

## Handling Volatility of Private Capital Flows

- 60 The experiences of countries who have received large capital inflows during the 1990s indicate two potential problems: sudden large surges of capital inflows and equally sudden slowdown or cessation of inflows, or outflows. The magnitude of these flows can be as large as 4 to 5 percent of GDP on an annual basis. Reversals of flows can also be very substantial if investors lose confidence in domestic macroeconomic policies, as was the case in Mexico, Turkey, Venezuela, Argentina, Brazil and Thailand. Countries that are considering opening their capital account may therefore be concerned about the risk of experiencing greater volatility in private capital flows.
- 61 This volatility of private capital flows may sometimes be due to external factors: shocks arising in the international economy (including changes in international interest rates and terms of trade). Or it may be due to domestic shocks including economic policy changes. Institutional weaknesses in a country's financial markets can magnify the effects of various shocks causing a greater degree of volatility in the early stages of financial integration.
- 62 There have, however, been significant differences in volatility among countries. Asian countries have generally shown less volatility, and have reduced levels of volatility when compared to Latin America in the 1980s, suggesting that country conditions remain the primary determinant of volatility. It may also reflect the fact that Asia has sought to attract more FDI than portfolio investment which is believed to be more volatile than the former.
- 63 The volatility of portfolio investment flows compared to FDI is a contentious issue. On the one hand, FDI is believed to be less volatile because it is more costly to reverse and is based on long-term economic and political fundamentals rather than shifts in international financial conditions. The opposite is true for portfolio flows which are more sensitive to short-term differentials in rates of return and investors can divest themselves more easily of their stock of equities or bonds. On the other hand, there is increasing evidence that using various hedging instruments, FDI flows can also be volatile. (For example, transnational corporations can respond quickly to country circumstances by managing international intra-firm financial transactions and by borrowing in domestic currency against their fixed assets, and switching into foreign currency.)
- 64 The remainder of this section discusses how countries can guard against and best handle volatility in capital flows. It starts by discussing the disciplinary effect that capital market integration imposes on macroeconomic policy. It considers the impact of both capital outflows and inflows and the policy dilemmas in macroeconomic management that governments face in handling capital surges. It also looks at the implications of capital market integration for the financial sector and capital account liberalisation.

## 1 The effects of capital market integration on macroeconomic policy

65 Governments and central banks in financially integrated countries find themselves operating in an environment where capital flows are highly sensitive to changes in domestic and foreign economic policies, events and interest rates. Compared to economies that are less integrated into world financial markets, both domestic events - including changes in domestic policies - and international events, will have a different, quicker and larger impact on the economy. Capital market integration thus affects and in some ways limits the scope for domestic macroeconomic management. In one respect at least this is beneficial: it places a higher premium on the steady pursuit of sound domestic policies, and requires swifter action when policy is going off course. But there are other more specific implications for the conduct of policy.

66 First, the ability to conduct independent monetary policy and maintain interest rates that differ from international interest rates, becomes increasingly difficult if the government wishes to target the nominal exchange rate. In a completely open economy, with a fixed nominal exchange rate, domestic interest rates will be determined by external factors and will be equal to the foreign interest rates adjusted for a risk premium and any expected exchange rate changes. The authorities cannot, therefore, conduct an independent monetary policy. By targeting the exchange rate effectively over a long period, countries can reduce the expectation of future exchange rate changes, and hence the risk premia and the difference between domestic and foreign interest rates. Countries following such a policy can find themselves faced with complex policy dilemmas, where domestic circumstances require the interest rate to be different from the international rate.

67 In a semi-open economy, however, domestic interest rates can differ from foreign interest rates for at least a period. For example, if the authorities adopt a more expansionary monetary policy, which reduces domestic interest rates and increases the differential, then there could be a lag before there is serious downward pressure on the exchange rate, forcing either a devaluation or a reversal of the original interest rate change.

68 Second, financial integration increases the importance of responsible fiscal management. With a fixed exchange rate regime and constraints on monetary policy, fiscal policy becomes the only available instrument for influencing aggregate demand in response to external shocks. In using fiscal policy as a short-term stabilisation instrument, governments must of course also pay attention to medium term fiscal solvency.

69 Third, financial market integration reduces the effectiveness of capital controls. This is discussed further below in sub-section 3(d).

70 Finally, financial market integration gives exchange rate management a different perspective. Exchange rate management remains an option, as noted above, but in some circumstances allowing exchange rate movement, or a move to a floating rate, may be the best option. Holding the rate down, for example, in the face of strong upwards pressure, may mean accommodating inflation and losing control over the domestic price level, undermining confidence in the government's policies and, in due course, an uncomfortable reversal of funds.

## 2 The macroeconomic impact of capital flow surges

71 A number of financially integrated countries represented in the group, including both industrial and developing countries, have had experience of handling periods of strong

capital inflows. The most important macro-economic risk is that such inflows result in an excessive expansion of aggregate demand, and create inflationary pressures. If a country maintains a fixed exchange rate, or resists exchange rate appreciation, reduces official interest rates and intervenes in the foreign exchange market to purchase the foreign exchange generated by the capital inflow, that may lead to monetary expansion, and greater domestic demand. If the domestic economy does not have sufficient capacity to meet this demand, this will trigger an acceleration in domestic inflation together with a deterioration in the current account. In due course rising domestic prices will cause the real exchange rate to appreciate, adding to the deterioration of the current account, already caused by the increase in aggregate demand. At that point capital flows may go sharply into reverse.

72 Two important initial economic conditions may make a country particularly susceptible to such episodes. First, the initial fiscal-monetary policy mix. In general a tight monetary policy which is accompanied by a loose fiscal policy drives interest rates high and attracts capital inflows to unsustainable levels. So keeping fiscal policy tight is important. A second initial condition of importance for capital flow surges is the imbalance between domestic savings and foreign inflows. Encouragement of domestic savings is one policy response that can help to reduce long-term vulnerability to capital inflows. Increasing domestic savings bridges the gap between savings and investment so that less foreign savings and capital inflows are required - and there are some encouraging international examples in this regard. Chile, for example, which increased its domestic savings over time and its saving ratio stood at 33 per cent during the period 1991-93. Its success lies in its establishment of a compulsory private pension system. The accumulated funds have been invested in the open

financial markets and not held as book reserve credits with the government as is often the case in the developing world.

73 The next section looks at experience with handling periods of strong capital inflows, when they occur.

### 3 Possible domestic policy responses

74 The experience of both industrial and developing countries suggests that a mix of different policy responses is likely to be the most appropriate way to handle volatile private capital flows. The nature of that mix will vary according to individual country circumstances. It may also change over time depending on whether capital flows are sustained

#### (a) *Fiscal Policy*

75 Fiscal policy is a very important policy instrument in stabilising the economy in the face of external financial shocks. For a well integrated economy under a fixed exchange rate regime, it may be the government's only available policy option for reducing absorption and tackling inflationary pressures in the economy. Under flexible exchange rates, governments can use a mixture of monetary and fiscal policies. Some countries have handled episodes of capital inflow effectively by tightening fiscal policy but there are limits on its use: it usually cannot be changed quickly, and often needs to be set in a medium term framework. Moreover the use of fiscal policy by itself may be impractical in circumstances where the magnitude of the required fiscal adjustment is very large. Fiscal policy has, however, been used by some countries successfully, e.g. Chile, Malaysia.

#### (b) *Exchange rate adjustment*

76 A second option is to tighten monetary policy while floating the exchange rate. The resulting appreciation of the domestic currency will

tend to both discourage net inflows through the capital account and, in time, create a current account offset through a reduction in the current account balance as exports become less competitive. It will also cause a rise in interest rates, or at least eliminate the need to reduce them to maintain the exchange rate, hence reducing domestic demand.

77 The higher the capital inflows and the greater the appreciation, the higher would be the loss of profitability of the export sector. But it is worth remembering that the alternative may be a similar real appreciation, but achieved with a rise in inflation caused by an expansionary monetary policy required to defend a nominal fixed exchange rate. This is clearly a less desirable outcome.

78 On the whole, developing countries have not favoured the adoption of completely floating exchange rates. But many have permitted some flexibility, adopting exchange rate bands around a crawling central parity in order to accommodate some nominal appreciation in response to inflows. Others, while keeping fixed rates, have permitted step revaluations on occasions.

*(c) Intervention, sterilisation and debt management*

79 Another policy open to countries seeking to hold fixed exchange rates is to sterilise the effects of an inflow on the money supply through intervention in the foreign exchange market. Sterilisation operations have been used by many countries which have experienced net capital inflows. They have taken three forms: a reduction in the monetary base through open market operations; a transfer of public sector deposits from commercial banks to the Central bank; and an increase in reserve requirements to domestic financial institutions reducing thus the expansion of the monetary base or the growth of broader monetary aggregates. There are a number of

other options for sterilisation of capital inflows, notably the use of foreign exchange swaps. Swaps tend to be flexible since there is no need for a stock of short-term government securities, as in open market operations. They have been used successfully in the past for sterilisation (e.g. by countries such as Indonesia), though one constraint is that the use of swaps depends on a liquid foreign exchange market.

80 In general, the effectiveness of sterilised intervention depends on the degree of substitutability between domestic and foreign interest-bearing assets. For example, when sterilisation takes place through the selling of domestic public debt, there will be a fall in the price of securities and a rise in domestic interest rates. That will make domestic assets even more attractive to foreigners, increasing capital inflows and aggravating the problem.

81 There is, however, a cost incurred by the public sector when sterilisation takes place through open market operations, which has to be taken into account. That cost relates to the difference between a) earnings on accumulated net foreign assets and b) the payments on domestic currency instruments. It is often the case that the former is less than the latter. For example, the government in Jamaica has experienced substantial fiscal costs from sterilised intervention.

82 There is a general consensus in the Group that sterilised intervention is a temporary measure which can buy time but does not provide a permanent solution, and can be costly. It can nevertheless be useful in the case of temporary capital inflows, and to buy time while longer term policy responses are being considered.

*(d) Controls on inflows*

83 Many countries have also tried a variety of direct and indirect controls in response to

surges in capital flows. These can take many forms. They can take the form of non-remunerated reserve requirements on new foreign credits or foreign currency deposits. These are equivalent to taxes. They can take the form of limits on the foreign exchange liabilities of banks. They can also take the form of a ban, on the sale of short-term securities to foreigners by residents. Such controls were for example, imposed by Malaysia at the beginning of 1994 in response to a sharp acceleration of capital inflows in 1993.

84 It is, however, very difficult to assess the effectiveness of such capital controls. In some countries there was a reduction in net private capital inflows as controls were introduced, in others an acceleration. The problem with such before-after assessments is that there are also other factors at work. The general consensus, is that on the whole, in integrated economies, such controls can only be effective in the short-run - given the world-wide integration of financial markets and the sophistication of financial intermediaries. Even then controls over capital inflows are more likely to be effective than those over outflows. In general, the effectiveness of capital controls depends on a variety of factors, such as:

- The state of technology: this affects the transaction costs in conducting arbitrage amongst different financial centres. If these costs are low, it will be more difficult to implement effective controls.
- The design of the controls themselves, in particular their comprehensiveness and a country's administrative capacity to enforce them. Controls which apply only to some types of assets can be evaded through substitution to other assets. The extent of the substitution depends on the depth of the country's financial markets. In such a situation controls will be ineffective in limiting the total amount of flows,

though they may alter the composition of flows.

The degree of openness of the economy. This determines the scope for evading controls through under and overinvoicing of trade transactions and the use of leads and lags on trade credits. The existence of money laundering provides additional channels through which funds can be moved across borders.

85 Empirical evidence has shown that capital controls can drive wedges between domestic and international interest rates, thereby providing the country with a certain degree of independence in setting its domestic interest rates. The Group's conclusion, therefore, is that they may be useful for countries at an early stage of financial integration. A recently published World Bank report advises that the use of restrictions may plausibly be warranted when surges of foreign money encourages poorly run and supervised banks to lend imprudently. There is consensus that controls can only buy time, and they are not a solution to a sustained surge in inflows.

#### **4 Implications of capital market integration for the financial sector**

86 The banking system in many developing countries plays a greater role in financial intermediation than in industrialised countries. Another general characteristic of banking systems in a number of developing countries is their fragility, as indicated by Moody's financial strength ratings. In an environment of increasing capital market integration, these characteristics accentuate the vulnerability of countries to strong capital inflows or outflows, and that in turn increases macroeconomic vulnerability. For example, in the absence of a well supervised banking system, surges of capital inflows can result in the imprudent expansion of credit for consumption, speculative purposes, or the

financing of a construction boom. As a result, banks' portfolios become exposed to volatile sectors and to severe losses when sentiment changes and asset prices fall, causing a banking crisis. Experience with a series of banking crises that have been associated with episodes of surges in capital inflows, such as that in Chile over the period 1978-81, has implications for the liberalisation process.

## 5 Implications for the liberalisation process

87 The potential volatility of private capital flows highlights a number of issues concerning the liberalisation process. One issue relates to the sequence of liberalisation and stabilisation policies, another to the order in which the sectors will be liberalised and a third to the speed of the liberalisation process.

88 In general macroeconomic stabilisation should precede liberalisation: this means improving public finances, tackling inflation and reducing external imbalances. The financial sector should also be strengthened before liberalisation: - by improving the regulatory and supervisory frameworks; and by establishing clear standards and rules of accounting, auditing and legal procedures. Where there is a deposit insurance scheme, it must be appropriately targeted and priced to reflect risk levels.

89 Capital market integration is thus best engineered against a background of macroeconomic stability, liberalised domestic financial markets and a well regulated and healthy financial sector. However the state of the financial sector is constantly changing with new financial innovations often accompanying capital inflows. Governments therefore need to be vigilant in ensuring the continued stability of their financial sectors after liberalisation.

90 On the issue of the speed of liberalisation, many countries have expressed a preference for gradualism. Malaysia is cited as a success story by liberalising its economy slowly. The experience in South Africa with capital account liberalisation also appears to support the gradual approach. South Africa removed foreign exchange controls in 1983 following a "big bang approach" and was forced to reimpose them in 1985. More recently it has followed a more gradual approach in removing the controls. Other countries, however, including the UK in 1979, have successfully followed a more rapid approach, finding that once they began to remove controls they had to move more quickly than originally intended across the board.

91 There is a consensus that there are no set rules, as country circumstances differ and policies adopted need to reflect the country context.

## 6 Conclusions

92 This section brings together the Group's conclusions on the handling of volatility of capital inflows and outflows and the implications of such volatility for policy and the sequencing of liberalisation:

- i Getting the fiscal/monetary policy mix right, and encouraging domestic saving, can help to reduce the risk of volatile swings in private capital flows.
- ii The basic economic policy choices in handling capital inflows are:
  - (a) permitting flexibility in the exchange rate with some nominal appreciation
  - (b) fiscal policy tightening
  - (c) sterilised intervention and controls on capital flows

Countries will want to use a combination of these policies according to their circum-

stances. With this in mind, the Group also noted that:

- ❖ Monetary expansion to counter any nominal exchange rate appreciation is not recommended: in due course it will lead to faster inflation and therefore real exchange rate appreciation.
  - ❖ There will be limits on the extent of possible fiscal tightening in the short run.
  - ❖ Sterilisation and controls on capital inflows can provide short term breathing space but may not be effective in the event of large and persistent capital surges.
- iii. Potential volatility in capital flows has also implications for the sequencing of reforms and the speed of capital market liberalisation. The Group concluded that the process of liberalisation is likely to

vary according to the circumstances of individual countries, but that experience suggested a number of steps that governments should take before opening up their capital accounts:

- ❖ improve public finances, reduce inflation and reduce external imbalances.
- ❖ strengthen domestic financial markets by improving financial infrastructure and the regulatory and supervisory framework for banks and financial institutions, and by lifting restrictions on interest rates and the allocation of loanable funds.
- ❖ tackle other major structural distortions in the economy.

After capital account liberalisation is in place governments need to continue to monitor both capital flows and their financial sectors - and to do so more carefully than in the past.