positive shock to commodity prices. The gains to total government revenues are estimated to be greater than the increase in total government expenditure. The 15/30 percent positive shock to non-energy/energy commodity prices will likely contribute to a reduction of the budget deficit of around 0.2 percentage points in 2010 and 0.3 percentage points in 2011. (Table 8) Thus positive shocks to commodity prices create fiscal space.

Table 8: Changes to budget estimates
(percentage change from baseline, budget deficit is expressed as a percentage of GDP)

	2010				2011			
	-15	Baseline	+15	+30	-15	Baseline	+15	+30
Total revenue	-2.8	0.0	3.3	6.7	-4.1	0.0	5.2	9.9
- Tax revenue	-1.1	0.0	1.4	2.9	-1.8	0.0	3.0	5.4
- Non-tax revenue	-7.5	0.0	8.9	17.5	-11.1	0.0	12.0	23.7
Expenditure	-2.1	0.0	2.3	4.7	-2.7	0.0	2.9	6.1
Budget deficit (per cent)	-1.1	-1.0	-0.8	-0.7	-0.6	-0.4	-0.1	0.1

Source: World Bank estimates

d. Government policies can mitigate the impacts of commodity price variability

Indonesia can implement policies to mitigate the impact that the higher price volatility inherent in commodities can have on their macroeconomic stability and on their population.

Indonesia's prudent fiscal management must be maintained to minimize shocks in macroeconomic parameters, and to allow expenditures to be maintained during commodity price busts. Setting up a stabilization fund will not only help diminish appreciative pressure on the exchange rate but also mitigate the macroeconomic impact of volatility by preventing increased expenditure during commodity booms. Indonesia would need to rethink its price stabilization policies to make them more predictable, better targeted, less costly and more effective. The international experience shows that some policy options are better than others at mitigating the impact on the poor. (Table 9) From an export perspective, it is important to diversify export destinations and products to reduce export volatility. Policy makers can also make use of instruments that decrease transaction costs, encourage supply and reduce price volatility. Such instruments include the reduction of red tape to internal transport of goods, which benefit consumers and producers, and limited intervention reducing import tariffs and quotas which benefit consumers at the expense of commodity producers.

Government policy is also needed to mitigate the impact of price volatility on the poor

Poor households that are net consumers of those commodities are particularly vulnerable to sharp increases in their prices. To mitigate this impact governments have a variety of policy options. Many of these options were tried out by the Government of Indonesia during the recent food crisis. In February 2008 the Government of Indonesia introduced a policy package to temporally assist the poor, help small producers and control food price inflation. The package included the elimination of import tariffs and taxes on soybeans, a direct subsidy to small scale producers of soybean-based foods, an increased export tax on palm and cooking oil to control cooking oil prices, an expanded program that provides subsidized cooking oil for low income households, the elimination of the VAT on cooking oil, an increased monthly quota of subsidized rice (from 10 to 15 kg) for 19.2 million poor households, the removal of the import tariff on flour, the relaxation of flour fortification standards, and a strengthened role of the state logistics agency (Bulog).

Table 9: Commodity price shock Impacts on key economic indicators, poverty and Government revenues and expenditure

	Transfers to poor households	Public Price Stabilization	Transition towards Market Stabilization Measures
Immediate responses	• Feeding programs • Expand existing cash transfer programs • Food for work programs • Limited subsidies	• Lift import restrictions on food and quotas • Draw down food stocks	• Reducing red tape in transporting goods across regions • Limited intervention using variable tariff
Long-term responses	• Develop cash transfer programs (where previously non-existent) or improve targetting (where existent)	• Improving food logistics network • Improving village infrastructure • Improving farm productivity	• Encourage investments in private storage and warehouse receipt • Future Market, Index-based weather insurance • Domestic market efficiency • Forward contracts
Policies to avoid	• Universal subsidies • In-kind transfers	• Export bans • Price controls	• Import quota or import bans • Price controls

Sources: Based on a note prepared by Louise Cord, Eduardo Ley, Hassan Zaman, Elena Iacnchovina, C. Hull, Emmanuel Skoufias, Mark Thomas, Brian Pinto and Tahrat Shahid

In the medium to long term, to be most efficient at stabilizing prices Indonesia would need to develop policies and institutions that are less distortionary and promote greater market price stabilization

In the medium run, policy makers should encourage the development of market-based instruments that can act as price stabilizers. Measures of this kind include: the promotion of investments by the private sector in storage and warehouse receipt systems; the development of a domestic market for forward contracts; and the development of futures market and of index-based weather insurance. The public sector can support the development of these instruments by fostering an appropriate regulatory environment and by providing direct support to overcome market failures at an initial stage, as well as creating greater certainty of the role of government in price stabilization.

C. INDONESIA 2014 AND BEYOND: A SELECTIVE LOOK

1. Indonesia's climate change challenges

Climate change is a major economic development challenge facing Indonesia

Indonesia is highly vulnerable to climate change impacts, such as rising sea levels, changing weather patterns and increased uncertainty. Potential impacts include: increased threats to food security and agricultural productivity; impacts on productive coastal zones and community livelihoods; consequences for water storage; intensification of water- and vector-borne diseases; and deterioration of coral ecosystems. These changes will put past development gains and poverty alleviation efforts at risk.

Indonesia's greenhouse gas emissions are globally significant

At the same time, Indonesia's green house gas (GHG) emissions are globally significant. The Government's recent Second National Communication on Climate Change (December 2009) reports average emissions of about 1.66 million gigagrams (equal to 1,000 metric tons) of carbon dioxide equivalent emissions over 2000-04. Land-use change and forestry (LUCF), and peat fires account for the vast majority of Indonesia's emissions — over two-thirds of the total in an average year. Energy use is the distant second-largest source of emissions, but one of the fastest growing. Power sector emissions are growing most rapidly due mainly to conversion from oil-fired to coal-fired power generation plants. Transportation is also a major fossil fuel consumer, due to the rapidly growing number of vehicles, poor fuel quality, and a lack of investment in mass transport systems.

Indonesia's current energy growth path relies on increasing contributions from emission-intensive sources

Indonesia's fossil-fuel related emissions per capita are relatively low. Energy use per capita is growing at about the same rate as GDP per capita, but GHG emissions per capita ("emissions intensity") are growing faster. This means that the current energy growth path relies on increasing contributions from emission-intensive sources such as coal-fired power and the rising use of motorized transport. IEA (2007) projects that on a business-as-usual (BAU) path Indonesia's fossil-fuel related GHG emissions could triple by 2025.

Despite the opportunities, Indonesia's investment climate still impedes private sector development of alternative energy resources

Indonesia has an opportunity to increase economic efficiency and competitiveness by addressing the policy and governance framework that leads to excessive forest loss and fossil-fuel consumption. Also, Indonesia has significant alternative and renewable energy resources, including geothermal, hydro, and biomass, as well as substantial and economically viable opportunities to save energy through improved efficiency. However, the investment climate remains an issue, impeding private sector development of alternative energy resources.

Indonesia realizes that efforts to address climate change must not come at the expense of the poor

The Government's medium-term action plans recognize that sound development planning is a key to sound climate change adaptation. Adaptation needs and planning will focus on: water resources management; water supply, sanitation and health; agriculture, irrigation, and farmer education; spatial planning; coastal management; and disaster risk management and preparedness. Climate impacts will likely fall disproportionately on the poorest people, in areas susceptible to drought, flooding or landslides and in resource-dependent livelihoods, particularly in agriculture and fisheries. The poor lack the assets and flexibility to deal with the impacts of climate change on productivity, and the devastation wrought by natural disasters and extreme weather**.** Both domestically and internationally, Indonesia stresses that efforts to address climate change should not be done at the expense of the poor.

The government recognizes the adaptation challenge

Indonesia recognizes the adaptation challenge, although more study and concrete implementation will be needed. With community participation over the coming years, GoI investments in adaptation in coming years will be prioritized in: (a) the water sector to ensure people can respond in cases of water shortage, drought or flood; (b) the marine and fisheries sector to prepare people to deal with coastal land inundation, extreme weather situations, and change in fishery productivity and zonation as a result of sea-temperature change; (c) the agriculture sector to deal with climate change and its impact on planting seasons/harvests and the implications for food productivity and plantation crops; and (d) the health sector in anticipation of increasing vectors of infectious diseases such as malaria and dengue fever, as well as the increasing risks of respiratory and gastrointestinal diseases.

Box 3: Climate change issues: land use change and forestry

Rapid deforestation, illegal logging, forest fires, and peat-land degradation cause emissions, deplete Indonesia's natural assets, undermine revenue generation potential, and damage community livelihoods. Indonesia emits significant amounts of greenhouse gases (GHGs), mostly from forest loss and land-use change. Deforestation and fires/haze reduce Indonesia's development potential and undermine its international reputation. Most deforestation and fire losses occur in just 10 provinces. Riau, Central Kalimantan and South Sumatra alone account for over half of all forest degradation and loss. While efforts to measure emissions more precisely continue, there is a broad consensus within the G0I that forestry and land-use are key targets for mitigation.

Forestry and land-use governance issues are complex and challenging. Key issues contributing to deforestation are: (i) weak legal and political accountability; (ii) policies favoring large-scale commercial activity over small- and medium-sized businesses; (iii) distorted incentives for timber pricing and transport; (iv) an inadequate legal framework for protecting the poor and indigenous land-users; (v) undervaluation of forest assets and low revenue capture; and (vi) corruption. These underlying issues lead to the downstream activities that give rise to visible impacts on the landscape, as well as GHG emissions and societal losses. Any scheme to change practices or reduce deforestation needs to be understood in this wider context of upstream institutional, governance, and incentive issues that cause downstream outcomes on forest and peat land. Progress on forest governance is essential if a national REDD program is to succeed.

In responding to climate change, Indonesia faces major institutional, policy, technical, financial and legal challenges

However, Indonesia faces institutional, policy, technical, financial and legal challenges in responding to climate change. Both the forestry and energy sectors have long-standing and well-studied policy distortions and governance issues. Rapid deforestation, illegal logging, forest fires, and peat-land degradation deplete Indonesia's natural assets, undermine revenue generation potential, and damage community livelihoods. Indonesia's energy sector remains highly subsidized and regulated. This contributes to inefficient public spending, impedes investment to modernize the sector, and makes the country vulnerable to world energy price shocks. It also impedes the development of alternative energy sources, such as geothermal, and leads to adverse environmental and health impacts. Indonesia realizes that these distortions are an expensive burden on the budget and the economy. Weak governance impedes investment, raises costs, and hinders international competitiveness and market access (for forestry and other products).

Indonesia's commitment to tackling climate change has been increasingly evident since 2007

Indonesia's commitment to climate change action has been increasingly evident since 2007, when the country hosted the UNFCCC 13th Conference of the Parties in Bali and published its National Action Plan on Climate Change. In 2008, the Government formed the National Council on Climate Change and published its Development Planning Response to Climate Change, a key practical step in mainstreaming climate action into the planning and budgeting process. In 2009, the Government solidified its technical understanding of climate change issues and impacts (Second National Communication) and took steps to facilitate climate financing with the establishment of an Indonesian Climate Change Trust Fund.

Indonesia has announced path-breaking commitments to cut GHG emissions by 26 percent by 2020 through voluntary action and by a further 41 percent with international support

In 2009, Indonesia announced path-breaking mitigation commitments, aiming to reduce GHG emissions by 26 percent by 2020 through voluntary action, and further reductions of up to 41 percent with international support. This bold action opened the door for more developing countries to make commitments in advance of Copenhagen COP 15. The GoI also joined the G20 pledge to phase out subsidies for fossil fuels. Indonesia is developing a strategic, multi-year policy and investment program for low-carbon growth, as outlined in its Climate Change Sectoral Road Map (December 2009) and its submission to the UNFCCC in fulfillment of the Copenhagen Accord (January 2009).

Indonesia has mapped out a strong program of climate change action for the coming years

In its economic development planning documents, the GoI has mapped out a strong program of climate change action for the coming years. The GoI submitted its international commitment to the UNFCCC in fulfillment of the Copenhagen Accord at the end of January 2010. The GoI plans to codify the president's 26 percent emissions reduction commitment as domestic law, through a presidential decree. The emissions reduction plan, the Medium-Term Development Plan 2010-2014 and the National Development Priorities Year 2010 provide a firm basis for budgeting and implementation. These build on the framework established by the National Action Plan for Climate Change 2007, the Development Response to Climate Change 2008, and a range of technical studies.

The GoI is also putting its plans into action

Indonesia is taking action on peat and forest emissions through the development of pilot projects on peat lands and development of a national program for Reduced Emissions from Deforestation and Degradation (REDD) with a score of demonstration activities in

development. Indonesia is incrementally addressing the governance issues that lie behind forest and land-use emissions, including the passage of a timber legality standard and verification system. In the energy sector, the GoI has made efforts to improve the investment climate for renewable energy development through improved pricing and off-take requirements (although these policies can still be improved). Indonesia is also requiring more action on energy efficiency and conservation by large firms, as well as national and local governments. On the adaptation front, Indonesia is improving water resource management and agricultural extension to strengthen resilience and reduce the risks of climate impacts, which include drought, flooding and pests. Indonesia has established a national disaster management law and agency that is mainstreaming climate change into the disaster preparedness agenda. The institutional, technical, and legal basis for coordination and implementation of climate change actions has been established and will continue to be improved.

Indonesia is also using international climate finance options and domestic climate financing mechanisms

Indonesia is also taking advantage of a range of international climate finance options and establishing domestic climate financing mechanisms. The Indonesia Climate Change Trust Fund was launched in September 2009 as a mechanism for funding technical assistance, capacity building and demonstration activities for adaptation and mitigation. The GoI is seeking climate financing assistance through the Clean Technology Fund and through the Forest Carbon Partnership Facility. The Government has been selected as a pilot country under the Forest Investment Program. Additional international financing mechanisms (e.g., the Adaptation Fund managed by the GEF) are developing, such that transfers from developed countries could help to reduce the cost of Indonesia's movement towards a lower carbon, more climate-resilient development path.

Indonesia's development partners are also making an important contribution

Indonesia's development partners are also providing technical assistance, analytical support and capacity building through a range of mechanisms. Many development partners are providing assistance through on-going project vehicles while others are designing new programs of support. Several have pledged support for the GoI's Climate Change Trust Fund. Many of these development assistance programs will provide capacity and support to the GoI to achieve its climate change agenda.

A ground-breaking forest conservation agreement with Norway was signed in May 2010

In May 2010, Indonesia and Norway signed a Letter of Intent on forest conservation, aiming to support and accelerate the GoI's efforts to control emissions from land-use change and forestry through a national program for REDD. The agreement sets up a performance-based approach whereby Norway will provide US$1 billion if certain forest governance, monitoring and financing objectives are achieved. This agreement raises the stakes for implementing Indonesia's REDD program and elevates attention to the presidential level.

Indonesia has also made use of a Climate Change Program Loans

Indonesia has since 2008 been engaged in a Climate Change Program Loan series (supported by JICA and AFD, with the World Bank joining in 2010) that aims to support efforts to develop a lower carbon, more climate-resilient growth path. This operation also helps Indonesia to prepare for the post-2012 global climate change regime by establishing a favorable policy, regulatory, and institutional setting that allows Indonesia to access global climate finance opportunities and carbon markets. The policy actions included in the program loan contribute to Indonesia's development agenda by improving governance, forest management, efficiency, and competitiveness. The program loan focuses on three main thematic areas: (i) addressing the need to mitigate Indonesia's GHG emissions; (ii) enhancing adaptation and resiliency efforts in key sectors; and (iii) strengthening the institutions and cross-cutting policy framework needed for a successful climate change response.

Climate change is an important entry point for broader actions that support good development

Building on a solid foundation of climate change achievements, strong economic performance and consolidated political structure, Indonesia is now proposing to move towards a lower carbon development path, as well as a more resilient and adaptive path that can help to reduce vulnerability and protect the poor in the future. Indonesia will face challenges in the use of peat-land, forests and energy that are essential for more efficient and climate-friendly development. The GoI will also face challenges in developing the institutional preparedness and adaptive responsiveness needed to protect both the vulnerable and the broader economy from unpredictable climate-change impacts in the future.

2. Improving maternal health in Indonesia through a stronger health system

Addressing Indonesia's numerous health challenges, among them high maternal mortality, is a national priority

Indonesia's health system faces numerous challenges and the GoI has designated health a national development priority in its 2010-2014 Medium Term Development Plan (RPJMN).[6] The December 2009 edition of the Indonesia Economic Quarterly highlighted one of the key issues facing the health sector, namely, how to finance healthcare for Indonesia's growing and ageing population in the context of relatively low health spending and a move towards universal health insurance coverage. This edition focuses on another important health issue, how to address a lagging key health outcome, maternal mortality. At 229 maternal deaths per 100,000 live births Indonesia's maternal mortality ratio (MMR) remains amongst the highest in East Asia and more than double the Maternal Mortality Millennium Development Goal (MDG) of 102. Meeting this target will require extra efforts to address a number of challenges, including strengthening the health system. A recently released World Bank report—*"…and then she died": Indonesia Maternal Health Assessment*—provides evidence and analyses to inform and assist the government as it develops a strategy for accelerating the pace of improvement in maternal health.

Despite significant improvements, Indonesia's maternal mortality ratio (MMR) remains high and the pace of decline will need to accelerate in order to meet the 5th Millennium Development Goal (MDG) by 2015

Despite strong government and civic commitment and decades of investment in relevant interventions, maternal mortality in Indonesia remains stubbornly high. Use of maternal health services in Indonesia has expanded significantly over the past 15 years (Figure 60). The proportion of births attended by a professional health provider (doctor, nurse, or midwife) almost doubled from 40 percent between 1990-94 to 74 percent between 2003-07. The proportion of facility-based deliveries almost tripled from 18 percent to 47 percent over the same period, with over 90 percent of the recent increase due to use of private sector facilities. At the same time, cesarean section rates, an important measure of the comprehensiveness of care, increased from 0.8 percent between 1986-89 to 6.8 percent between 2003-07, again mostly provided in private sector facilities. The increased use of maternal health services has coincided with a more than 40 percent decrease in Indonesia's MMR, which declined from 390 maternal deaths per 100,000 live births between 1990-94 to 229 according to the latest estimates (Lancet 2010). Around half of this improvement was achieved in the past five years, reflecting an acceleration in the pace of decline from around 2-3 percent to around 5 percent annually. Despite these significant improvements, Indonesia's MMR remains amongst the highest in East Asia and at least 10,000 women continue to die of childbirth-related causes every year. Moreover, Indonesia's current MMR is more than double the fifth MDG target of 102. If Indonesia is to meet this target by 2015, it will need to further accelerate the pace of decline in maternal mortality.

Indonesia's high MMR reflects a number of challenges: First, a large number of poor women continue to give birth at home

Indonesia's high MMR reflects a number of challenges. First, access to quality maternal care remains uneven. Inequities in access to maternal care facilities between rich and poor women and those living in rural and urban areas have generally decreased with the increased use of the professional health providers for birth.[7] However, the richest are still seven times more likely to access a facility than their poorest counterparts and a large number of poor women continue to give birth at home with professional help. A review of a sample of maternal death audits from West Java (n=210) in 2009 shows that a large share of the women who died due to childbirth-related causes relied only on traditional birth attendants to deliver, were referred too late and even when referred did not get appropriate treatment.[8]

… use of family planning services has stagnated

In addition, although pre-natal and post-natal care increased to high levels, use of family planning services has stagnated. There are persistent high rates of unintended pregnancies among both married and unmarried women. Recent reviews of the national family planning program highlight the need to address contraceptive practices among high-risk groups, especially the growing group of unmarried women who are sexually active and whose needs are ignored by family planning programs. Unintended

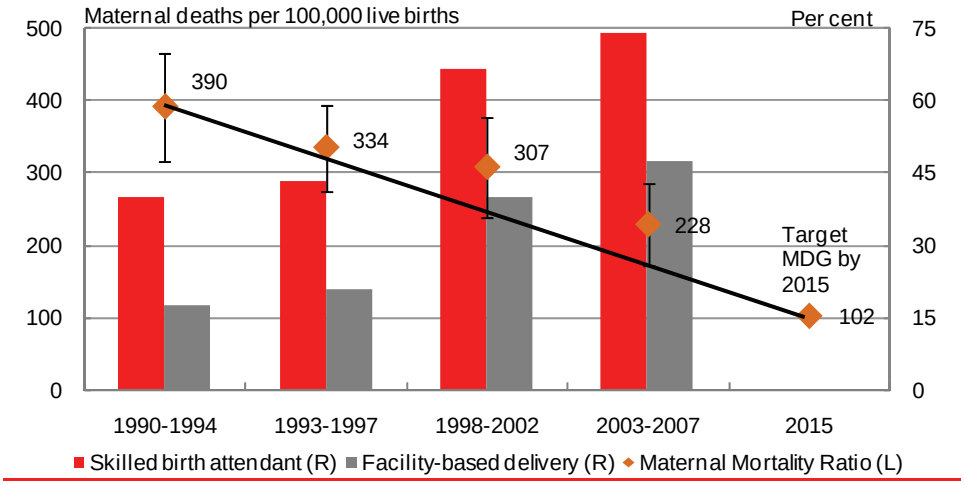
[6] The 2010-14 RPJMN is discussed in the March 2010 *Indonesia Economic Quarterly.*

[7] Hatt, L., C. Stanton, K. Makowiecka, A. Adisasmita, E. Achadi, and C. Ronsmans. 2007. Did the strategy of skilled attendance at birth reach the poor in Indonesia? *Bulletin of the World Health Organization,* 85(10): 733-820.

[8] World Bank (2010) " and then she died": Indonesia Maternal Health Assessment by Lucy Mize, Eko Pambudi, Marge Koblinsky, Susan Stout, Puti Marzoeki, Pandu Harimurti, Claudia Rokx

pregnancies among the 24 million women in this group are more likely to result in unsafe abortion and lead to more maternal deaths. Although little information is available about the incidence of abortion, estimates range between 700,000 and 3 million abortions each year, many of them unsafely performed with increased risk.[9] Family planning service delivery has shifted to the private sector over the last decade, with the subsequent risk that the poor may face financial barriers. Privatization without regulation has also meant a shift towards more temporary and profitable contraceptive methods, as seen with the shift towards short-term injectables as the primary contraceptive nationally.

Figure 60: Despite significant improvements, Indonesia's MMR rate remains high and the pace of improvement will need to accelerate in order to meet the 5th MDG target
(trends in MMR, skilled birth attendance and facility-based delivery between 1990-2007)



The latest *Lancet* analysis shows MMR in Indonesia at 229. Sources: IDHS 1994-2007.

… financial barriers delay woman from seeking care when needed

Further, high levels and especially uncertainty about medical expenses continue to delay women from seeking care when needed. In 2005, in order to provide better financial protection against catastrophic health expenditures and to increase access to care, the GoI implemented the health insurance for the poor, ASKESKIN, now called JAMKESMAS. The latter program covers 76.4 million people and intends to ensure that poor women have access to all aspects of maternal care in the public sector. It is already influencing levels of demand for and incentives to provide maternal health services by both public and private providers, as seen in a jump in outpatient and in-patient utilization rates (Figure 61 and Figure 62). Despite the increased coverage of Jamkesmas, financial barriers to seeking timely care remain: women do not know about their eligibility for Jamkesmas coverage; they do not understand the benefits and remain unsure about the possible future costs of delivery at a facility. They often refuse referral of obstetric complication to a facility due to transport costs which are not included in the benefit package.

[9] Hull, T., and H. Mosley 2009 Revitalization of Family Planning in Indonesia Jakarta: Government of Indonesia and the United Nations Population Fund

Figure 61: Utilization of outpatient services by woman jumped following the introduction of ASKESKIN
(outpatient utilization rate in the last 4 weeks by type of insurance among women aged 10-49 years old, percent)

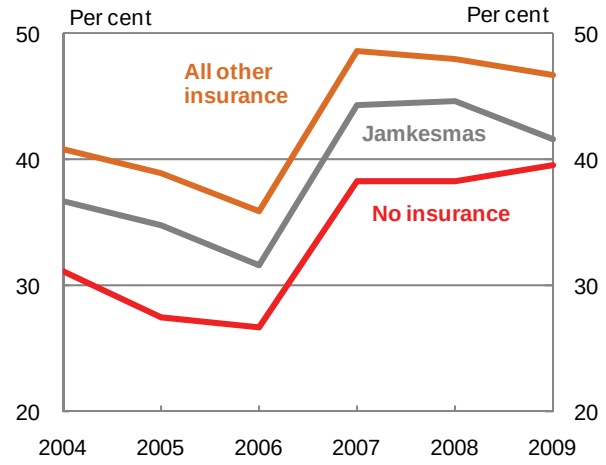
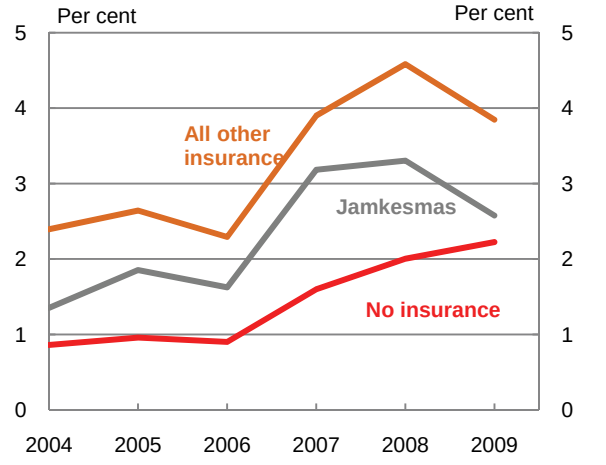


Figure 62: Utilization of in-patient services by woman jumped following the introduction of ASKESKIN
(in-patient utilization rate in the last 4 weeks by type of insurance among women aged 10-49 years old, percent)

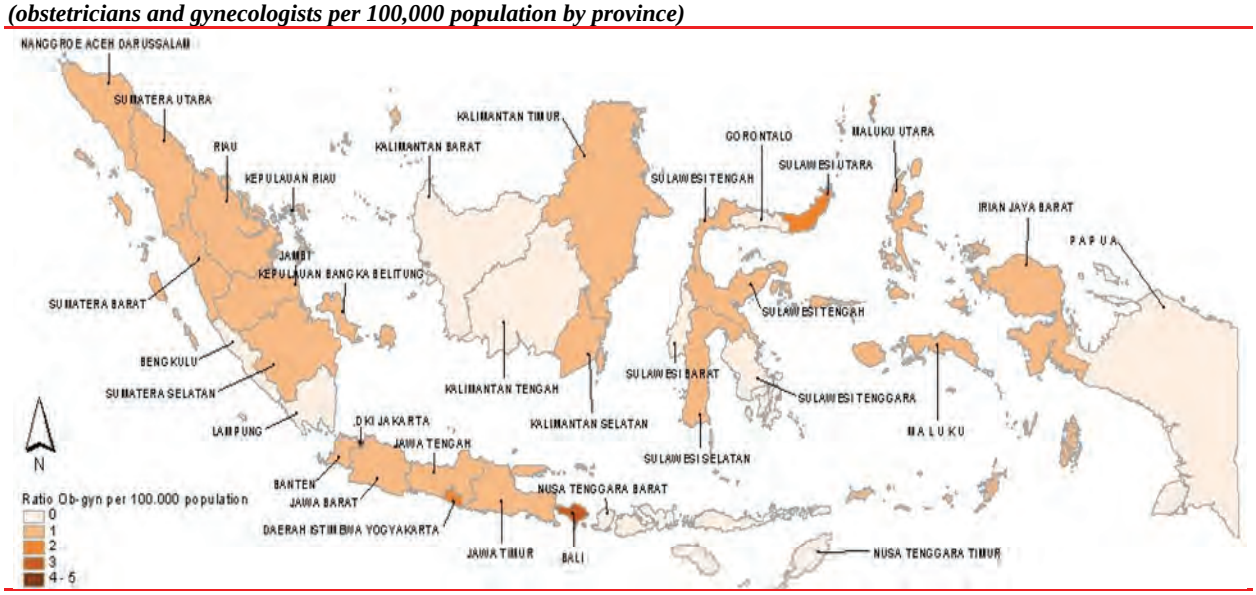


Sources: Susenas 2004-2009

… quality of obstetric care is poor and still often results in unnecessary deaths

In the case of referral for women with obstetric complication, the quality of the emergency obstetric care is poor and still often results in unnecessary deaths. Village midwives do not always stabilize the cases before referral; health centers that provide Basic Emergency Obstetric and Newborn Care (BEONC) are often bypassed because of the perceived lack of ability to handle complications, while not all districts have a functioning hospital with Comprehensive Emergency Obstetric and Newborn Care (CEONC). Despite attention in past years and policies to promote facilities that are able to treat obstetric emergencies, few areas have reached the numbers set by UN standards and few facilities fulfill the required CEONC criteria leaving women at risk of inadequate treatment once they are referred to a facility. Quality concerns apply both to public and private facilities.

Figure 63: Indonesia has a shortage and uneven distribution of maternal health specialists
(obstetricians and gynecologists per 100,000 population by province)



Source: KKI, 2007

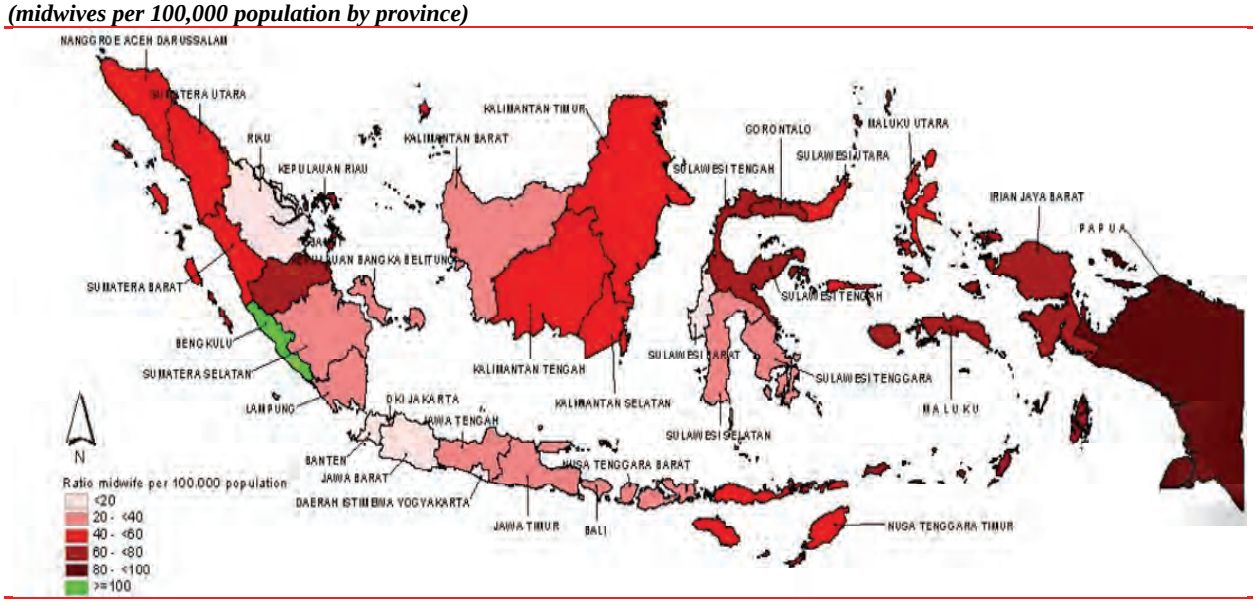
… and while Indonesia has given serious attention to increasing the number of midwives, there is a shortage of specialists

Although Indonesia has given serious attention to increasing the number of midwives in all areas of Indonesia, and especially in rural areas, the number of specialists (obstetricians, gynecologists and anesthesiologists), specifically obstetricians, is far from sufficient. There are only 2,100 obstetricians for 230 million people in Indonesia and the distribution is highly inequitable (Figure 63). Moreover, while earlier government efforts did largely achieve the one midwife per village target, financial incentives have changed over time; many midwives have moved from the rural to urban areas and prefer to provide private care, leaving the poor with less coverage. Hence, midwifery coverage is also highly variable (Figure 64). In addition, the quality of the services midwives provide could be improved; studies show that poor quality of care was a contributing factor in 60 percent of 130 maternal deaths (Supratrikto 2002). A recent comprehensive review of Indonesia's health workforce draws attention to the fact that the quality of health workers, general practitioners, midwives and nurses, has improved only marginally over the past decade and that the regulatory framework governing the basic training of these providers is at best patchy (World Bank 2008, Rokx et al 2010).

In part, the lack of care at facilities can be explained by continuing low levels of health spending

In part, the lack of care at facilities can be explained by continuing low levels of health spending. Indonesia spends barely 2 percent of its GDP on health, of which half is public spending. This is one of the lowest health spending levels in East Asia – and globally – despite a doubling of public spending since 2005 (Bappenas 2009). In addition, at the local government level, budgets are available only very late in the fiscal year resulting in already low levels of resources not being spent at all (Laksono et al, 2009).

Figure 64: Midwifery coverage in Indonesia is highly variable
(midwives per 100,000 population by province)



All types of midwifes; target of 100 per 100,000 by 2010. Source: Indonesia Health Profile 2006

Finally, the "Big Bang" decentralization of public sector management responsibilities to the district level has also created serious challenges

The "Big Bang" decentralization of public sector management responsibilities to the district level, initiated in 2001, has created serious challenges to the capacity of central agencies, including the MOH and BKKBN, the family planning coordination agency, to oversee and guide service delivery. Minimum service standards (MSS) for basic maternal health and for family planning services at district level have been established with the Ministry of Health and Home Affairs and a guidebook for managers lays out their responsibilities. However, the MSS remain ill-defined, complex to measure and few districts actually apply them[10]. The sense is that quality of family planning services and health care in general have deteriorated, and access remains a major issue with decentralization.

[10] Haynes and Harahap, forthcoming Governance and Accountability in the Health Sector in Indonesia; an assessment

3. Strengthening the accountability and reporting of the Specific Purpose Grants (DAK)

Indonesia is now one of the most decentralized countries in the world

With the "big bang" decentralization of 2001, Indonesia went from being one of the most centralized countries in the world in administrative, fiscal and political terms, to one of the most decentralized. Under Law 32/2004 (on Regional Autonomy) and Law 33/2004 (on Fiscal Balance), local governments (LGs) have assumed new responsibilities that were previously covered by the central government, as well as managing new financial resources that have been transferred from the central government or raised within their own localities. LGs have therefore experienced substantial increases in financial resources, mostly through increased transfers from the central level.

Central government transfers are the main source of local government (LG) finance and LGs now manage 38 percent of total public expenditure

Transfers from the central government are currently the main source of LG finance. LGs now manage 38 percent of total public expenditure and carry out more than half of all public investment. However, Public Expenditure Reviews (PER) conducted at the LG level show that they are experiencing difficulty in managing and spending their resources. Some LGs have accumulated significant financial reserves, although reserves were not found to be excessive in general. Given the high investment needs in basic services, greater reserve accumulation can be seen as symptomatic of an inability to spend financial resources effectively. Fiscal decentralization in Indonesia still faces a number of major challenges, such as how to improve and speed up spending, and reduce LG dependency on central government transfers.

LGs have insufficient financial resources to meet their investment needs for basic services

Following the decentralization process of 2001, the responsibility for investment in most services was transferred to LGs. Indonesia's more than 500 LGs (provincial, *kabupaten* and *kota*) are now in charge of delivering education, health and infrastructure services. When capital investment needs are taken into account, LGs have insufficient financial resources to meet their investment needs for basic services, which far exceed their revenues and surpluses.

LGs lack significant own-source revenue making them over-reliant on central government transfers

LGs lack significant own-source revenue, which accounts for only about 15 percent on average of total revenues. This causes great reliance on central government transfers for capital expenditure purposes. In order to increase investments over time, LGs will need to have access to larger financial flows and the central government will need to strengthen its transfer mechanisms, especially its grants for investments. In terms of management of expenditure assignments, LGs have great autonomy, so strengthening the intergovernmental capital grant transfer system will not weaken decentralization, but will strengthen LGs' ability to deliver services.

There are two types of intergovernmental transfers, DAU and DAK

The bulk of the intergovernmental transfers to LGs are constituted by the General Allocation Fund (*Dana Alokasi Umum*, DAU) and the Specific Purpose Fund (*Dana Alokasi Khusus*, DAK). In 2010, the DAU share of total intergovernmental transfers was 63 percent, while the share of DAK neared 7 percent. DAU is mainly used to fund salaries and other administrative costs. The total 2010 DAK allocation is about USD 2.3 billion.

DAK is a fund allocated to LGs for financing specified activities that are aligned to national priorities

DAK is a fund from the national budget (*Anggaran Pendapatan dan Belanja Negara*, APBN) allocated to LGs with the purpose of financing specified activities that are aligned to national priorities and conducted under the jurisdiction of LGs. The amount of DAK allocation is determined on an annual basis within the APBN. There are three types of criteria that LGs must be satisfied in order to receive DAK, namely: general, specific and technical criteria. General criteria refer to LGs' net fiscal capacity. Specific criteria relate to whether LGs receive special autonomy funds or are categorized as disadvantaged areas, etc. Technical criteria assess conditions of the infrastructure, for example, the total road length and condition. These three criteria are used in a formula for determining the DAK allocation by sector and district.

The DAK allocation has been growing very rapidly, although it declined in 2010

The DAK allocation has been growing very rapidly, increasing from IDR2.2 billion in 2003 to IDR24.8 billion in 2009, and accounting for 0.7 percent to 2.4 percent of the APBN, respectively. In 2010, however, total DAK IDR21.1 billion declined by 17.4 percent compared with 2009 as a result of global financial turmoil. Eligible recipient LGs are required to provide a 10 percent LG contribution (*dana pendamping*) for each DAK sector. Exceptions to this rule are allowed where regions have low fiscal capacity.

The MoF allocates the DAK to each sector and within the sectors LGs can choose which subprojects to invest in

The MoF allocates the DAK to each sector and within the sectors LGs have the flexibility to determine which subprojects they invest in. In the case of infrastructure sectors, the Ministry of Public Works (MPW) provides Ministry Decree No. 42/PRT/M/2007 for Technical Guidelines on the Implementation, Monitoring and Evaluation of the DAK for each infrastructure sector. MPW's Technical Guidelines clearly specify the outputs on which the DAK grants can be spent, and these are limited to maintenance, rehabilitation, and the upgrading or improving of existing infrastructure.

The decline in DAK in 2010 was a result of the global financial crisis

Over the years, the DAK allocation has been growing very rapidly, increasing from IDR 2.2 billion in 2003 to IDR 24.8 billion in 2009, and accounting for 0.7 percent to 2.4 percent of the APBN, respectively. In 2010, total DAK allocation amounts to IDR 21.133 billion or 2.0 percent of APBN. This is a decline of 17.4 percent on 2009 as a result of global financial turmoil that started in late 2008.

Table 10: The DAK allocation has grown more than ten-fold in the past 6 years
(allocation, billions of IDR)

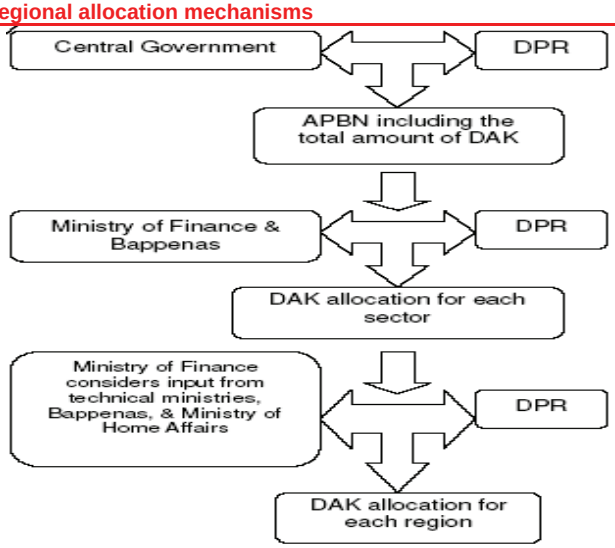
Sector	2003	2004	2005	2006	2007	2008	2009
Education	625	653	1,221	2,920	5,195	7,015	9,335
Health	375	456	620	2,407	3,381	3,817	4,017
Road Infrastructure	843	839	945	2,576	3,113	4,045	4,501
Irrigation Infrastructure	339	357	385	628	859	1,497	1,549
Drinking Water and Sanitation			204	608	1,062	1,142	1,142
Governance Infrastructure	88	228	148	449	539	362	562
Marine and Fishery		305	322	776	1,100	1,100	1,100
Agriculture			170	1,095	1,492	1,492	1,492
Environment				113	352	352	352
Family Planning						279	329
Forestry						100	100
Rural Infrastructure							190
Trade							150
Total	**2,269**	**2,839**	**4,014**	**11,570**	**17,094**	**21,202**	**24,820**

Source: Grand Design *Desentralisasi Fiskal*, 2009

The amount of DAK and its allocation is the responsibility of the Minister of Finance in consultation with the DPR

The determination of the total amount of DAK, and its allocation to LGs, are based on the decision made between the Budget Committee of the Parliament (*Dewan Perwakilan Rakyat* or DPR) and the central government, including the MoF, MoHA, Bappenas, and technical ministries within sectors receiving DAK allocations. While the mechanism for the determination of total DAK involves several institutions, the final decision regarding the total amount of DAK and its allocation both by sector and by region is the responsibility of the Minister of Finance after consultations with the DPR (Figure 1). In order to be entitled for DAK allocations, LGs must meet: (a) general criteria based on the Net Fiscal Index (NFI); (b) specific criteria based on legislative regulation and regional characteristics, such as whether or not LGs receive special autonomy funds or whether they are categorized as disadvantaged areas, etc; and (c) technical criteria which assess conditions of the infrastructure based on technical indexes in the relevant sector.

Figure 65: DAK regional allocation mechanisms



Source: MPW, 2007

The disbursement process of DAK is from the state general cash account and is conducted in three stage

DAK allocations to recipient regions are transferred from the state general cash account to a region's general cash account. The respective regional head should arrange the definitive plan (RD) and budget implementation statement (DIPA) based on a budget allocation document (SRAA) from the MoF through the National Treasury Regional Office and technical guidelines from related ministries. Currently, the disbursement process of DAK is conducted in three stages. In the first stage, LGs receive 30 percent of their total DAK allocation (across all sectors) upon fulfillment of the following: finalization of their budgets (APBD), and submission of APBD and letter of declaration of LGs' commitment to match 10 percent of DAK to the MoF. The first payment should be disbursed no later than February of each fiscal year. LGs can apply for a second payment, which amounts to 45 percent of total DAK, after they have spent 90 percent of the first payment and provided evidence that they have done so. The remaining 25 percent can be released after LGs supply evidence that they have spent 90 percent of the second payment.

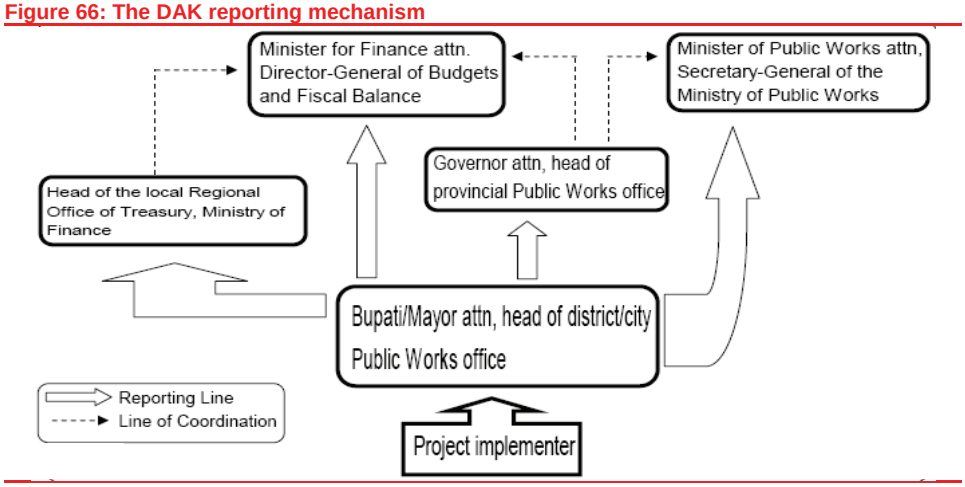
Line ministries provide technical guidelines for using DAK funds

Line ministries provide technical guidelines for the use of DAK funds. For example, in the infrastructure sectors the MPW provides Ministry Decree No. 42/PRT/M/2007 on Technical Guidelines for the Implementation, Monitoring and Evaluation of the DAK that serves as basic rules for the implementation and monitoring and evaluation of DAK-funded projects for the infrastructure sub-sectors. The decree is supplemented by an MPW Circular Letter on eligibility of works to be funded by the DAK, which is renewed on annual basis.

Monitoring and evaluation of DAK-funded projects is important for effective implementation

Monitoring and evaluation of projects/activities funded by DAK are integral to effective, efficient and transparent DAK implementation. Figure 2 depicts the reporting mechanism from LGs receiving DAK for infrastructure sub-sectors. In essence, LGs have to send reports to technical ministries and the MoF (through the DG of Fiscal Balance). The types and frequency of reporting requirements are set in accordance with the respective ministries' decrees on DAK.

Figure 66: The DAK reporting mechanism



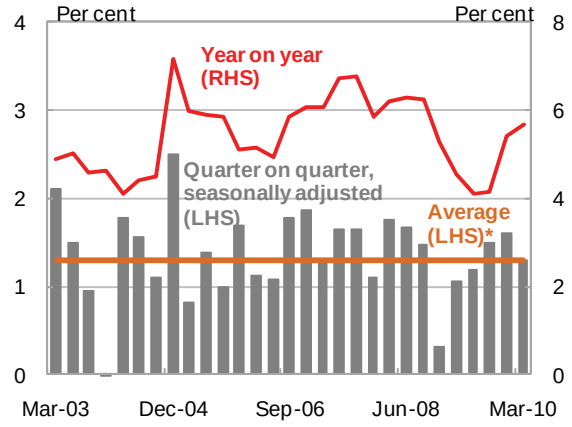
Source: MPW, 2007

The recent study reveals that improvements in the DAK are needed in the financial, technical, institutional and governance areas

Since the implementation of the fiscal decentralization policy in 2001, policies regarding DAK have been well established, although the monitoring and verification of use of funds, especially with regard to physical outputs, remains a challenge. A recent study undertaken by the National Planning Agency (Bappenas), *Options for Improving DAK (2009),* assesses DAK management over the past five years. The study reveals that improvements are needed in the financial, technical, institutional and governance areas. With regard to the *financial* aspect, the main problem is the mismatch between the amounts of DAK funds allocated and local needs. Financial reporting on the DAK from LGs to the MoF has improved significantly since the MoF started to impose sanctions by withholding future DAK in 1998. On *technical* issues, LGs formulate DAK investments as part of their annual planning and budgeting process. However, the link between longer-term development planning and annual DAK expenditures is still weak. *Institutional* issues revolve around the lack of coordination between the central and local governments on priorities for the DAK, and the lack of appropriate reporting and monitoring of DAK utilization, particularly on the verification of outputs delivered. These weaknesses in financial, technical, and institutional aspects all combine to impact the overall *governance* of the DAK in terms of transparency and accountability.

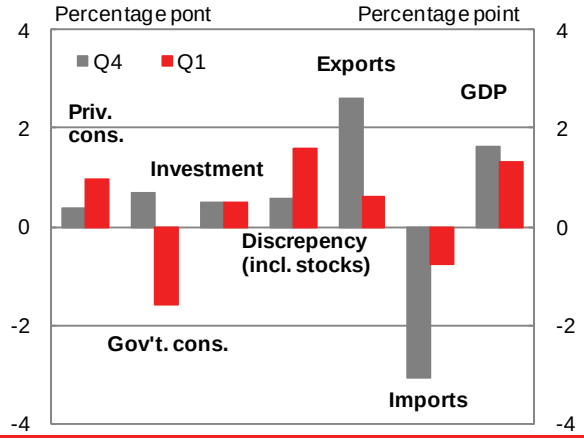
APPENDIX: SNAPSHOT OF THE INDONESIAN ECONOMY

Figure 1:GDP growth
(percent growth)



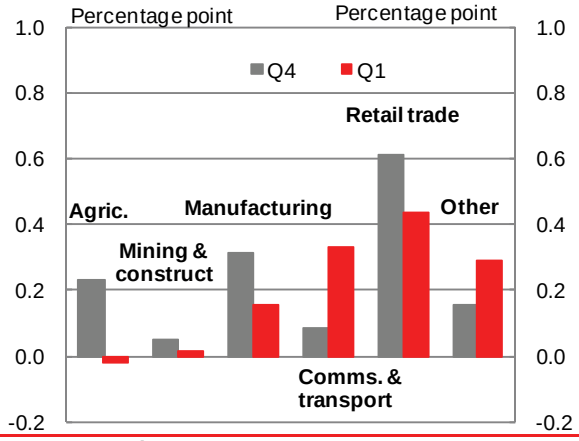
Sources: BPS, World Bank seasonal adjustment

Figure 2: Contributions to GDP (Expenditures)
(year-on-year growth, seasonally adjusted)



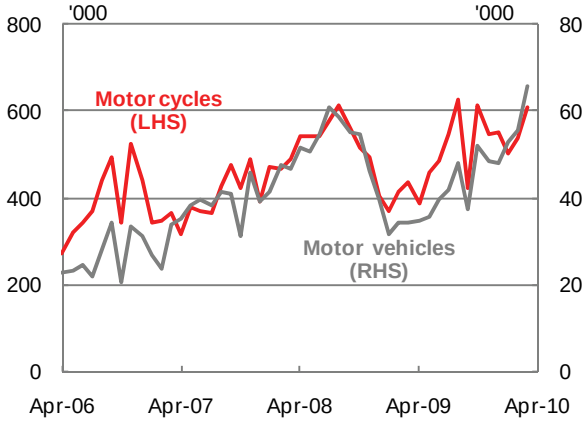
Sources: BPS via CEIC and World Bank

Figure 3: Contributions to GDP (Production)
(year-on-year growth, seasonally adjusted)



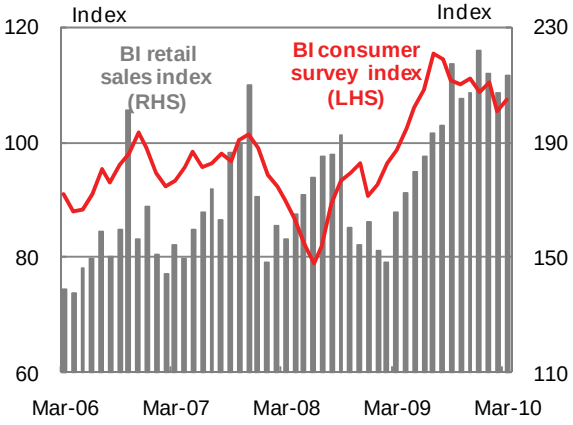
Sources: BPS via CEIC

Figure 4: Motor cycle and motor vehicle sales
(levels)



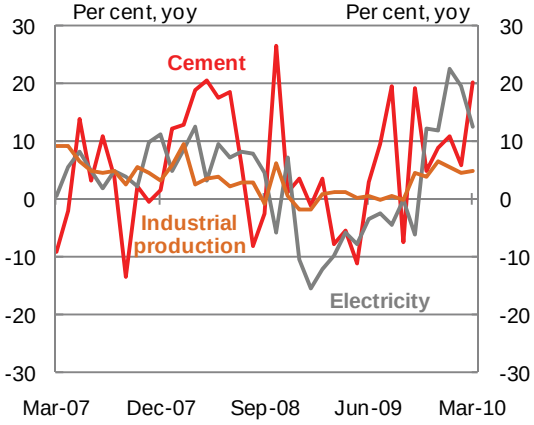
Source: CEIC

Figure 5: Consumer indicators
(indices)



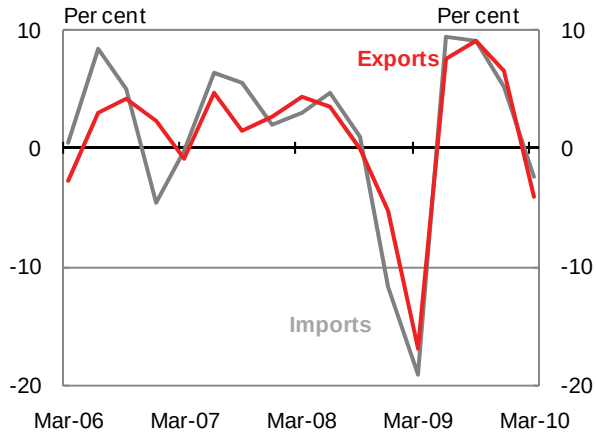
Sources: BI via CEIC

Figure 6: Industrial activity indicators
(year-on-year growth)



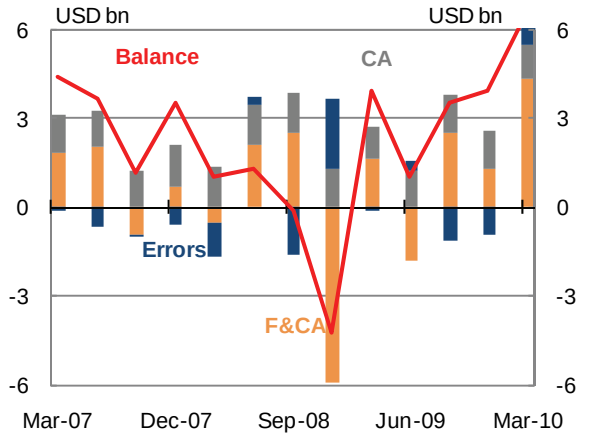
Source: CEIC

Figure 7: Real trade flows
(quarter-on-quarter growth)



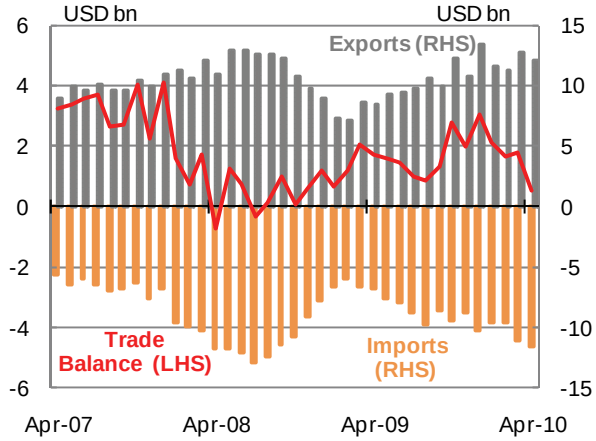
Source: CEIC

Figure 8:Balance of Payments
(USD billions)



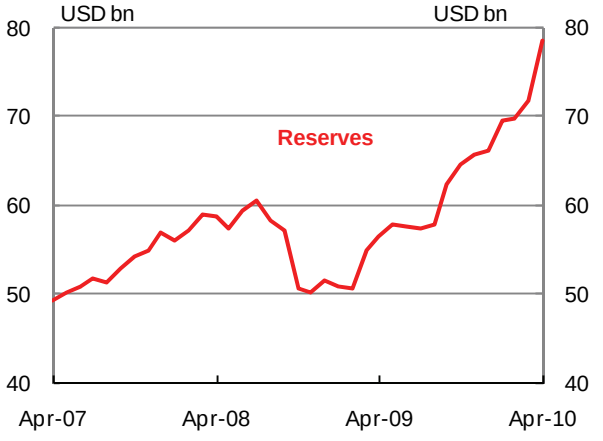
Sources: BPS and World Bank

Figure 9: Trade balance
(values, USD billions)



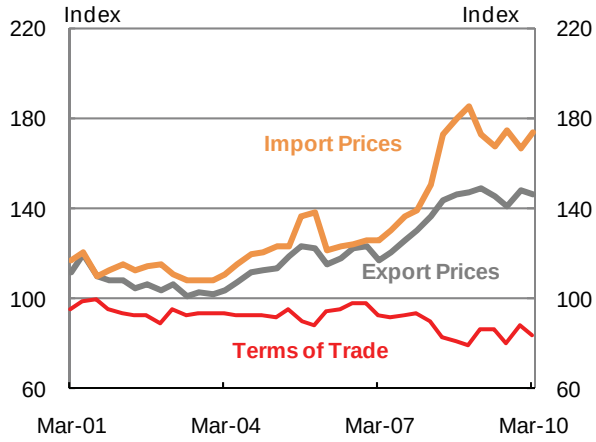
Sources: BPS and World Bank

Figure 10: International reserves
(USD billions)



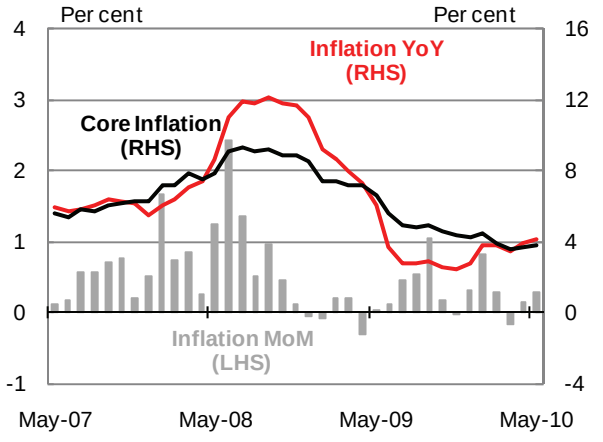
Source: BPS

Figure 11: Terms of trade and implicit export and imports prices, quarterly
(USD billions)



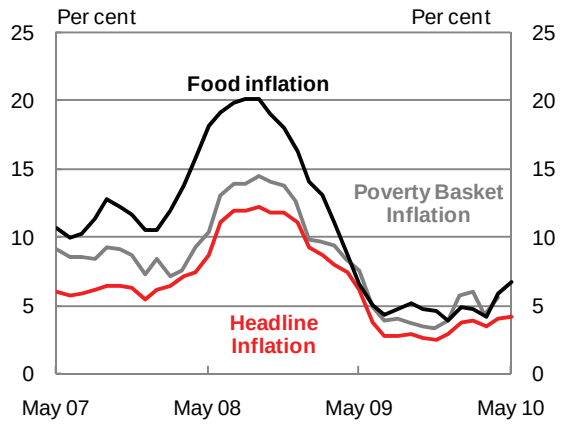
Sources: BPS and World Bank

Figure 12: Inflation
(month-on-month & year-on-year)



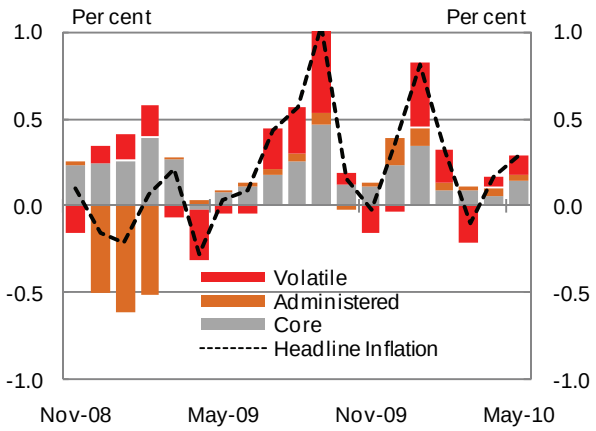
Sources: BI and BPS

Figure 13: Inflation, food prices and poverty basket inflation
(year-on-year)



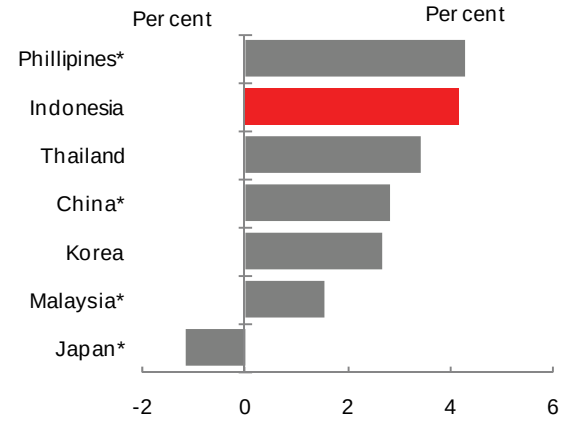
Sources: BPS, World Bank

Figure 14: Breakdown of monthly CPI inflation rates
(monthly percentage contribution)



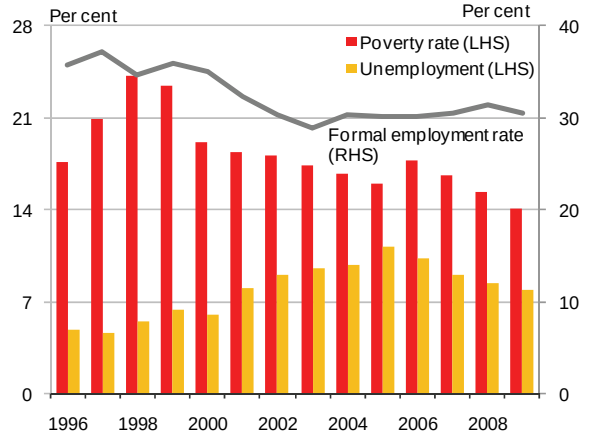
Source: BPS

Figure 15: Inflation in neighboring economies
(year-on-year, May 2010)



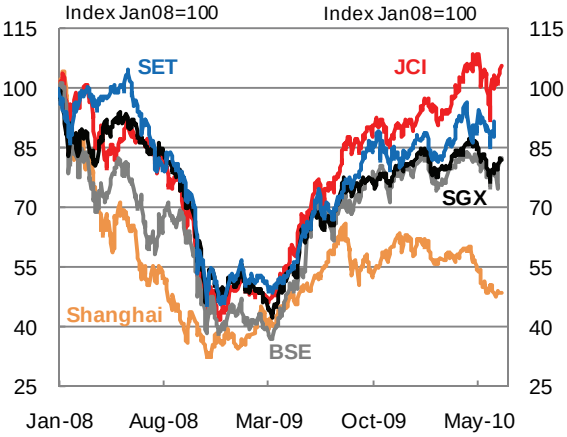
* April 2010. Source: National statistical agencies via CEIC

Figure 16: Poverty, formal sector employment and unemployment rates
(February observations to 2005, then August observations for employment and February observations for poverty)



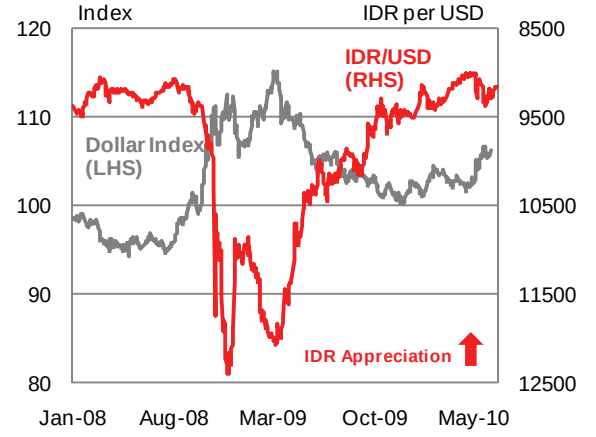
Sources: BPS, Sakernas and World Bank

Figure 17: Regional equity indices
(daily, index)



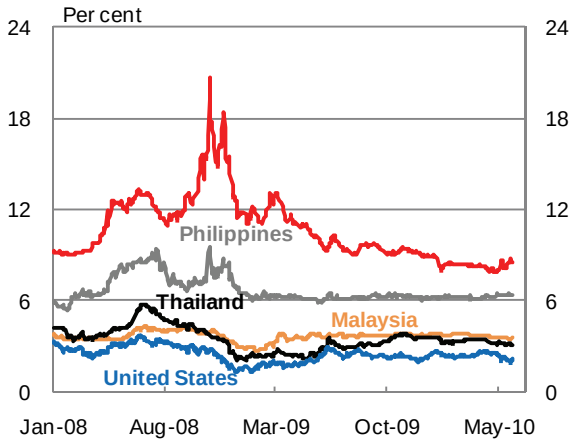
Sources: World Bank and CEIC

Figure 18: Broad dollar index and rupiah spot
(daily, index and levels)



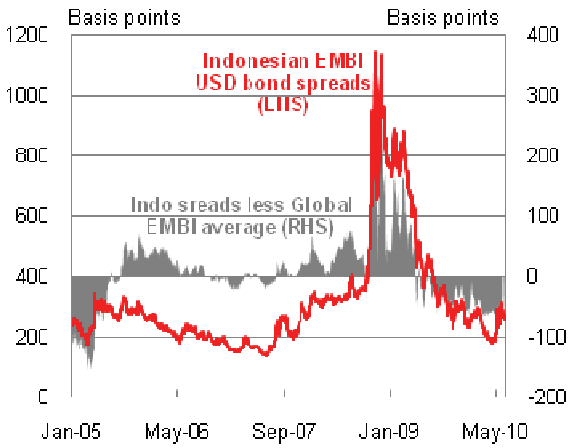
Sources: World Bank and CEIC

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



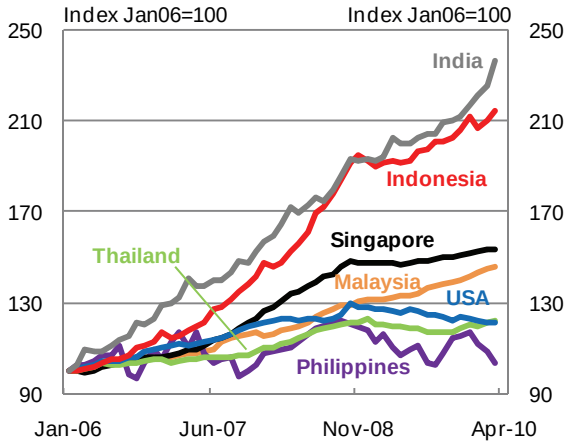
Sources: World Bank and CEIC

Figure 20: Sovereign USD bond EMBI spreads
(daily, basis points)



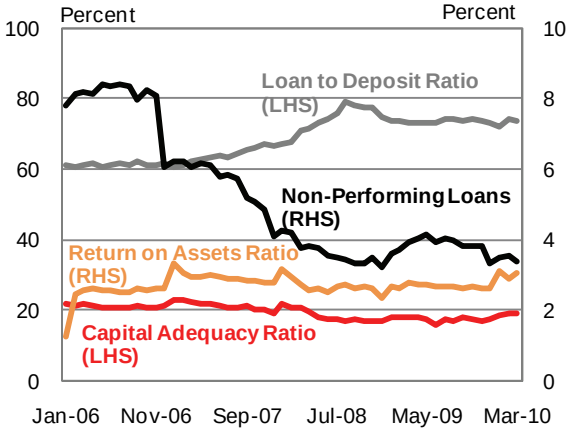
Sources: World Bank and CEIC

Figure 21: International commercial bank lending
(monthly, index)



Sources: World Bank and CEIC

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



Sources: World Bank and BI

Table 11: Balance of payments
(USD billion)

				2009				2010
	2007	2008	2009	Q1	Q2	Q3	Q4	Q1
Balance of Payments	12.7	-1.9	12.5	4.0	1.1	3.5	4.0	6.6
Per cent of GDP	*3*	*-0.4*	*2.3*	*3.5*	*0.8*	*2.4*	*2.6*	*4.1*
Current Account	10.5	.1	10.7	2.5	2.5	2.2	3.6	1.6
Per cent of GDP	*2.4*	*0.0*	*2.0*	*2.2*	*1.9*	*1.5*	*2.4*	*1.0*
Trade Balance	20.9	9.9	21.1	4.1	5.1	5.0	6.9	4.4
Net Inome & Current Transfers	-10.4	-9.8	-10.3	-1.6	-2.6	-2.8	-3.2	-2.8
Capital & Financial Accounts	3.6	-1.8	3.5	1.6	-1.8	2.5	1.3	4.3
Per cent of GDP	*0.8*	*-0.4*	*0.6*	*1.4*	*-1.4*	*1.7*	*0.8*	*2.7*
Direct Investment	2.3	3.4	1.9	.5	.4	.5	.6	1.9
Portfolio Investment	5.6	1.8	10.3	2.0	1.9	3.0	3.5	6.2
Other Investment	-4.8	-7.3	-8.8	-.8	-4.1	-1.0	-2.9	-3.9
Errors & Ommissions	-1.4	-.2	-1.8	-.1	.4	-1.1	-.9	.8
Foreign Reserves*	56.9	51.6	66.1	54.8	57.6	62.3	66.1	71.8

Sources: BI and BPS

Table 12: In 2010 the deficit is projected to reduce to 1.0 percent of GDP, compared to the government's projection of 2.1 percent of GDP, while in 2011 the deficit may be as small as 0.4 percentage points of GDP
(central government revenue and spending, trillions of IDR)

	2008	2009	2010	2010 (p)	2011	2011 (p)
	Actual	Actual (prelim.)	Revised Budget	WB Estimates	Draft Proposal	WB Estimates
A. State revenues and grants	**981.6**	**868.9**	**992.4**	**1,017.6**	**1,086.7**	**1198.9**
1. Tax revenues	**658.7**	**641.4**	**743.3**	**754.4**	**839.9**	**904.2**
a. Domestic tax	622.4	622.7	720.8	728.5		873.8
i. Income tax	327.5	317.6	362.2	371.7		450.6
- Oil and gas	77.0	50.0	55.4	61.5		71.5
- Non oil and gas	250.5	267.6	306.8	310.2		379.1
ii. Other domestic taxes	294.9	305.1	358.5	356.7		423.2
b. International trade tax	36.3	18.7	22.6	25.9		30.4
i. Import duties	22.8	18.1	17.1	20.6		24.3
ii.Export tax	13.6	0.6	5.5	5.3		6.1
2. Non tax revenues	**320.6**	**226.4**	**247.2**	**263.2**	**243.5**	**294.7**
o/w natural resources	224.5	137.9	164.7	166.5		182.4
i. Oil and gas	211.6	125.7	151.7	151.3		165.2
ii. Non oil and gas	12.8	12.2	13.0	15.3		17.2
B. Expenditures	**985.7**	**956.4**	**1,126.1**	**1,080.1**	**1,204.9**	**1229.5**
1. Central government	**693.4**	**647.8**	**781.5**	**737.2**	**840.9**	**825.3**
- Personnel	112.8	127.7	162.4	152.6		182.0
- Material expenditure	56.0	79.6	110.7	103.2		123.1
- Capital expenditure	72.8	74.5	88.1	85.0		101.3
- Interest payments	88.4	93.8	105.6	102.9		98.1
- Subsidies	275.3	159.5	202.3	196.2		205.0
- Grants expenditure	0.0	0.0	0.2	0.0		0.0
- Social expenditure	57.7	73.8	69.7	66.2		79.0
- Other expenditures	30.3	38.9	42.4	30.9		36.9
2. Transfers to the regions	**292.4**	**308.6**	**344.6**	**342.9**	**364.1**	**404.2**
C. Primary balance	84.3	6.4	-28.1	40.5		67.5
D. SURPLUS / DEFICIT	(4.1)	(87.4)	(133.7)	(62.5)	(118.3)	(30.6)
Deficit (per cent of GDP)	(0.1)	(1.6)	(2.1)	(1.0)	(1.7)	(0.4)
Economic assumptions/outcomes						
Gross domestic product (GDP)	4,954	5,613	6,254	6,506	6,959	7,757
Economic growth (per cent)	6.1	4.5	5.8	5.9	6.2 - 6.4	6.2
Inflation (per cent)	11.1	2.8	5.3	5.3	4.9 - 5.3	6.3
Exchange rate (IDR/USD)	9,691	9,408	9,200	9,218	9100 - 9400	9,200
Interest rate of SBI (average %)	9.3	7.6	6.5	6.5	6.3 - 6.7	6.5
Crude oil price (USD/barrel)	97.0	61.6	80.0	77.7	80 - 85	78.0
Oil production ('000 barrels/day)	931	952	965	965	960 -980	970

Sources: Ministry of Finance, World Bank

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