Coping with Capital Inflow Surges:
Reviewing the IMF's New 'Institutional View'

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ABSTRACT

This paper reviews the IMF's recently published 'institutional view' on capital flows management, focusing on its views on the management of capital inflow surges. The IMF's acceptance of the use of capital controls and other capital flow management measures (CFMs) in certain circumstances, is a step forward. However, we argue that the IMF's recommendations as to when CFMs may be legitimately used are difficult to apply in practice, as it is difficult to ascertain whether the conditions that the IMF prescribes are fulfilled, such as whether exchange rates are overvalued. Moreover, the premise that macroeconomic and other measures should be preferred over CFMs, and that any CFMs should therefore be temporary, targeted and transparent, are unduly restrictive. We argue that CFMs could be particularly useful and appropriate in a financial environment where global push factors rather than country specific factors tend to be the dominant drivers of capital flows, and that CFMs should be considered as a potentially useful policy in the toolkit, on par with other policy measures.

Keywords: Capital Flows, Capital Control, International Monetary Fund

JEL Classification: F32; F33

1. Introduction

The International Monetary Fund (IMF) recently published what it defines as the 'institutional view' on the liberalization and management of capital flows (IMF 2012a). The published view codifies its stance on these contentious issues, on which its view has been evolving gradually over the past decade or so. The IMF view is important because it represents a 'consensus' view of the international policy community, on which policy advice and surveillance by the IMF will be based. The view will also shape the debate on the design of the international monetary system. Some have heralded this new view as representing a 'substantial ideological shift' (Beattie 2012), but while welcome, the changes appear incremental and is underpinned by continued skepticism towards the use of capital control measures. This paper will review the IMF's new policy stance on the management of capital flows, and argue that while the IMF view offers a consistent conceptual framework to guide policy, the actual implementation is not straightforward, and that capital control measures should have a more important role to play than suggested by the IMF.

The IMF's institutional view covers capital account liberalization as well as management of capital inflow and outflows. However, this paper will focus on the management of capital inflows into emerging markets. Capital inflow surges have posed serious challenges for emerging markets in recent years. Against the background of aggressive monetary easing by the monetary authorities of major currencies combined with periodic bouts of financial uncertainty, global capital flows have shown large volatility, characterized by the so-called 'risk-on' and 'risk-off' episodes that reflect shifts in market risk appetite. This has resulted in strong upward pressure on the exchange rate and asset prices during 'risk-on' periods from inflow surges, while sudden stops or reversals of inflows in 'risk-off' periods have resulted in heightened volatility of exchange rate and asset prices.

2. The IMF's Institutional View

The IMF recognizes that excessive inflows can lead to financial and economic volatility as well as build-up of vulnerabilities, and acknowledges that countries may need to respond to these inflow surges. It summarizes its advice on what policy measures may be used to manage capital inflows surges, as follows (IMF 2012a):

- 'Allowing the currency to strengthen if it is not overvalued relative to fundamentals.'
- 'Lowering interest rates in the absence of overheating or asset price inflation.'
- 'Intervening in the foreign exchange market to accumulate international reserves if reserves are not more than adequate.'

It is only when these options are not available does the IMF acknowledge that countries may legitimately employ capital flows management measures (CFMs). The IMF defines CFMs to encompass not just residency based restrictions on capital account transactions (i.e., traditional capital control measures), but also other measures that such as prudential financial regulations that are specifically designed to limit capital flows though not necessarily tied to residency.[2] The IMF would prefer countries to deploy macroeconomic and exchange rate policies where possible, and considers CFMs to be policies of last resort.[3] Moreover, the IMF places further restraint on the use of CFMs by urging countries to be 'transparent, targeted and temporary' and to be 'non-discriminatory' between residents and non-residents in the event that they resort to these measures.

The IMF's position raises a number of issues. The first question is whether the IMF framework provides a clear guidance on whether to use CFMs or not in a specific setting. The second question is whether CFMs should be considered as a policy instrument of last resort, as the IMF paper implies. The third question is whether CFMs should be used restrictively in a transparent, targeted and temporary fashion, as well as being non-discriminatory. We shall review these issues in turn.

2.1 Clarity of Guidance

The three conditions for the use of CFMs, namely overvalued exchange rates, no overheating and more than adequate reserves, seem fairly straightforward. But in practice, they are quite difficult to judge definitively. Consider the judgment on whether a currency is overvalued. As discussed in some detail in the appendix, it is difficult provide a clear-cut answer to this question, even when using the IMF's own methodology on exchange rate evaluation.

Similarly, the existence of overheating, especially whether there is an asset price bubble, is difficult to judge. Since asset prices reflect expectation of the future, it is difficult to say whether expectations that are embodied in current prices are overly optimistic. Excessive credit growth is widely considered as a factor that could be used to judge the existence of overheating, but rapid credit growth may also occur in the process of financial deepening, so that this indicator may not be as reliable as indication of potential overheating.

Judging the adequacy of foreign reserves is also problematic. There are a number of popular criteria, ranging from the traditional 3 months of imports, the Greenspan-Guidotti rule of 100 percent coverage of short-term debt, to percentage (20% sometimes cited) of M2. Not only do these different criteria produce a wide range of numbers, but the criteria themselves are essentially rules-of thumb without much theoretical or empirical underpinning. The IMF

(2011a) has proposed a risk based index that attempts to combine and expand the idea behind the existing metrics and link it to observed vulnerabilities during crisis. But the exercise remains exploratory and the IMF admits that there may be country specific factors that are not adequately captured in the model. It may nonetheless be noted that for some countries in Asia, the actual reserve level is well above the levels based on any reasonable criteria, so if one takes the view that intervention should not be undertaken when there is clearly excess reserves, then it may be a useable guideline for these countries.

When it is not clear whether condition for deployment of each measure is met, countries will be faced with shades of grey rather than a black and white answer as to whether, following IMF advice, it may legitimately resort to CFMs.

2.2 Should CFMs be Policy Instruments of Last Resort?

Beyond the feasibility of application of the IMF advice, there is a more fundamental issue of whether CFMs are inherently inferior to other measures. The IMF's recommendation that other measures be considered over CFMs implies that they are regarded as being more costly, less effective or creating greater negative spillovers. This position seems somewhat biased, in that it emphasizes the shortcomings of CFM measures without comparing them with costs and benefits of other measures. Let us consider the various aspects in turn.

2.2.1. Costs

In terms of costs, as the IMF view itself acknowledges, any policy measure is bound to have some costs. Allowing a large and sudden appreciation would result in some existing businesses becoming unprofitable, generating stranded costs for businesses and leading to increased unemployment which could be difficult to be absorbed rapidly by other sectors, resulting in high short-run costs to the economy.[4] Moreover, greater exchange rate variability in itself imposes costs to the economy even when the exchange rate is not apparently overvalued. Volatility of exchange rates generates uncertainty about the profitability of investment in the tradables sector, and thus may lead to misallocation of resources in the form of underinvestment in that sector.

The use of interest rate policy may also have costs. A reduction in interest rates to offset the deflationary impact from strengthening exchange rates may be appropriate to some extent, but in an inflation targeting framework, employing monetary policy to stabilize exchange rates may confuse the objective of monetary policy and reduce the credibility of the central bank.

Holding of international reserves could generate the quasi-fiscal costs of carrying international reserves (i.e. the difference between the domestic interest rate and the interest rate on reserves, when the former exceeds the latter) as well as possible capital losses in the event of local currency appreciation. There are also possible opportunity costs of investing in low-yielding foreign assets rather than in productive domestic investment, which is typically though to generate a higher real return in emerging market economies. However, it should be noted that these costs exist regardless of the level of reserves, and costs should be judged against the benefits of insurance provided by the reserves and the reduced volatility of exchange rates achieved through intervention. It is also useful to note that a country may also invest in less liquid but higher yielding foreign assets through sovereign wealth funds, which will tend to reduce the quasi-fiscal costs of holding reserves.

As with any regulation, CFMs could impose costs on the economy. The IMF cites a number of possible costs, including the possibility that they 'reduce discipline in financial markets and public finances, tighten financing constraints' and notes that CFMs can be 'costly to monitor and enforce, promote rent-seeking behavior and corruption, and facilitate repression of the financial sector' (IMF 2012a). It is worth noting that the former observation does not apply in the case of CFMs introduced in response to inflow surges, as excessive inflows is what is loosening funding constraints.

Then, on surface, it is not obvious that CFMs should be considered to be more costly when compared with other measures. Perhaps the IMF's true concern can be inferred from their repeated warning that CFM's should not substitute for necessary macroeconomic policies, namely that endorsing capital controls too readily may encourage countries to avoid taking unpopular but necessary decisions.

2.2.3 Spillovers

The costs above pertain to those that impact the countries adopting the measures. The IMF also considers the possible spillovers to other countries, so that even if a measure may be desirable from a domestic perspective, the negative spillovers to other countries might argue for moderation of their use. In the case of CFMs, the potential spillover could come from deflection of flows to other countries.

Again, other measures could also have spillover effects. Generally, any policy by a country to counter inflows will necessarily result in some deflection of flows to other countries and/or relative depreciation vis-à-vis other inflow receiving countries that do not take countermeasures.

2.2.2 Effectiveness

Whatever the costs of CFMs and other measures, they need to be judged against the benefits from these measures; namely whether the measures are effective. This cannot be judged a priori, as effectiveness will depend on a host of factors including country conditions and external environment, as well as response of the private sector and expectations regarding policy.

Again, it is worth noting that all of the policies proposed are subject to uncertainty as to their effectiveness:

- Appreciation may lead to expectation of further appreciation and thus encourage further inflows. (Band wagon effect.)
- Lower interest rates may increase asset prices, and lead to more capital inflows.
- Sterilized intervention does not fundamentally change the basic attractiveness of domestic assets. (There might be the need to continue intervening, even if effective in keeping appreciation in check.)

With CFMs, experience suggests that effectiveness could be a major issue (Ariyoshi et.al., 2000). Capital controls may easily be circumvented, especially in an open economy with developed financial markets, while prudential measures can also suffer from reduced effectiveness through attempts by sophisticated financial institutions to circumvent regulations. In order to ensure effectiveness, the measures may need to be broad based and possibly even draconian, but such a measure will have large side effects in that they will also restrict economically desirable flows and transactions. Indeed, beyond any consideration of costs, lack of effectiveness with targeted capital control measures is a major reason why advanced economies have been reluctant to use capital control measures.

2.2.3. Drivers of flows

An important factor that will bear on the choice of policy measures is the driver of flows. If the main driver of inflow surges is external environment that temporarily 'pushes' capital into a country, then it will not be optimal for the country to adjust its own macroeconomic or structural policies, as policies taken to suppress inflows will not be based on domestic needs. A better strategy may be to absorb the inflows through sterilized intervention or to deploy CMFs to limit the inflows directly. Also, measures that directly respond to the problem are preferable to indirect measures that attempt to limit the secondary spillovers (such as build-up of vulnerabilities), as they may also impose negative side effects.

When the source of the inflows is 'pull' due to expected high returns on domestic assets, or when external environment causing the 'push' is more permanent, structural or macroeconomic responses may be required as a sustainable response. Nonetheless, CFMs may be warranted when inflows exceed the ability of the economy to absorb these flows productively. (See section 2.3 below on whether such measures may be a permanent feature.)

2.2.4. CFMs as a Standard Policy in the Toolkit

The above considerations suggest that CFMs should not be considered as being fundamentally inferior to other measures in formulating policy response to capital inflow surges. Rather, they should be options that are available to countries in all circumstance, including in cases where the IMF view does not endorse their use. To the extent that our understanding of the likely effectiveness, costs and the causes or duration of the flows is limited, a strategy of relying on a limited set of measures is neither optimal nor desirable. In that sense, while the IMF acknowledges that capital controls and other CFMs are policies 'in the toolkit', its insistence that they be used when other option are not available, thus effectively putting it at the bottom of the toolbox, reduces the flexibility in employing policies.

2.3 Should CFMs be Temporary, Targeted, Transparent and non-discriminatory?

While the recommendations for CFMs to be temporary implicitly assumes that any flows that are the result of structural factors should be accepted, there could be cases when more permanent measures are desirable from a macroeconomic perspective. Suppose a country is expected to maintain high growth and high rate of return over some time; then with an open capital account, capital inflows will occur to equalize the domestic and global real rate of return. Capital inflows will continue until the domestic real rate of return declines or real exchange rates appreciates sufficiently to create an expectation of real depreciation, or a combination of both occurs, so that the expected risk-adjusted rate of return on domestic and foreign investment is equalized. As the required degree of reduction in real rates or real appreciation is likely to be vary large, what is likely to happen in practice is that the increased investment and/or substantial appreciation generates a high enough risk premium to offset the difference between the expected rate of return on domestic investment and the global return.

That increased vulnerabilities are necessary in order to produce the required risk premium is troubling, to say the least. In this case, it would be desirable for capital account liberalization to be delayed until the gap between domestic and global returns are sufficiently reduced, or, if the

country experienced an increased rate of return or a reduction in country risk premium under an open capital account, to reintroduce more permanent capital control measures.

Even when capital surges are seen to be temporary in nature, there may be grounds for not making CFMs temporary. CFMs require administrative infrastructure to manage effectively. Thus, a system that needs to be set up from scratch or one that is not utilized often will be hard to administer. This could argue for a more permanent measure (with intensities being adjusted) rather than a temporary measure.

On the issue of whether the measures should be targeted, one issue to consider is that if measures are narrowly targeted at a transaction or an instrument, the measures may be easily circumvented and result in being ineffective, while still causing distortions in that specific market. This could argue for measures with a broader scope rather than narrowly targeted measures, which are more difficult to circumvent and will result in smaller distortions being distributed across a wider spectrum of assets and transactions. A case in point is the experience in Indonesia,[5] where a minimum holding period regulation on short-term central bank paper led to deflection of flows to government bonds, resulting in sharp increases in external demand for bonds with concomitant instability in the government bond market. A narrowly targeted measure, on the other hand, is more likely to be successful in countries with less developed financial markets, where scope for arbitrage is smaller.

Transparency is usually preferable, but more transparent the measure, the easier it will be to devise transactions that circumvent controls. Authorities may have to play constant catch up with market developments, which could mean less predictability in regulations. Previous episodes of controls show that they were most effective when the precise rules were not clear (Ariyoshi et al., 2000). While it would not be desirable to deliberately create ambiguities, principle-based regulation/controls, where possible, may be more effective than a rules-based regulation/control. Such a principle-based regulation is more likely to be implementable when they are prudential measures that apply to a well-defined group of institutions such as banks, rather than with regulations that need to be applied across a broad spectrum of regulated and non-regulated agents.

Finally, on non-discrimination between residents and non-residents, while it is generally preferable for measures not to be discriminatory, it is not clear that one can, or even should attempt to have a superficially non-discriminatory rule, in cases where the flows that are targeted are non-resident's purchase of domestic assets. The policy objective is to manage the externally driven inflows, so that an effective rule must mean that it target non-residents; trying

to devise rules so that it covers residents equally can either make the rule less efficient or create side effects that restrict desirable transaction by residents.

3. Concluding Comments

The IMF's continuing reluctance to endorse capital flow management measures except under certain circumstances and to implement them restrictively preserves the stigmatization of these otherwise potentially useful policy tools. It is true that there has been a tendency for some government to resort to capital controls even when fundamental adjustments in its own macroeconomic or structural policies are needed. However, much has changed over the last decade; with the growing integration of global capital markets, volatility that is caused by global factors rather than recipient country specific factors have become more common.

In these circumstances, managing capital flows at the border would be more desirable than attempting to mitigate the secondary detrimental impact of these flows in the domestic economy. Of course, it may well be the case that a country with open capital account and developed financial market will find it difficult to construct CFMs that are effective and not unduly restrictive. But there appears to be no need to put off considering the introduction of CFMs as a policy instrument that can be used by countries faced with challenges poses by large and volatile capital inflows.

APPENDIX

Does the IMF's methodology give a reliable evaluation of currency misalignment?

The IMF provides estimates of the 'equilibrium exchange rate' for many industrial and emerging market countries based on its CGER approach.[6] These estimates provide a benchmark for judging whether a currency is overvalued or not, and by extension, whether the country may legitimately resort to CFMs in the eyes of the IMF.

The estimates based on CGER are less precise than one would wish. The CGER methodology itself uses three separate methods that typically produce different estimates, and the IMF usually cites a range for the likely equilibrium exchange rate. It is not uncommon for this range to be wide as 10 to 20 percent and may encompass both overvaluation and undervaluation. Moreover, the estimates generated by the Macroeconomic Balance (MB) approach, which the IMF regards as the most reliable, is subject to large margins of error.

The MB approach first estimates the 'current account norm'; i.e. the current account deficit or surplus that a country 'should' have based on its economic characteristics. The estimate is based

on a cross country regression of the current account of countries, regressed on around ten variables that include demographic factors, country income and fiscal variables. It then assumes that any difference between the actual current account balance and this current account norm is due to exchange rate misalignment, and calculates, based on elasticities of trade with respect to exchange rates, how much change in effective real exchange rates is required to close this gap.

The main problems with this approach are that; first, it uses a point estimate of the predicted current account balance from the panel regression estimate as the current account norm, when the standard error of the regression is reported to be as much as 2 to 3.5 percent of GDP.

Second, the accuracy of the second step of deriving the actual extent of misalignment from the current account imbalance is also made uncertain by the fact that the elasticities of exports and imports are not know with certainty. The IMF only notes that it uses country specific estimates of elasticities, which makes it difficult to evaluate the reliability of the estimates of exchange rate misalignment. In an earlier article (Isard & Mussa, 1998), the IMF noted that it used a common elasticity of about 0.6, so that a 10 percent change in the real exchange rate will result in a correction of the current account by 0.6% of GDP when the trade/GDP ratio is 10 percent. Using the same trade elasticities, countries with higher trade/GDP ratio will show a proportionately larger adjustment relative to the same change in the real exchange rate; e.g. if the trade/GDP ratio were 30%, then a 10 per cent real exchange rate change will result in a 1.8 percentage point of GDP swing in the current account.

As the history of empirical work attempting to ascertain the validity of Marshal-Lerner condition shows, the estimates of elasticities themselves are subject to a wide margin of error. This means that there is a very large uncertainty in the extent of the estimates of misalignment, even if we accepted that the estimates of current account norm were accurate. At the extreme, if the current account balance were assumed to be very insensitive to the real exchange rate, the estimated degree of misalignment could be huge even for a small deviation of the current account from its estimated norm.

Notwithstanding the debate on whether one can judge misalignment, the estimate may be useful if it correctly predicted future large movements of the exchange rate; that is to say, if the a country judged to be undervalued always experienced a large appreciation of the exchange rate in the following years, then it may make sense for a country not to try to buck this trend. Again, the evidence is mixed. An IMF staff study (Abiad, Kannan & Lee, 2009) shows that the performance of the estimated under- or over-valuation in predicting subsequent appreciation or depreciation respectively over the following three- to five-year horizon is not large: estimated

measure of misalignment from CGER gets the direction of subsequent movement right only about two-thirds of the time.

NOTES

1. The paper is based on a presentation made at a seminar 'Managing Capital Flows: What Worked and Why', jointly organized by Hitotsubashi University and the IMF Regional Office for Asia and the Pacific, held in Tokyo on May14-15, 2013. The author is grateful for the participants for the seminar for their comments and discussions on the presentation, including in particular to Mr. Marshall Mills of the IMF who presented the IMF's view. Responsibility for any errors or perceived misrepresentations of the IMF view rests with the author.
2. Typical prudential measure targeted to influence capital flows include required reserve on foreign exchange borrowings by banks.
3. IMF staff stresses that the IMF does not consider CFMs to be measures of last resort, but that it also recognizes that they have a role to play, when for example macroeconomic adjustment takes time to take effect. Semantics aside, it seems clear that the IMF prefers other policy instruments over CFMs.
4. Counter-cyclical policy will compensate for the loss of aggregate demand from net exports and help the movement of resources into profitable sectors, but it will not be able to reduce the loss on existing capital nor fully avoid a temporary increase in unemployment.
5. See for example Annex IV in IMF (2011b).
6. Descriptions of the CGER approach include Isard and Mussa (1998) and IMF (2006). The IMF is currently developing a successor methodology to CGER called The External Balance Assessment (EBA) (IMF 2012b), but much of the limitations of CGER apply to EBA as well.

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