The international banking crisis: effects and some key lessons

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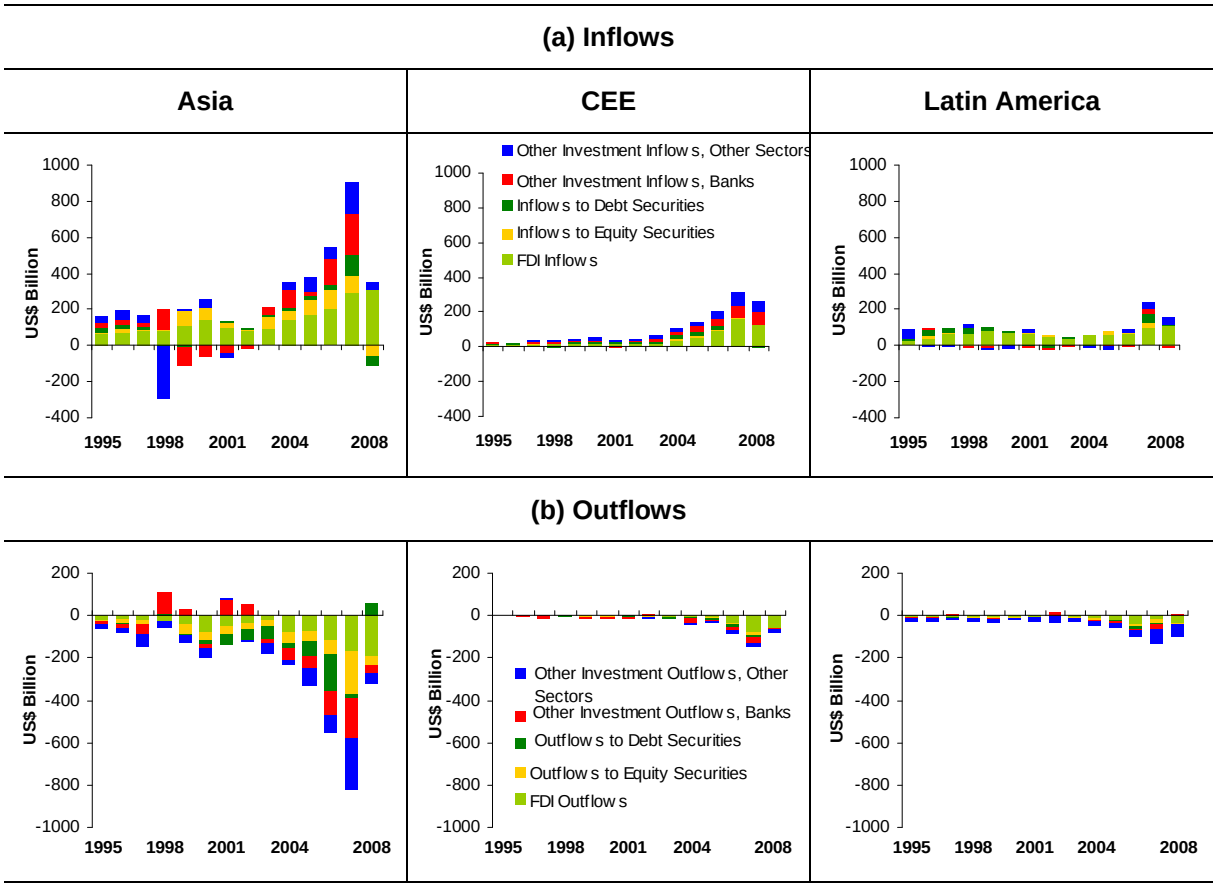
A. Trends in capital flows during the crisis

The recent increase in capital inflows to some emerging market economies (EMEs) followed a period of strong growth in such flows from 2002 to 2007 and then a sharp contraction during the global financial crisis of the past two years. Between 2002 and 2007, gross capital inflows to EME regions increased more than seven times in absolute terms. This was accompanied by an equally large increase in outflows over the same period (Chart 1).

Chart 1

Composition of gross capital flows in EME regions



Source: IMF Balance of Payments; MAS estimates.

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The composition of gross capital flows has also changed. Foreign direct investment (FDI) continues to be a key driver of both capital inflows and outflows but portfolio investment and cross-border lending flows have become more important drivers, contributing to the bulk of the rapid increase in capital flows between 2002 and 2007 and the sharp retrenchment in 2008 (Chart 1). In Asia, gross capital flows continued to contract in Q1 2009. Since Q2 2009, however, there has been a revival of gross capital flows, as global risk appetite returned and Asia's economic recovery proved sharper and faster than expected. Portfolio investment flows have been particularly strong.

To the extent that capital flows reflect different economic prospects and take the form of long-term FDI, they contribute to economic efficiency and stability by reallocating resources from capital-rich to capital-deficient regions. However, as noted above, cross-border lending flows have become more important in EME regions in recent years.

B. Domestic vs cross-border financial intermediation

Cross-border funding together with domestic financial intermediation in EMEs helps to integrate global financial markets by moving funds from countries with excess savings to those that need them. Capital markets can also play a similar role but there is a segment of borrowers and savers that capital markets will not be able to reach. Cross-border funding is also able to achieve the following benefits:

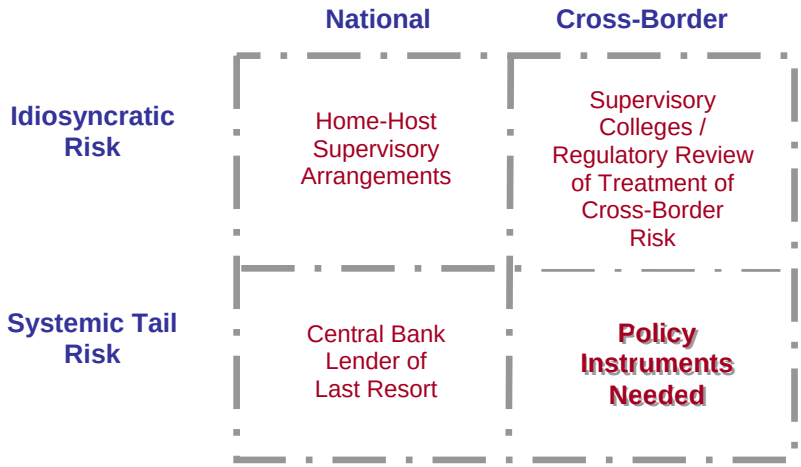
1. Efficiency: banks can raise funds from the most abundant (cheapest) source and lend to the areas with the highest demand (return).
2. Centralised liquidity management: banks pool liquid assets globally to avoid maintaining excess liquidity. To ensure that there are sufficient pooled liquid assets, stress tests (some specified by home regulators) are conducted.
3. Risk management: local funding means that they need to keep dealing, risk management and settlement desks in many locations. This is potentially costly.

Local funding can be less efficient because it requires banks to set up more funding desks locally (with the attendant support facilities) as well as a distinct pool of liquid assets. The absence of financial intermediation may also create more systemic risks to the extent that it restricts banks' ability to diversify their risks and creates asset bubbles in countries with excess savings. In broad terms, the unintended restriction of cross-border inter-regional flows would lead to "trapped liquidity" in surplus countries and consequent asset price inflation pressure in those countries. Conversely, capital-importing regions losing the benefit of inbound cross-border capital allocation would, over time, see increased funding costs for the economy as a whole, translating into lower potential trend growth. Depending on the specific nature of the regulatory cross-border funding safeguards, there could also be inadvertent limitations, or more costly capital structures, for banking groups to diversify their exposure to different geographical and asset markets.

However, it should be acknowledged that cross-border funding, as demonstrated by the international banking crisis following the collapse of Lehman Brothers, can involve maturity and currency mismatches that should be monitored. Banks should, for example, be required to conduct rigorous stress tests on their liquidity needs. This would help to reduce idiosyncratic risk that could otherwise pose systemic challenges. However, because idiosyncratic risk cannot be reduced to zero, even if regulations are tightened sharply, central banks may have to consider the use of cross-border central bank facilities to mitigate extreme events.

C. Differences in addressing idiosyncratic and systemic tail risk

The matrix below is one illustration of how risks and implications could be categorised in order to be addressed by relevant regulatory/central bank bodies based on their respective mandates.



Anecdotal evidence suggests that the cross-funding market generally, and the foreign exchange (FX) swap market in particular, did not seize up for endogenous reasons. There was a distinct upstream trigger arising from the impairment of banks' assets, which resulted in a breakdown in credit lines, leading in turn to a scramble to secure funding in collateralised markets such as the FX swap market. Initiatives are therefore currently being developed by regulatory colleagues to ratchet up measures to manage individual financial institutions' (FI) idiosyncratic risk.

Better management of institution-specific risk is important. By definition, however, idiosyncratic risk cannot be uniform from one institution to another. As such, to limit the probability of any institution entering distress to a near zero or even negligible likelihood would require the substantial tightening of regulatory measures. While the appropriate magnitude of such measures is for competent authorities to address, it is important to note that even a sharp tightening of measures targeted at idiosyncratic risk cannot reduce the probability of the incidence of a system-wide event to zero.

This can be seen in the domestic context where each jurisdiction imposes capital and liquidity requirements on relevant FIs. Despite this, there is broad consensus that a back-stop in the form of the pertinent central bank's lender of last resort function is still necessary and indeed crucial. Taking the analogy to a cross-border setting, the lesson learned is that, beyond cross-border regulatory collaboration and international FI group-wide supervision, improved policy instruments are needed to act as a back-stop to address cross-border or cross-currency systemic risk events.

D. Key lessons learned from the international banking crisis – the need for a cross-border policy back-stop

There are three non-mutually exclusive options that central banks can consider adopting in their repertoire of policy instruments:

a. use of official foreign reserve (OFR) assets;

b. FX swap lines between central banks;

c. cross-border collateralisation arrangements between central banks.

Deployment of foreign reserve assets

Central banks with foreign reserve assets were able to channel some liquidity into the FX swap markets during the crisis. This was achieved by making USD available through FX swaps in routine market operations, as in Singapore's case, or by putting in place non-routine facilities accessible to market participants in need. This is helpful in ameliorating liquidity needs but is ultimately limited to OFR resources.

One issue that has arisen concerns the potential for unintended signals. Using OFR to improve market liquidity essentially involves a redistribution of USD and other foreign currency placements among market operation counterparties or otherwise determined eligible participants. This takes care of idiosyncratic needs but does not change the net supply of foreign currency liquidity in the system as a whole. The concern is that the market could misinterpret the central bank's redistribution of its foreign currency deposits among its counterparties as a statement regarding the creditworthiness of one or more FIs.

There is also a balancing of objectives between the OFR's purpose, on the one hand, as a balance of payments item to be used for *intervention* in managing FX market volatility with a view to macroeconomic stability, and, on the other hand, as a tapped item to be *lent* to support foreign currency liquidity. Analysts could choose to interpret the latter usage as circumscribing a jurisdiction's ability to deploy OFR for the former purpose.

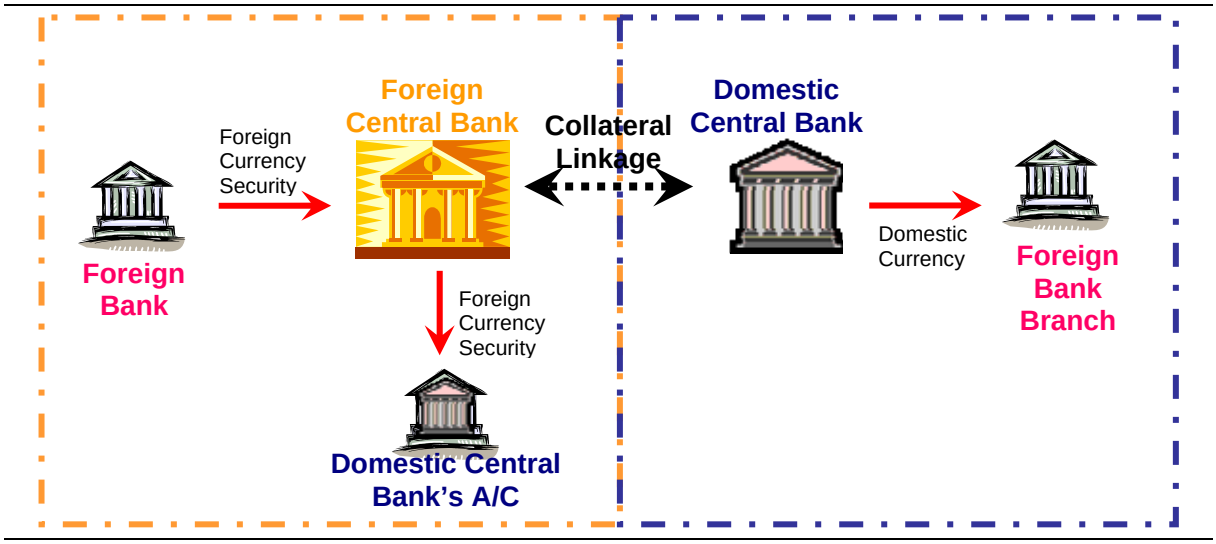
FX swap lines

Experience has shown that the establishment of currency swap arrangements in the course of 2008 made a decisive difference in calming cross-border liquidity requirements. Prior to that, major central banks' auction mechanisms to inject USD liquidity into the market had successfully eased some of the USD Libor strain, but the liquidity remained largely within each centre.

By allowing other central banks in different time zones to swap their currencies in order to obtain USD liquidity to lend to a wider pool of banks on a collateralised basis, USD liquidity strains were more successfully addressed across time zones. The observation, and subsequent private sector feedback, was that even the assurance of access to USD liquidity in itself in the Asian dollar market was sufficient to bolster market confidence and smoothen volatility. This was important from the experience gained during the crisis, whereby fragile sentiment could flow into European time, and aggressive funding needs that were not sufficiently allayed could have a snowball effect as the global trading day progressed.

Cross-border collateralisation arrangements

Another policy instrument being explored in various forms by certain central banks is cross-border collateralisation arrangements. Such arrangements involve central bank A in jurisdiction A providing its domestic currency liquidity to an FI against collateral placed by that bank's headquarters (or collateral-rich branch) in jurisdiction B, to be held in central bank A's account maintained with central bank B. This is illustrated in the following diagram.



In essence, this allows central banks the additional policy instrument of providing a back-stop cross-border bridge to support funding requirements in either jurisdiction in the event that interbank cross-border intermediation becomes impaired. This has the added advantage of giving both central banks access to "private market information" on where the strain in cross-border flows might be, at the point at which an FI accesses the facility, which can be made available at a penal rate.