

Through the Looking Glass: The Links between Financial Globalization and Systemic Risk

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Thank you for inviting me to speak here this afternoon. It is a pleasure and a privilege to address this conference. These proceedings are focused on some of the most pressing and pertinent financial sector issues. My remarks today will address one of them: namely, how to understand and limit systemic risk in a world that is increasingly financially integrated. As the financial system has broadened and deepened through securitization and globalization, it stands to reason that our concept of systemic risk also must be recalibrated. For sure, the range of questions we need to think through are difficult, as they inevitably will be intertwined with market liberalization and technological change. Reflecting the impressive list of contributors, however, I am confident that this conference will contribute tangibly to our understanding of the issues.

I will begin by posing a few questions — hopefully useful ones — and then offer some tentative answers during the balance of my remarks. In addressing the question of globalized systemic risk, four challenges are central: the first is to define, as precisely as possible, the meaning of “systemic risk” in a globalized financial market. Second, what tools and policies are available at present to control such risks? Third, what needs to be changed to be more effective in limiting systemic risks? And, fourth, can the IMF play a useful role in this regard?

1. Features of Financial Globalization

Before examining these questions, I’d like to mention some crucial features of the current landscape. A few months ago, I would have said that

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one of the most striking features of financial globalization has been the broadening reach of financial institutions and markets, creating an ability to disperse risk much more widely than previously. The process of globalized risk transfer is being facilitated by securitization and by the use of complex derivative transactions. As is well-understood, the key benefit of modern risk transfer instruments is that they allow investors to bear only the financial risks they wish to.

While I still believe this to be one of the most relevant facets of financial globalization, the events of the past few months have demonstrated that the process of risk dispersion contains some inherent potential problems. In particular, the complex composition of some derivative instruments — and the lack of transparency regarding some holders' balance sheets — make it hard to assess the risk exposure of individual entities, including some regulated institutions. For example, over the last couple of years, US sub-prime and other mortgage-backed assets have been a key ingredient of structured credit products that have been sold to a broad set of investors, many outside the United States. In fact, this aspect of financial globalization has worked well up to now — abstracting from the issue of whether investors became excessively exuberant.

Problems arose when it became apparent that the underlying assets were not performing very well — that is, when US house prices began to weaken and mortgage delinquencies rose quickly. At that point, the lack of transparency regarding both instruments and investors created a sudden loss of confidence in the predictability of the mapping of changes in the underlying housing market, to the prices of the relevant derivative securities. Liquidity disruptions emerged quickly — both in terms of the market liquidity of the instruments themselves and the funding liquidity of some of the institutions that purchased them.

Despite the widely held views that much mortgage credit risk had been transferred outside the banking system, a fair bit of this risk ended up in mid-sized banks, as well as in conduits and special investment vehicles (SIVs) associated with banks. Moreover, even though the conduits and SIVs were legally separate from the associated bank and thus were “off-balance-sheet”, these vehicles had ties to banks through various guarantees and contingent credit lines. Thus, rising uncertainty and impaired liquidity forced banks and other intermediaries to fund (or acquire) these assets directly. In other words, financial innovation — at its current state of evolution — has increased banks' ability to move risk

off their balance sheets, but has not eliminated the possibility that it could return unexpectedly.

Another key feature of financial globalization is the expectation of continuous liquidity. Ready pricing of securities is assumed to be attainable at all times, effectively without limits. The bundling of assets and merging of cash flows was supposed to make this expectation more certain. The conventional view is that it is easier to price and trade a bundled security than to try to find buyers and sellers of the individual component assets.

There is a limit to this notion, however. It is difficult to price a complex security when the risks of the underlying cash flows cannot easily be observed and analyzed. When instruments become too opaque, only specialized investors have the ability to understand them. Such instruments are likely to have low or even no market liquidity. Effectively, they become “buy-and-hold” securities.

I want to be clear: I am not suggesting that there is something inherently flawed about securitization, and there is nothing wrong with tailoring financial transactions to individual investors who anticipate holding them to maturity. Indeed, in theory, these actions lower interest costs for borrowers and are an important element of the process of redistributing risk to those most willing and able to bear it.

Recent events, however, have demonstrated once again that the existence of fluid and continuous markets for complex instruments may not be counted on in moments of stress. Difficult-to-analyze securities will tend to complicate investors’ ability to anticipate market shifts resulting from changing fundamentals and shifts in perceived credit risks. In 1987, for example, portfolio insurance was promoted as a new technique for hedging equity risk, allowing upside gains while protecting against downside losses by creating an implied put option. These hedges worked well when the bundled stocks and the associated index futures were liquid enough so that the relation between the two was predictable. Once that relationship broke down, however, and price continuity on stock exchanges was impaired, the futures market also suffered. Information was not conveyed in a timely manner, was misinterpreted, and ultimately produced perverse and volatile outcomes.

In early 1994, the Fed’s unexpected interest rate rise altered the prepayment risk on mortgages in a way that many market participants had not anticipated. Those who thought they understood both the risks embedded in mortgaged-backed pools and how to hedge the associated convexity

risk found that their actions increased their own losses by inadvertently pushing prices down further.

What happened during these earlier instances is similar in many ways to the events of the last couple of months: issuance of sophisticated products grew so rapidly that market capacity implicitly became stretched. When uncertainty about pricing relationships increased, liquidity dried up and price gaps appeared, further boosting market volatility and raising uncertainty.

2. What is Systemic Risk?

Returning to the basic question of defining systemic risk in securitized globalized markets, experience suggests that systemic risk is created by unexpected events that heighten uncertainty sharply and impair market liquidity. Illiquidity leads to “price gaps” in individual markets and in the pricing of specific assets. The associated stress subsequently extends to the funding liquidity of financial institutions across the globe that are supporting those individual markets. Market illiquidity in turn can lead to potentially significant real economic effects, thus justifying policy action, especially by central banks.

Several aspects of this portrayal are associated with financial globalization. First, the impact of the identified systemic risk is wider than previously, encompassing more than an individual country or even a region. Thus, the impact of recent problems with US sub-prime mortgages extended to Europe as well as the United States, and liquidity problems have been registered as far away as Australia and Russia. And, the incidence of their impact probably is broader than previously. In the latest episode, the incidence has included shareholders in private banks, and taxpayers in the case of some public banks in Germany, depositors of a UK bank with no exposure to the original credit deterioration, investors in hedge funds, not to mention 40 percent of US nonbank mortgage originators.

3. How to Control Systemic Risk

The second of my four questions is: “How do we deal with systemic risk in today’s environment?” This question is obviously complex, but recent

events (and those of the past as well) point to some basic principles. In general, enhancing transparency is a ubiquitous and key theme.

First, in addressing the events that lead to market illiquidity, the provision of information can be improved regarding the risks embedded in the underlying securities on which pricing is based. A critical issue is deciding who should have access to this type of information and who should provide it: if the instrument is traded in a public market, all potential buyers and sellers need to be able to access the appropriate information. If the instrument is a negotiated contract, adequate information needs to be accessible to those that are party to the contractual agreement. At present, however, there are an increasing number of instruments and markets that do not fall neatly into either category. For instance, if structured credit products are expected to be liquid in an over-the-counter market, the ability to look through the structure to the underlying assets and their characteristics would be important. However, it may not be realistic to expect that all potential end-investors will have the ability to do this. If not, can third parties be trusted to do it for them?

Second, in addressing uncertainty associated with funding illiquidity, information about institutions' asset structure (including, for instance, maturity and marketability) and their associated funding strategies would be important in judging how well funding liquidity is being managed. Most recently, many nonbanks, including conduits and SIVs, have undertaken the traditional maturity mismatch associated with banks. Some of the investors providing funding for this activity — typically, in the case of conduits and SIVs, through vehicles such as asset-backed commercial paper backed up by contingent credit lines — apparently were unaware of the risks involved. The entities holding the hard-to-value, potentially illiquid assets also did not adequately factor in the risks of market illiquidity or of a potential loss of their funding sources. For the public to assess the soundness of these new financial institutions, regulated entities will need to provide more information about their relationships with them, their specific exposures (through guarantees or contingent credit lines), and the associated revenues and costs.

I would like to stress that improvements in the practices of market participants — including issuers, investors and intermediaries — is not only possible, it is also likely to improve information flow and to reduce uncertainties. In many cases, the recent problems will induce new private sector initiatives — witness rating agencies' proposal to produce liquidity

ratings. However, new regulations also may be needed to induce parties to reveal information that they would rather not disclose.

Here, I would like to sound a note of caution: we must be careful not to focus excessively on new regulations intended to fight the last battle when the next one could be different. We already have made a lot of progress in recognizing that supervision should be “risk-based” and that regulation should be “incentive compatible”. These principles should be kept in mind when we look ahead. The key will be to adapt these concepts to the problems of today with careful thought given to what we expect to happen tomorrow.

For this reason, I find some of the latest criticism of Basel II to be just a bit too facile. It has been claimed that conduits and SIVs were conceived as a means to avoid Basel II capital charges by placing assets off bank’s balance sheets. In a Basel II world, however, it would be less costly to put the assets held by conduits and SIVs on the balance sheet than in the current Basel I world, since their risk-sensitive ratings likely would have required less capital charges than in Basel I. The current debate about ratings agency regulation is another area where we must tread carefully in order not to stifle innovation.

For example, many observers have pointed to the longstanding conflict of interest within ratings agencies’ business model as a principal cause of recent difficulties. While rating agencies clearly misjudged the credit deterioration underlying some of the securities they rated — and incentives likely pressed them to rate too many complex structures too quickly — the notion that they are primarily to blame suggests that investors need not do their homework and can rely entirely on third parties. Clearly, investors share the blame for recent market difficulties. They should not take a credit rating letter grade on complex securities as the principal element of their due diligence process. Nonetheless, rating agencies will continue to play an important role in providing third-party opinions about credit risks, especially in areas where credit risks are difficult to assess. At the same time, ratings agencies no doubt realize that they need to adapt. When the instruments they rate for their probability of default are highly susceptible to market and liquidity risk as well, they should acknowledge and include an assessment of this as well.

In addition to making sure that market participants have access to the necessary information, there is a role for regulation when individually rational behavior from a set of financial institutions produces a collectively bad outcome: such an outcome is most likely in areas where it will

be difficult for market incentives to work properly. For instance, risk management systems place “risk-based” limits on traders’ positions. These limits may work well when volatility is in “normal” ranges, but when volatility spikes abruptly, positions may need to be reduced rapidly in order to satisfy certain regulatory capital requirements or internal firm rules. Credit rating downgrades also can lead to abrupt valuation changes. At a minimum, risk management techniques need to account for market participants’ likely actions during “tail” events, and this will be very difficult to accomplish satisfactorily.

As we all recognize, there are many interactive effects that crop up in times of stress but that are absent in normal circumstances. The most evident of these is related to liquidity stress, when many institutions simultaneously want to assure themselves of credit availability. Credit providers often cannot anticipate these circumstances with certainty. This problem was illustrated by the recent Canadian situation, where one issuer’s difficulties in refinancing commercial paper led to 17 other issuers requesting funding from their liquidity providers, intensifying the ongoing market sell-off.

To summarize, my main message here is that we can use the current strains in financial markets to understand where market weaknesses have been exposed. Market practices themselves are likely to adapt to this knowledge. But where market incentives fail, the regulatory responses should be forward-looking, and not stifle the underlying process of financial innovation.

4. What Needs to Be Changed?

The third question is, “What do we need to change to be more effective at dealing with the aftermath of systemic risks?” Past financial crises have provided some “first aid kits”, mostly in the form of deposit insurance for bank depositors, guarantee funds for pensions and mortgage lenders, legal structures for “bad” banks to resolve bad assets, and lender of last resort action by central banks. Globalization makes it harder to identify who will provide the “first aid kits”. When the ownership of financial institutions is held by individuals, or by institutions, across several countries, this is a nontrivial problem. It could be that the parties most in need of emergency support are relatively uninvolved with the financial sector, even if financial markets may have been at the epicenter of the shock. Countries with well-developed financial systems, generally good information, and transparent

policies may be better able to cope with the economic effects of financial disturbances, but economies that lack these characteristics may not.

5. Role of the International Monetary Fund

A discussion of potential spillovers leads naturally to a last question: “What is the Fund’s role in all this?” Given the Fund’s universal membership and broad mandate, it could provide a catalytic role in bringing together policy-makers of various countries — along with other relevant international institutions — before, during, or after a systemic shock. The Fund could help identify potential or real cross-border financial disturbances, identify their transmission mechanisms, ensure that financial markets’ “plumbing” (such as clearing and settlement systems as well as mechanisms for liquidity provision) are in good working order, and if necessary after a shock, to identify and facilitate solutions. Fund researchers are analyzing how systemic events are likely to take place in current circumstances — their precursors, linkages, and after-effects — and actions that can head them off and/or ameliorate their impact. The Multilateral Consultation, a novel tool introduced by the Fund specifically to facilitate frank and open discussions on key economic issues of mutual interest to our members, could be useful.

There may be other roles the Fund could and should play in this arena. As this conference progresses, I would be delighted to hear your suggestions about the Fund’s role, or about any of the other questions I have posed today.

Thank you very much for your attention.