

## Discussion 3

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### **Introduction**

It is incumbent on an overview panellist to draw some general lessons. These are of two kinds. They can be backward-looking: what have we learned? And they can be forward-looking: what remains to be learned?

I will try a mixture of the two, but will be emphasizing the forward-looking element. This is because I would like to think of this conference more as a point of departure than as a point of arrival. By doing so, I will draw a lot on research done at the Bank for International Settlements (BIS), although, as always, the usual disclaimer applies.

I will do three things. First, I will recall the main focus and message of the papers. Second, I will highlight the (invisible) thread or perspective that holds them together. Finally, I will argue that we may wish to explore a different thread or perspective to analyze the nature of financial instability and its policy implications. In particular, I would like to stress a different notion of systemic risk from the one that seems to underlie many of the papers, one that I think is also richer in terms of analytical and policy implications, not least because it is less well explored.

### **What Have We Learned?**

The papers can be classified into four different categories. The categories deal, respectively, with the merits and demerits of diversification, with contagion, with prudential regulation and supervision, and with bank lending. Let me consider them sequentially.

## **Merits and Demerits of Diversification**

The key question addressed by the papers on diversification is whether it improves risk-adjusted performance. The focus is on one aspect of performance, namely, on whether the combination of different activities increases the probability of failure.

The answers vary across papers. D'Souza and Lai argue that benefits exist, potentially, based on evidence from Canadian banks. Stiroh finds that even if they do exist, they are not really exploited, based on evidence from bank holding companies in the United States. He highlights the negative impact of the variability in trading income. In fact, the broader evidence that emerges from the vast empirical literature on this subject is mixed, with the results depending typically on the methodology followed.

The personal conclusion I draw from the papers presented here and the broader literature is that benefits may exist, but they are not as significant as business people think or would have us believe.

## **Contagion**

The question underlying the papers on contagion is whether market participants discriminate sufficiently across firms/countries or whether they overreact relative to fundamentals. The focus is on the implications for financial stability. The concern is that contagion may spread and amplify problems at one economic unit, resulting in broader financial instability.

Again, the answers vary across papers. Gobert, González, Lai, and Poitevin explore theoretically one possible mechanism giving rise to contagion, based on aggregate liquidity shortages. Gropp and Vesala find that contagion does exist, based on the behaviour of the stock prices of banks in the euro area. Santor, by contrast, finds no evidence of contagion, based on the foreign-asset-allocation decisions of Canadian banks. Clearly, identifying contagion is difficult, since measuring fundamentals is difficult, and fundamentals set the benchmark for assessing when reaction becomes overreaction. Not surprisingly, the evidence of the rapidly expanding literature on the existence of contagion is also mixed.

The personal conclusion I draw from the papers presented here and the broader empirical literature is that contagion does exist, but it may not be as serious as the authorities sometimes appear to think.

## **Prudential Regulation and Supervision**

The questions addressed in the papers examining prudential regulation and supervision include the justification for its existence and its effectiveness. In fact, do we need it at all?

Dionne stresses the “liquidity crisis–deposit insurance–capital requirements” logical sequence and concludes that regulation is not doing a good job. I have already objected to this approach and conclusion before, so I will not say much more here. Let me just repeat that to think of capital standards as a logical response to deposit insurance (i.e., a mechanism to contain its moral-hazard side effects), while quite common, is fundamentally misleading. Logically, prudential regulation is there to limit the risk of financial distress, which could arise even in the absence of deposit insurance. Historically, in most countries it predates deposit-insurance arrangements. Das, Quintyn, and Chenard helpfully remind us that the authorities can do a better job if there is good “regulatory governance.” In his thoughtful paper, Douglas Gale stresses, quite rightly, that before introducing regulations, we need to think hard about the “pecuniary externality” that justifies them. It is, in fact, very hard to specify the nature of this externality and to derive desirable policies from first principles. Methodologically, Gale’s analysis is a step in the right direction. I will return to this point.

The personal conclusion I draw from these papers and the related literature is that we collectively know something about the rationale for, and effectiveness of, prudential regulation and supervision, but not as much as we think.

## **Bank Lending**

The papers concerned with bank lending explore the determinants of bank lending decisions and their interaction with prudential regulation. While the papers do not quite draw out the link with financial stability, it may well be there, as I will explain.

Van den Heuvel notes correctly that, given frictions in raising external finance, minimum capital requirements can affect the transmission mechanism of monetary policy (although I would prefer a stronger focus on credit risk, rather than interest rate risk, as a factor driving changes in the capital cushion). Chant finds little evidence that corporate governance linkages affect central banks’ credit allocation policies.

I draw two personal conclusions from the papers and the related literature. First, we have not thought much about the nexus between prudential regulation–supervision and monetary policy, and we need to think much more about it. In our research at the BIS, we have started to do so. Second, we think we know a lot about the merits of bank versus market-centred

financial systems, but what we think we know changes a lot over time. The bank-centred Japanese system was regarded as the model during the boom years of the late 1980s, but fell into disrepute in the wake of the crash in the 1990s. The U.S. market-centred model then took over, before being tainted in the wake of the recent stock market crash and widespread corporate malfeasance. One cannot help doubt whether the type of financial system is as critical for financial stability as many appear to think.

### **The Invisible Thread**

What, then, is the invisible thread running through the papers? To the extent that they are concerned with financial stability and appeal to a notion of systemic risk—and admittedly at the cost of oversimplification—the notion implicit in the papers has four key characteristics.<sup>1</sup> First, at the origin of systemic risk lies the failure of an individual institution that, through contagion, leads to broader financial instability. Second, risk is seen as endogenous with regard to the amplification mechanisms but not with regard to the original shock. The economy starts with a fragile structure, which is then hit by a liquidity or asset valuation shock, as highlighted in the paper by Gale. Third, the notion is fundamentally static rather than dynamic, in the sense that there is no discussion of how the vulnerabilities build up over time. Finally, illiquidity is key, with the action taking place primarily on the liability side of the balance sheets.

### **The Alternative Notion**

And yet, if we look at the episodes of financial instability with the more serious macroeconomic costs—those that we should care about—they look quite different. In a nutshell, they relate to credit/asset price booms and busts that have gone hand in hand with, and have amplified, business fluctuations. In these episodes, the financial-accelerator mechanism noted in Gale's paper arguably figures prominently. To use a different terminology, these episodes highlight the potential "excessive procyclicality" of the financial system (not of regulation per se); see Borio, Furfine, and Lowe (2001).

The notion of systemic risk that lies behind these episodes is rather different from the "canonical" one implicit in many of the papers already discussed (Borio 2003). First, the origin of financial instability does not lie so much in contagion as in shared exposures to common risk factors, in particular, in the exposures to the evolution of systematic risk through time, which is

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1. As argued further below, I am firmly in the camp of those who believe that the main justification for prudential regulation and supervision should be systemic risk, not depositor protection, as, say, Dewatripont and Tirole (1994) have argued.

intimately linked to the business cycle. Second, risk is fundamentally endogenous. It is the mutual interaction between the financial system and the real economy that results in overextension in booms and that in turn sows the seeds of the subsequent downturn and financial strains. In other words, the shock itself is largely endogenous. Third, the notion is fundamentally dynamic. Risk builds up over time (during the boom) and then materializes as the imbalances unwind in the downturn. Finally, the notion stresses the asset side of the balance sheet and insolvency. It is the deterioration in credit quality that is crucial.

The evidence for the relevance of this notion goes beyond direct but informal observation of experience. Statistically, in previous work we have found that it is possible to predict fairly well banking crises with a three-to-five-year lead based exclusively on the characteristics of the boom and on information available during the boom (Borio and Lowe 2002a, 2003). Measures of a simultaneous excessive growth in credit and asset prices play the key role.

But why should the financial system be prone to such excessive procyclicality? I think that the reason has to do with two gaps. There is a “risk perceptions gap.” Economic agents are better able to measure the cross-sectional dimension of risk than the time dimension of risk, especially of system-wide risk. In fact, a careful look at the empirical evidence on market discipline indicates that much of the extant literature on its effectiveness is of a cross-sectional nature (e.g., Flannery 1998). There is also an “incentives gap”—and here we are moving closer to Gale’s “pecuniary externality.” That is, actions that are rational from the perspective of individual economic units can result in undesirable collective outcomes. Familiar notions like the prisoner’s dilemma, herding, and coordination failures are key. For instance, is it reasonable to expect a bank manager to trade off a sure loss of market share in a boom against the distant hope of regaining it in a future potential slump? Or to fail to retrench in a slump only because, if everyone did the same, the slump would be worse? Short horizons are at the heart of some of these distortions. And short horizons can themselves be grounded on the contractual mechanisms designed to overcome obstacles of asymmetric information, which may thus have unintended consequences. The frequent monitoring of performance based on short-term benchmarks is one such example.

In other words, the Achilles heel of market discipline may be not so much indiscriminate reaction to idiosyncratic shocks, as highlighted in the analysis of contagion. Rather, it may be failing to prevent generalized overextension.

If one accepts this alternative notion of systemic risk, what are the policy implications?

As regards prudential regulation and supervision, the obvious implication would be to strengthen the macroprudential orientation of the framework. As argued in detail elsewhere (Borio 2003), rather than focusing on the risk profile of individual financial institutions, the macroprudential perspective stresses systemwide risk. If one were to think of the financial system as a portfolio of securities, with each financial institution representing a security, this perspective would focus on the loss on the overall portfolio rather than on the loss on each individual security. The ultimate metric to measure the costs would be the associated costs for the real economy. In addition, this perspective would consider explicitly the endogeneity of risk with respect to the collective behaviour of financial institutions. An important objective would be to seek to internalize the externalities that can result in unwelcome aggregate outcomes.

This macroprudential perspective has implications for the design and calibration of the policy instruments. In the cross-sectional dimension, the calibration would target the marginal contribution of one institution to overall portfolio risk. In the time dimension, a prominent feature would be to encourage the buildup of cushions in good times so as to run them down, up to a point, in bad times. This would make each institution safer and could also reduce the size of the aggregate economic fluctuations that give rise to financial instability.

But the alternative notion of systemic risk has implications for monetary policy, too (Borio and Crockett 2000; Borio and Lowe 2002b, 2003). And these implications extend beyond crisis management—the traditional lender-of-last-resort role—to crisis prevention, as well. For it is monetary policy that exerts the ultimate influence on overall liquidity/credit creation in the system. And, as highlighted by empirical evidence, the unwinding of financial imbalances can have serious consequences for the economy, inflation, and the effectiveness of monetary policy itself.

## **Conclusions**

Although we have learned a great deal at this conference, we have much more to learn. To further our understanding of financial instability and to help us identify an appropriate policy response, I would encourage a shift of focus in the prevailing notion of systemic risk. This is why I would like to think of this conference as not so much a point of arrival but as a point of departure.

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