Managing Capital Surges

Graham Bird

Introduction

Issues surrounding capital account liberalisation and the use of measures to moderate and manage capital mobility, including capital controls, have always proved to be 'thorny' ones for policymakers. In addition to the ideological disagreements about market liberalisation as opposed to the use of controls, the difficulties arise from a number of sources, but in particular from the fact that not only is the underlying theory ambiguous and complex, but also the available evidence is mixed. Just as international capital movements have exhibited a large amount of volatility, attitudes towards the treatment of capital mobility have shown considerable inconsistency over time.

Prior to the Asian crisis in 1997/98, the momentum seemed to be heading in the direction of favouring capital account liberalisation, and there were proposals to enshrine this into the IMF's Articles of Agreement. Following the crisis, the momentum was lost. Former advocates of liberalisation began to present it more as a long-term objective rather than a short-term imperative, and gave more attention to the preconditions needed for liberalisation to work well. Since then, the debate has evolved still further into one about the circumstances in which measures to limit capital mobility may be legitimately used and about what form they should take. The IMF has been working on producing an internationally agreed framework to guide policy.

Graham Bird is Professor of Economics at the University of Surrey, Visiting Professor of Economics at Claremont McKenna College and a Clinical Professor at Claremont Graduate University.

Reflecting the above, the nature of the interest in capital mobility has taken on different forms at different times depending on the contemporary circumstances. At a general level, the issue has involved examining the pros and cons of financial globalisation and, leading on from this, the problems associated with international capital volatility. At a more specific level, during the Asian crisis the focus was on the problems created by capital reversals, or sudden stops. Prior to that crisis, attention had instead focused on the large and rapid inflows of international capital into both Asia and Latin America in the early to mid-1990s. Although the global financial crisis of 2008/09 was again associated with a decline in capital flows towards emerging economies, the period after mid-2009 has witnessed another sharp increase in them. Discussion has once more therefore been concentrating on the problems to which the inflows give rise and the design of policy aimed at neutralising any harmful economic consequences.

Rather than attempting to cover all the issues associated with international capital mobility, this article focuses on these recent 'capital surges'. It explains why they have occurred and why they may be problematic. It also examines the policies that may be adopted to help deal with them. In doing this, both individual country and systemic perspectives are taken. The analysis is then drawn upon to discuss current proposals for establishing a framework for using capital flow management measures (CFMs).

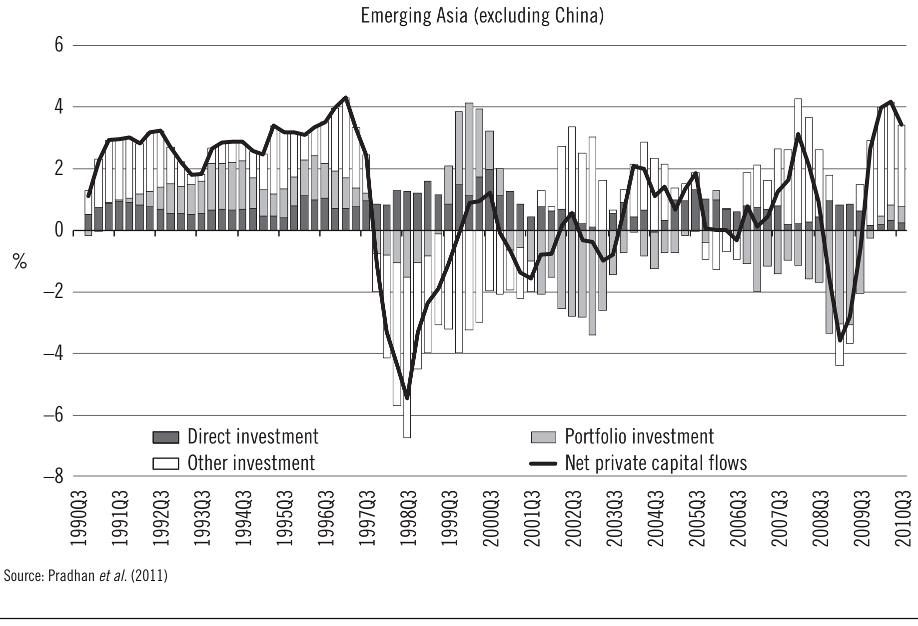
The article is organised in the following way. It first provides a brief statistical picture of international capital mobility. Next, it summarises the potential causes of international capital movements and relates them to the contemporary picture, after which it investigates the consequences of capital surges and emphasises the ambiguities involved. These are what make the design of policy difficult since it needs to try to retain what is good about capital inflows while eliminating, or at least minimising, what is bad about them. The following section assesses the policy options and, after that, the current situation is discussed as well as attempts to arrive at international agreement on the use of CFMs. The final section ponders on what may happen in the future.

The pattern of capital movements: surges and sudden stops

A well-established feature of international capital movements is not only their short-term volatility but also the sustained swings that occur over relatively protracted periods of time. This is illustrated in Figure 1, which shows net private capital flows to emerging economies in Asia (excluding China) since 1990. A similar pattern would be found for emerging economies in other regions of the world. The figure shows how, after the third world debt crisis in the 1980s, net private capital flows built up from the early 1990s until the East Asian crisis in 1997/98, when there was a sharp and dramatic reversal. From a low point in 1998, the trend was once again upwards until the end of 2007, after which there was another sharp reversal during the global financial and economic crisis. Following this crisis, however, flows quickly recovered and, by the end of 2010, net inflows had returned to something close to their apparent trend value. The figure shows that there has been a surge of capital moving into emerging economies since the middle of 2009.

The broad statistical pattern revealed by the figure raises a number of important issues. The first relates to the nature of the association between capital flows and crises. To what extent are the crises, such as the East Asian crisis in 1997/98 and the global crisis in 2008, independent of the

Figure 1: Net capital inflows to emerging economies, 1990–2010 (in % of GDP; 4-quarter moving average)



Source: Pradhan *et al.* (2011)

capital flows that preceded them? Are the crises caused by other factors? Do the crises then go on to have a negative effect on capital flows? Or does the strong growth in capital inflows contribute to the incidence of crises? Is it the boom in capital inflows that leads to the crisis and the subsequent sudden stop in capital? In reality things are complicated and there is likely to be a complex picture of interdependence between capital flows and crises. Capital surges may, to some extent, be a precursor to sudden stops, and the challenge is to understand in detail the mechanisms that link them together. The mechanisms may be macroeconomic and involve exchange rates and inflation, or they may be sector specific and involve inadequate prudential regulation.

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The second issue arising from Figure 1 relates to the composition of capital flows. The figure appears to confirm the conventional wisdom that foreign direct investment (FDI) is more stable than shorter-term bank lending and portfolio investment. This would imply that FDI would fall less during a sudden stop episode, but would also increase less during a surge, and this is the picture revealed by the figure. Indeed, during the surge that has occurred since mid-2009, and for emerging Asia excluding China, FDI as a proportion of GDP has fallen, and the increase in net capital inflows has resulted from the rapid increase in portfolio investment and other types of short- to medium-term investment, including, in some but not all cases, bank lending.

For emerging economies outside Asia the rapid increase in portfolio investment has also been a feature of the post-2009 surge. Evidence presented by the IMF (Pradhan *et al.* 2011) reveals that, for a group of non-Asian emerging economies comprising Brazil, Peru, South Africa and Turkey, the surge in capital inflows has been greater than during past surge episodes in these countries – something that is not the case in Asia. While for Brazil the surge in portfolio investment has been reasonably evenly split between equity and debt, for South Africa and Turkey the growth has been driven by debt-related portfolio investment. This is a feature that is also found in Asian emerging economies including Thailand and Indonesia, but to a lesser extent in Korea.

A third issue of interest relates to the likely persistence of the surge in net capital flows to emerging economies. The data in Figure 1 hint at the possibility that it will not be sustained. Indeed, by definition, a surge cannot continue indefinitely since, if it did, it would affect the trend against which it is being measured. Figure 1 suggests that the surge in capital flows since mid-2009 may simply be reflecting a recovery from the low point in 2008 and a return to the trend that had been established since the end of the 1990s. This implies that it will be short-lived and temporary.

A further possibility is that the increased flows observed during the surge since mid-2009 may reflect an adjustment to the balance of investors' portfolios. The flows will continue to increase at the pace that they have only for as long as it takes to make the associated portfolio adjustment. Once the adjustment has been made, the growth in flows to emerging economies may therefore be expected to diminish. Within the context of such an analytical framework, the relevant issue relates to the optimum speed of portfolio adjustment and the extent to which excessively rapid adjustment results in a short-term surge that then needs to be managed in a way that minimises the possibility of it leading to a sudden stop and a crisis.

Understanding capital surges

In order to design policy appropriately, it is important to understand the phenomenon with which it is dealing. In order to manage capital surges, it is therefore important to understand what lies behind international capital mobility. At a superficial level things are reasonably straightforward. International investors, like all investors, will be thinking about return and risk or, what comes to the same thing, risk-adjusted rates of return. As far as return is concerned, this will be affected by the rate of interest being offered, the yield on bonds, and the profits, dividends and asset appreciation associated with equity portfolio investment. Different types of capital flow will be affected by different things. A rise in the interest rate may, for example, have a positive effect on bank lending but a negative effect on FDI, where it may be seen as suggesting a possible fall in the rate of economic growth. In any case, foreign multinational enterprises may be more concerned about wage rates than about interest rates.

In a similar way, risks may fall into different categories and be assessed in different ways by potential investors. There are risks surrounding future exchange rates, the chances of default, and domestic politics. Some of these risks may be hedged against. For example, exchange rate risk may be offset by engaging in forward market transactions. But this will increase the costs of foreign investment.

Different investors may not only assess the same categories of risk differently, but may also view different categories of risk as being of more or less importance. Default risk may be important for bank lending and for bonds, but may be of less concern in the case of FDI, for which future political stability and the continuity of domestic economic policy may be of greater importance.

On top of this, there are other considerations when it comes to explaining capital flows. From an international perspective, it will generally be *relative* rates of risk-adjusted return that will be important, although theories of behavioural finance suggest that absolute levels may also be important if low interest rates in one part of the world lead investors to take on more risk in an attempt to keep up returns. Either way, one country or region may become a more attractive place in which to invest not as a consequence of anything that has happened there, but as a consequence of events elsewhere in the world. There will be both 'push' and 'pull' factors at work.

Moreover, financial markets frequently exhibit patterns of procyclicality and herding behaviour. The risk may be seen as the risk of being left behind. Such tendencies gather momentum as the size of the herd increases. These influences create a stronger unanimity of view within markets that are particularly relevant when seeking to explain surges or sudden stops. The market feeds on itself in the short run.

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How does this collection of ideas help us to understand the observed pattern of capital movements reported in the previous section and, in particular, the surge of capital into Asia and Latin America since mid-2009? The success of emerging economies in terms of economic growth, combined with relatively high interest rates and yields, and exchange rate and asset appreciation, may certainly have resulted in a strong 'pull' element. At the same time, economic recession and stagnation in the United States and Europe, combined with low interest rates and forecasts of low economic growth, as well as the risk of a depreciating dollar and a faltering euro might have been expected to have 'pushed' capital elsewhere. Recent evidence presented in the IMF's *World Economic Outlook* in April 2011 shows that push factors emanating from global financial circumstances have indeed been a significant factor in explaining capital inflows into emerging economies. It also reveals that capital has flowed into emerging economies with both relatively strong and less strong economic fundamentals, which indicates that global factors have perhaps been dominating.

If this is the case then there are reasons to anticipate that the surge will not be sustained at the rate that was observed between mid-2009 and the end of 2010. First, there is the point about portfolio balance, with enhanced flows reflecting a process of portfolio adjustment. Second, as the US and European economies recover, and interest rates in the US and elsewhere rise, push factors will weaken. Third, as capital moves into emerging economies, it may have the effect of increasing the supply of funds at a faster rate than the demand for them is rising – something that may be expected to happen if growth rates in emerging economies slow down. In these circumstances, the rate of interest will tend to fall, reducing the strength of pull factors as well.

Again, evidence presented by the IMF suggests that the surge of capital into emerging economies has contributed to a reduction in bond yields. The surge since mid-2009 may turn out to be less persistent than the one observed in Asia in the first part of the 1990s when the increase in the domestic demand for funds in the capital-importing countries had the effect of keeping interest rates relatively high.

Finally, where capital inflows result in exchange rate appreciation, as has been the case in a number of emerging economies, another factor that has been attracting capital may diminish. How significant this will be depends on how exchange rate expectations are formed and whether a rise in a currency's value strengthens or weakens expectations that it will rise further.

The consequences of capital surges

Capital inflows have both a good side and a bad side. The balance between the two will change as circumstances themselves change. A secular and steady increase in long-term FDI may, for example, on balance be good, while a surge of short-term bank lending and portfolio investment may, on balance, be bad. It is to be anticipated that attitudes to capital mobility will therefore depend on the particular composition of the flows that there is at any one particular time, and it is unsurprising that recent debates about managing capital inflows have been motivated by the rapid increase in non-FDI flows.

But what is good and what is bad about capital inflows? On the good side, first they may relax financing constraints on economic development by allowing domestic investment to increase, thus enabling a faster rate of economic growth to be achieved. This growth may in turn create the resources necessary to service the accumulated debt and offer an attractive rate of return. Second, capital inflows, particularly in the form of financial FDI, may encourage domestic financial development and increase the efficiency of the domestic financial sector. Third, FDI may act as a conduit for the transfer of technology and contribute to an increase in productivity, with benefits for long-term economic growth. Fourth, access to international capital will permit countries to choose an optimal inter-temporal path for their balance of payments, with capital inflows allowing contemporary current account deficits to be financed. Fifth, financial globalisation permits foreign investors to diversify risk, and it may also mean that there is a superior global distribution of global saving, with capital being directed to where its return is highest.

What about the bad side of capital inflows? While doubts may be raised about some of the underlying claims for financial globalisation in terms of its welfare benefits in circumstances where there is herding behaviour, the bad side of capital inflows is particularly pertinent where inflows take the form of a surge in bank lending or debt-related lending. The basic argument is that such flows will create macroeconomic instability – but how? There are two broad components at work, although each of them has a number of dimensions.

First, rather than financing productive investment, capital inflows may be used to finance additional consumption or may finance speculative investment that results in asset price or housing bubbles. As a consequence, they may lead to faster inflation and fail to generate the resources necessary to service the related debt. They may also increase the chances of there being a financial crisis. Periods of boom do seem to be followed by busts, and the IMF reports empirical evidence that shows how capital surges are frequently followed by credit booms.

Second, capital inflows will tend to lead to currency appreciation that will in turn cause a loss of competitiveness. There will then be Dutch disease effects in the form of de-industrialisation and rising unemployment. To offset these effects, governments may intervene in the foreign exchange market to buy the foreign currencies and supply their own, but this then not only leads to the accumulation of international reserves but also to domestic monetary expansion, which carries with it the threat of accelerating inflation. This may be one reason why capital surges are associated with credit booms. To deal with this threat, governments may seek to sterilise the monetary effects of their intervention by issuing bonds. But this will tend to depress bond prices and raise yields, which will in turn perpetuate the capital inflows. It may also be that governments end up paying a higher rate of interest on their liabilities than they receive on the reserves they have accumulated. There will therefore be additional fiscal problems.

Measures to manage capital surges

Macroeconomic and prudential measures

In determining their policy response to capital surges, governments need to consider a number of things. First, will an appreciation in the exchange rate drive it above its fundamental equilibrium level, and what impact would this have on the current account of the balance of payments? If the surge occurs at a time when the currency is undervalued, little policy response may be needed and the currency's value may be allowed to rise. But it is a different matter if the currency is already significantly overvalued.

Second, where the surge would push the exchange rate well above its fundamental equilibrium level, intervention in the foreign exchange market would seem to be appropriate. This will be especially the case in circumstances where it is deemed sensible to build up international reserves and where the domestic monetary implications of intervention are not of any particular concern because the economy possesses spare productive capacity. But where reserves are already at a high level and the economy is vulnerable to overheating, other options may be needed.

Third, the scope for sterilising the monetary effects of intervention will be greater where government debt starts off at a relatively low level and where there is enough fiscal space to accommodate an increase in it.

Governments will also need to consider whether improved prudential regulation will help moderate the impact of capital surges by limiting their effects on asset prices, thus helping to avoid asset price and housing bubbles.

In short, therefore, when the exchange rate is already overvalued, international reserves are already at a high level, the economy is in danger of overheating and prudential regulation cannot easily and quickly be strengthened, alternative policies may need to be adopted. Capital controls are in the policy tool kit. Should they be used?

Capital controls

Capital controls can take on various forms but in common they seek to limit capital inflows and/or outflows, or more broadly the cross-border movement of capital. They discriminate between residents and non-residents and may also discriminate on the basis of foreign exchange. They set out to work by reducing the incentives to move capital internationally by taxing flows or by requiring investors to deposit part of the capital flow for a specific period of time in an account that does not earn them interest (unremunerated reserve requirements). Alternatively, they may involve special licensing arrangements or direct quantitative bans. Controls may therefore be either price or quantity based. Furthermore, they may be applied to all capital movements or only to particular types of flow. They may, for example, discriminate between short-term and long-term lending, between sectors, and between debt, equity and direct investment.

In practice, the range of controls is wide, but even so the number of key issues associated with their use is limited. Perhaps the most important one relates to their effects. Ostry *et al.* (2011) provide an up-to-date and comprehensive survey of the existing literature. From this they extract some general findings, although they also emphasise the methodological problems in isolating the effects of controls from the effects of other factors that will be influencing capital movements, particularly in circumstances where there are significant differences in the types of control used. They examine 30 studies covering the effects of controls as used by Brazil, Chile, Colombia, Croatia, Malaysia and Thailand.

The empirical evidence in general suggests that controls do not tend to affect the total volume of capital inflows and therefore do not have a discernible impact on the rate of exchange rate appreciation, although some studies find that countries with controls experience smaller capital surges. Controls do, however, seem to affect the composition of the inflows and their maturity, moving them in the direction of longer-term lending. They also seem to exert some impact on the degree of monetary autonomy, with controls allowing countries to exercise more independence in the design of domestic monetary policy. This is consistent with the idea of an impossible trinity or trilemma that is firmly established in international macroeconomics, and suggests that controls and monetary independence are to some extent substitutes for one another. Many studies further suggest that the impact of controls is relatively temporary as international investors discover ways to circumvent them.

Ostry *et al.* (2011) also present their own empirical examination of capital controls using the global financial and economic crisis of 2008 as a 'natural experiment'. The evidence they report shows that there is a negative association between the existence of controls prior to the crisis and output declines during it. They also find evidence that controls, and in particular controls on debt flows, were associated with helping to mitigate exposure to the crisis. Finally, they point out that the effectiveness of controls 'hinges critically on countries' implementation capacity'.

The evidence on the effects of capital controls carries with it some lessons for their future design, although what is learned may be difficult to implement in practice. One lesson would seem to be that controls should focus on helping to deal with temporary rather than persistent inflows. While this may be a reasonable conclusion where the danger is that a surge of capital will cause macroeconomic instability, it may be less justified where the concerns are prudential. Here, persistent inflows may represent a greater danger. In any case, in real time it is difficult to determine whether an apparent surge is actually a short-term deviation from the trend (that will be reversed) or a change in the trend itself.

A second lesson relates to the coverage of controls and whether they should be targeted on flows that carry a higher risk of reversal as well as a higher risk of contributing to a future crisis. It might appear that broad controls will be necessary where the concerns are macroeconomic in nature and relate to the loss of international competitiveness associated with currency overvaluation. The problem here is in establishing the degree of overvaluation. Targeted controls will be more appropriate where the concerns relate to financial stability and asset bubbles. In these circumstances controls could focus on short-term inflows and debt that is denominated in foreign exchange. The problem is that it will be easier to circumvent partial controls. In order to minimise circumvention, the need for broader controls may therefore be unavoidable.

A third lesson is that there is no clear indication as to whether price-based or quantity-based controls are superior. Price-based measures may be easier to adjust and may appear less arbitrary, but it is difficult to know how international investors will respond to them. Quantity-based controls may have a more predictable impact on flows in the short term and may therefore have advantages when dealing with surges. However, an important factor will be the ease with which the controls can be implemented and the nature of any existing institutional framework. Confronted with a surge of capital, the design of the measures to deal with it may come down to institutional convenience. If one measure requires parliamentary approval, such as a tax on inflows, whereas another can be implemented by the central bank, such as an unremunerated reserve requirement, this may dictate the use of the URR. At the same time, a URR tends to be more complex to administer than a straight tax. The ambiguities help explain why countries have used a diverse range of capital controls.

Capital surges: global considerations

In designing policy to manage capital surges there are also global considerations to take into account, although in many ways they serve only to make things more complicated. First, where capital flow management measures are used to prevent exchange rate appreciation, they may make it more difficult to reduce global economic imbalances. The problem here is in judging whether and to what extent the measures are being used to prevent a currency from moving towards its fundamental equilibrium rate rather than to prevent it from becoming severely overvalued.

Second, the use of controls may mitigate the perceived need to accumulate owned reserves, since they reduce the chances of encountering a crisis against which reserves are being held as a form of insurance. This may reduce the incentive to run current account surpluses that would otherwise motivate a policy of currency undervaluation. From this angle, controls may assist in reducing global economic imbalances rather than make it more difficult.

Finally, and to the extent that they are effective, there is the possibility that the use of controls in one country may redirect capital to other countries that are less well equipped to deal with the ramifications of capital inflows. In a sense the irony here is that the more effective the controls in one country are in reducing capital inflows that may have had significant adverse consequences, the more damaging will be the implications for other countries. Taking this one stage further, however, if controls in one country redirect long-term FDI to other countries, there may be beneficial implications for these other countries.

The general point emerges that there are likely to be significant international externalities associated with the use of capital controls as well as other measures to manage capital inflows. The question is then whether there should be a multilateral approach to using such measures.

An international framework for managing capital inflows: will it work?

At an international level, policy has evolved alongside the evolution of capital mobility. In the IMF's Articles of Agreement, under Article VI Section 3, members are allowed to 'exercise such controls as are necessary to regulate international capital movements'. Prior to the East Asian crisis, and during an era when policies of economic liberalisation were in the ascendancy, the momentum was to amend the Article to encourage capital account liberalisation and rule out the use of controls, even though some commentators pointed out that capital account liberalisation and the calculus of free capital mobility could not be equated with current account liberalisation and the calculus of free trade. The East Asian crisis halted the momentum towards capital account liberalisation. The surge in capital flows to emerging economies since mid-2009 has led to a further rethink about IMF policy.

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The initial response, apart from the additional research into the subject that has, in part, been reported earlier in this paper, was to try and construct a 'code of conduct' or 'guidelines' on the design of measures to manage capital inflows. However, as far as one can judge, opposition to an approach that appeared to be overly prescriptive led to the repackaging of the guidelines as a 'framework' that would merely be used to inform regular Article IV consultations. As presented in *IMF Survey* (5 April 2011), the framework is to be organised around six 'key principles'. These are: 'no one size fits all'; 'structural reforms are always encouraged'; 'there are no substitutes for the right macro policies'; 'capital controls are part of the toolkit'; 'design the medicine to treat the ailment'; and 'think of others'. Stated in this way, it is difficult to find too much to disagree with. Would one ever advocate the 'wrong' macro policies, or suggest that there is one easy solution to managing capital inflows and that this should always exclude controls, or claim that measures should be designed without reference to the nature of the problems being encountered? The difficulty will instead be encountered in interpreting these statements on the ground. Thus, while it may be agreed that exchange rates should not become seriously undervalued or overvalued, the problem will be in establishing when this is the case. Similarly, while there may be agreement that foreign exchange reserves do not need to be accumulated beyond a point at which they are adequate from a precautionary perspective, there may be significant disagreement about at what precise point this occurs. Or, again, there is likely to be disagreement about the extent to which overheating is a danger and about the scope for macroeconomic adjustment.

What one ends up with is a checklist of issues rather than clear guidance on how to deal with them. It seems unlikely therefore that the framework will significantly constrain the design of policy in individual economies. Just as the proposal to introduce a Tobin tax on international currency transactions faltered because of the problems in gaining sufficient international agreement on it, political economy considerations seem likely to rule out an internationally coordinated approach to capital inflows. Those experiencing inflows may be expected to resist any attempt to limit their policy options.

A much weaker framework may be all that can be achieved, although even with this there will be some countries that are opposed to the idea. The argument will be made that international policy ought to focus on policy in the countries from which the flows are emanating and the underlying push factors.

In any case, it is difficult for the IMF to exert effective pressure on countries that are attracting international capital and accumulating reserves. As Malaysia demonstrated during the East Asian crisis, even when emerging economies are experiencing capital outflows, it is not easy for the IMF to influence policy relating to the use of capital controls. These may sometimes be preferred to borrowing from the IMF. Furthermore, there is little reason to believe that the G20 will be any more successful in organising a global approach than the IMF.

Concluding remarks

Since mid-2009 there has been a surge of capital into emerging economies. While capital inflows have good aspects, there are also macroeconomic and prudential problems associated with them. Countries may be reluctant to see their exchange rates appreciate, but sterilised intervention in the foreign exchange market may also involve significant costs. In such an environment, capital controls may become relatively attractive as a policy option, and may be less unpopular politically than the alternatives. Governments can present them as helping to avoid asset bubbles and subsequent crises as well as the losses in competitiveness that would result in lower economic growth and higher unemployment.

Faced with the increasing use of capital controls in emerging economies, the IMF has accepted that they are an appropriate part of the policy toolkit with which to manage inflows. But, at the same time, the Fund has been anxious to ensure that they are not used as a substitute for required exchange rate adjustment, since this would make it harder to reduce global economic imbalances. This has led to a proposal to establish a framework for the operation of measures to manage capital inflows. While such a framework may be helpful in focusing attention on the issues to which capital inflows give rise, it seems unlikely that it will force countries to adopt policies that they do not see as being in their own best interests.

The surge in capital inflows is more likely to abate as both pull and push factors weaken. On the pull side, bond yields in emerging countries may fall as capital flows in, and rates of economic growth may not be sustained at the levels that have recently been achieved. On the push side, the advanced economies may continue to recover from the global financial crisis and interest rates may begin to rise. Moreover, the inflows to emerging economies may reflect portfolio adjustment among international investors. Once this has been achieved, flows may be expected to diminish. The hope must be that the process by which the surge abates is smooth and that a sudden stop is avoided. The worry is that there could be a rerun of the events seen in East Asia in 1997/98. If the judicious use of capital controls helps in this regard, history could show that they made a useful contribution to achieving global financial and economic stability.

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