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**The Global Financial Crisis:  
Challenges to the Regulatory Path Ahead**

By

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The intensification of the global financial crisis, following the bankruptcy of Lehman Brothers in September 2008, made the economic and financial environment very difficult for the world economy, the global financial system and for central banks and financial regulators alike. The fall out of the current global financial crisis could be an epoch changing one for central banks and financial regulatory systems. It is, therefore, very important that we identify the causes of the current crisis accurately so that we can then find, first, appropriate immediate crisis resolution measures and mechanisms; second, understand the differences among countries on how they are being impacted; and, finally, think of the longer term implications for monetary policy and financial regulatory mechanisms.

**What Went Wrong with Financial System**

*Accommodative Monetary Policies*

It is generally agreed that a variety of factors led to the crisis -- developments in the subprime sector, excessive leverage in the financial system as a whole in recent years, lax financial regulation and supervision, and global macro imbalances. What I have been particularly interested in is the role of lax monetary policy in the advanced economies, and particularly that in the United States. In examining the waves of capital flows to emerging market economies

that have occurred over the last 30 years, it is noteworthy that almost each wave has been preceded by loosening of monetary policy in the advanced economies, usually led by the U.S., followed by tightening leading to the reversal of capital flows. In the period after the dotcom crash lax monetary policy led to excess liquidity and low interest rates worldwide. In previous episodes of such excess liquidity over the last 30 years it was emerging market economies that suffered from crises. This time it rebounded on the North Atlantic economies.

When there is an extended period of lax monetary policy and low interest rates, there is a natural search for yields leading to outward capital flows in search of higher yield. This time what happened is that with monetary policies being accommodative for an extended period in the US and other advanced economies, in addition to capital flows going outward in search of yields, the volume of liquidity generated was such that there was also a burst in financial innovation within these countries, so that higher yields could be obtained within. This search for higher yields within led to many of the irregularities observed. The consequence is that it has been the advanced countries of the North Atlantic who have suffered from financial crises this time.

The other issue of note is that this time – in the last ten years really, not just the last five years -- the accommodative monetary policy practiced and increased liquidity did not lead to higher inflation as measured by the Consumer Price Index (CPI), or even higher inflation expectations conventionally measured, which is what the central banks were focused on for guiding monetary policy decision making. It did, of course, lead to huge increases in asset prices of different varieties, particularly housing and real estate, not just in the U.S and Europe but in other parts of the world as well.

Central Banks felt no pressure to tighten until very late because they were not observing increases in CPI, and being generally focused on CPI they avoided reacting to asset price growth, and even to supply induced commodity price increases. To my mind, this is a major issue for central banks, financial regulators and academics to discuss. In what circumstances should monetary

policy take cognizance of variations in asset prices and in commodity prices and how? In the presence of low CPI inflation central banks typically come under significant public and market pressure not to raise rates. *So I believe that Lesson no 1 of the crisis relates to revision in the prevailing monetary policy frameworks that are essentially based on inflation targeting. What should be the basis of new frameworks that also look at other issues related to the maintenance of financial stability? Furthermore, will the new frameworks necessitate less separation between monetary policy and financial regulation?*

*What has been the channel of contagion?* Short-term interest rates were of course being determined by monetary policy. However, it was low long term interest rates that affected the boom in real estate prices. Thus it has been argued by some that accommodative monetary policy cannot be held responsible for the boom in real estate and other asset prices. The short-term interest rates caused private capital to flow out in search of yields; but these private capital outflows could not be absorbed in the recipient countries and hence came back as official capital inflows from the central banks, particularly from the Chinese and other Asian central banks, but also from the Middle Eastern oil producing countries. Official reserves were invested directly in US government treasuries and in the securities of the government sponsored agencies like Fannie Mae and Freddie Mac. That increased the demand for these securities and thus reduced long-term interest rates. This was a vicious circle: low interest rates fuelled demand for consumer goods, contributing to greater demand for Chinese consumer goods and hence Chinese exports and surpluses; the back flow of official reserves dampened long term interest rates contributing to the increase in housing and other asset prices, and hence household wealth, which itself resulted in lower household savings and higher consumption... and so on.

*In this process why did emerging market economies, particularly in Asia and Latin America, not get as seriously affected as the North Atlantic advanced economies? As in previous episodes they did experience a surge in capital flows. This time, however these flows were not absorbed in these economies*

since they were either exhibiting current account surpluses or only mild deficits, such as India. The consequence was that these excess flows returned to the advanced economies in the form of official flows.

Why did the EMEs exhibit such stability in their external financial accounts? After the Asian crisis of the late 1990s and the repeated Latin American crises, overall macroeconomic and monetary management in these countries has been much more prudent; leading to much improved fiscs, lower inflation, and positive savings/investment balances. They have also managed their external accounts well through appropriate capital account management and forex intervention, while maintaining flexible exchange rates, though somewhat managed. Meanwhile, most of these countries also strengthened their financial regulation and supervision systems with greater attention being given to the maintenance of financial stability through tighter regulation. Thus there was relatively muted financial contagion; except through the stock markets that suffered from the sudden withdrawal of foreign institutional funds. The main channel of contagion was the steep drop in world trade, which drastically reduced the exports of EMEs and hence there was a significant reduction in their growth in the first instance. The freezing of world financial markets itself had sharply affected the availability of trade finance. The reduction in export earnings, however, did not cause balance of payment crises this time because of the availability of insurance through forex reserves. *So lesson no 2 is that the traditional virtues of prudent fiscal policy, stable monetary policy, along with the maintenance of sustainable external accounts, should not be lost sight of in the presence of highly flexible financial markets.*

So, it is the combined interaction of lax monetary policy, choice of exchange rate regimes among some countries, lax regulation, belief in efficient markets and the cognitive capture of regulators that contributed to the various developments that ended up as the global financial crisis. The last issue, I believe is itself a very important one that also deserves much greater attention. The prevailing academic orthodoxy with respect to the theories of efficient markets, rational expectations, and inflation targeting monetary policy constrained both central banks and financial regulators from adopting activist roles in curbing some of the excesses that prevailed prior to the outbreak of the crisis.

Speaking as a regulator who was not captured (the Reserve Bank of India, which is a central bank and financial regulator combined) I can tell you that our life was not at all easy! We were consistently excoriated over the period of the boom years by academia, the financial press, bankers, capital market participants and even segments of the government, for not practicing the kinds of policies followed by most central banks and light touch financial regulators elsewhere. It was very, very difficult. Going against prevailing conventional academic wisdom is not for the faint hearted!

### **Financial Regulation**

As a consequence of the global financial crisis there is ongoing intense discussion on the shortcomings of financial regulation and supervision. The report that I have found of greatest interest personally is Adair Turner's Review, including all the data that have been compiled in that. Among the more interesting features for academic discussion, much more than has happened I believe, is that he has actually put forward very starkly the questioning of core assumptions underlying financial regulation of recent times. As stated by him, the core assumptions that need to be questioned are:

- Market prices are good indicators of economic value.
- Securitized credit has improved allocative efficiency of markets leading to financial stability.

- Risk analysis can be done through mathematical models.
- Market discipline can be used to curb harmful risk taking.
- Financial innovation provides value addition.

He feels that all these five assumptions need to be questioned closely. These are indeed the right questions to be asked even though they raise doubts about some of the core beliefs underlying much of monetary and financial regulatory policies of the recent period. Thus a lot of reputational capital is at stake.

There is a long history of financial crises, which have been dealt with earlier by Charles Kindleberger (Kindleberger and Aliber, 2009), and documented in detail more recently by Carmen Reinhart and Ken Rogoff (2009): a common feature of their analyses is that they have all resulted from the buildup of excessive leverage. Of course, at any given time it is difficult to define, *ex ante*, what is excessive and what is not excessive, but *ex post* certainly, almost all crises have resulted from excessive leverage. The question is, if this has been so obvious why are regulators not able to see such excessive leverage as it builds up each time?

### *Regulatory Framework*

What should be done to improve the regulatory framework? Overall financial regulation has to be strengthened; but an important point is that if this is done, all systemically important financial institutions must be regulated. If banks are regulated much more strongly, that will inevitably lead to regulatory arbitrage and much of financial sector activity would tend to go to other lighter regulated financial institutions: hence the need to regulate all systemically financial institutions. The question is, how much regulation; how do we know what is systemically important; and how do we make sure that everything does get regulated, and in what form?

Second, there is now general agreement on the need for higher capital adequacy requirements for banks. There is, however, also need for less

complexity -- unlike in Basel II – as the new guidelines are framed. The imposition of higher Tier I requirements is likely to be one component of the new regime, along with new requirements for countercyclical buffering, and countercyclical provisioning.

If there are higher capital requirements, capital buffering of different kinds, countercyclical provisioning, and the like, they will imply the emergence of lower potential returns to equity in the regulated firms in the financial sector. This, I believe, is a very important issue that needs further work. What will be the impact on future financial sector expansion? How will financial intermediation get affected? Will the cost of financing go up?

The important point to remember is that we need to ensure that, in the future, the financial sector serves the cause of economic growth in the real sector, and not of itself; and that when we do more regulation, we really need to make sure that we do strengthen the financial sector for better accomplishing its core function of intermediating savings to the highest productivity users for promoting growth in the real economy.

We also need to remember that financial markets will remain global and financial innovation will continue to take place. It should not be stifled. The issue that is very difficult for regulators to resolve is that whereas there is clear need for restraining unproductive financial innovation how do they know ex ante what is productive and what is unproductive? It is easy to agree on this issue in principle, but how can it be dealt with in practice.

Third, the regulatory regimes have to be more effective over the cycle. There is general agreement on the need for putting in place a regime of macro prudential regulation and financial stability oversight. The issue under discussion in different jurisdictions is: who will do it? Would it be a council of regulators, the central bank or the treasury? I have perhaps a biased view, having been in a central bank, though I have also worked in the treasury! I really do not believe that effective macro prudential oversight or financial stability oversight can be done without the central bank being at the helm of this activity. Any kind of group

can be set up depending the country's overall regulatory set up: including the treasury and the heads of the other regulators. The central bank is the lender of last resort; it is also the only agency which has an overall view of the economy, along with exceptional stability in terms of staffing and continuity in thinking, relative to most treasuries; and it should have its ear to the ground with respect to evolving developments in all financial markets if it is doing its job well as a monetary authority. I do believe that given different countries with large variations in institutional legacies, traditions and systems, no one size can fit all. But at the same time, I think that the central bank does need to have a lead role as far as financial stability is concerned within any kind of arrangement that is deemed fit in a particular country.

## **Emerging Challenges**

### *Consequences of Tightened Financial Regulation*

Everyone seems to be agreed that there is need to have increased levels of regulatory capital. The problem that I have already put forward is that it does imply lower profitability in the financial sector. That in itself may not be such a bad idea for the maintenance of financial stability. But there is still need for greater understanding of its implications for the financial sector as a whole. Would more stringent capital requirements imply a slower pace of credit intermediation and overall lower economic growth? Or does it just mean that there will be less intra financial sector activity with negligible implications for the real economy? There is clearly a great need for working out the overall economic effects of the current recommendations related to the proposed regulatory overhaul.

Second, in the identification of macro prudential risks -- what is systemic and what is not? It is easy to say, "Look for systemic risk. Curb it." But what is systemic? How do we know what is systemic? How could we have known ex ante that the subprime mortgage market – one small segment of the overall housing market – could potentially be a systemic risk? What prior regulatory actions could have been effective?



### *Difficulties in Pro Active Countercyclical Financial Regulation*

Third, there is the issue that everyone knew about. The existence of global imbalances was debated at length, including by the IMF in international fora. But no effective action could be taken. The asset price bubble, the mortgage explosion, and unprecedented expansion in derivative trading were obvious to all: central banks, regulators, governments, financial institutions and other market participants. That was public information. There was no lack of transparency about it in terms of the way that U.S. housing prices, U.K. housing prices, and Spanish housing prices were going up. Everyone knew about it, but nothing was done.

Prudential decisions have to be taken with limited information. Central bankers and prudential regulators and supervisors then have to be willing to take decisions based largely on judgements about the needed prudential actions that are in the interest of maintaining sustained economic growth with financial stability.

### *Monetary Policy and Volatile Capital Flows*

Finally, one issue that I've been working on much more intensively is the issue of cross border capital flows. If one examines recent history, huge cross border flows have almost always preceded financial crises as they have emerged in emerging market economies. Actually, the huge increase in cross border flows among advanced countries 2004 to 2007 was the highest ever, and a huge multiple of anything that went to emerging market economies. Again, the question is why did this happen? As a proportion of the world's advanced country GDP, it was far greater than anything that has ever been seen. To my mind, that has also not been analyzed enough, why it happened; because it does seem to be one of the reasons for the kind of crisis that took place. How does monetary policy and financial regulation react to such large volatility in cross border capital flows?