

# The transmission mechanism and policy responses to global monetary developments: the Indonesian experience

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## Abstract

This note describes Indonesia's experiences of the monetary policy transmission mechanism and the country's policy responses to global monetary developments, with a focus on the period following the Federal Reserve's announcement in May 2013 of its plans to begin tapering its quantitative easing measures. The Fed's unconventional monetary policy and its normalisation process have given rise to the policy "trilemma" of trying to find the optimal interest rate response while maintaining exchange rate flexibility and managing capital flows. In the case of Indonesia, we have managed this "trilemma" through a mix of monetary and macroprudential policies. Clear communication, policy coordination with the government on inflation, fiscal and structural reforms, as well as central bank cooperation on strengthening regional financial arrangements have also played a crucial role in these efforts.

Three particular issues are discussed here. First, the setting of interest rates supported by exchange rate flexibility and capital flow management in response to the policy "trilemma" arising from global monetary developments. Second, the efficacy of macroprudential measures in reinforcing the lending channel of the monetary policy transmission mechanism on the back of volatile capital flows and an underdeveloped financial market. Third, the importance to domestic monetary and financial system stability of financial market deepening through its role in smoothing out the transmission of global monetary developments. The note concludes with an agenda for further strengthening macroeconomic stability in the short term and for accelerating reforms to promote sustainable and balanced growth in the medium term.

Keywords: Unconventional monetary policy, policy mix, monetary policy, macroprudential policy, central banking, financial market deepening

JEL classification: E52, E58, F31

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## I. Introduction

Indonesia this year is coping relatively well with the spillovers from the normalisation of the advanced countries' unconventional monetary policies (UMP). In fact, over the past two months portfolio inflows have increased, equity prices have rebounded, bond yields have decreased and the exchange rate has appreciated (Graphs 1–4). This is evidence that strengthening domestic macroeconomic fundamentals and financial system stability play a crucial role in mitigating such spillovers. The country's bold mix of monetary and macroprudential measures since June 2013 have resulted in a spate of positive data showing benign inflation, a faster than expected decline in the current account deficit, and better than expected GDP growth. Nevertheless, there is no room for complacency. In the short term, the focus of macroeconomic policy is still stabilisation ahead of growth. Meanwhile, structural reforms in the real economy as well as financial market deepening are also a priority for ensuring strong, balanced and sustainable growth over the medium term.

This note describes Indonesia's experiences of the monetary policy transmission mechanism and its policy responses to global monetary developments, with a focus on the period following the Fed's announcement in May 2013 of its plans to start tapering its quantitative easing measures. In particular, three main issues are discussed. First, the setting of interest rates supported by exchange rate flexibility and capital flow management in response to the policy "trilemma" that has arisen from global monetary developments. Second, the efficacy of macroprudential measures in reinforcing the lending channel of the monetary policy transmission mechanism on the back of volatile capital flows and an underdeveloped financial market. Third, the importance to domestic monetary and financial system stability of financial market deepening through its role in smoothing out the transmission of global monetary developments. The note concludes with an agenda for further strengthening macroeconomic stability in the short term and for accelerating reforms to promote sustainable and balanced growth in the medium term.

## II. Making possible the policy "trilemma"

The UMP and its normalisation have given rise to the policy "trilemma" of trying to find the optimal interest rate response while also maintaining exchange rate flexibility and managing capital flows. Interest rate policy needs to be geared toward maintaining price stability, taking into account the impacts of global interest rates and leaving some scope for exchange rate flexibility to act as a shock absorber. However, market overreactions and structural rigidities can cause unnecessary exchange rate overshooting and volatility that may hamper growth as well as overall monetary and financial system stability. Volatility in capital flows also complicates the task of finding the optimal monetary policy response for achieving domestic economic objectives.

In the case of Indonesia, we have addressed this policy "trilemma" by pursuing a mix of policies consisting of interest rate actions complemented by exchange rate flexibility, capital flow management and macroprudential measures. Clear communication, policy coordination with the government on inflation, fiscal and structural reforms, as well as central bank cooperation on strengthening regional

financial arrangements have also played a crucial role. Our interest rate policy, as in other inflation-targeting countries, is our main instrument for anchoring inflation expectations and forecasts within the targeted range. Our exchange rate policy is geared toward keeping the exchange rate stable along its fundamental path. We also pursue capital flow management to an extent with a view to dampening excessive short-term volatility in these flows. Our macroprudential measures aim to manage procyclicality and excessive lending in specific sectors. Overall, the policy mix is intended to reinforce the effectiveness of all monetary transmission channels (the interest rate, exchange rate, money and lending, asset price, and expectation channels) to better withstand the spillover impacts of global monetary developments.

### Interest rate policy

Indonesia was one of the first central banks to raise its policy rate in the aftermath of the Fed's announcement in May 2013 that it planned to begin tapering its quantitative easing measures. We started by raising the BI policy rate by 25 bp in June 2013. We then aggressively raised the policy rate by 50 bp in July, by another 50 bp in August and by 25 bp in September 2013. After pausing in October, we again raised the policy rate by 25 bp in November. In total, the policy rate was raised by 175 bp to 7.50% within six months. We have kept the policy rate on hold since then and maintained our tight monetary policy stance.

The primary objective of this aggressive interest rate policy has been to anchor inflation expectations, which initially had risen due to food price shocks. Another aim has been to contain the second-round impacts of fuel price hikes that caused CPI inflation to peak at 9.0% in July 2013. Moreover, the sharp increase in the policy rate has had the goal of dampening domestic demand in order to rein in the current account deficit, which rose to a peak of 4.4% of GDP in Q2 2013. The timing of the aggressive policy rate increases has also been important as they have helped respond to the capital reversals, rising interest rates and increasing risks in the global financial markets following the Fed's announcement of its tapering plans. We believe the bold interest rate response has been key in sending a strong, clear signal to the markets regarding our monetary policy deliberations. Greater consideration has been given to domestic factors, although global monetary conditions and trends are always taken into account.

Our interest rate response has succeeded in containing inflation pressures and has helped reduce the current account deficit faster than initially forecast. CPI inflation has returned to its normal path since September 2013 and dropped to 8.3% in December, much lower than our earlier forecast of 9.0–9.8% (Graph 5). The inflation rate decelerated further to 7.7% in February 2014 and we believe it will come down to 4.9% by the end of 2014, thus falling within our targeted range of  $4.5\% \pm 1$  percentage point (Graph 6). The trade balance is now in surplus and the current account deficit is falling much faster than expected, from 4.4% of GDP in Q2 2013 to 3.8% of GDP in Q3 2013 to 1.9% of GDP in Q4 2013 (Graphs 7 and 8). We aim to lower the current account deficit from 3.3% of GDP in 2013 to about 2.5% of GDP in 2014 and around 2.0% of GDP in 2015. We believe this level is more sustainable in the longer term for Indonesia. The good news is that this price stability and external stability can be achieved with better than expected economic growth. GDP growth reached 5.8% in 2013 (Graph 9) and is forecast to be at the lower end of the 5.8–6.2% range in 2014.

The interest rate transmission mechanism is working, though not yet fully. Following the 175 bp increase in the policy rate, bank deposit rates have risen by 240 bp as liquidity conditions have tightened and competition for funding among banks has increased (Graph 10). However, lending rates have increased by less than 50 bp due to a combination of factors, eg a time lag in setting interest rates, excess liquidity and aggressive lending by some banks, as well as shallowness in the domestic financial market. Liquidity and monetary aggregates have already declined substantially, eg M1 growth dropped from around 22% in January 2013 to 12% in January 2014 (Graph 11), even though liquidity is not evenly distributed among banks. Bank lending growth declined more gradually, from 23.5% to 21.1%, during the same period, although it accounts for 16.9% when adjusted for exchange rate depreciation (Graph 12). Looking ahead, even though the policy rate is being held constant, continuous monetary tightening will bring about a further increase in lending rates and a decline in lending growth.

### Exchange rate policy

Although policy rate increases have succeeded in anchoring inflation expectations and helped dampen domestic demand, they alone could not be expected to bring about all the necessary economic adjustments, such as further reducing the current account deficit and mitigating the spillover effects from the UMP normalisation process. To do so would have required excessive increases in the policy rate. Instead, some scope for exchange rate flexibility was necessary to help facilitate the reduction of the current account deficit and the transmission of global monetary policy normalisation.

In Indonesia, exchange rate policy is geared toward maintaining the stability of exchange rate movements in a way that is consistent with the exchange rate's fundamental path. This path is calibrated by using a particular methodology for determining the fundamental exchange rate and then applying this rate in a simulation to check its consistency with macroeconomic forecasts before determining the policy interest rate. The real effective exchange rate (REER) is one approach for checking the consistency of exchange rate movements with the fundamental rate (Graph 13). To achieve the exchange rate policy objective, symmetric intervention in the foreign exchange market is conducted to smooth out the short-term volatility of day-to-day exchange rate movements along the path that is consistent with the fundamental equilibrium exercises. The objective is not to achieve a certain level or range of exchange rates, but merely to avoid excessive volatility that could give rise to panic or disrupt the smooth functioning of the foreign exchange market.

However, introducing greater exchange rate flexibility is not always easy when faced with a shallow domestic foreign exchange market. This was the case for Indonesia last year in the aftermath of the Fed's announcement regarding its planned tapering. The markets were not ready to adjust to our new policy of greater exchange rate flexibility to manage the spillover impacts of the Fed's tapering and facilitate the adjustments to the current account deficit, especially during the period June–August 2013. Along with increasing volatility and exchange rate depreciation during this period there was considerable divergence in the banks' exchange rate determination (Graph 14). Frequent and close communication with market participants was important to enable them to adjust their behaviour to the new

policy direction. The domestic foreign exchange market began functioning smoothly again in September 2013 and has done so since.

## Dual interventions

Our intervention in the foreign exchange market is conducted in a number of ways. Intervention in the spot market is indirectly channelled through agent banks so that it does not disrupt the functioning of the foreign exchange market. Intervention through forward and swap transactions is conducted both bilaterally and in weekly auctions with the banks. Certainty and continuity of the auctions are important for price discovery and for deepening the foreign exchange market.

Foreign exchange intervention is supported by central bank operations in the secondary market for government bonds, especially during periods of large capital reversals involving foreign investors' holdings of government bonds, a tactic that we call dual intervention. There are at least three reasons for Bank Indonesia's purchases of government bonds from the secondary market.

First, they help strengthen the effectiveness of foreign exchange intervention in stabilising the exchange rate. By buying bonds from the secondary market, the central bank sends a clear signal that it is prepared to buy government bonds that foreign investors wish to offload, especially in periods of severe capital reversal pressure, as evidenced in the aftermath of the Fed's announcement about its planned tapering.

Second, purchases of government bonds from the secondary market are also intended to synchronise liquidity management in both the foreign exchange and domestic money markets. Through these dual interventions, some of the rupiah liquidity that has been absorbed due to selling dollars in foreign exchange intervention can be recirculated back into the market, thus avoiding an excessive liquidity squeeze and increases in money market rates.

Third, the dual interventions are a way of achieving the objective of monetary stability in a manner that is consistent with maintaining financial system stability. By stabilising the foreign exchange and government bond markets, the dual interventions help stabilise the overall financial system. The dual interventions also help the transmission of short-term interest rates to longer-term interest rates, especially those of government bonds.

## Capital flow management

Volatile capital flows, especially those of a short-term and speculative nature, increase the risks to both monetary and financial system stability. Carry trade flows often give rise to excessive volatility in exchange rate movements beyond that implied by fundamentals. Dual interventions are one strategy to smooth out this volatility. But in some cases, the capital flows need to be managed.

In Indonesia, our policy for capital flow management is guided by three principles. First, the objective is to help mitigate the negative impacts of short-term volatility in capital flows on the stability of both the exchange rate and the overall monetary and financial system. Second, the measures specifically target short-term and speculative capital flows; medium-to-longer-term flows are welcomed as they benefit the economy. Third, the measures are consistent with our broad principle of

maintaining a free foreign exchange system. They are temporary, ie the measures are strengthened in the event of excessive capital inflows and relaxed in the event of excessive capital outflows, and do not differentiate between domestic and international investors.

The following provides a clear example. In response to the strong capital inflows following the UMP, we introduced in 2010 a six-month holding period for transactions in central bank bills and imposed a ceiling of 30% on banks' short-term offshore borrowings in relation to their capital. However, following the Fed's announcement in 2013 about its planned tapering we relaxed the holding period for central bank bills to one month and expanded the number of transactions that could be exempted from the calculation of banks' offshore borrowings.

We believe that these measures help dampen short-term and volatile capital flows, thus making them consistent with the objective of managing financial system stability.

### III. Assessing the macroprudential measures

As previously mentioned, the interest rate channel of monetary policy is not always smooth or fully effective in a country with an underdeveloped financial market, such as Indonesia. Other channels of monetary transmission need to be used, including the lending channel. This is where macroprudential measures can play a key role, eg in their ability to smooth out the procyclical nature of bank lending behaviour. Thus, we take account of both the objectives of maintaining monetary and financial system stability when designing macroprudential measures.

In Indonesia, the formulation of macroprudential measures is done as follows. First, we develop a number of methodologies to estimate optimal lending growth for the banks, including what we call the non-accelerating inflation lending growth model. We then apply this model to aggregate lending growth and to the lending growth of each bank, as well as to certain types of lending (consumption, working capital, and investment) and by economic sector. By comparing these optimal growth figures with actual lending growth, we get an idea of where lending is excessive and therefore also of which macroprudential measures to use.

This is the approach that we applied when introducing the loan-to-value (LTV) ratio for lending to the automotive and property sectors in 2012. We subsequently strengthened the LTV ratio on lending to the property sector in 2013, especially on mortgages for second and subsequent purchases of certain types of houses and apartments. The measures were also complemented by supervisory measures against banks that we viewed as excessive in their lending behaviour. Note that the formulation and implementation of macroprudential measures required a very detailed and complex analysis and calibration, as well as the need for clear communication with the banks and the business community.

Our experience shows that the macroprudential measures and supervisory actions helped reinforce the effectiveness of the monetary transmission mechanism and supported financial system stability. Although lending growth increased prior to the implementation of these measures, it is likely that banks and their customers were taking advantage of the interim period before the measures came into effect. Once the measures were implemented, the banks and their customers adjusted their

behaviour in a relatively short time. For instance, the growth in mortgages on housing of less than 21 square metres declined from more than 100% to negative growth during the period June–September 2012 (Graph 16). Likewise, the growth in mortgages on apartments of less than 21 square metres dropped from more than 300% to less than 10% during the period January–November 2013 (Graph 17). It should be noted that the automotive and property sectors have very large import content, so managing the growth in lending to these two sectors helped reduce the current account deficit.

## IV. Financial market deepening

The stage of development and depth of the domestic financial market influence the transmission mechanism and the policy response to global monetary factors. This has been the case during both the UMP period and its normalisation process. The preceding discussions in this paper clearly show the challenges that we have faced in Indonesia. Interest rate transmission lags in the absence of domestic money and fixed income markets that can provide an efficient mechanism for interest rate and term structure determination. The shallowness of the domestic foreign exchange market often causes excessive volatility and overshooting of exchange rate movements in response to global monetary and financial shocks.

This is why we view financial market deepening as an integral part of our policy response to the normalisation of the UMP in the advanced countries. In addition to strengthening economic fundamentals and promoting sound macroeconomic and financial system stability, the best defence against the spillover effects of such global monetary and financial developments is to make our financial market more resilient to swings in international investor preferences.

We have launched a series of policy initiatives to deepen our financial market, especially the domestic money and foreign exchange markets. In the foreign exchange market, we have established the Jakarta Interbank Spot Dollar Rate (JISDOR), reflecting actual transacted exchange rates, as a reliable reference for the market. Recently, the Association of Banks in Singapore (ABS) recommended that their members use the JISDOR as a reference rate in fixing their non-deliverable forward (NDF) transactions. We have also introduced FX swap transactions with the banks, both bilaterally and in weekly auctions. We have further relaxed the regulations on underlying transactions for forwards and swaps as hedging instruments, and we are now campaigning for banks and corporates to use more hedging instruments when managing their increasing exchange rate risks.

We have also made significant progress in deepening the domestic money market, especially for collateralised transactions. We use more reverse repos with government bonds in our monetary operations. We have succeeded in developing an interbank repo using government bonds as the underlying securities. Within less than three months, the size of the interbank repos has increased sharply, from next to nothing to around USD 3 billion. The number of banks participating in the interbank repos has also increased, from only eight to 46, and more will join.



## V. The next agenda

Despite the progress made by Indonesia, we cannot afford to be complacent. The road ahead is still bumpy, and the uncertainty and risks in the global financial markets remain high. Further strengthening the domestic economic and financial system is key for better withstanding the spillover impacts of the normalisation of the Fed's monetary policy. The monetary and macroprudential policy mix needs to be continuously adjusted in anticipation of the spillover impacts and to be closely coordinated with fiscal policy to maintain overall macroeconomic and financial system stability. Structural reforms in the real economy as well as financial market deepening are also a priority to ensure strong, balanced and sustainable growth over the medium term.

In the short term, the challenges to maintaining macroeconomic and financial system stability need to be continuously addressed. Monetary policy will remain tight to ensure that inflation expectations are anchored and that the current account deficit is reduced further. Macroprudential measures and supervisory actions will further strengthen the liquidity and credit channels of monetary policy transmission. Fiscal policy needs to be geared toward maintaining fiscal sustainability and, whenever possible, to provide better expenditure allocation for supporting growth and poverty alleviation, including reformulating energy subsidies if needed.

Further initiatives to develop the financial markets are key for creating an environment that is conducive to beneficial capital inflows and financing for the economy. The significant progress made so far in deepening the foreign exchange and money markets will be followed by additional measures to strengthen interest rate determination, product development, as well as market infrastructure and conduct. The objective is to expedite the development of interbank swaps to provide hedging facilities for the banks and corporates, thus enabling them to better mitigate increasing exchange rate risks. Close links between the already developed interbank repo market and the much-needed interbank swap market would facilitate the smooth functioning of the domestic money market in responding to global monetary transmission. More products will be introduced in both the money and foreign exchange markets, including negotiable certificate deposits, commercial paper, promissory notes and medium-term notes.

Structural reforms are also progressing, albeit at a slower pace. The strategy is to promote exports and substitute imports by expanding domestic production capacity, including moving our focus from natural resources to manufacturing in order to increase gains in value added. Last year, the government introduced a tax policy including measures to promote exports of a number of manufactured goods, provide tax incentives for production of import-substitution goods, and raise import tax on luxury goods. Amendments to the energy laws were also made by providing tax incentives and disincentives to encourage firms to advance their processing of natural resources. Some progress is also being seen in infrastructure development, including airports and seaports, railways, electricity and roads. However, more progress is needed to expedite the structural reforms in a number of key areas of investment, manufacturing, agriculture and infrastructure.

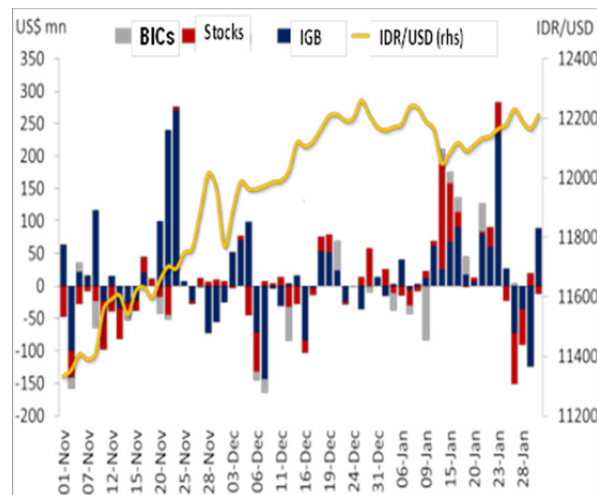
To conclude, Indonesia has coped relatively well with the spillover effects from the normalisation of the Fed's monetary policy. The policy mix of monetary and macroprudential measures has proven to be effective in anchoring inflation



expectations, lowering the current account deficit and maintaining financial system stability, with a modest decline in economic growth. The mix of monetary and fiscal policies has also supported the stabilisation process over the short term. Nevertheless, some progress in structural reforms will be necessary to move the economy toward higher, sustainable and balanced economic growth over the medium to long term.

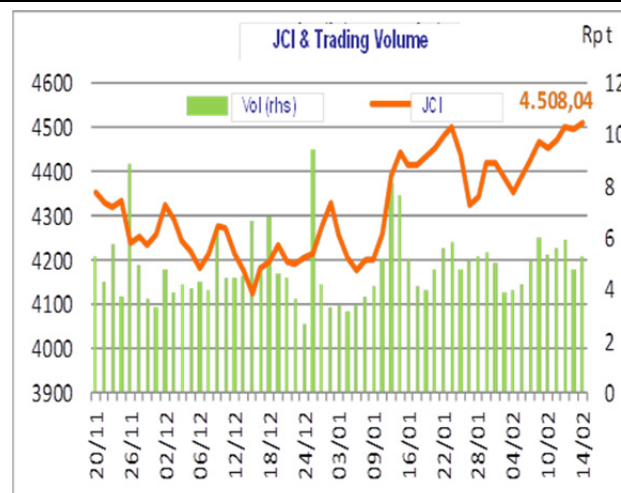
Portfolio inflows and IDR/USD

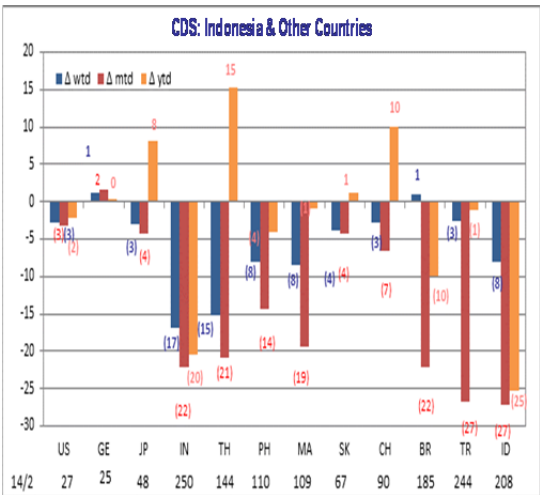
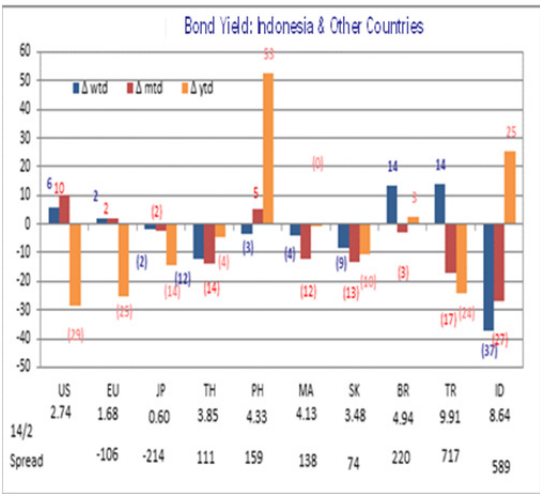
Graph 1

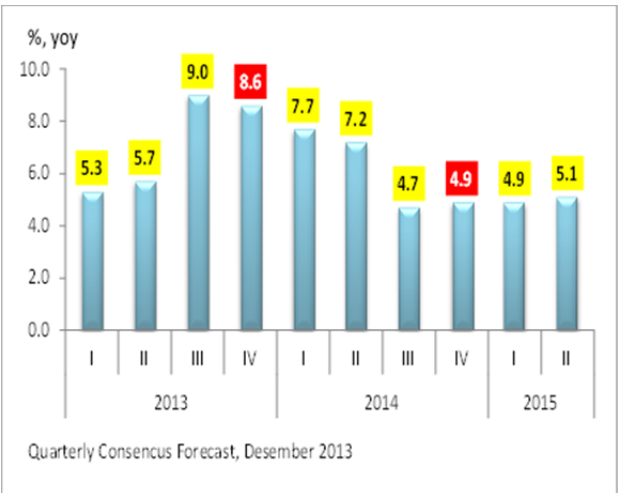
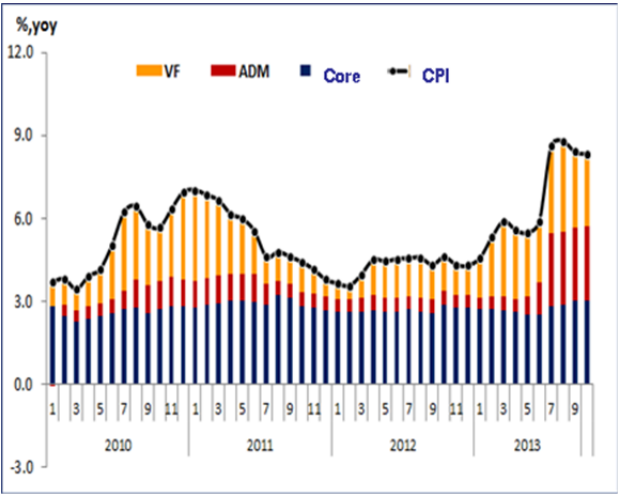


JCI stock prices and volume

Graph 2

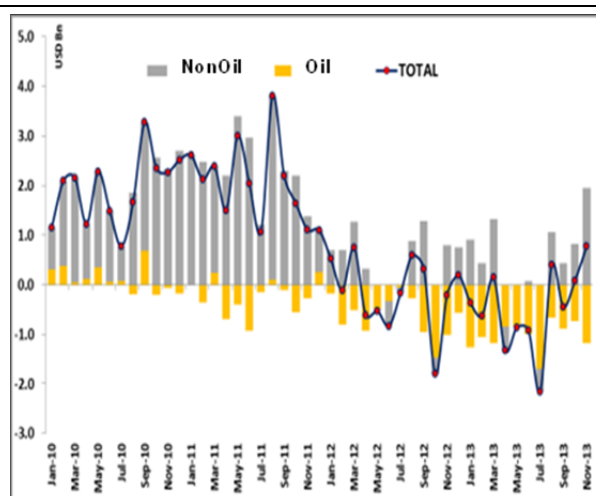






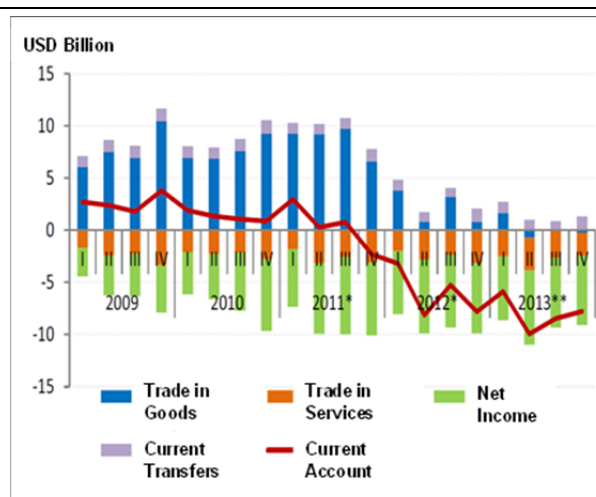
Trade balances: oil and non-oil

Graph 7



Current account deficit

Graph 8



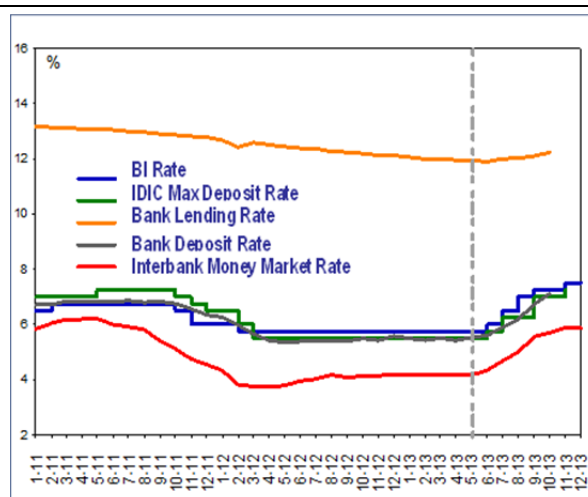
## GDP growth by expenditure

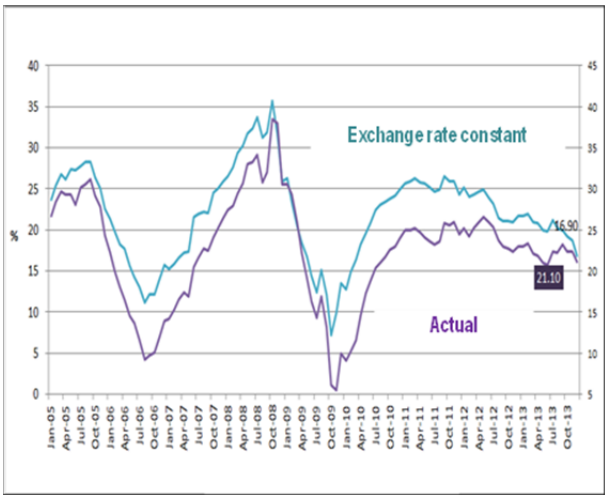
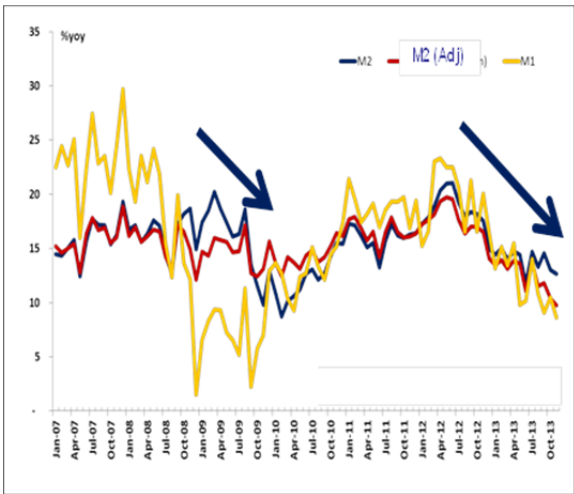
Graph 9

No	Components	2012**					2013***					
		I	II	III	IV	TOTAL	I	II	III	IV		TOTAL
										Fore- cast	Real- isation	
A	Domestic Demand^	6.40	7.38	5.94	4.90	6.12	4.99	4.69	5.50	5.68	5.13	5.08
1	Consumption	5.09	5.64	4.50	3.91	4.76	4.77	4.78	5.89	6.13	5.44	5.23
	- Household C.	4.94	5.24	5.57	5.36	5.28	5.24	5.15	5.48	5.56	5.25	5.28
	- Government C.	6.52	8.66	-2.80	-3.31	1.28	0.44	2.17	8.91	9.21	6.45	4.87
2	Gross Fixed Cap Formation	9.86	11.96	9.68	7.49	9.69	5.54	4.47	4.54	4.55	4.37	4.71
	- GFCF Building	7.08	6.67	7.56	8.18	7.39	6.78	6.61	6.23	6.20	6.68	6.57
	- GFCF Nonbuilding	17.61	26.90	15.24	5.78	15.81	2.39	-0.64	0.40	0.36	-1.49	0.10
B	Net Export	5.75	-27.32	-9.93	-22.03	-13.72	16.44	26.61	5.79	9.39	46.34	22.40
3	Export	8.23	2.63	-2.56	0.48	2.00	3.58	4.82	5.25	6.00	7.40	5.30
4	Import	8.95	11.33	-0.17	6.82	6.66	-0.03	0.69	5.09	5.30	-0.60	1.21
	Gross Domestic Product	6.33	6.34	6.21	6.18	6.26	6.03	5.76	5.63	5.49	5.72	5.78

## BI rate vs deposit and lending rates

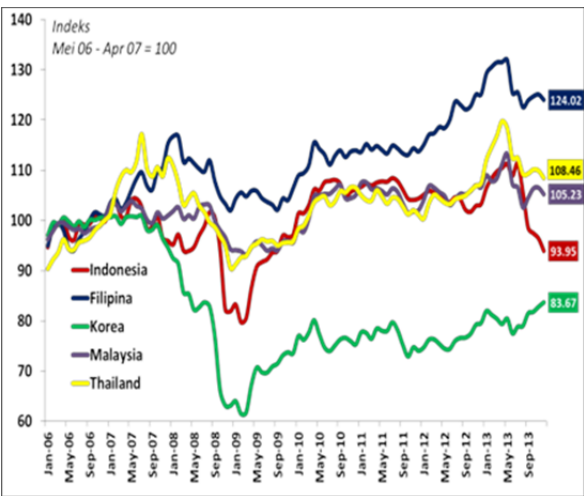
Graph 10





Real effective exchange rate (REER)

Graph 13



IDR/USD: quotation vs transaction

Graph 14

