CHAPTER THREE

Managing Capital Flows: Toward a Policy Maker's *Vade Mecum*

Jonathan D. Ostry

The work I will present in this session began nearly a decade ago, in 2009, as capital flows to emerging market economies (EMEs) were rebounding and policy makers were beginning to think about how they might respond. The issue seemed particularly relevant given that some EMEs, particularly in Eastern Europe, had recently experienced a capital inflows-induced boom-bust cycle of epic proportions. Initially, the thought was that coming up with a coherent policy framework—taking account of the recipient countries' interests as well as the multilateral repercussions—could be done swiftly, given that managing EME capital-flow boom-bust cycles was hardly a new issue. And, of course, there was a long history of advice to draw on, as well as the accumulated wisdom from the academic literature.

Not to overly caricature, but my sense of the prevailing view in official circles and much of academia at the time was that EMEs should simply allow their currencies to appreciate in the face of capital inflows (appreciation being a market-driven force that naturally would dampen inflows) and tighten fiscal policy if there was a risk of economic overheating. Foreign exchange market intervention was recommended only to counter very short-term market volatility (sometimes referred to as "disorderly market conditions"); as for capital controls, they were to be eschewed pretty much without exception.

The views expressed are those of the author and should not be attributed to the IMF. This contribution draws on my co-authored book *Taming the Tide of Capital Flows* (MIT Press, 2017).

In thinking afresh about these issues, it seemed logical not to foreclose the use of any policy instrument without a solid rationale for doing so. In that context, policy makers have at their disposal potentially five tools: monetary and exchange rate policies; fiscal policy; macroprudential measures; and capital controls. There did not seem strong grounds a priori to exclude their use nor to rank them in a normative fashion. In a sense, this was the main point of the first paper I draw on in today's presentation (Ostry et al. 2010)—a point that proved highly controversial when it was made because it recognized that capital controls on inflows *might* have a legitimate place in the policy maker's toolkit.

I also draw on a second paper (Ostry et al. 2011a) whose insight was that, in open economies, many prudential measures—for example, those limiting foreign currency exposures—are economically equivalent to capital inflow controls. For example, higher reserve requirements on banks' liabilities in foreign currency, while legally not a capital control insofar as the measure applies equally to deposits of residents and nonresidents, would have the same impact on capital flows as a capital inflow control if the foreign currency liabilities of banks are to nonresidents. This is an important insight because, in practice, the policy community has blessed macroprudential tools almost as strongly as it has shunned measures that discriminate according to residency (capital controls). In fact, both nondiscriminatory and discriminatory measures can make meaningful contributions to financial stability: the salient issue is which type of measure is better targeted to the financial-stability risk at hand (if the risk is from flighty foreign investors rather than residents, a capital control indeed might have more traction).

THE INSTITUTIONAL VIEW

These two papers sparked intense debate and controversy when they were issued, both within the Fund and outside. Meanwhile, EMEs continued to be deluged with foreign capital and began experimenting with a variety of policy responses—including capital controls—to deal with the macroeconomic and financial-stability consequences of capital flows. At the IMF's Executive Board, the issue of policy responses to capital flows—especially the role of capital controls and prudential measures that could act like them—became highly contentious. This led IMF staff to prepare a series of Board papers to inform our policy advice. In 2011, the IMF's governing body, the IMFC, called on the Fund to advance "work on a comprehensive, flexible, and balanced approach for the management of capital flows." Building on earlier Fund policy papers, analytical work, and the Board discussions, the Institutional View (IV) was developed and adopted in November 2012.

The IV sought a common ground among the diverse views on capital flows. Its intention was to provide a framework which ensures that policy advice provided to Fund member countries on capital flow management is "consistent, even-handed, flexible, and takes into account country circumstances." The IV does not cheerlead countries to fully open their capital accounts, in marked contrast to the IMF position in the mid-1990s when it sought jurisdiction over these issues. It recognizes in particular that "there is no presumption that full liberalization is an appropriate goal for all countries at all times" and that, while capital flows can bring great benefits to countries, openness likewise carries substantial risks.

The IV envisages a role for macroeconomic policies—including foreign exchange intervention—as well as capital controls and related prudential measures (collectively referred to as capital flow management measures, or CFMs) in managing capital flows under certain circumstances. What are those circumstances? When confronted with an inflow *surge*, the IV proposes a role for CFMs when macroeconomic policy space is limited, when it takes time to pull other policy levers (or for those policies to have an effect), and when there are risks to financial stability. Importantly, for financial-stability purposes, the IV envisages that CFMs can be maintained *over the longer term*, provided that "no less discriminatory measure is available that is effective." For outflow episodes, the IV advises that CFMs could be used temporarily in crisis situations or when crisis is imminent.

With respect to foreign exchange market intervention (FXI), the IV suggests that in the face of inflows, the currency should be allowed to appreciate provided it is not already overvalued, but that reserves may be accumulated when overvaluation becomes a problem provided the country isn't already over-reserved according to the Fund's prudential metrics. For outflow episodes, the IMF staff operational guidance note suggests that FXI could be appropriate when exchange rate changes are contributing to disorderly market conditions, provided that such intervention does not cause reserves to fall to inadequate levels as determined by appropriate metrics.

ROLE OF UNWANTED PUSH FACTORS

Of course, there was an important conjunctural element that added force to the arguments that capital inflow receiving countries should have latitude to adopt policies that could insulate them against the macroeconomic and financial-stability risks induced by volatile capital flows. From the EME perspective, inflow surges were largely an unwanted spillover from advanced-economy monetary policies. The fear that the "monetary tsunami" could easily reverse was very much on their minds—they had lived through this many times before, as the long history of boom-bust cycles (surges and crashes), going back decades, amply demonstrates. The Brazilian finance minister at the time echoed what was on the minds of many policy makers, namely that the inflationary and currency-overvaluation consequences of inflows legitimated "self-defense" measures, as EME countries had no say over the monetary policy decisions of the countries at the epicenter of the global crisis. But the point being made was not specific to the conjuncture of quantitative easing, given that EMEs had been faced with similar challenges for decades in the past.

Giving EME policy makers greater latitude to deal with the problems inflicted by advanced-economy (AE) monetary policy would have been less of an issue if AE policy makers took greater account of the financial spillovers from their policies. This was a theme of remarks made by Reserve Bank of India Governor Rajan back in 2014—and repeated at today's conference—in calling on "large-country central banks . . . to internalize more of the spillovers from the policies in their mandate." But those central banks did not buy the argument, with Fed Chair Ben Bernanke arguing instead that any adverse repercussions on EMEs through capital flows were more than offset by favorable growth spillovers through trade. While coordination or global rules to constrain large-country policies whose "negative emissions" loomed large was debated (see Blanchard and Ostry 2013; Ostry and Ghosh 2016), they failed to gain traction.

MANAGING INFLOW SURGES

There is convincing evidence that surges and crashes of capital flows are influenced to an important degree by common global factors, such as advanced-economy (especially US) interest rates, global investors' risk aversion, and commodity prices (Ghosh, Ostry, and Qureshi 2016). While capital flows can help finance much-needed investment and can help to smooth consumption for credit-constrained individuals, *surges* give rise to special concerns, including rising macroeconomic and financial-stability vulnerabilities. On the macroeconomic side, the issues are economic overheating, depending on the type of inflow (Blanchard et al. 2016), currency appreciation, and credit booms. On the financial-stability side, worries include maturity and currency mismatches on balance sheets, sometimes manifest in FX-denominated credit booms.

Widening macro and financial vulnerabilities in turn amplify crisis risk in EMEs, with surges increasing the likelihood of crisis (relative to more normal inflows) fourfold. *How* countries manage the surge period turns out to be a powerful determinant of whether a crisis or a dignified end to the surge ensues. Successful strategies, the evidence shows, include using the toolkits at policy makers' disposal to ensure that vulnerabilities remain contained during the surge period. Indeed, a natural mapping of targets and instruments exists, with monetary policy targeted to overheating concerns; FX intervention to mitigate over-appreciation of the currency; and prudential tools applied to financial-stability risks. Capital controls may serve to underpin the effectiveness of these orthodox measures or they may be used in a more structural manner to foster a safer mix of inflows (e.g., by discouraging carry trades).

The latter point is related to the prudential theory of capital controls which argues that full financial integration may not be a desirable end-goal for emerging market countries when distortions or externalities mean that the assumptions of a first-best competitive equilibrium are violated. In the presence of imperfect information, for example, free capital mobility may amplify existing distortions, encourage moral hazard and excessive risk-taking, and expose countries to contagion and herding effects. Modern incarnations of this line of thinking encompass formal models in which capital controls (or, equivalently in many of these models, macroprudential measures) act as a Pigouvian tax against excessive inflows to attain the constrained optimum. The tax is an *ex ante* measure, akin to a Tobin tax designed to prevent excessive inflows, which then mitigates the impact of subsequent outflows more effectively than direct measures to stop outflows when reversals occur.

ASSESSING THE EFFECTIVENESS OF CAPITAL CONTROLS

While some structural measures to curtail especially risky flows may be desirable, much of the recent debate has been about the use of cyclically varying measures and the degree to which they have traction. A problem with a number of the studies on the effectiveness of these measures is that they are unclear about the policy objective against which the measures are being assessed. Some studies, for example, find that capital controls have little effect in reducing the overall volume of inflows and their associated consequences (e.g., currency appreciation or overheating) and from this conclude that capital controls are ineffective. But if the goal is to shift the composition of inflows so the country ends up with a less risky external-liability structure, and if the studies find that controls are successful against this objective, then controls might be viewed as having traction against an established objective.

Empirical studies need to confront a number of difficulties in evaluating the effectiveness of capital controls, including creating the counterfactual and contending with the fundamental identification problem whereby countries tend to impose controls precisely when they face large inflows. This reality yields a spurious positive correlation between inflow controls and inflows and tends to bias estimates of the effectiveness of controls in reducing the aggregate volume of flows toward zero. There is indeed a voluminous literature on the effectiveness of controls, which tends to find more favorable evidence in favor of compositional effects than on aggregate-volume effects. Some researchers have undertaken meta-studies that comprehensively review the empirical literature on capital-control effectiveness. The general finding is that inflow controls tend to make monetary policy more independent and are successful in altering the composition of flows. My own work

(Ostry et al. 2011b; Ostry et al. 2012) exploits the natural experiment afforded by the global financial crisis and finds that countries that had capital controls (or currency-based prudential regulations that mimic them) in place in the run-up to the crisis tended to be more resilient (i.e., experience smaller output declines) during the crisis. Aside from this, my work also suggests that prudential capital controls acted to reduce financial-stability risks (manifest, for example, in high levels of FX lending by the domestic banking system).

TAKEAWAYS

To sum up, boom-bust cycles in cross-border capital flows are nothing new. They happened during the late nineteenth-century golden era of financial globalization, they were present in the interwar period, and they reemerged in the decades following World War II as capital account restrictions were dismantled and private capital flows resumed. But views about managing capital flows have swung markedly over this period—from the laissez-faire attitude of the nineteenth century, to the structural controls envisaged under Bretton Woods, to the free market principles and Washington Consensus of the 1980s and 1990s, to the recent reevaluation in light of the global financial crisis.

It is clear, however, that many advanced economies used restrictions on capital inflows for prudential purposes until the 1980s. For emerging market countries, the lesson from history and from the academic literature is that capital flows can bring myriad benefits but fully unfettered flows may not be optimal, and measures to manage inflows form a legitimate part of the policy toolkit. When and how such measures should be used, and how they fit with other (monetary, exchange rate, and macroprudential) policies, is what I have tried to sketch in these few pages, and more fully in the book on which they draw.

References

Blanchard, Olivier, Jonathan D. Ostry, and Atish Ghosh. 2013. "Overcoming the Obstacles to International Macro Policy Coordination is Hard." *VoxEU*, December 20.

Blanchard, Olivier, Jonathan D. Ostry, Atish R. Ghosh, and Marcos Chamon. 2016. "Capital Flows: Expansionary or Contractionary?" *American Economic Review* 106, no. 5 (May): 565–69.

Ghosh, Atish R., Jonathan D. Ostry, and Mahvash S. Qureshi. 2016. "When Do Capital Inflow Surges End in Tears?" *American Economic Review* 106, no. 5 (May): 581–85.

Ghosh, Atish R., Jonathan D. Ostry, and Mahvash S. Qureshi. 2017. *Taming the Tide of Capital Flows*. MIT Press.

Ostry, Jonathan D., Marcos Chamon, Atish R. Ghosh, and Mahvash Qureshi. 2012. "Tools for Managing Financial-Stability Risks from Capital Inflows." *Journal of International Economics* 88, no. 2: 40–21.

Ostry, Jonathan D., and Atish R. Ghosh. 2016. "On the Obstacles to International Policy Coordination." *Journal of International Money and Finance* 67: 25–40.

Ostry, Jonathan D., Atish R. Ghosh, Marcos Chamon, and Mahvash Qureshi. 2011b. "Capital Controls: When and Why?" *IMF Economic Review* 59, no. 3 (August): 562–80.

Ostry, Jonathan D., Atish R. Ghosh, Karl Habermeier, Marcos Chamon, Mahvash S. Qureshi, and Dennis B. S. Reinhardt. 2010. "Capital Inflows: The Role of Controls." IMF Staff Position Note No. 4, International Monetary Fund.

Ostry, Jonathan D., Atish R. Ghosh, Karl F. Habermeier, Luc Laeven, Marcos Chamon, Mahvash Qureshi, and Annamaria Kokenyne. 2011a. "Managing Capital Flows: What Tools to Use?" IMF Staff Discussion Note No. 6, International Monetary Fund.