Capital flows in Indonesia: challenges and policy responses

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1. Introduction

Experience across many different countries indicates that international financial liberalisation not only offers benefits but also poses risks (McLean and Shrestha (2002)). Financial liberalisation will stimulate foreign capital inflows of benefit in stabilising consumption levels and funding productive investment. Foreign capital, and especially foreign direct investment, also facilitates transfer of technology and managerial knowledge. Portfolio investment and offshore borrowing can contribute to the growth of the domestic financial market. Studies have found that, provided there is legal certainty, capital inflows can improve macroeconomic policy discipline (Grilli and Milesi-Ferretti (1995)).

Besides the benefits, financial liberalisation also involves risks. Capital inflows can put upward pressure on the recipient country's currency, which will in turn adversely affect the trade balance. High-volume capital inflows can lead to rapid consumption growth, triggering a rise in inflation and the likelihood of a persistent current account deficit. Liberalisation of capital flows in a country with an inadequately developed financial system can render that country more vulnerable to crisis. For instance, credit expansion funded by foreign capital can put pressure on bank balance sheets in the event of exchange rate turmoil, exacerbating the fragility of the financial system (Calvo et al (1993)).

The past few years have seen intensified debates on the advantages of liberalising capital flows, particularly since the round of balance of payments crises among developing countries during the 1990s. The financial and economic crises in Mexico and Asia, and of course the 1997–98 crisis in Indonesia, demonstrate that even a country with high economic growth and sound macroeconomic policies still faces the risk of rapid capital outflows. This paper describes Indonesia's experience in managing capital flows before, during and after the nation's economic crisis.

2. Development and impact of capital flows

2.1 Development of capital flows

Over the last three decades, in line with a greater degree of economic openness, the Indonesian economy has expanded impressively. Against this propitious backdrop, average annual economic growth from 1981 to 2007 reached 5.5%. This growth rate, however, falls below growth during the pre-crisis period, which averaged 6.7%. Improved macroeconomic stability was also evidenced by relatively controlled inflation, except during the crisis in 1997–98 and in 2005 due to the reduction in fuel subsidies. Meanwhile, several external sector indicators demonstrated similar tendencies, such as: growth of the current account,

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which ran a surplus during the last decade; the debt service ratio, which dropped below 20%; the threefold increase in international reserves over the past decade; and the competitive real exchange rate.

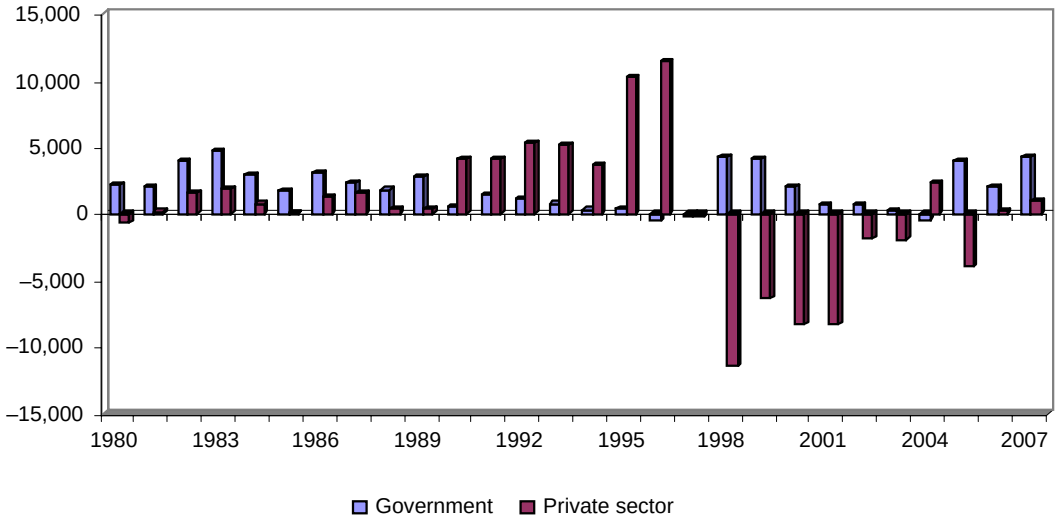
Satisfactory external sector performance is evident from the agreeable developments in Indonesia's balance of payments structure over the past decade. Principally from 1998, the current account began to run a surplus, while the capital and financial account experienced excessive outflows during the economic crisis. The positive trends that supported the overall balance surplus continued up to 2007. This success was partially attributable to the government's role in actively supporting non-oil/gas exports by promulgating several conducive policies, but also due in part to the soaring global oil price that quickly boosted foreign exchange revenues stemming from the oil sector.

Indeed, the financial account in Indonesia has not always generated a surplus. From 1980 to 1996, the financial account ran a surplus, with an average of USD 4,886 million per year. However, from 1997 until 2003, the financial account recorded an average annual deficit of USD 5,017 million. There are many causal factors for this. First, waning government capital inflows, primarily due to less foreign grants for projects, both bilateral and multilateral. For instance in 2000, grants from the ADB, the IBRD and Japan fell 59% to USD 1.6 billion. In addition, food assistance decreased by 73% to a value of USD 73 million, which further exacerbated the shrinking government net capital inflow surplus.

Graph 1

Net capital flows

In millions of US dollars



Source: Bank Indonesia.

Second, ebbing private capital inflows, mainly due to the increased servicing of private foreign debt (outflows), typically from the banking sector. This included capital outflow with its apogee during the economic crisis period of 1997–98, which compounded the deficit of private capital flows (Graph 1).

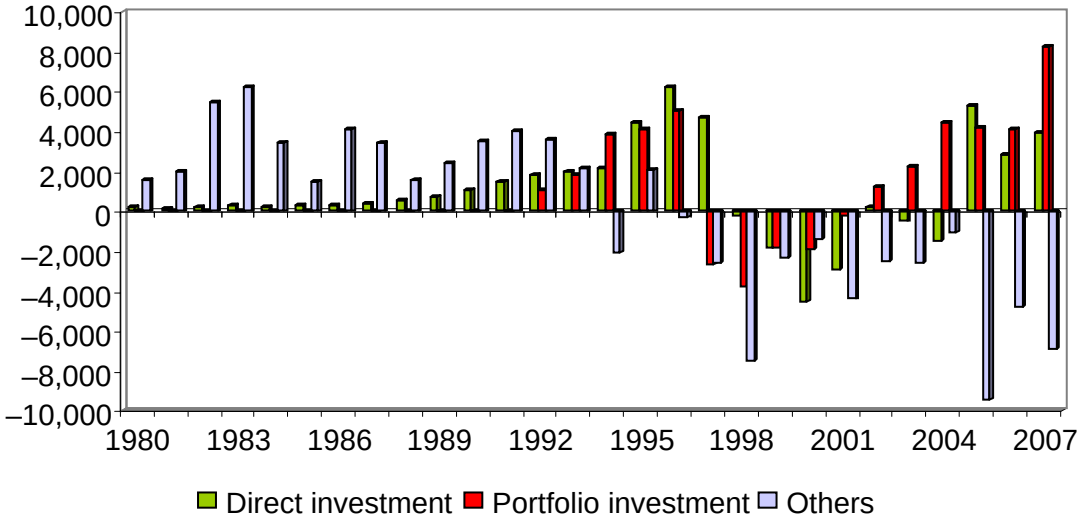
The capital flows phenomenon has thus become an important issue requiring further observation, especially in the context of and given the relevance of government endeavours to promote sustainable economic activities. In terms of the players, up to the early 1980s, capital inflows to Indonesia were dominated by government capital because at that time the government had a domineering influence in economic development. Besides, the domestic

financial market was underdeveloped, so did not attract the domestic private sector or foreign private sector to participate. In 1990, as a result of the financial reform programme and supported by the expanding role of the private sector in the economy, private capital began to dominate capital flows to Indonesia. Noteworthy growth has been reported over the last six years since the crisis, with a significant upsurge in net private capital flows (eg portfolio investment, foreign debt) being recorded, peaking at USD 8,247 million in 2007. Meanwhile, foreign direct investment (FDI) recommenced in 2004 after a downturn during the 1997–98 economic crisis (Graph 2).

Graph 2

Composition of net capital flows

In millions of US dollars



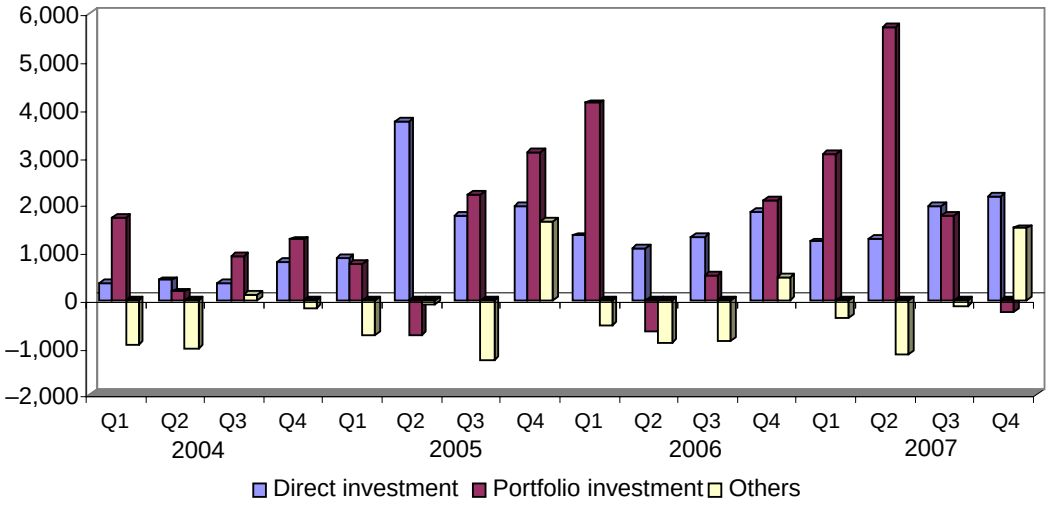
Source: Bank Indonesia.

On the inflow side, the dominance of other investment inflows (external debt, loan repayment, etc, from both the private and the public sector) in the 1990s was somewhat eroded by FDI and portfolio investment flows after 2005 (Graph 3). Post-crisis portfolio investment inflow was initially recorded in 2002. Although FDI inflows started to grow in 2004 and remained more or less on a positive trend, capital inflows are still dominated by portfolio (and other) investment flows. Meanwhile, gross capital outflows seemed to be improperly recorded until 2004. In this regard, as shown in Graph 4, capital outflows were mainly attributed to transactions in other investment assets (records of external debt transactions from the corporate and banking sectors). Sharp deficits in other investment assets in 2005 (USD 10.4 billion) were due to increased asset holdings (currency and deposits) by the private sector in foreign countries, particularly in the second and third quarters of 2005. Similar movements have been recorded recently, in July–August 2007, with other private sector investment assets increasing from USD 486 million (end-September 2006) to USD 2.6 billion (end-September 2007). An increase in other investment assets has been detected from increased deposits in foreign countries by domestic banks (banks' nostro/foreign exchange accounts at foreign correspondent banks).

Graph 3

Composition of gross capital inflows

In millions of US dollars

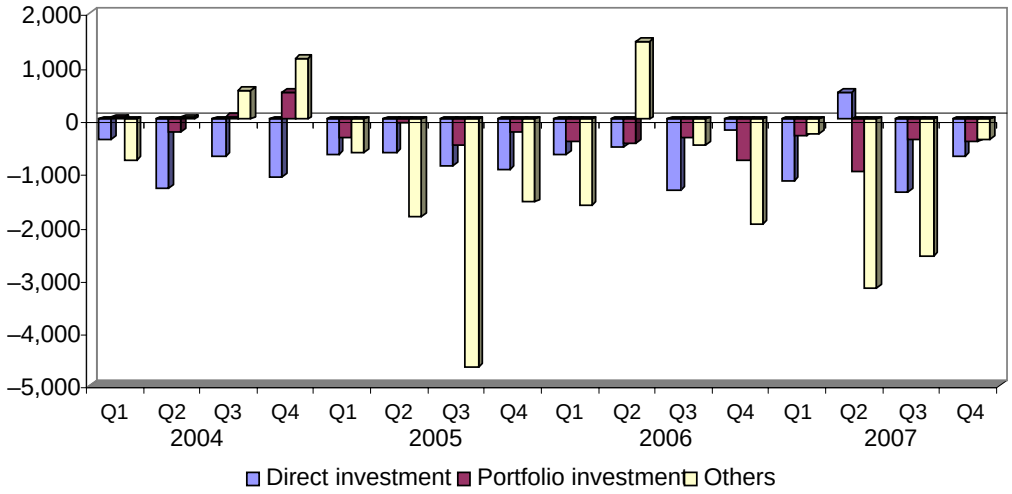


Source: Bank Indonesia.

Graph 4

Composition of gross capital outflows

In millions of US dollars



Source: Bank Indonesia.

2.2 Capital flows: drivers and impact on the economy

Drivers of capital flows

The brisk rate of capital inflows, especially during the pre-crisis period, was, on the one hand, driven by the pressing need for development funds and, on the other, encouraged by financial liberalisation. Domestic saving, which ordinarily should be the main source of development financing, was inadequate for the scale of investment needed. Realising the importance of domestic as well as foreign financing, the government moved forward with progressive reforms for the economy and the financial sector. The most important policy

reform for improvement of capital flows was the launching of the free foreign exchange regime in 1970, under which anyone in Indonesia could hold, buy and sell foreign exchange. In a subsequent reform in 1982, exporters were allowed to hold foreign exchange from their export earnings as needed. In 1983 and 1988, the government launched ambitious deregulation policies for the banking system and the capital market. In June 1983, the government eliminated ceilings on credit allocations and interest rates. The October 1988 banking deregulation led to a rapid expansion in banking networks and activities, including the opening of foreign banks and expansion of foreign bank branch operations. Bank ownership was liberalised in 1989 with foreign investors permitted to own up to 99% of bank shares listed on the capital market. Bank Indonesia also replaced offshore borrowing ceilings for banks with a new requirement on the net open position. In the real sector, new sectors were opened to foreign investment in 1991.

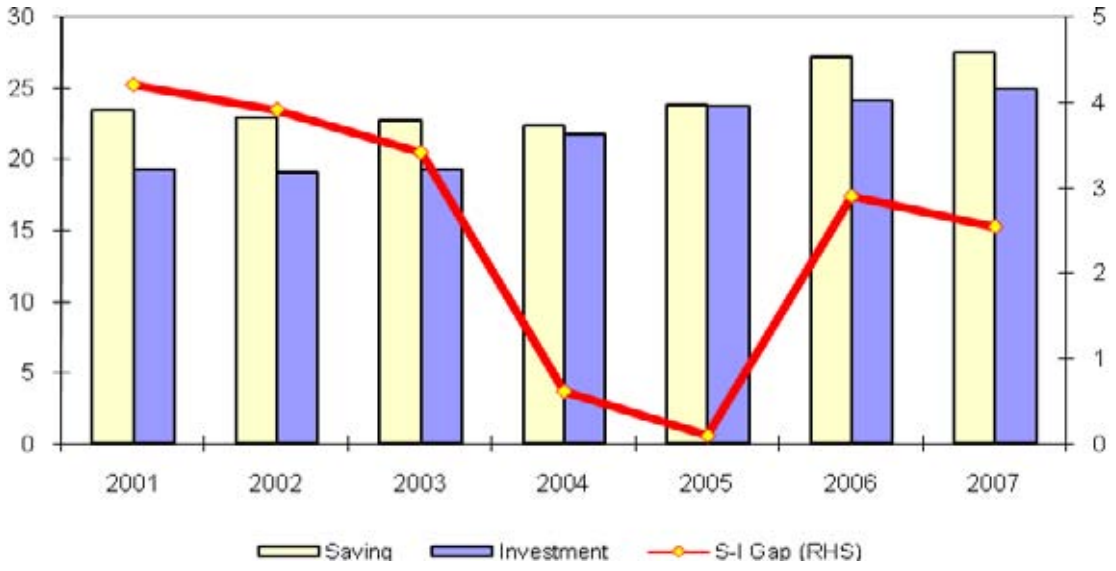
Other internal factors attracting foreign capital to Indonesia included stable macroeconomic conditions (reflected in relatively strong economic growth, low inflation and a stable exchange rate) and the high interest rate differential. On the external side, Indonesia's capital inflows were encouraged by the downward trend in international interest rates at the beginning of 1990. At the same time, the recession in the United States, Japan and some European countries prompted investors to reallocate portfolios to emerging markets, including Indonesia. Another external factor was the rapid expansion in the number of investment institutions, such as mutual funds, that invested heavily in developing countries in pursuit of long-term profits and diversification of risks.

Reflecting the inadequacy of domestic savings as the main source of development financing was the savings-investment (S-I) gap for the 1980–96 period, which averaged 2.5 to 3% of total GDP. During the 1998–99 economic crisis, Indonesia the S-I gap turned into a surplus, reflecting a significant drop in investment activities. In the recovery process of the post-crisis period, the steady improvement in the overall macro economy and sociopolitical condition has gradually reversed the picture, producing the highest momentum in 2001 with an S-I surplus of 4.2% of GDP. Nevertheless, it can be seen from Graph 5 that while saving and investment have steadily increased, the net borrowing (S-I) gap has fluctuated during the last five years. This confirms that the economic recovery process has been volatile and relatively vulnerable to subsequent shocks.

Graph 5

Savings-investment gap

As a percentage of GDP



Source: Bank Indonesia.

Impact of capital flows on the economy

The positive impact of capital inflows on the Indonesian economy is reflected in macroeconomic indicators during the pre-crisis period (Table 1). Between 1989 and 1996, Indonesia enjoyed one of the highest growth rates in Asia. Growth during the period averaged 7.2% while inflation was relatively subdued at below 10%. Unemployment averaged 4.9%. Per capita GDP improved significantly, rising from USD 596 in 1990 to USD 1,155 in 1996. The high economic growth occurred alongside structural changes in the economy, which shifted away from the traditionally dominant role of agriculture towards heavier reliance on manufacturing as the engine of the economy.

Table 1

Pre-crisis macroeconomic performance in Indonesia

	1990	1991	1992	1993	1994	1995	1996
Internal stability							
Real GDP growth (in per cent)	9.0	8.9	7.2	7.3	7.5	8.1	7.8
Agriculture	2.3	2.9	6.3	1.7	0.6	4.2	1.9
Industry	13.2	11.8	8.2	9.8	11.1	10.2	10.4
Services	7.6	9.3	6.8	7.5	7.2	7.9	7.6
Percentage of GDP:							
Consumption	63.3	64.1	61.8	64.7	65.6	65.9	66.0
National savings	27.5	26.9	26.9	27.0	28.4	28.0	28.5
Investment	30.1	29.9	29.0	28.3	30.3	31.3	32.1
Inflation (CPI)	9.5	9.5	4.9	9.8	9.2	8.6	6.5
Fiscal balance	0.4	0.4	–0.4	–0.6	0.1	0.8	0.2
External stability							
Current account (percentage of GDP?)	–2.8	–3.7	–2.2	–1.6	–1.7	–3.7	–4.0
Net capital flows (percentage of GDP?)	4.9	5.0	3.8	1.9	2.4	4.6	5.0
Forex reserves (in import months)	4.7	4.8	5.0	5.2	5.0	4.4	5.1
M2 ratio against forex reserves (in per cent)	514.0	505.7	497.4	557.1	602.9	657.4	633.3
Total offshore borrowing (as a percentage of goods and services exports)	222.0	236.9	221.8	211.9	195.8	205.0	194.0
Short-term offshore borrowing (as a percentage of goods and services exports)	15.9	17.9	20.5	20.1	17.1	20.9	24.8
Debt service ratio (as a percentage of goods and services exports)	30.9	32.0	31.6	33.8	30.0	33.7	33.0
Exports (as a percentage of GDP)	26.6	27.4	29.4	25.9	26.0	26.0	26.2
Export growth (in per cent)	15.9	13.5	16.6	8.4	8.8	13.4	9.7
Oil prices (USD per barrel)	28.6	20.1	18.7	14.1	16.1	18.0	22.8

Source: Bank Indonesia.

The brisk growth rate and massive capital inflows also resulted in steady expansion in Indonesia's international reserves (gross foreign assets). After relative stability in the range of USD 2.5 billion to USD 5.6 billion during the period from 1980 to 1990, international reserves mounted steadily to USD 17.8 billion in 1996. Domestic interest rates maintained a declining trend in keeping with the flush liquidity on the market. However, because of the pressing need for foreign capital, the government maintained an interest rate differential to ensure that domestic interest rates would be competitive against foreign interest rates. In real terms, domestic interest rates remained positive as a result of the downward trend in inflation.

Although financial sector deregulation offered numerous benefits, it was not supported by an adequate regulatory and supervision framework, nor by the institutional framework needed to promote financial system efficiency. With inadequate regulation and supervision, poor governance and heavy government intervention in credit allocations, the financial system was left weak and vulnerable. At the micro level, banks and corporate actors frequently ignored prudential principles. Offshore borrowings, in particular, were fraught with currency and maturity mismatches. Feeling secure given Indonesia's track record of a stable rupiah during the period, the private sector neglected to hedge their offshore borrowings. When the exchange rate plunged into turmoil, the lack of hedging left these borrowers in a highly exposed position.

Heavy capital inflows helped to keep the rupiah at the lower limit of Bank Indonesia's intervention band. Measured in real terms, the rupiah in fact gained in value, with especially strong appreciation recorded during 1996 and the first half of 1997. In order to discourage market speculation and reduce the costs of intervention, Bank Indonesia gradually widened the intervention band. The strengthening rupiah hurt Indonesia's competitiveness and created distortion in savings and investment decisions, thus reducing economic efficiency at the macro level.

Increased capital inflows led to expansion in the money supply, which in turn fuelled aggregate demand at levels exceeding the absorption capacity of productive sectors. During the 1990–96, the narrow measure of the money supply (M1) and broad money (M2) widened by an average of 26.9% and 20% respectively. This quickly led to overheating in the Indonesian economy, particularly in 1995–96 when vigorous growth (close to 8%) was followed by high inflation (around 8.5%) and a hefty current account deficit (4% of GDP).

In addition, a property boom funded by bank credit expansion and offshore borrowing led to an asset price bubble. Offshore borrowing by the government and private sector alike mounted to levels that by international standards would begin triggering alarm. Dominating the debt stock were private sector borrowings, which climbed sharply from USD 64 billion in 1990 to USD 110.2 billion in 1996 (48.5% of GDP). The combination of these conditions left the economy vulnerable to domestic and international pressures.

2.3 The economic crisis and its impact on the economy

A prominent event related to Indonesian external developments was the economic crisis of 1997–98. In July 1997, contagion from the balance of payments crisis in Korea and Thailand placed mounting pressure on the rupiah. With the domestic economy already fragile, the exchange rate turmoil quickly unfolded into a fully fledged financial and economic crisis. Externally, the exchange rate crisis triggered massive private capital flight with Indonesia's balance of payments recording a deficit for the first time since 1989/90. The rupiah value of foreign debt and debt servicing obligations soared, causing many companies to default.

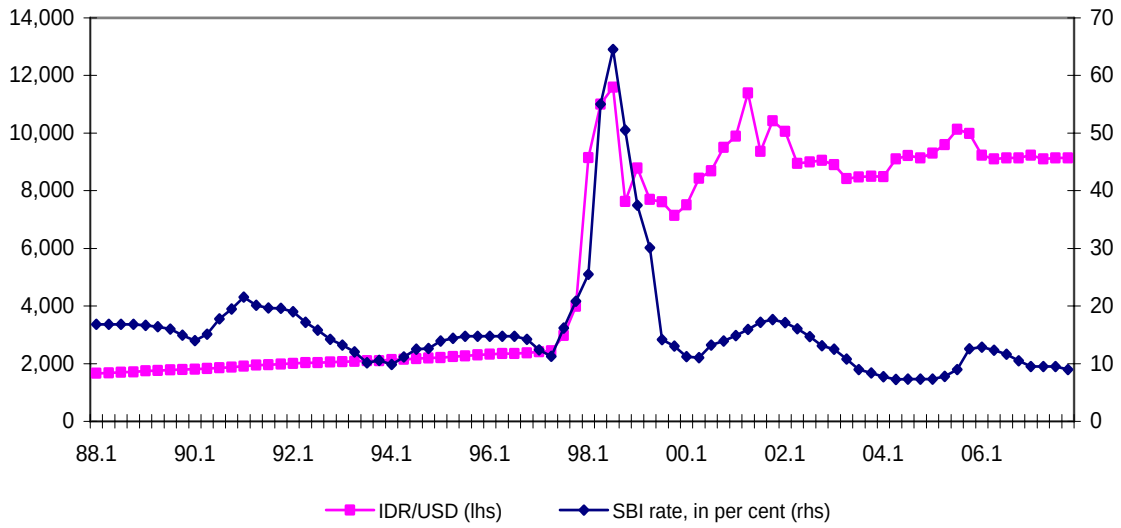
Unlike with Thailand, few had suspected that Indonesia would suffer such a devastating crisis. Even the leading rating agencies failed to detect the country risk. Right until the eve of Indonesia's crisis, markets were still indicating a fairly high level of confidence. The capital market index recovered immediately after Thailand abandoned the currency peg and

adopted a free floating rate system in early July 1997. Shortly after that, however, expectations regarding Indonesia quickly reversed. Private capital that had previously poured into Indonesia suddenly began flowing out. Before the crisis, foreign investors had been perfectly willing to roll over short-term debt, such as commercial paper, certificates of deposit and promissory notes, but now all this had changed. Quickly, offshore sources of borrowing for the domestic private sector dried up while payments on outstanding debt were falling due. The capital account surplus that had reached USD 11 billion in 1996 plunged drastically to USD 2.5 billion in 1997. In 1998, the capital account sustained a USD 3.8 billion deficit that in 1999 widened further to USD 4.6 billion.

Despite the sharp rise in government capital inflows during the period, this was insufficient to cover the mounting deficit caused by outflows of private capital. Most of the official capital inflows comprised borrowing from creditor nations and international financial institutions under IMF coordination in support of the economic recovery programme. Indonesia's post-crisis foreign debt composition thus changed significantly with a sharp rise in government debt in contrast to the decline in private sector borrowing.

Graph 6

Rupiah/dollar exchange rate and SBI[1] rate



[1] SBIs are Bank Indonesia Certificates issued since 1984 to manage the money supply.

Source: Bank Indonesia.

What started as a balance of payments crisis unfolded into a multidimensional crisis that brought down the economy as a whole. The rupiah quickly lost value amid wide fluctuations, falling from IDR 2,500 per US dollar in July 1997 to IDR 5,000 in December that year and to a low of IDR 16,000 (in Graph 6 less than IDR 14,000) per US dollar in June 1998. The economy contracted across all sectors, producing a sharp 13.7% real GDP decline in 1998 (year on year). This was worsened by the failure of the export sector to take advantage of the rupiah's depreciation because of inability to produce and the drying-up of financing. Domestic banks began to record negative margins, which resulted in a rapid contraction of the supply of domestic credit. In 1998, the sharp depreciation of the rupiah sent inflation soaring from 11.6% in 1997 to 77.6%. Also contributing to the near hyperinflation was the sheer size of the money supply, and especially of cash outside banks. To curb inflation and stabilise the rupiah, Bank Indonesia applied an extremely tight monetary policy with steep increases in domestic interest rates.

After the worst of the crisis had passed and new policies had been introduced to put the economy back on track, signs of significant recovery began to emerge in 2002–03. Even so, conditions were far removed from the boom years before the crisis. The exchange rate recovered significantly to stabilise in the range of IDR 8,500 to IDR 9,000 to the US dollar in 2003. Inflation fell sharply from 77.6% at the peak of the crisis (1998) to 5.06% in 2003. Likewise, interest rates came down from 38% (working capital credit) at the end of 1998 to 13.4%. Although Indonesia's recovery lagged behind that of other crisis-hit countries, economic growth nevertheless steadily improved to 4.72%.

During this time, Indonesia also saw improvement in the balance of payments. The current account surplus during the most turbulent period of the crisis had resulted mainly from sharply reduced imports. In the years that followed, the surplus was maintained due to the strengthening performance of non-oil and gas exports. In 2003, the current account surplus reached USD 8.1 billion or 4.0% of GDP. With improved macroeconomic stability, private capital began flowing back into the country. During 2004–07, the capital account recorded an average surplus of USD 2.6 billion per year. Capital flows consisted mainly of rapidly expanding portfolio inflows and debt servicing by the private sector. As a result of the debt restructuring programme, private sector debt repayments were substantially lower than previously estimated. However, FDI remains low. The dominance of short-term funds in capital inflows calls for vigilance, as these flows are highly susceptible to changes in sentiment that can disrupt monetary stability.

A valuable lesson from previous situations and the crisis itself is that financial sector liberalisation without adequate regulation, control and management (good governance) can cause fundamental weaknesses at the micro level. This is reflected in the following:

(i) Excessive dependence on foreign sources of funding. With heavy capital inflows, Indonesia's private sector became increasingly dependent on external financing, particularly through debt. Before the crisis, private sector offshore borrowing had soared to nearly 60% of total foreign debt. At the same time, the managed floating exchange rate system in use before the crisis offered an implicit guarantee against exchange rate risk that encouraged the private sector to take out massive long-term loans without hedging.

(ii) Foreign debt mounted in the banking sector, with escalating risk from maturity and currency mismatch. To circumvent high domestic interest rates, Indonesia's private sector sought funding alternatives from overseas offering lower interest rates. Many domestic banks borrowed short-term from foreign institutions to support their lending to the domestic private sector. These funds were then disbursed as long-term loans denominated in rupiahs. In 1993, foreign debt in the financial sector stood at USD 6 billion. By 1995, this had soared to USD 12.1 billion.

(iii) The financial condition of the banking system steadily weakened from mounting problem loans. Amid the rapid credit expansion, problem loans soared in the banking industry because of the high volume of lending that ignored prudential principles. In November 1996, loan losses in the banking system stood at IDR 10.4 trillion (about 2% of GDP or 10% of total lending), with 68% of these losses recorded at state banks.

(iv) Government intervention in credit selection. Lending decisions at state banks were strongly influenced by government intervention, with the result that many loans were extended by reason of political pressure or connections. Decisions concerning credit expansion were in many cases implicitly or explicitly directed by the government.

(v) Poor management (governance). Lack of bank financial transparency undermined not only the accuracy of financial analysis but also social control and market discipline. Unsound business management led to inefficiency and failure in the application of good management principles. Poor corporate governance was also

reflected in the lack of effective institutions, particularly for resolution of bankruptcy. This in turn created moral hazard in the business sector.

3. Management of capital flows

The heavy social and economic costs of the financial crisis underscore the importance of efforts to reduce economic vulnerability to sudden reversals in capital inflows. Capital flows tend to follow a cycle, rushing in when the economy is strong and rushing back out again during times of decline. Developing countries are more susceptible to loss of investor confidence, with the result that the economic and social costs of a financial crisis can be enormous. So far, Indonesia has adopted a series of policies to mitigate negative impacts from capital flows on the economy. These policies focus on two key areas. First, the use of macroeconomic policy instruments to counter the negative impact of capital flows on monetary, fiscal and exchange rate stability. Second, the control of short-term capital flows through a series of regulations on foreign borrowing, foreign exchange transactions and operations of the banking system. The appropriate policy mix depends on various factors, such as the causes of capital inflows and outflows (permanent or temporary), availability and flexibility of instruments and the condition of the domestic financial market.

It is painfully obvious that policies put in place prior to the crisis were inadequate for building Indonesia's economic resilience to the negative impact of capital volatility. This was demonstrated by Indonesia's inability to cope with the contagion effect of the mid-1997 currency crisis in Thailand. For this reason, the management of capital flows in the post-crisis period has been supported by efforts to improve the resilience of the domestic financial system through a series of structural reforms. Following this, policy focused on efforts to boost capital inflows through consolidation of macroeconomic stability and actions to reduce the risk of a reoccurrence of the crisis. In general, policy targeted the following four objectives: a sound macroeconomic framework consistent with the exchange rate regime; a sound domestic financial system with proper controls and prudential standards; an independent and strong central bank; and transparency through provision of up-to-date and accurate economic information. A number of elements have been important in achieving these goals:

3.1 Monetary policy

Monetary policy plays an essential role in coping with demand pressure. During the managed floating rate regime, monetary policy focused on sterilisation of the monetary expansion caused by the accumulated foreign exchange reserves as a means of curbing demand pressure. Sterilisation took place primarily through open market operations using Bank Indonesia Certificates (SBIs), with the support of the statutory reserve requirement, discount window and moral suasion.

In response to the excessive monetary growth in 1994 brought on by domestic credit expansion partly funded by offshore loans, monetary policy was tightened significantly in mid-1995. Monetary expansion was effectively reduced through forex market sterilisation. However, the monetary policy tightening resulted in higher domestic interest rates, particularly during the 1995–96 period. This occurred at a time of falling rates on dollar instruments, thus widening the interest differential. In turn, the wider differential provided added impetus to capital inflows. Because short-term capital flows were more responsive to changes in the interest differential and movement in the nominal exchange rate remained largely steady, a shift took place in the composition of external debt obligations. Historically, external obligations had consisted primarily of foreign investment and long-term borrowings, but now were dominated by portfolio flows and other short-term debts.

The new composition significantly increased the burden of monetary sterilisation through the use of open market operation instruments, and support from other monetary instruments became necessary. To reduce bank lending capacity, the statutory reserve requirement was raised from 3% in 1995 to 5% in 1997. Bank Indonesia in addition sought to limit credit expansion through moral suasion, calling on banks to submit their annual business plans and progress reports and establishing a credit policy direction. Bank Indonesia also introduced restrictions on lending to the property sector.

During the crisis, the priority for monetary policy was to arrest the depreciation of the rupiah and rein in inflation by tightening the money supply. This was accomplished by absorbing excess liquidity and especially the enormous volume of base money that resulted from Bank Indonesia's liquidity support extended to commercial banks to keep the banking system from collapse. In response, interest rates climbed sharply from 22% in January 1998 to a high of 70% in September that year. Although several underlying factors played significant roles, it is believed that the monetary institutional establishment was the main aspect fostering economic stability, not only in the short run but also in the long run. During 2003, five years after the crisis, consistent monetary policies supported by prudent fiscal policies and other progress achieved in economic restructuring have contributed to macroeconomic and monetary stability. The inflation rate declined significantly to about 5% in 2003, from an average of 10% over the 2000–02 period. Consequently, these conditions provided adequate room for monetary policy to consistently adjust interest rates in order to support further economic recovery.

To strengthen monetary policy effectiveness, the monetary authority introduced the Inflation Targeting Framework in July 2005 with an interest rate (the BI rate) as the operating target. Open market operations were also supported by direct intervention on the rupiah money market using rupiah intervention instruments.

3.2 Exchange rate system

In an open small economy like that of Indonesia, the management of the exchange rate plays a vital role.[2] Since 1967, Indonesia has employed three different exchange rate regimes (fixed, managed float and float). The periods of the fixed and managed floats alone were marked by eight devaluations – six of them during 1967–78. Prior to the 1997 currency crisis, the policy focus was on maintaining a real exchange rate conducive to export-oriented growth.

In the early years of national development, Indonesia had relied on a currency peg. However, increasing capital mobility and growing integration into the regional and international economy led Bank Indonesia to consider a more market-oriented exchange rate mechanism. Thus in 1978, Indonesia abandoned the peg for the managed floating system.[3] Under this system, movement in the rupiah was managed by Bank Indonesia within an intervention band. The direction of the middle point of the intervention band was determined by Bank Indonesia, taking into account the real competitiveness of the rupiah against the real exchange rate movements of major trading partner currencies. Bank Indonesia would then

[2] Transmission of exchange rate fluctuations is felt throughout the country through import prices which in turn are reflected in general prices through the price of finished goods produced with imported intermediate goods. Inflation in general prices determines the level of interest rates. Through the interaction of the money market and the goods market, this interest rate, adjusted for inflation, theoretically determines the output of the economy.

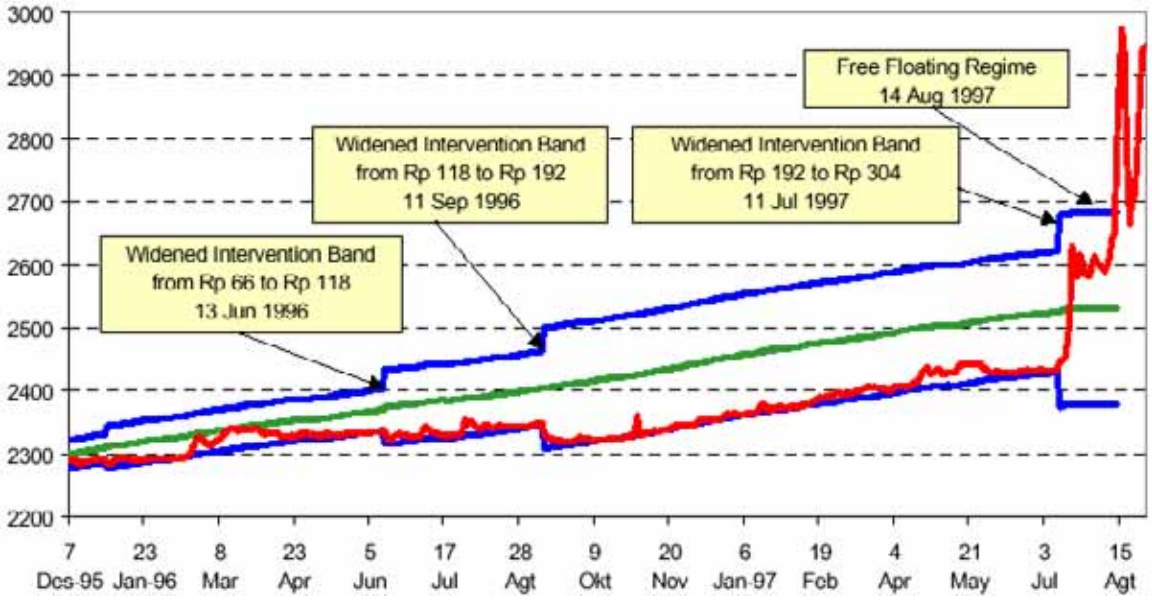
[3] In 1971–78, Indonesia had operated a fixed exchange rate with the rupiah pegged against the US dollar. This period was also marked by a number of devaluations.

only intervene on the foreign exchange market when the market exchange rate began moving outside the intervention band.

As Indonesia's economy opened further with the rising volume of capital inflows, the intervention band was progressively widened. From September 1992 to August 1997, Bank Indonesia widened the band eight times. Despite this, capital inflows, particularly of short-term capital, continued to mount rapidly. The reason was that the intervention band helped the market to predict movement in the nominal exchange rate, and this reduced the incentive for market agents to hedge their offshore debt exposure. Because of the heavy volume of capital inflows, the market exchange rate was almost always at the bottom limit of the intervention band (Graph 7).

Graph 7

Exchange rate movement and the intervention band



Source: Bank Indonesia.

The massive capital outflows during the crisis resulted in serious problems for macroeconomic management. The sudden movement of vast volumes of capital necessitated hugely expensive market intervention, reduced the effectiveness of monetary sterilisation and increased the quasi-fiscal costs of monetary policy operations. The first move to arrest the decline in the rupiah was the widening of the intervention band. However, pressure on the rupiah continued to mount. On 14 August 1997, the monetary authority abandoned the intervention band altogether and switched to a free-floating exchange rate system. This protected base money from fluctuations in capital flows, limited speculation and shifted the weight of the increased exchange rate risk onto foreign investors.[4]

[4] Since Indonesia moved from managed to free floating on 14 August 1997, intervention has been used primarily as a liquidity management tool to offset government expenditures. At the same time, such interventions can also stabilise rupiah volatility, especially during rapid depreciations associated with excess liquidity. Thus intervention, through tightening domestic liquidity by the sale of foreign exchange, can be used as a framework to influence the exchange rate. As well as absorbing excess rupiah liquidity, intervention by way of selling foreign currency also aims at lessening the volatility of the exchange rate, easing market pressures, and, by its nature, adding foreign currency liquidity to a market which is often marked by lack of supply.

However, the sudden weakening of the rupiah against the US dollar during the 1997 crisis and the brief period right after it simply reflected the excess demand for the US dollar against the rupiah in the local market. Closer observation revealed that such excess demand did not necessarily represent any underlying real transaction of goods and services. Non-resident economic agents who held current accounts with Indonesian banks played a big role in such a phenomenon. In this context, part of the excess demand for US dollars can be categorised as "speculative trading".

Given the thin, small and immature IDR/USD exchange market during that time, such large speculative trading volumes had relatively major consequences for the economy. The IDR/USD exchange rate became a source of uncertainty, due to the nature of the speculation, which triggered volatility more than stability. Subsequently, it posed bigger problems for the economy because a large number of economic agents were facing the sudden reality of asymmetrical (limited) information regarding the future IDR/USD rate, thus influencing their economic decisions involving any exposure to exchange rate risk. In contrast, other players, mainly in the international financial markets, enjoyed relatively less risky decision-making in their business, due to their advantages in terms of access, prowess and knowledge of international finance issues. Right after the rupiah was freely floated against the US dollar, for instance, nobody could easily calculate its "equilibrium" rate. Only economic agents with an information advantage and sophistication were able to reap gains from IDR/USD trading during that time – mainly economic agents in the international financial market – and among the most influential players were non-residents.

It is common practice for countries to try to limit speculative trading of their currency in the interest of safeguarding domestic price stability. Asian countries have been known to do so, including Singapore, Malaysia, Thailand and China. How does Indonesia go about it?

As briefly discussed above, right after it was allowed to float freely, the Indonesian rupiah became the subject of speculative trading; this occurred with relative ease due to the lack of regulation. The offshore rupiah market has been known to be very active, thus making the rupiah as an international "commodity" in the world market, which only mirrors the currency's internationalisation. The ownership of rupiahs by non-residents can be motivated by a real underlying need to finance the goods and services traded or by profit-seeking through speculative trades, two areas which are not easily separated. While the use of the rupiah for underlying real transactions is desirable, its use for speculation is not, because the latter would introduce instability into the market if not isolated. Thus, the trading of rupiahs by non-residents in the offshore market does not benefit the economy because the main underlying need in this case is merely to speculate on the IDR/USD rate for profit.

IDR/USD trading by non-residents involves spot and derivatives transactions. Spot market transactions take place conventionally with counterparties agreeing to each other's bids and asks with the promise to deliver as arranged, while derivatives involve a higher degree of complexity. For example, derivatives often involve synthetic swaps, where a non-resident can speculate on the IDR/USD rate by buying rupiahs from the resident via the spot transaction (two-day or next day settlement), and at the same time buying back the US dollars in the forward market (for future delivery). By doing this, non-residents obtain the implicit rupiah credit facility (non-conventional) while locking their exchange rate risk through forward transactions.

In order to curb such speculative action arising from the internationalisation of the rupiah, in 1997 Bank Indonesia issued a regulation that limits forward trading to USD 5 million per transaction, although with only partial success due to the lack of enforcement and sanctions. Given all these problems, a well orchestrated policy is needed to really curb speculative trading, especially by limiting international speculators' access to the rupiah, including rupiah

financing through sophisticated derivatives arrangements.[5] Fortunately, Bank Indonesia and the government of Indonesia have introduced the needed regulations, which have been relatively successful in reducing the threat of such speculation.[6] However, all of these abnormal market activities only took place during the period of upheaval, which is the only context in which speculative trading of this kind can reap big gains. Hence it must be stated that when the overall market situation has normalised and the impact of fluid political and other non-economic factor developments has lessened, the sizeable swap and derivatives market with its highly diverse maturity profile will be a catalyst for the future development of Indonesia's modern financial sector.

3.3 Regulation of offshore borrowing and efforts to improve transparency

In October 1991, Indonesia reinstituted quantitative limits on offshore borrowing by banks and the government sector, including state-owned enterprises. A ceiling on private offshore borrowing was also imposed for activities directly connected with government institutions. The central bank set up a queuing system in which prospective borrowers would apply for licences within the ceiling. Penalties were imposed on banks that did not submit progress reports on their offshore borrowing and on borrowing in excess of the ceiling. The queuing system enabled the central bank to determine the amount of the debt drawdown and monitor the terms and conditions and use of borrowed funds.

Following this, the government introduced quantity controls over private sector foreign borrowing in a regulation on issuance of commercial paper where banks acted as arrangers. Bank Indonesia also eliminated the subsidy for swap facilities in order to reduce incentives for drawdown of debts. The attempts to restrict private offshore borrowing lacked effectiveness because of the difficulty of controlling capital flows in a relatively free foreign exchange system. Complicating this was the lack of an accurate, thorough and timely reporting system. The central bank was unable to control capital flows and had difficulty in obtaining an accurate picture of private sector foreign borrowings.

Lack of detailed, accurate and timely data on capital flows, especially short-term capital, is a key factor in the slow policy response to pressures generated by rapid capital flows. To resolve this, Bank Indonesia has developed a system for monitoring foreign exchange flows and strengthened transparency based on accurate reporting of economic and financial information as stipulated in Act no 24 of 1999 on Foreign Exchange Flows.

3.4 Banking regulations on bank forex transactions and forex positions

Bank Indonesia is engaged in an ongoing drive to strengthen bank performance and efficiency in order to build a sound banking industry resilient to internal and external shocks. Actions taken include improvements to the application of prudential principles, bank restructuring through mergers, resolution of problem loans, and rescue or closure of problem banks. The central bank also encourages banks to apply self-regulatory principles, improve the quality of risk management and enhance the quality of human resources.

On other fronts, Bank Indonesia is working to bring the Indonesian banking system into line with the standards proposed by the Basel Committee on Banking Supervision. The capital

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[5] For example forward and/or swap selling, and put and call option transactions.

[6] Government Regulation no 18/1998 of 2 February 1998 limits the amount of rupiahs that may be physically transported into and out of Indonesia, while various Bank Indonesia circulars limit rupiah cash loans for exchange rate trading, as does Official Announcement by the Exchange Rate Department to Banks no 30/19/UD of 2 September 1997.

adequacy ratio was raised to 8% at all banks in 1995–96. The loan/deposit ratio is restricted to a maximum of 110%, and banks must also operate under the legal lending limit.

Restrictions also apply to bank asset positions and foreign exchange liabilities in the regulation on the net open position (NOP). In 1992, Bank Indonesia raised the NOP from 20% to 25% of bank capital, with banks required to report their NOP regularly to the central bank. Initially, the NOP regulation applied only to on-balance sheet assets and foreign exchange components. This was subsequently amended to include off-balance sheet items.

As important as these provisions were, they still proved inadequate in compensating for the weak internal management in the banking sector. Weak internal control and the unsupportive behaviour of bank owners and management concerning prudential principles led to rampant banking irregularities in areas ranging from credit valuation and classification to application of accounting standards. For example, banks competed with each other in lending to the property sector, where loans were partly funded through offshore borrowing and extended without proper credit valuation. This, in turn, led to burgeoning problem loans and became one of the factors that undermined the banking sector and ultimately brought on the banking crisis in Indonesia.

To ease pressure on the rupiah, on 12 January 2001 Bank Indonesia issued Regulation no 3/3/2001 on Restrictions on Rupiah Transactions and Foreign Currency Loans by Banks. The regulation essentially covers two main areas:

(i) Prohibition of rupiah transfers by Indonesian banks to non-residents, with particular emphasis on rupiah transfers not supported by underlying transactions within the Indonesian economy.

(ii) Restriction on derivatives transactions not supported by underlying transactions, with the maximum limit for derivatives transactions involving forex sales by domestic banks to non-residents being lowered from USD 5 million to USD 3 million.

This regulation is intended to limit the supply of rupiahs from residents to non-residents for potential use in speculative activities and thus curb excessive fluctuation in the rupiah. In addition to the policy restricting foreign exchange transactions, Bank Indonesia also amended the NOP regulation. In July 2004, the new NOP was introduced for two categories: (i) a 30% NOP on on-balance sheet components and the overall balance sheet for banks that include market risk in the calculation of their capital adequacy; and (ii) a 20% NOP on on-balance sheet components and the overall balance sheet for banks not calculating market risk.[7]

3.5 Financial sector restructuring

The primary goal of financial sector restructuring is to rebuild public confidence in the banking sector and, in so doing, create long-term financial system stability, improve efficiency in financial intermediation, and build financial system resilience for the medium and long term. The following are specific actions pursued to achieve these objectives:

(i) Rebuilding confidence in the banking sector by launching a blanket guarantee scheme guaranteeing bank deposits of all types, in both domestic and foreign currency.

[7] See Bank Indonesia Regulation no 6/20/PBI/2004 of 15 July 2004 amending Bank Indonesia Regulation no 5/13/PBI/2003 on the Net Open Position for Commercial Banks.

(ii) Improvements in banks' internal governance:

- Strengthening of the legal framework, policies and infrastructure of the banking system. To this end, new laws on the banking system and the central bank came into force in October 1998 and May 1999.
- Strengthening of prudential regulations with focus on improving banks' internal control, organisational structure, enforcement of banking regulations and a specific programme for building up the expertise of bank supervisors and examiners.

(iii) Rebuilding bank solvency:

- Establishment of the Indonesian Banking Restructuring Agency (IBRA) and the Asset Management Unit (AMU).
- Closing-down of problem banks. Following the crisis, 20 commercial banks had their licences revoked and four state banks were merged into a single entity named Bank Mandiri (September 1998).
- Strengthening of bank capital through the recapitalisation programme.

3.6 Fiscal policy and other structural reforms

Sound fiscal conditions are important for reducing the volatility of capital flows. To address this, the government strengthened fiscal prudence in two key steps. The first involved reducing the size of the foreign debt service burden by using the fiscal surplus and the proceeds raised from the privatisation of state-owned enterprises for early repayment of high interest foreign debt. Second came expenditure reductions in investment and consumption designed to ease government dependency on international borrowings. The government expenditure reductions were designed to protect major revenue-generating activities important for long-term growth. Because most government expenditures are used for non-tradable goods and services, this expenditure reduction policy would also help ease pressures for real appreciation of the exchange rate. Fiscal conditions were strengthened through increased taxation and improved management of state-owned enterprises. The conservative fiscal policy enabled the government to accumulate considerable savings deposited with the central bank that reduced the expansion of base money.

With the crisis having severely weakened domestic demand, fiscal policy sought to promote economic recovery and lay the foundations for sustainable fiscal management. Four main objectives were established. The first was to provide a fiscal stimulus for the sectors and social group worst affected by the crisis. The second was to prepare for the creation of more agricultural resources in the medium term. The third was support for banking recapitalisation and restructuring. The fourth was management of the fiscal deficit using funding not originating from the central bank.

Domestic revenues were strengthened through improvements to the tax structure and tax administration. Non-tax revenues were enhanced by transferring some hitherto off-budget items to budget revenues. To fund the budget deficit, the government continued to draw on foreign borrowings that accounted for as much as 60% of total budget funding. Other budget funds came from the proceeds of the privatisation of state-owned enterprises and sales of bank assets held by IBRA. To provide added deficit financing, the government re-entered the international capital market in 2004 with a successful USD 1 billion bond issue that attested to improved credibility in the eyes of foreign investors.

Structural reforms in the economy have been focused on addressing various problems that hamper the efficient functioning of the market mechanisms on the supply side. Adjustments are required to improve transparency in decision-making, foster a climate of fair competition and improve good governance through market-friendly policies. Measures taken to improve

transparency and efficiency in the government sector include developing mechanisms for the resolution of tariff issues and business conflicts and improving mechanisms for the selection of government projects. Meanwhile, the critical steps towards fostering a conducive business climate are, inter alia, removing obstacles to foreign investment, lowering import tariffs and export taxes on various products, eliminating import subsidies, and removing import monopolies for basic commodities, price controls on certain products and restrictions on foreign share ownership of companies listed on the stock exchange.

3.7 Developing robust capital markets

In Indonesia, as in most of East Asia, the banking sector continues to be the major source of domestic financing. Capital markets are still embryonic, and on the few occasions when issues are priced, they are usually in small amounts. The inadequacies of East Asia's capital markets represent the flipside of dominant banking sectors that have intermediated over 80% of the region's investment. Banking sector dominance was even greater in Indonesia, and in the aftermath of the 1997 financial crisis bank lending collapsed, further exacerbating domestic economic implosion. The collapse of bank lending after the crisis exposed the fragilities of both the country's and the region's financial systems in responding to external shocks due to unexpected capital reversals. To address weaknesses in the financial system, Indonesia has systematically adopted a practical step-by-step approach, based on collaboration among all government agencies, to creating an environment in which these economic, technical and political factors build confidence and lead to the robust development of capital markets. An equity market and a rudimentary bond market already exist in Indonesia; however, developing the bond market is now a primary focus.

A primary stage of Bank Indonesia's strategy involves establishing a comprehensive market for government bonds, which will eventually become the backbone of the corporate and other sectors of the bond market that are likely to emerge. The market for government bonds will help provide a benchmark yield curve and establish the overall credit curve off which all other issues will be priced. A deep and liquid market for government bonds not only fosters financial stability by allowing the development of other capital market sectors, but also provides the government with tools for effectively managing its debt, reducing dependence on foreign borrowing and supporting the implementation of sound and prudent monetary policy.

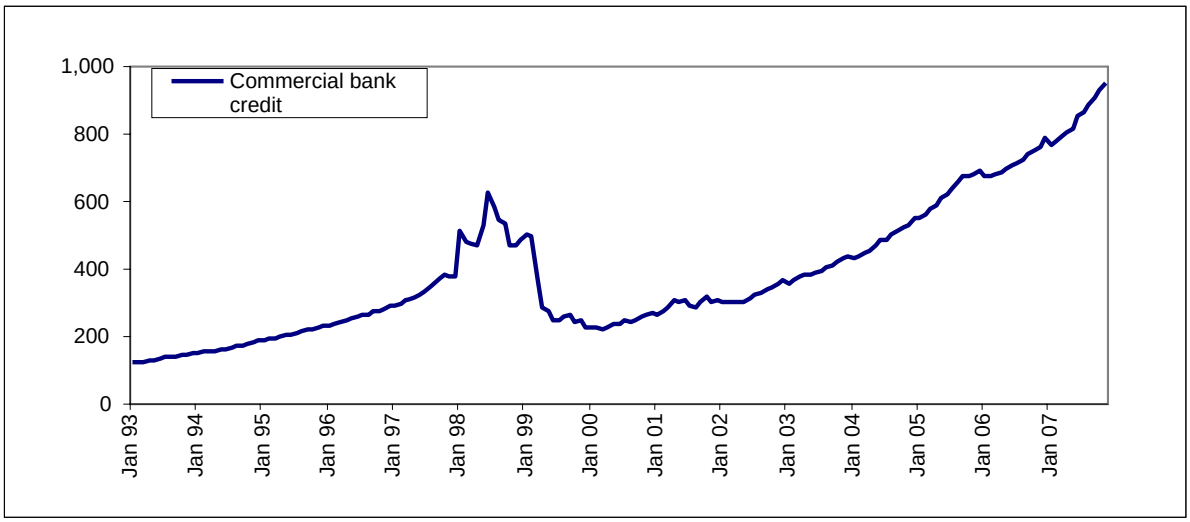
4. Capital flows and financial stability: recent salient observations

As a consequence of increasing globalisation coupled with greater openness of the economy, Indonesia's economic and financial institutions are undergoing changes. Key factors behind the changes are the macro policies adopted by the Indonesian government and the rapid progress in information technology. Another important factor is the growth in the number of financial institutions: by November 2007, Indonesia had 130 banks with 9,667 branch offices, compared with 7,001 branch offices operating for 141 banks in 2002. In November 2007, funds mobilisation and credit reached IDR 114.84 trillion and IDR 963 trillion, up from IDR 59.9 trillion and IDR 371 trillion, respectively, in 2002 (Graph 8).

Graph 8

Commercial bank credit

In trillions of rupiahs



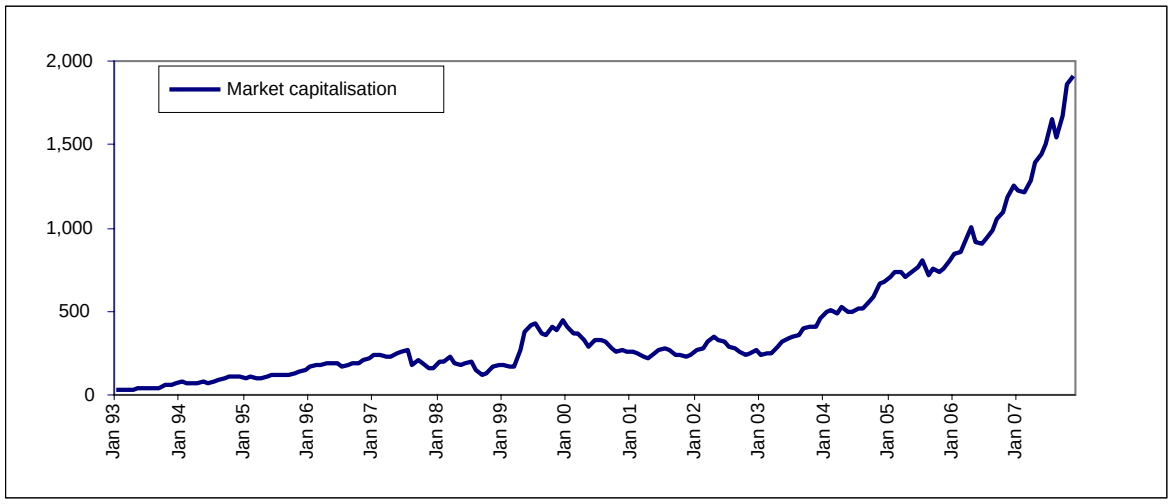
Source: Bank Indonesia.

The capital market has also seen remarkable change. Listing on the Jakarta stock exchange (JSX) climbed from 331 companies in 2002 to 383 in December 2007, while market capitalisation also soared in the same period from IDR 268 trillion to IDR 1,988 trillion (Graph 9). Share trading rose from IDR 10.2 trillion in 2002 to IDR 89.2 trillion in 2007. This indicates that sources of business funding are diversifying away from the banking system. At the same time, the expanding portion of foreign investor holdings in the capital market reflects the growing integration of Indonesia's money market and capital market into the global system. The ratios in value terms of foreign investor sales and purchases to total sales and purchases in the capital market are given in Graph 10.

Graph 9

Jakarta stock exchange market capitalisation

In trillions of rupiahs

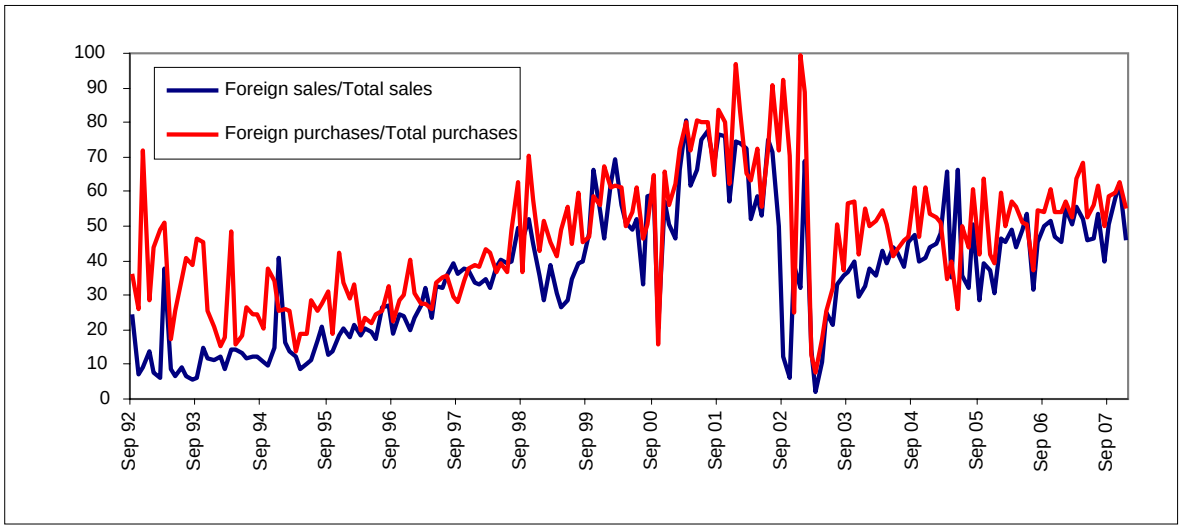


Sources: Bank Indonesia; CEIC.

Graph 10

Jakarta stock exchange share trade – foreign component

Ratios, in per cent



Sources: Bank Indonesia; CEIC.

The flows of money and capital that occur in an open economy framework exceed the flows of goods in the real sector, and that poses specific challenges for the monetary authority in dealing with the internal balance in the economy. The main concern is that a more open economy reduces the degree of monetary policy effectiveness. Other important issues are the exchange rate policy choice, external debt management, and the primary balance in the fiscal budget. With a relatively open capital account, optimal exchange rate management is a high priority. Managing the macroeconomic impact of a relatively liberal capital account can mean less complex policy challenges when the "automatic adjustment" mechanism is applied, such as the implementation of the free floating exchange rate. However, several factors should be considered before an optimal exchange rate policy and strategy are chosen, as such a liberal approach to the floating exchange rate can be less beneficial to the economy if economic and financial institutions are not coping with the standard practices followed in the more globalised part of the world.

In monetary policy, the dilemma always faced by the monetary authority in an open capital system concerns the blunted effectiveness of interest rates in lowering inflation and the consequences for the exchange rate. Openness allows for international economic influences to work directly in the day-to-day economic decision-making of economic agents. Any interest rate hike involving a strong world currency (US dollar or Singapore dollar, for example) will lower the interest rate differential, possibly triggering capital flight that will weaken the rupiah and enlarge the current account deficit. But if, for example, Bank Indonesia anticipates this by raising the SBI rate, to keep the rupiah at an attractive level and prevent capital flight, such a strategy will induce inflows of capital, appreciation of the nominal IDR/USD rate, and boost inflation through an increase in the money supply, putting pressure on the external sector balance. The excessively high interest rates will also dampen overall economic growth if not accompanied by improvements in productivity. Moreover, a growing capital market highly susceptible to rumours and movements in world markets – as attested by the close correlation between the JSX index and the NYSE and other indices – will create further difficulty for the use of monetary policy to combat inflation while maintaining a competitive exchange rate.

Therefore, the inflows and outflows of money and capital are better reflected in the composition of net capital inflows. FDI has generally been the most important source of

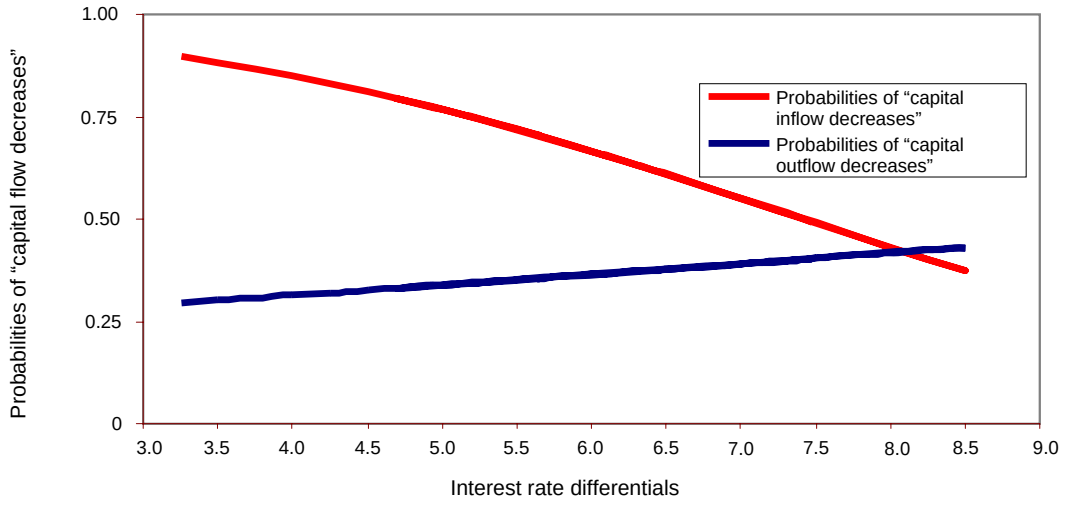
inflows, bringing not only capital but also technology and market access, and without creating short-term liabilities. Meanwhile, obligations in the form of royalties or dividends normally arise after a company has started operating and earning profit. Portfolio investment is the logical consequence of capital market expansion, but it is obviously preferable to have inflows for equity investment. At the same time, it is becoming more difficult to raise long-term borrowings, which has led to the recent soaring trend in short-term private borrowing. Another important issue is the effectiveness of the government's debt management strategy in avoiding a debt trap. In fact, in terms of total debt, there is a shift in the government role to the private sector.

Using a simple exercise, we seek to establish how the inflows and outflows of foreign capital in the case of the Indonesian economy respond to the movement of interest rate differentials and the real effective exchange rate. Basically, we estimate the probability of "capital flow decreases" given changes in macroeconomic variables.[8] Our aim is to check whether the market shows an excessive tendency to flee Indonesia when the prime macroeconomic variables – that is, the real effective exchange rate (REER) and interest rate differentials, move.

Graph 11 shows that the probability that "capital inflows (outflows) decrease" becomes smaller (bigger) with a higher interest rate differential. This just confirms the notion of "flight to higher gains" for foreign capital in a particular small open economy with free capital movements. However, it is encouraging that when the market sees interest rate differentials narrow, the probability of bigger foreign capital outflows remains below 0.50. That alone proves the confidence of the international economic agents who already hold positions in Indonesia and their willingness to stay.

Graph 11

Foreign capital flows (to and from Indonesia) and their response to movements in interest rate differentials, November 2003–June 2007

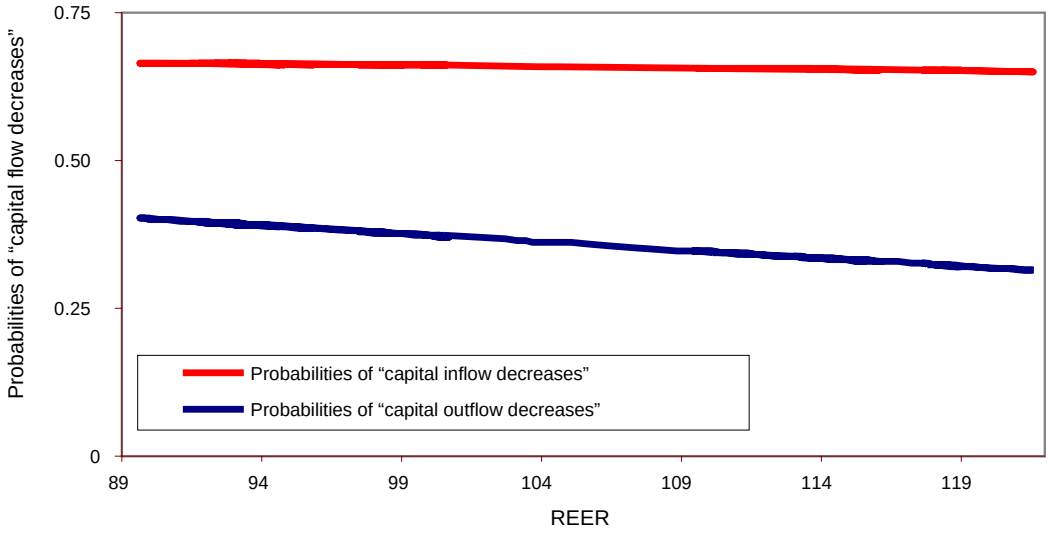


[8] To capture the response of capital flows to some financial market signals, we use the probit model. This model is a regression model for a dependent variable that has a Bernoulli distribution, a discrete probability distribution. The series records 1 when gross capital flows decrease and 0 when gross capital flows increase or remain stable. We use interest rate differentials, REER and the nominal exchange rate as financial market signals. The data period is May 2003 to June 2007.

Meanwhile, Graph 12 shows that the probability that "capital inflows (outflows) decrease" in both cases becomes smaller with real effective exchange rate appreciation. REER appreciation is associated with a decrease in Indonesian economic competitiveness. However, real appreciation is conducive to foreign economic agents continuing investing in Indonesian short-term equity and fixed income portfolios. That relates to the future expectation of better returns in terms of their home currencies, which explains why foreign holdings in those two types of portfolio investments remain relatively high. Thus, we still see the probability of capital outflows below 0.50, which again shows how the international economic agents investing in Indonesia maintain their confidence to stay, vis à vis the appreciation of the REER.

Graph 12

Foreign capital flows (to and from Indonesia) and their response to REER, November 2003–June 2007



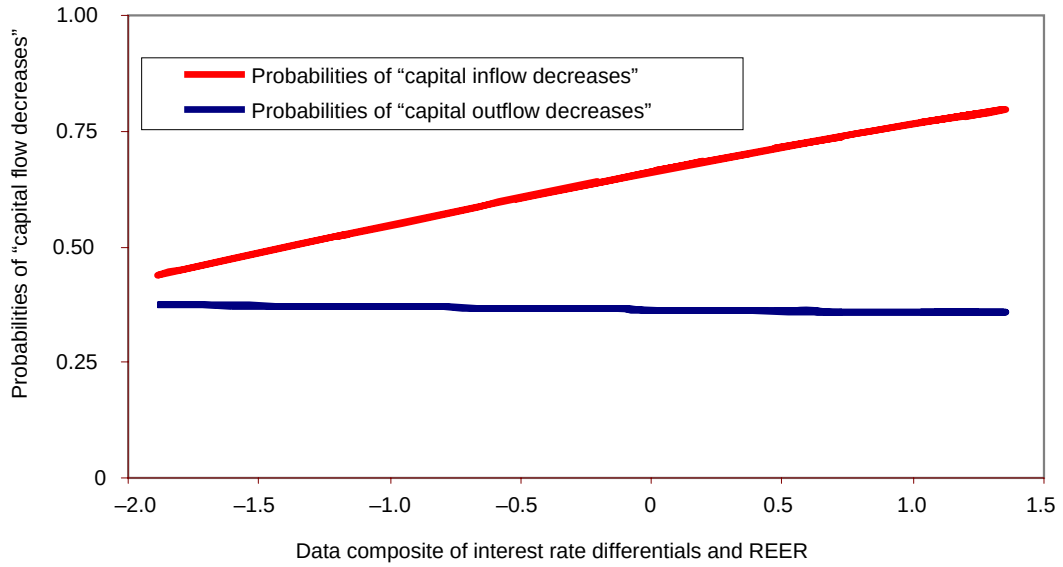
Finally, we adopt a different approach where the two most important variables that influence capital flows are now compressed into one "composite" variable.[9] We do this with a principal component analysis, where the dimensions of the interest rate differentials and the REER vectors are now compressed and mapped into one dimension so as to see how the "fundamentals base" movement of both variables (REER and interest rate differentials) influences the probability of capital flows decreasing.

Graph 13 shows a very interesting finding from this analysis. The probability that "capital inflows (outflows) decrease" becomes bigger (smaller) with the combination of a rise in the interest rate differential and REER appreciation. This suggests that, in the face of an increase in the interest rate differential and REER appreciation, foreign capital already in Indonesia will probably stay, while a decrease in capital inflows is more likely.

[9] The term *"composite" variable* is actually not entirely correct by definition in our principal component analysis approach. However, it is meant only to simplify the interpretation of a new single vector of data which actually represents the fundamental dynamic factors: ***REER*** and ***interest rate differentials***, influencing the probability of "capital flow decreases", which is produced by the estimation of the principal component of both variables.

Graph 13

Foreign capital flows (to and from Indonesia) and their response to the composite of interest rate differentials and REER, November 2003–June 2007



5. Closing remarks

Indonesia's financial sector liberalisation succeeded in strengthening the capacity of the domestic financial system and promoting the rapid expansion of foreign capital inflows for financing national development. However, in the first half of the 1990s huge inflows of capital, much of which were short-term, led to asset price bubbles in the property sector and runaway credit expansion that threatened financial system stability. Indonesia became an easy target for speculators because of weaknesses in the financial system, poor corporate governance and heavy dependence on the external sector. As a result, the country was plunged into a prolonged crisis.

The actions taken during the crisis and post-crisis period have brought significant results, although Indonesia is still some way from achieving full recovery from the crisis. Considerable progress has been made in stabilising macroeconomic conditions and resolving various structural problems. This has helped to create conditions that will enable Indonesia to move forward with the development process set back by the crisis. In view of the importance of foreign capital in accelerating economic development and having learned lessons on the negative impact of weak management in this area, the policy actions necessary for Indonesia to move forward are as follows:

First, globalisation is an unstoppable phenomenon and Indonesia must do what is necessary to profit from this trend. An open economy offers a means of financing development beyond the capacity of domestic sources. Indonesia must thus retain the free foreign exchange regime and support its usefulness by building a more efficient, stronger and sounder domestic financial market. The monitoring of foreign exchange flows is therefore not aimed at imposing restrictions on capital flows. Instead, it is more for statistical purposes in support of monetary policy and improved transparency, one of the prerequisites for the creation of an efficient market.

Second, the strengthening of the financial system will be crucial. Liberalisation of capital flows should be supported by a more robust institutional structure and regulatory framework in the financial system, particularly in the application of prudential principles and better risk management in keeping with international standards. These efforts must also be complemented by consistent macroeconomic policy.

Third is the selection of an appropriate exchange rate system. The balance of payments crisis in Indonesia and other countries was closely linked to negative impacts from rigid exchange rate systems. Experience demonstrates that systems like these lead to moral hazard in taking on excessive, unhedged foreign borrowings. In the view of the monetary authority, the free floating rate system is the most appropriate for today's conditions. Sharp rate fluctuations from the application of this system can be minimised through consistent implementation of appropriate macro and micro policies.

Fourth, good governance and transparency in the private and government sectors are important to the development of healthy markets and strengthening of government policy credibility. To achieve this, at least two prerequisites need to be in place: (i) implementation of macroeconomic policy and financial sector regulations within a transparent framework supported by up-to-date, accurate and high-quality information; and (ii) the private sector must operate in compliance with accounting standards and uphold international standards of disclosure in keeping with sound business principles.

Fifth, Indonesia must extend full support for improvements in the international financial architecture. To avoid future crises and cope with the impact of any crises that may arise, the international financial system must undergo a restructuring to ensure not only that countries operate sound macroeconomic policies, but also that these policies are properly coordinated. This is especially necessary among developed countries. The restructuring must also ensure that the private sector is involved in the management of capital inflows.

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