PHOTO: ISTOCK / BIHAIBO

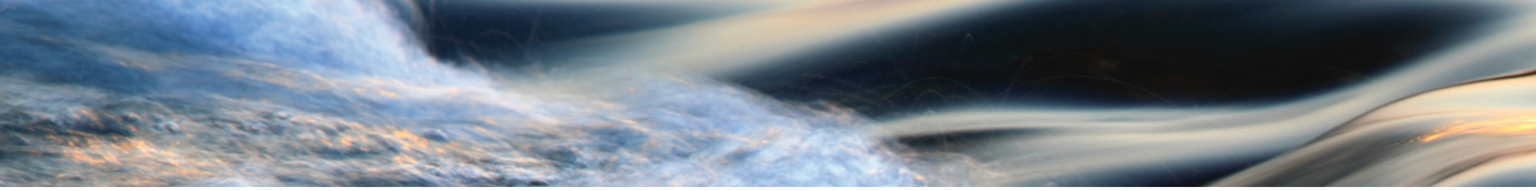
Rising Tide

Global cooperation is needed to reap the benefits and avoid the pitfalls of cross-border capital flows

Raghuram Rajan

Cross-border capital flows are neither an unmitigated blessing nor an undoubted curse. Used judiciously, they can be beneficial to recipient countries, making up deficiencies in the availability of long-term risk capital and reducing gaps in local corporate governance. They can also be beneficial to sending countries, offering investment avenues for savings generated by aging populations.

Of course, capital flows can also be problematic. They can come at the wrong time, adding further credit to a raging investment boom and fueling asset-price bubbles. They can come in the wrong form—held as short-term claims on corporations or the government, with the option to leave at a moment's notice. And they can leave at the wrong time, when the lure of higher interest



rates in sending countries summons them back, instead of when projects in the receiving countries are completed. As with dynamite, whether cross-border capital flows are good or bad depends on how they are used. Unfortunately, there are no obvious policy remedies to tame capital inflows. Even if there were, receiving-country institutions are often not up to the task—easy money is hard to turn down for even the most sensible policymakers.

Recipient countries are, of course, not the only relevant players. A particularly important factor in "pushing" and "pulling" cross-border capital flows is the stance of monetary policy in advanced economies. Easy monetary policy is transmitted to receiving countries via capital flows, currency appreciation, a rise in borrowing, and an increase in prices of financial and real assets. All this is reversed when monetary policy tightens, albeit with a critical difference. The buildup of receiving-country corporate and government borrowing in the easing phase leads to financial fragility during the tightening phase.

What can emerging market economies do to reduce the risks associated with large, sustained capital flows? What responsibility should central banks in advanced economies bear for the impact of their monetary policies abroad, and what steps can they take to limit the impact? Is there a role for international financial institutions such as the IMF?

Domestic credit boom

To answer these questions, we need to understand what happens when an emerging market economy experiences a sustained inflow of capital from overseas. An individual firm's experience in a domestic credit boom provides a useful parallel. Sustained expectations of high future liquidity (in the sense that potential asset buyers are wealthy and can pay high prices for corporate assets) can incentivize companies to load up on debt; from the borrower's side, debt financing is always welcome because it allows the borrower to run an enterprise with less of its own money at stake. From the lender's side, high anticipated liquidity makes it easier to recover debt—if the borrower fails to pay, the lender can seize the firm's assets and sell them to someone else at a high price. The combination of high leverage and high expected liquidity, however, also reduces managerial incentives to put in place structures to constrain managerial misbehavior. The reason: if financing is expected to be plentiful, why put in place costly and constraining structures (such as good accounting rules and an unimpeachable auditor) that will make yet more financing available?

An analogy from housing booms helps explain the dynamic. If a mortgage lender knows a house can easily be repossessed and sold profitably because houses are selling like hotcakes for high prices, what need is there to investigate the mortgage applicant further to determine whether she has a job or income? Normal safeguards and due diligence on loans are dispensed with in times of high prospective liquidity. One result during the US housing bubble was the infamous NINJA loan extended to borrowers with no income, no job, and no assets.

Sudden stop

The deterioration in governance is not a problem when high liquidity is sustained, but it does become problematic when liquidity dries up, since there is then very little supporting the ability of corporations to borrow. Put differently, expectations of high liquidity create the conditions where corporations become dependent on continued future liquidity to roll over their debt. When it does not materialize, they experience a sudden stop. This can occur even if economic prospects for corporations are still bright.

What I have described so far is a model of corporate behavior that is developed more fully in a paper I wrote with two colleagues, Douglas Diamond and Yunzhi Hu. Now let's shift our perspective and situate this firm in an emerging market economy. We add three more assumptions based on the vast emerging evidence. First, domestic companies in the emerging market economy have a substantial amount of outstanding borrowing from source countries or denominated in the currency of those countries. Typically, the source country is the United States and the currency the dollar, though our point is more general. (Gopinath and Stein [2018] explain why domestic companies take on foreign currency debt, and there is vast literature documenting this phenomenon empirically.)

Second, easier monetary policy in the source country pushes capital, looking for higher returns, into higher-interest-rate environments like emerging market economies. These inflows raise the value of the emerging market's currency in dollar terms. Since a number of emerging market firms have already borrowed in dollars, the result is that their net worth, and hence their liquidity, will be expected to increase as the amount of domestic currency it takes to repay foreign borrowing diminishes. To the extent that monetary policy in source countries reacts aggressively to low domestic growth but normalizes only after extended periods (especially in an era of low inflation), capital flows to the emerging market could be substantial. Anticipating that the future buying power of domestic firms that have borrowed in dollars will increase as the currency appreciates, lenders will be willing to expand credit significantly to other domestic firms today. This leads to higher up-front borrowing and higher asset prices.

At some point, source country monetary policy will normalize—the third ingredient. Tighter policy will lead to a depreciating emerging market currency, higher repayments on foreign borrowing in local currency terms, and thus lower corporate liquidity. Moreover, leverage is much higher at the onset of tightening, because lenders have been anticipating a high probability of continued liquidity. Debt repayment and the capacity to roll over debt will fall, not just because liquidity is lower, but because corporate governance has been neglected. The combination of high leverage and a plunge in debt capacity will mean domestic and foreign lenders will be reluctant to renew loans. If the firm has substantial, preexisting short-term borrowing, the decline in debt capacity can precipitate a run, and thus force the firm immediately into distress.

While the collapse in prospective liquidity may originate with a change in the source country monetary stance, it need have nothing to do with macroeconomic policies in the emerging market, and their credibility or lack thereof. Put differently, the boom and bust in the emerging market could be a genuine spillover from the source country policy.

The so-called taper tantrum provides a good example of how a change in advanced economy monetary policy—or even the expectation of a change—creates fallout for emerging markets. In 2013, then-Chairman Ben Bernanke signaled that the Federal Reserve might soon begin "tapering" its purchases of bonds after a long period of exceptionally easy monetary policy. The result was an outflow of capital from emerging markets and a sharp decline in emerging market assets and currencies.

The great moderation

Before the recent financial crisis, there was a sense among policymakers that the world had arrived at a policy optimum, which had contributed to a "great moderation" in economic volatility. In this world, the sole objective for monetary policy was domestic price stability, and it was achieved by flexible inflation targeting. By allowing the exchange rate to respond as needed, the system eliminated the need to intervene in currency markets or accumulate reserves. For instance, if capital flows came into a country, and the exchange rate was allowed to appreciate, eventually capital would stop flowing in as the prospect of future depreciation reduced expected returns.

A vast body of research since the global financial crisis of 2007–08 suggests that this view is too complacent—the spillovers from capital inflows cannot be offset by allowing exchange rates to appreciate. Instead, many countries that did just that found yet more capital flowing in, chasing the returns that earlier investors had realized (Bruno and Shin 2015).

Many emerging market economies have understood that they should build foreign exchange reserves.

Indeed, our model suggests that fluctuations in the exchange rate are the main reason for fluctuations in corporate liquidity in receiving countries. Emerging market economies have often been accused of manipulating their currencies to make their exports more competitive. But worries about trade competitiveness need not be the reason receiving-country authorities have a fear of allowing their currency to float or move freely against the dollar. Their attempts to smooth exchange rate movements may be an effort to avoid large swings in the availability of credit and the resulting macroeconomic volatility. Emerging market authorities have seen that movie many times and know how it ends.

Certainly, many emerging market economies have understood that they should build foreign exchange reserves in the face of a sustained domestic currency appreciation. Purchases of assets such

as US Treasury securities by a number of emerging markets may be seen as a widespread demand for assets considered safe. In reality, they may be an attempt to put sand in the wheels of currency appreciation, even while building a war chest to combat the inevitable depreciation (Hofmann, Shin, and Villamizar-Villegas 2019). Of course, such intervention exacerbates moral hazard because corporations may overborrow in foreign currency, seeing a lower risk once the central bank smooths volatility. That is why some emerging market economies, like China and India, also try to control foreign borrowing by corporations.

Few tools

Unfortunately, receiving-country authorities have few other tools to manage capital flows that will not also significantly disrupt the domestic economy. Importantly, tighter monetary policy in the receiving country risks shifting the currency composition of corporate borrowing yet further into relatively cheaper dollars and so risks exacerbating appreciation of the domestic currency. On the other hand, more accommodative domestic monetary policy could encourage excessive credit expansion.

The tendency for boom and bust in receiving countries is more pronounced as quiescent inflation makes source country monetary policy accommodative over long periods, as has been the case in recent decades. From the receiving country's perspective, a commitment to "low for long" in the source country is a commitment to sustained easy liquidity in the receiving country—until it reverses. This implies a substantial buildup in leverage and financial fragility. No wonder emerging market policymakers have expressed concern about both sustained easy policy in source countries, as well as the possibility that it will be reversed abruptly. These concerns are not in contradiction; one follows from the other.

Scope for multilateral action

What responsibility do source countries have for these spillovers? The view that spillovers resulted primarily from insufficient exchange rate adjustment in recipient countries suggested there was none. This is indeed the view that some advanced economy central bankers, focused on their domestic mandates, espouse. It is hard to know whether they would have the same view if their mandates also included some element of international responsibility. Others recognize there may be spillovers but do not see any possibility of altering the behavior of sending countries. Instead, they focus on so-called macroprudential policies and capital flow measures in recipient countries, as does the IMF.

Yet macroprudential policy is narrow in scope—often the macroprudential authorities have jurisdiction over only parts of the financial system while monetary policy, as Jeremy Stein has argued, gets "into all the cracks." Such policies also have yet to show their effectiveness—Spain's dynamic capital provisioning for banks may have smoothed the credit cycle, but certainly did not avert its excesses. The broader point is not to rule out the use of macroprudential tools but to emphasize that multiple tools may be needed.

Some economists have called for monetary policy rules that constrain the actions of sending-country central banks under some circumstances. For instance, Mishra and Rajan (2019) suggest that while ordinary monetary policy should be given a pass, certain kinds of unconventional monetary policy actions in specific environments could be ruled out of order because of the large adverse spillovers they create—much as sustained one-directional intervention in the exchange rate was frowned on till recently. Adhering to such rules would not be a matter of altruism. Countries that have signed the IMF Articles of Agreement already accept responsibility for the international consequences of their actions. Such rules would limit central bank behavior under extreme circumstances without changing their mandates or requiring international coordination. Central banks would then simply avoid policies that transgress the rules. Indeed, an Eminent Persons Group, tasked by the Group of Twenty with suggesting changes to the global financial architecture, has noted the need for a "rules-based international framework, drawing on a comprehensive and evolving evidence base… to provide policy advice through which countries seek to avoid policies with large spillovers, develop resilient markets, and benefit from capital flows while managing risks to financial stability." It adds that the IMF should develop a framework that enables sending countries "to meet their domestic objectives while avoiding large international spillovers."

There is another intriguing possibility. Our model suggests that a long period of easy monetary policy could enhance leverage, inflate asset prices, and increase risks to the source country's own financial stability. If central bank monetary policies in source countries included a domestic financial stability mandate, policy actions might well be altered in a way that also mitigates external spillovers.

Of course, we are still a long way from having the evidence and the understanding needed to create a rules-based international framework. Yet we have also come a long way. For the most part, we no longer scapegoat emerging market and developing economies for reacting improperly to capital inflows. If we are to find ways to use capital flows well—to meet the saving needs of rich aging countries while also fulfilling the financing needs of developing and emerging market economies, without precipitating periodic crises—countries will have to temper their sovereign policymaking with their international responsibilities to avoid major spillovers. Multiple tools used responsibly by all countries, with the IMF doing the necessary research, laying out a mutually agreed framework, and calling out habitual defaulters, may be the best way of tackling a multifaceted problem. FD

RAGHURAM RAJAN is a professor of finance at the University of Chicago's Booth School of Business and a former governor of the Reserve Bank of India. This article summarizes the 2018 Mundell Fleming Lecture he gave at the IMF, which was based on a paper by Diamond, Hu, and Rajan (forthcoming).

References:

Bruno, Valentina, and Hyun Song Shin. 2015. "Capital Flows and the Risk Taking Channel of Monetary Policy." *Journal of Monetary Economics* 71:119–32.

Diamond, Douglas, Yunzhi Hu, and Raghuram Rajan. Forthcoming. "Pledgeability, Liquidity, and Financing Cycles." *Journal of Finance*.

Gopinath, Gita, and Jeremy C. Stein. 2018. "Banking, Trade, and the Making of a Dominant Currency." Working paper, Harvard University, Cambridge, MA.

Hofmann, Boris, Hyun Song Shin, and Mauricio Villamizar-Villegas. 2019. "FX Intervention and Domestic Credit: Evidence from High-Frequency Microdata." BIS working paper, Bank for International Settlements, Basel.

Mishra, Prachi, and Raghuram Rajan. 2019. "International Rules of the Monetary Game." In *Currencies, Capital, and Central Bank Balances*, edited by John Cochrane, Kyle Palermo, and John Taylor. Stanford, CA: Hoover Institution Press.