

## **Glenn Stevens: Financial system developments and their implications for the conduct of monetary policy**

Remarks by Mr Glenn Stevens, Governor of the Reserve Bank of Australia, to Central Bank of Malaysia's High Level Conference 2009 "Central Banking in the 21st Century: Implications of Economic and Financial Globalisation", Kuala Lumpur, 10 February 2009.

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It is a great pleasure to be here in Kuala Lumpur at this celebration of Bank Negara Malaysia's 50th Anniversary. The two central banks actually have something of a shared history. In the late 1950s, the Commonwealth Bank of Australia, as Australia's central bank was then known, seconded officers to assist with the establishment of Bank Negara. One of them, Tan Sri W.H. Wilcock, became Bank Negara's first Governor in 1959. So it is a pleasure indeed to be renewing the relationship in this way here today.

The subject for this session is "The Nexus between Monetary and Financial Stability". It is certainly a topical one. The global financial system has changed dramatically since Bank Negara's early days, both in size and complexity. Yet for all its supposed sophistication, the system is still characterised by cycles – as is the case with so much of human behaviour. Periods of strong growth, rising asset prices and investor optimism are still followed by sharp increases in risk aversion, falls in asset prices, investor pessimism and weak economic conditions. What is perhaps novel in recent experience is the scale with which risk appetite could be accommodated by the global financial system and, equally, the scale of the damage wrought by the ensuing shift to risk aversion.

All of this has, of course, complicated the operation of monetary and other policies and, in some cases, threatened to overwhelm them. With the benefit of this experience, policy makers everywhere are working on strengthening their frameworks. In doing so, however, we all need to keep in mind that our capacity to predict how financial behaviour will change in response to events, and to policy initiatives, will always be imperfect, as will be our capacity to keep pace with the latest innovations. Therefore, we need policy regimes that are robust enough to be effective despite this limited knowledge.

These are the issues I will be discussing today. I wish to make clear at the outset that my remarks are about the general international issues, not specifically about either Malaysia or Australia.

### **Financial system complexity and its role in the financial crisis**

In the current cycle, it has been argued that complexity obscured risks that were embedded in certain financial instruments and activities. So what do we mean by financial system complexity?

Three key aspects come to mind:

- the complex financial instruments that have played such a prominent role in the current financial turmoil;
- the interactions between financial markets and institutions; and
- the speed and virulence with which problems spread across national borders.

Each of these elements has been important over the past two years. Financial innovation saw the development of a number of complex products, from asset backed securities (ABS), to structured credit products such as collateralised debt obligations (CDOs) based on portfolios of ABS, and CDO squareds (CDOs of ABS that hold CDOs as collateral) and credit

derivatives. Only too late was it understood that the prices of these instruments move in a highly non linear fashion in response to falling credit quality in the tranches underlying the securities. When that began to happen, moreover, there was little or no liquidity in markets where these instruments were traded. Opacity was also a problem insofar as the banking system was concerned because such instruments were often not accounted for on balance sheet but were issued indirectly through special purpose vehicles.

At the same time, the activities of financial institutions became much more closely intertwined with financial markets. There was a blurring of distinctions between different types of institutions and a shift in their relative sizes within the financial system. Banks moved beyond their traditional role as deposit takers and lenders to offer a much broader range of financial products, including funds management and insurance. The growth of securitisation markets (until recently) enabled non bank financial institutions to play a greater role in credit provision, and fostered the expansion of the so-called “shadow banking system”.

Financial institutions also became much more reliant on markets for their own risk management and funding, and in some cases found that disruptions in financial markets had a serious impact on their ability to operate. For example, in the United Kingdom, Northern Rock’s heavy reliance on securitisation, and its inability to find an alternative source of funding when this market closed, was instrumental in its need for official support and subsequent nationalisation. Similarly, disruptions to markets for credit default swaps, or even simple foreign currency swaps, had a significant impact on the operations of institutions that relied on these markets to hedge their exposures and manage funding.

Globalisation has also been important, with much economic and financial activity increasingly organised on a transnational basis. Hence, there is much greater interdependence between national financial systems – and one of the remarkable features of the recent global turmoil has been the speed at which problems have spread across borders at critical moments.

This is true not only of financial difficulties, by the way, but also of the effects on the real economy. Modern management of inventories and shipments has probably transmitted weaker demand back up through the production chain, across countries, all the way to the raw materials sector faster than in the past. (This should, of course, be stabilising in the sense that it prevents the old fashioned inventory cycle amplifying the effects of the swings in demand.) The slump in trade has also been exacerbated by dislocation in trade credit, which is but another manifestation of counterparty risk.

But something more than just the usual effect of lower US demand via trade channels has been at work. The ubiquity of access to instantaneous “news” – from globalised news organisations and via the screens on our desks, CNN and so on – and the pace at which households and businesses adjusted their expectations and behaviour based on this new information was surely a big part of the explanation for the highly synchronised slump in demand around the world during the final few months of 2008.

I suspect that economists will debate for years ahead the nature of what has clearly been a common shock to all countries. My reading of the episode is that the extraordinary financial events of September and October 2008 – several large financial failures, large scale rescues of major institutions, enough incipient systemic concerns about banking systems to lead governments to issue guarantees, investor panic on share markets – were all observed in real time by households and businesses right around the world. This caused a collapse of confidence, a disengagement from financial and business activity and a much more cautious attitude to spending. It has had very large effects on the real economies of most countries.

### **Recent challenges for the operation of monetary policy**

How then has all this affected the task of conducting national monetary policies?

Here I will take some liberties and define monetary policy more broadly than just the setting of the overnight interest rate, and include the full gamut of central bank operations in markets.

The first point to note is the international spillovers of the crisis, stemming from the cross border integration I mentioned earlier. The earliest evidence of this was the way higher term funding spreads in money markets were observed in many countries, even those whose exposures to the problem assets were trivially small (I include in this group my own country and some others in this time zone). In many short term money markets, the spreads between overnight rates and 90- or 180-day rates rose significantly, even though not as much as in the United States, the United Kingdom or the euro area. These spreads reached extremes in most cases during September and October 2008, in the midst of the turmoil following Lehman's failure. In some cases, turnover in money markets dropped sharply, almost to zero, for anything other than overnight maturities. An important dimension of this phenomenon was the shortage of dollar liquidity for non US entities trying to fund their US asset positions. The pressure this placed upon swap markets ultimately saw them effectively close for a couple of weeks during September.

In response to these spillovers, central banks did two things. First, they adapted their own domestic policies for provision of liquidity, responding to the unusual term spreads by widening the classes of assets in which they would transact, being prepared to push the amount of cash in the system higher than normal, lending on a collateralised basis at longer terms and in some instances providing foreign currency from their reserves to swap markets.

Second, central banks stepped up their collaboration in recognition of the mutual dependence of national financial systems. The Federal Reserve co operated with central banks in a number of countries to provide US dollar funding against local currency collateral, with the central banks in effect acting as intermediaries. This alleviated the US dollar liquidity problems. Subsequent further expansions of these facilities in the United States and Europe have, for all practical purposes, made the dollar liquidity shortage a thing of the past. (Of course, counterparty risk aversion remains to some extent, which would explain the fact that term spreads remain higher than prior to the crisis – but that reflects questions over the perceived riskiness of the major institutions, rather than liquidity *per se*.) On top of this, there was also the co ordinated interest rate reduction by the G10 central banks in October. And in Asia, there have been further developments of bilateral and multilateral swap agreements.

The second complication for several countries is that some of the transmission channels of monetary policy are not working normally. In the boom, optimism and the search for yield pushed down the risk premia that were built into the interest rates offered to borrowers, and this may have diluted the effect of any increases in policy rates on the ultimate cost of funds. But lately, this dynamic has worked powerfully in the reverse direction, with sharply rising risk premia diluting the effect of lower policy rates. The most damaging instances of this have been in the United States and the United Kingdom, where despite quite aggressive reductions in the interest rates set by the central banks, rates paid by many borrowers have not fallen very much until quite recently. In addition, even where interest rates have declined, many banks display an individually understandable, but systemically damaging, reluctance to lend.

Perhaps these impairments of the transmission process could be offset, to some extent at least, simply by pushing the policy rate further than would otherwise have been the case. But by now, the zero bound problem, which had been a theoretical curiosum until Japan's experiences over the past decade, is being faced also by the United States and Switzerland, and prospectively perhaps by one or two other countries. For this reason, so called "unconventional" policy instruments are starting to come into view in some countries. These essentially amount to direct purchases of assets by the central bank, so as directly to affect the price of that asset and/or the balance sheet of the counterparty, or to act as "intermediator of last resort".

A third general issue is that the sheer interconnectedness of all of the major institutions and markets makes the framing of particular policy interventions aimed at fostering stability much more difficult. Because every linkage cannot possibly be known beforehand, the effect of any particular measure is almost impossible to predict with much accuracy.

### **The broader issue**

The current financial crisis has highlighted some of the risks associated with this financial system complexity – and the complications they bring for monetary policy are far from the only ones. Those charged with designing and implementing policies for prudential supervision, market conduct and deposit insurance, among others, are thinking hard about how to refine them.

Obviously, each episode has its unique elements. In this one, the very low interest rates and macroeconomic stability of the past decade or so led investors to lower their perceptions of risk and allowed a greater range of borrowers much easier access to finance than before. Investor optimism and the search for yield provided the demand side background that was associated with the development of complex financial products. These products, in turn, facilitated the build-up in leverage that allowed investors to achieve higher returns.

The complexity and opacity of certain financial products and financial institutions' activities made it difficult for investors to develop a good understanding of their counterparties' business and their own exposures. There were no long time series of historical relationships that investors could use to estimate the probability of default associated with new instruments. Further, the new products and changes in the structure of the financial system resulted in a tight web of interconnections between institutions and markets that made it more difficult to determine the correlation of default probabilities across institutions.

Information asymmetries were also associated with incentive and agency problems. The difficulties of assessing potential losses and limited transparency, in the presence of competition and investors' search for yield, may have encouraged some managers to take on greater risks than would have otherwise been the case. Rewards systems based on short term performance added to these incentive problems. The difficulties involved in measuring risk meant that, during the buoyant conditions prior to mid 2007, investors were content to outsource risk measurement to credit rating agencies. Even then, investors did not fully understand the differences between different products with the same rating.

But as important as all the new instruments and the various interactions between them, markets and institutions have been, it would be a mistake to conclude that fancy new instruments alone were the root cause of the crisis. Complexity was responsible for obscuring the risks associated with certain financial instruments, but many investors, if they were honest, would have to admit that they knew that they did not fully understand the instruments, yet they were not deterred from investing.

In the end, the question remains: why were investors willing, eager even, to invest in such complex products they must have known they did not fully understand? Why did some financial institutions allow their business model to become so dependent on particular forms of market funding? Yes, the complexity obscured risk. But investors and institutions were not deterred by that. The simple point, surely, was that there was too much optimism combined with too much leverage. That is neither new, nor particularly complicated. I am prepared to assert that it will, periodically, recur. Policy makers across a range of endeavours will need to keep that very much in view in the future.

### **The challenge for the future**

Turning to the implications for the future conduct of monetary policy, we have seen that financial system complexity and the financial cycle have affected both the overall

environment in which monetary policy operates and the transmission channels through which it affects the economy.

In response, policy makers clearly have to work hard at understanding the effects of changes in economic and financial behaviour and the way they affect the transmission channels. They need to monitor a wide range of indicators to assess both financial conditions and the impact of their decisions on the economy. It is also important to monitor closely and respond to developments around the globe, as recent events have demonstrated that these can be rapidly transmitted across borders. In addition, monetary policy authorities need to work in collaboration with regulators and those responsible for financial stability to build their understanding of the financial system.

In the short term, the situation requires flexibility and a degree of innovation on the part of central banks, and on occasion not a little boldness. I think most central banks have been prepared to embrace those principles, without abandoning the long term foundations on which credible policy making must rest.

As challenging as the current environment is, however, some big challenges loom for the longer term, once the emergency has been dealt with. Complexity and uncertainty have always been defining characteristics of the economy. Economic behaviour and the structure of the financial system and economy are continually evolving. It will never be possible for central banks or others to work with full information, nor to predict exactly how their actions will be passed through the financial system, nor how they will affect the economy.

The financial crisis may lead to a certain simplification of the financial sector for a time, with the closure of markets for many complex products, banks moving towards more narrow, traditional business models and the disappearance of some highly leveraged institutions with complex business structures. But the global nature of financial activity and the importance of markets to financial institutions are likely to remain, and the cycle of risk taking will eventually turn. We certainly want this to be the case, in my view. The problem in the next couple of years will not be too many cross border capital flows, but too few; not too much risk taking, but too little. A retreat into financial autarky and wholesale shunning of risk would be even more damaging than what we have seen to date.

So the challenge in the longer term is to construct a policy regime that handles all the complexity and cyclicity of the system. We need a robust policy regime that can operate effectively, *on the assumption* that we will never have the full picture of the workings of the financial system and the real economy. We need policies that can be effective *on the assumption* that private financial systems are periodically prone to “irrational exuberance” – but without being predicated on the fallacious assumption that regulators will always know best. We need policies that steer away from a retreat to the financial repression of the 1940s and 1950s, but that have a more sceptical view of the latest financial innovations, and in particular maintain a much greater degree of distrust of leverage, in all its forms. And we need a system that is more robust in the face of occasional financial failures.

This is a challenge, of course, for financial institutions, prudential supervisors and those responsible for seeking to maintain overall system stability alike. Indeed, these two perspectives have to be married more effectively than they have been to date. Assumptions reasonably made at the level of the individual institution when assessing prudential strength – say, about the availability and liquidity of various markets – may turn out to be collectively invalid.

In the case of central banks, surely we cannot avoid another look at the question of monetary policy, asset prices and leverage. This has been a long running debate – going at least as far back as the early 1990s, in my memory. Distinguished scholars have disagreed on the extent to which monetary policy should respond to movements in asset prices over and above their

estimated impact on inflation via wealth channels, etc. Some argue in favour of “leaning into the wind” of asset price swings,<sup>1</sup> while others eschew that on various grounds, in favour of dealing with the aftermath of asset price busts if and when they occur.

Several chapters have been written in the story, the most recently completed one being in the early 2000s after the “dot.com” boom and bust. I think it could be said that, at that time, those advocating leaning into the wind did not get enough traction – I suspect mainly because growth in the United States was fairly easily restarted after the shallow recession of 2001 that followed the “dot.com” bust. In the aftermath of the excesses of the subsequent period, a new chapter is now being written in this discussion. Knowing the next speaker, Bill White, as I do, there will probably be food for thought on the topic here today.

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<sup>1</sup> See SG Cecchetti, H Genberg, J Lipsky and SB Wadhvani (2000), *Asset Prices and Central Bank Policy*, Geneva Reports on the World Economy No 2, International Center for Monetary and Banking Studies and Centre for Economic Policy Research, Geneva.