Key words: systemic risk; systemic regulation; policy coordination; regulatory reform

Grappling with systemic risk

This paper analyses systemic risk and considers appropriate policies to reduce it. It examines systemic risk as a negative externality in two dimensions: the cross-sectional and the time dimension. The paper further argues that financial regulatory policies are not enough to address systemic risk. Other policies – especially monetary and fiscal policy – also have a role to play. It also argues that policy coordination is essential, nationally among monetary, fiscal and macro- and microprudential policies, as well as internationally.[1]

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IT'S A REAL PLEASURE FOR ME to be here to address the Melbourne Centre for Financial Studies. Thank you for inviting me. It has been a very good trip to celebrate the 50 years of the Reserve Bank of Australia, a very successful central bank that has participated actively in all the meetings of central bankers and regulators in Basel, and it has been a pleasure for all the colleagues to be here during these few days.

For this lecture I thought it would be good to discuss one of the most difficult topics that we regulators and central bankers confront, which is how to deal with systemic risk. My paper's title is 'Grappling with systemic risk' and it is meant to convey how hard it is for policy makers to get to grips with this concept.

I am going to use a definition for systemic risk that was in a paper prepared by the IMF, the Financial Stability Board and the BIS for the G20. The definition adopted there is: risk of a disruption to financial services that is caused by the impairment of all or parts of the financial system and has the potential to have a serious negative consequence for the economy. The two key elements are the externalities concept and the spill-overs that these disruptions in the financial system can cause to the economy.

Translating these kinds of concepts and definitions into policies is very difficult, and different groups as well as the BIS have been working on that. There are two dimensions that we think are relevant in analysing this concept of systemic risk.

Concepts of systemic risk

First, there is what we call a cross-sectional dimension, and second, a time dimension. The cross-sectional dimension relates to how the structure of the financial system influences how it responds to possible shocks. The structure can amplify such shocks if, for example, there are common exposures across institutions or inter-connectedness between institutions. The other problem is the time dimension – how risks build up through time and how these risks, when they build up, interact with the macro economy. We have seen in this crisis how the business cycle and the financial system interact in a way that may amplify disruptions. It is sometimes referred to as the pro-cyclicality of the financial system or the pro-cyclicality of the economy.

I will focus on these two dimensions and then I will argue that it is very important to get the current financial regulatory reform right. Certainly, regulatory reform is part of the solution but it is not the whole solution. Regulatory gaps were not the whole problem and are therefore not the whole solution. To control systemic risk in the future, other policies such as monetary policy and fiscal policy will also have to play a role.

The third element I would like to say a few words about later is policy coordination at the international level. And, while a fourth group of issues – market discipline, transparency, governance, incentives, market integrity, consumer protection – is important, I will not have time to address those matters in this talk. But their importance should not be underestimated.

The main message I want to convey to you is that there has been a lot of work, a lot of progress has been achieved, but the reform agenda is very large, and this year is going to be a very important year for progress on this agenda.

Policies to deal with system-wide interlinkages and with too-big-to-fail and moral hazard issues

So let me come back to the concept of systemic risk. The cross-sectional dimension involves common exposures or inter-linkages and relates to how a specific shock to the financial system can propagate through the system and become systemic. The financial system is a network of interconnected balance sheets and, as a result of the complex web of transactions, a shock hitting one institution can spread to other institutions. There are several examples from history, such as the Continental Illinois crisis that started in one institution and moved to other institutions.

Alternatively, a shock can have wide ramifications and become systemic because of direct common exposures. National downturns in commercial real estate or housing markets tend to have this character, and this common exposure can have a profound impact on the financial system and can create a perfect storm as we have seen in this crisis.

The time dimension focuses upon pro-cyclicality and I will address a little later the main measures that have been addressing this dimension. But it is important to note that the financial sector can endogenously generate pro-cyclicality and systemic risk. Systemic risk can be highest when it looks lowest because it is then that credit is most extended and most freely available, and leverage and risk-taking are encouraged. We have seen how this complacency in itself turns out to be a source of risk, and this is one of the lessons that is repeated from time to time but which we tend to forget.

Policy will have to operate in both these dimensions if we want to address risk. It will have to operate on the cross-sectional dimension and it will have to operate on the time dimension. One item on the table at this very moment regarding the inter-linkages dimension is the 'too big to fail' problem. I have chosen to organise my following remarks on this topic as basically six building blocks.

First is *more and better capital and liquidity*. The idea here is that the firms that contribute to systemic risk must to some extent internalise the externalities that they impose. One way to get them to do so is to hold them to higher prudential standards than other companies – for instance, require them to hold more capital, more liquidity, than other firms. The important thing here is that these additional charges should be calibrated in proportion to the contribution to systemic risk. In that way we will

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reduce the probability of default of these institutions. This is not being thought of as constructing a list of systemic institutions, but rather as institutions lying upon a continuum with more systemic institutions being required to have higher capital. This is still under discussion.

The second element (I will come back to capital regulation) is the *resolution regime* – the failure of an institution of systemic importance should be managed in an orderly manner. Adequate resolution regimes should be put in place to hold down the system-wide losses that arise when a systemic institution fails. One important aspect is to ensure that counterparties are not relieved of the risk that they have taken in the event that there is a failure, so that market discipline remains strong. We know that because of this crisis we have created a huge amount of moral hazard – precisely because this has not happened.

That's easy to say and very difficult to do. Progress has already occurred but it is still limited and there is ongoing work at the Financial Stability Board and in the Basel Committee in these areas. The Basel Committee has published principles on how to better organise cross-border resolution, but there are legal problems that are very complex. Some concrete proposals will probably be published later this year.

These two topics, capital and liquidity and the resolution of financial institutions, are the core of the reform process.

Among additional elements being put on the table, one is the analysis of the *structure of the financial institution*. This crisis was a sign of market failures within the financial industry, and measures have been suggested to avoid perverse incentives that could increase leverage in pursuit of short-term profits. You know there have been proposals to encourage sound compensation practices and to strengthen governance, but there are additional proposals that have been put on the table. These go further, directly to the size and the structure of the financial system and trying to curb some of the most risky activities of banks.

This will be discussed also at the international level, although the structure of the financial system is an area where there have always been differences among countries.

When we discuss this problem of ‘too big to fail’ we need to be conscious that the industries are very different in different countries. It will have to be approached with a wide range of measures and making sure there is some consistency at the international level. Probably there will be less consistency on this topic than in the core of the reforms – capital and liquidity – where the work has been going on for much longer.

There have always been differences between the situation in the United States, for example, where they had the Glass-Steagall Act, and other countries without such constraints, but with all the industry subject to similar Basel I requirements.

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Another important area is a *more robust market infrastructure*, such as making settlements through central counterparties and more trading in organised platforms. I think this is an avenue that would reduce counterparty risk and can also help to reduce systemic risk and reduce contagion, and it is one which has been actively pursued.

Another thing that has been put on the table is *taxes or levies* (systemic levy / systemic taxes) and this is another building block that deserves some study. From a theoretical point of view, taxing is a classical area for dealing with externalities. My question concerning this approach would be: To what extent would it be better to concentrate more on capital or liquidity, than to go with this approach of taxes? This has not been resolved and it will be on the agenda for sure.

A last point on how to deal with systemic risk is how to make *supervision* more proactive, more vigilant, and to make sure that the perimeter of financial regulation is appropriate – that groups with systemic elements have the appropriate oversight by the regulators. One of the questions that perhaps we have not asked enough is why, with the same framework of regulation, there have been such different results in different countries. Obviously, there are many answers to that; some of them would be that the banks were doing different businesses, had different business models, different degrees of sophistication, and some were engaging more in securitisation and other things. I think part of the answer is also that in some areas the supervision was more proactive in looking into the activities of the banks. In my view, Australia and Canada are good examples of robust supervision, and that has helped to enable the financial systems there to cope with the situation in a better way. This should be a part of how to deal with systemic risk.

My own lesson is that you need regulation and supervision and to do it right. The notion that light supervision will increase your competitiveness as a centre or as a financial system is a wrong one in my view. On the contrary, good supervision, not excessive, but good supervision, helps to promote a robust financial system.

These are the six building blocks that will help to reduce the interconnectedness problem or the network risk.

Policies to deal with procyclicality

The other problem area that I mentioned is pro-cyclicality: how to reduce this interaction of the financial system with the real economy. The starting point is very simple.

The first lesson is that capital and liquidity buffers need to be higher over time. In this crisis, there was not enough capital, there were not enough provisions in the financial system. That is the first thing: on average capital and provisions will have to be higher. The Basel Committee has been working on strengthening capital requirements in the different areas where it was perceived that they were not right. For example, trading books or some areas of securitisation will be required to have more capital. That is more a micro approach just to get it right, and of course one of the important reforms is the emphasis on higher quality of capital, not just more capital, but much better capital – this is one of the issues where fortunately the convergence of the positions has come a long way but the discussion was not very easy.

Now let me mention something that I have heard several times since I have arrived here, which concerns the leverage ratio that is also included in the package. It is supposed to serve as a backstop to the risk-weighted capital measures. I see that in Australia it is not very popular and I would say that in Europe it is a measure that is not very welcome either. We can discuss this later – this is supposed to be a backstop, not necessarily as binding as the risk-weighted capital requirement, which should be the centre of the capital regulation.

The second lesson is that this stronger capital on average should be complemented with the general principle of building up and running down buffers over the cycle. The guiding principle is that you must build safety margins over the minimum in good times, when it is easier and when it is cheaper to do so, and this can, to some extent, also help to restrain risk taking. In bad times these margins can be run down, allowing the system to endure these strains more easily and dampening to some extent these feedback mechanisms between the financial system and the economy.

One principle has been incorporated that was not there before: capital conservation. If you have a target buffer, but you have not achieved it, there is a principle of capital conservation – meaning you cannot distribute profits or pay bonuses in the usual way, so that you get rapidly to the target. Once you have achieved the target buffer you can distribute at your discretion. That is a new principle that has been introduced.

The other area where work is going on is a principle that tries to capture the macro component. If there is rapid credit growth in the country / market, you will be asked to hold additional capital. It has been proven that this process of rapid growth requires that you should get ready and build more capital.

The third element to address pro-cyclicality is that banks must be encouraged to use forward-looking provisioning systems, based on expected losses, instead of more backward-looking provisioning based on realised losses. This would promote early identification and recognition of losses in a more robust manner. It would better reflect the reality of the financial performance of the institution and also its risk profile since it would incorporate a broader range of credit information, both qualitative and quantitative. Of course, this should be done in a very transparent way and be subject to the appropriate internal and external validation by auditors. This is part of the discussion in the Financial Stability Board with the accounting standard setters; they have mixed feelings about some of these elements.

The last lesson is perhaps that there are other policy tools to address pro-cyclicality which can be tailored to particular sectors. For instance, many countries in East Asia have been imposing some kind of loan-to-value ratio that applies to mortgages. In Australia, I have been told, the 50% risk weight for mortgages under Basel 1 was restricted to mortgages with loan-to-value ratios below some threshold.

We have to recognise that some of these measures can be intrusive and can have some distorting effects. We are analysing what measures have been used. Asia has been ahead of the curve in using some of these measures, and we are analysing what has worked and what has not worked. Such measures would be another way of addressing this pro-cyclicality of the financial system.

Regulation is not enough

I will very brief with my other comments. I was trying to convey to you that regulation is important and a lot of work has been done. But again it is not just regulation, we will need monetary policy also to help when there is a build-up of financial imbalances. It is very important that there is discussion about just cleaning up after versus leaning against the wind before a crisis. I think we will have to have both things. We will have to lean a little bit – not trying to target asset prices – and will have to act also when the bust comes.

There is more in the paper for those that are interested in this issue. I also make two points in the paper regarding fiscal policy. One, it is good to create room to manoeuvre in good times to be able to act in bad times. We have seen how important it is and yet how painful it can be from a fiscal point of view when you have to underwrite the financial system.

The second is in terms of taxes. Having a tax code that will not promote debt versus equity, that is more neutral, requires some more thinking for the future.

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The institutional framework of systemic regulation

Finally let me say a few words about the institutional framework of regulation. I think this is an important element and there are questions that remain open. One of the questions is the governance structure and flow of information when we try to address systemic risk. It depends on how regulation is organised in different countries. In some countries the prudential regulator and the central bank are identical and in some countries they are different.

The crisis has shown that central banks should play a very decisive role in systemic regulation. It is not clear yet, and we are working hard on that, how central banks should be equipped for this role especially when the central bank is not the prudential supervisor as is the case in Australia. So defining the goals of the central bank and making sure it has the tools, the mandate, the necessary supervisory information even on individual firms etc., is a very important task. Also I think that financial supervisors can get a lot of information from, for example, the liquidity operations that central banks perform.

The second thing regarding the institutional framework is the discussion about how to balance rules and discretion. I personally feel that rules and building automatic stabilisers into regulation is a good approach since it helps the authorities to take decisions. It also helps the financial sector to internalise the rules because they know how they work. But discretion will never be fully ruled out, it will always be necessary to have discretion for the central bank or regulator.

My final point will be on international coordination; this is not a new topic, but a very important one. I would like to say that a lot of new things have happened since the crisis started and that we have created a brand new structure of international cooperation. Certainly, there is clear evidence that just having individual nations keep their own houses in order will not maintain global financial stability, and so we have to do better.

The Financial Stability Board has taken a new role in coordinating the work of the national authorities and the standard setters, and the International Monetary Fund and Financial Stability Board are engaged in an early warning exercise trying to monitor systemic risk. But, most importantly, there are new processes of peer review. Some of them will be thematic and will also be country by country to verify adherence to the different codes, practices, regulations and standards that have been endorsed by the G20 and by the Financial Stability Board.

There are other new areas where a lot of work has been done, such as the colleges of supervisors; there are new developments in areas such as the European Union, the European Systemic Risk Board which will help to coordinate micro/macro approaches and issue warnings and recommendations to policy makers.

Lastly, the G20 is playing an important role to enhance the necessary coordination, not only supporting financial reform but also macroeconomic policies. There is a new mutual assessment process in the G20 that reinforces the commitment from the national leaders to join a coordinated action. Just as financial stability needs help from monetary and fiscal policy at a national level, international financial stability requires consistent policies at the global level.

So there are also new peer reviews at the level of the Basel Committee, in addition to the usual coordination that occurs in different committees. These are strengthening the commitment of the different authorities to a level playing field, to play by the same basic rules.

There is a new mutual assessment process in the G20 that reinforces the commitment from the national leaders to join a coordinated action. Just as financial stability needs help from monetary and fiscal policy at a national level, international financial stability requires consistent policies at the global level.

Final remarks

This issue of systemic risk is the most difficult and most important that is being dealt with at this moment. It requires a combination of better regulation and a more symmetrical macro approach, a macro orientation of some of the prudential rules. It also requires enhancement of international coordination and greater market discipline – I have not dealt with that element but it will also be very important.

I hope that I have conveyed that there is a lot of work already going on. Certainly this year is going to be a very important year in terms of refining the numbers and details of some of the proposals that have been worked on over the past few years. Thank you.

Note

1 See www.bis.org/publ/othp08.htm for the full version of the paper.