YV Reddy: Society, economic policies, and the financial sector

The Per Jacobsson Foundation Lecture 2012 by Dr YV Reddy, Emeritus Professor, University of Hyderabad and former Governor of the Reserve Bank of India, Basel, Switzerland, 24 June 2012.

Please see the remarks by José de Gregorio and Ignazio Visco related to this lecture.

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Chairman, esteemed panellists, and distinguished participants,

I am grateful to the Per Jacobsson Foundation, in particular Chairman Ortiz, for conferring on me the honour of delivering the Per Jacobsson Foundation Lecture for 2012. I did not have the good fortune to meet Per Jacobsson, so my familiarity with him is primarily through the references made to him in the second volume of the history of the Reserve Bank of India. He came across as a forceful personality, who had an excellent grasp of India's economic policies and problems (Balachandran, 1988; p. 641). He was obviously a forthright person with impressive foresight. I am wondering what Per Jacobsson would say if he were to comment on recent developments in the financial sector.

The future of finance, and in particular saving it from a popular backlash against the global financial crisis and related crisis-management policies, has rightly become a matter of great concern. There is broad agreement that finance has, as in the past, the potential to do good, which should be harnessed by all. However, it is essential to minimise its potential to do harm. In the commendable search for good finance, central bankers have not merely a stake but also have a legitimate role to play. From central banker's point of view, there are several issues in this search for good finance for the future, but there are three inter-related issues that I want to comment on today: (a) how to ensure that the financial sector serves the society better; (b) how to integrate financial sector policies better with national economic policies; and (c) how to ensure that the financial industry functions as a means and not as an end in itself?

Major issues confronting the finance industry were articulated by Sir Andrew Crockett in this forum last year (Crockett, 2011). The presentation today is in many ways a supplement to it. Sir Andrew has made an enormous contribution to the global community of central bankers and I would like to dedicate this address to Sir Andrew.

This presentation considers many issues raised on the future of finance (e.g., Ferguson, 2009, Sheng, 2009; Chittenden, 2010; Roubini & Mihm, 2010; Turner & others, 2010; Pringle and Jones, 2011; CAFRAL-BIS, 2011; Blanchard & others, 2012; Shiller, 2012). My reflections are moulded by not only a decade in central banking but also many years in macroeconomic management in federal government and the Bretton Woods Twins, in addition to a much longer period at provincial and local levels of government dealing directly with the public. Keeping in view the composition of today's audience and the key role of central banks in finance, I will be exploring select themes of operational significance to central banks at the present juncture.

Society and finance

An assessment of the impact of the recent global financial crisis on the trust and confidence of society in the financial sector is a useful starting point when considering ways of restoring the trust. A major reason for the erosion of trust may be a sense that there has been a comprehensive capture of regulation of the financial sector by the finance industry, particularly in the leading advanced economies. A demonstrable commitment to provide reasonable access to essential financial services to all segments of society would reinforce the assertion that finance serves the larger community. This approach, which may broadly be

described as inclusive finance, goes beyond the current concerns with providing consumer protection and ensuring systemic stability.

Restoring trust

It is true that the Occupy Wall Street movement directed at the financial sector has petered out. This may signify a lack of popular support for the movement, or equally it may signify a lack of hope that things will change or that better alternatives are on the horizon. A society's trust and confidence in finance, like in any other sector, is derived partly from formal laws, regulations and procedures, and partly on the manner in which they are implemented, through both formal and informal channels. Trust is, therefore, difficult to measure, but on the basis of surveys conducted and anecdotes reported in the media, there appears to be an erosion of trust in the financial sector as a whole, and banking in particular, in advanced economies. The perceptions of such an erosion of trust, however, differ.

What are the plausible reasons for the erosion of trust in some jurisdictions? We can only speculate.

First, large sections of the population have been affected by the financial crisis, and they consider themselves innocent victims of the crisis in financial sector. In particular, they feel that those involved in the financial sector have enjoyed disproportionate gains and shifted the pains of adjustment to the rest of the population.

Second, in the discharge of semi-fiduciary functions that are critical to the integrity of financial markets, such as fixation of LIBOR and credit rating, the major global players in financial markets discredited themselves by resorting to questionable practices.

Third, when several irregularities in the functioning of large financial intermediaries were found, the regulators reacted to the wrong-doing by imposing penalties. The public at large was often left in the dark about the details of the malfeasance and the losses they had suffered.

Fourth, the shareholders in a few large financial conglomerates are actively questioning the remuneration of senior management in some cases. This is unprecedented, reflecting the loss of trust by shareholders in the management of financial firms.

Fifth, although public policies provided liquidity, extended bail-outs in some cases, and in a few cases tax breaks, the much needed credit from the financial sector to the economies is not forthcoming, even after accounting for the muted demand for credit.

Finally, there is resistance from finance industry leaders to suggestions for strengthening regulations. In advanced economies, operational details of important reforms in the banking sector, shadow banking activities and innovations in financial markets are yet to take a final shape. There is, perhaps, what may be described as unionisation of global capital against attempts by public policies to regulate the financial sector effectively.

It is also possible to argue that erosion of trust, if any, may be temporary, as seen in the past when the financial sector faced crises. It is also possible that central bankers have no tools for managing society's trust except by delivering their mandate through price stability and financial stability consistent with maintaining employment and growth. But it is undeniable that maintaining trust and confidence in finance is essential for the good of society at large.

My submission is that the mandate for maintaining financial stability, which often rests primarily on central banks, has two related dimensions, namely the avoidance of disruptions in the functioning of the financial system and (more positively) the promotion of trust and confidence in the system. If there is any wing of public policy authority that has a stake in building such trust, it is the central bank. Hence, the central bank should be watchful of developments related to trust in their jurisdictions and take a conscious decision whether to monitor and act, as necessary, to ensure continued trust and confidence in the financial sector.

Comprehensive regulatory capture

As noted earlier, the decline of trust and confidence is partly the result of the perception that there has been a comprehensive regulatory capture. While the popular explanations for market failure relate to incentives, and possibly greed, the regulators' failures are generally attributed to misplaced faith in the self correcting powers of markets, a lack of skills in regulatory agencies and capture by vested interests. Such a capture can be described as comprehensive, particularly in the countries that were most affected during the crisis, in the sense that it was not restricted to the economic concept of regulatory capture, but extended to the overall public policy relating to financial sector.

What could be the reasons for this?

First, the political leadership has a short-term horizon, and financial markets also have a short-term horizon. This creates a natural tendency for their priorities to converge. Available evidence shows that financial contributions to political activity from the financial sector in many affected countries increased significantly in recent years. Moreover, large global financial conglomerates seem to be in a position to influence not only political governance but also corporate governance, to suit their own interests.

Second, regulators, as part of their public consultation process, often depend on the regulated for consultation, which is a feature common in most industries. But the dominant market shares of the few giants in the finance industry, combined with the characteristic externalities of finance, make a difference to the process and outcomes. In the past, the excessive deregulation of the financial sector was often designed to a significant extent based on the advice of the interested market participants themselves.

Third, in cases where academics are advising on the design of reforms, they are often finance experts, sometimes engaged with market participants in remunerated advisory or consulting capacities. A large part of economic research on regulation is funded by the financial sector. In fact, most of the analysis of macroeconomic trends available in the public domain is from economists employed by large financial conglomerates. There may be, as a result of several of these factors, a tilt in favour of the financial sector in media coverage too.

Fourth, in many countries, the finance industry offers prospects of highly paid jobs for those employed in the regulatory agencies and Treasuries or Ministries of Finance.

Finally, finance and its regulatory framework are somewhat intangible and difficult for a common person to fully understand. Hence interested groups can tilt the intended policy changes in their favour by presenting their initiatives to shift equilibria between competing considerations as mere technical issues.

It is possible to argue that capture of regulators is inevitable, and that a case can therefore be made in favour of reducing formal regulation, and encouraging self regulation and promoting principles-based regulation. On the contrary, there is a widespread feeling that those were the very prescriptions that brought about the global financial crisis. The biggest challenge for the future of finance lies, therefore, in designing governance practices that avoid the dangers of comprehensive regulatory capture.

I would, however, hasten to add that public policy failures cannot at the same time be wished away by placing undue blame on regulatory capture. It is evident that public authorities in major financial centres genuinely believed that the financial system, even in its complex evolution, was contributing to the public good. But this faith ex post proved to be misplaced. Professor Levine observes that the absence of an informed, expertly staffed and independent institution that evaluates financial regulation from the public perspective is a critical defect in the governance of financial regulation (Levine, 2012). He suggests establishing a body that would submit a periodic report to the legislative and executive branches of government assessing the impact of financial regulation on the public. The body would be politically independent, independent of financial markets and staffed with experts,

while having no official power over the central bank or other regulatory bodies. This may sound utopian, but is worth trying in the present day turbulent market environment.

Consideration may also be given to the formulation of a “fair practice code” for finance professionals, regulators and academia, extending the idea mooted by the American Economic Association on a Code of Ethics. A similar approach has been suggested by Professor Shiller in the context of financial innovation supporting the stewardship of society’s assets. He observes that “the best way to do this is to build good moral behaviour into the culture of Wall Street through the creation and observance of best practices in its various professions − CEOs, traders, accountants, investment bankers, lawyers, philanthropists” (Shiller, 2012, p. xi). However, experience suggests that there are limits to the effectiveness of such codes. In fact, ethical behaviour can be felt and understood, but it is difficult to formulate it fully in a code intended for day-to-day organisational purposes. Moral behaviour, in the final analysis, is a matter of individual choice. But what best practices can do is to exemplify the inherent morality in the individual.

My submission is that serious consideration should be given to evolving trustworthy institutional structures and adoption of best practices to re-assure the public that the scope for comprehensive regulatory capture is being minimised. These assurances could be further reinforced through improving the public image of central banks and, in particular, of the Governors.

Inclusive finance

Inclusive finance implies that the objective of financial sector regulation should be as much about protecting consumers as ensuring the availability of essential financial services to all sections of society, keeping in mind the expectations and needs of the common person. Emphasis on financial literacy by central banks has been advocated to enable consumers to take advantage of competitive efficiency. However, the issue is not one of financial literacy but of the behavioural patterns of common people dealing with finance. In this regard, it has been rightly observed: “By properly deploying both incentives and nudges, we can improve our ability to improve people’s lives, and help solve many of society’s major problems. And we can do so while still insisting on everyone’s freedom to choose” (Thaler and Sunstein, 2008, p. 8). It is useful to provide a default option of financial products for those large sections of society that have neither the inclination nor the tools to make those choices. It could be argued that a competitive financial system which is well-regulated, keeping in view the needs for stability and consumer protection, would automatically ensure inclusive finance. Experience so far does not support such a view. Public policy in relation to the financial sector therefore needs to consider the expectations of large sections of the community, typically those of a common person. They are bound to be different depending on the society, but a few broad generalisations may be attempted.

First, common people need a place to keep financial savings in safe custody (e.g., wives often need to keep them safe from wayward husbands in rural areas in developing countries). They should be able to place and withdraw such savings with ease and at minimal cost. While a range of instruments with a host of risk-reward profiles may be provided by the financial sector, access to one safe and simple instrument is essential for a common person. Often, this is a deposit in a recognised deposit taking institution, traditionally a retail bank-branch in the neighbourhood. The edifice of trust in the financial system, including leverage, is built primarily at this level.

Second, reasonable demand for credit for smoothing consumption between days/periods of income and of expenditure has to be met by the financial system at a reasonable cost. Smoothing of consumption may also be longer-term, including over lifetimes.

Third, remittances or payments may have to be made within families over different locations or for various other purposes, and such services should be available and accessible at affordable cost. These services are often a monopoly of the officially recognised or regulated

banking or payment system, and hence regulators need to accept some responsibility for delivery of such services.

Finally, from a common person's point of view, public policy should ensure the easy availability of simple-to-understand instruments in credit, capital and insurance markets. Consumer protection is important in the financial sector, but ensuring the supply of simple-to-understand products should be an obligation of regulators; it is an essential step to gain the trust of the common person.

In some advanced economies, regulators are already paying attention to excessive charges on retail financial services, in particular credit cards. Experience in some developing countries indicates that the involvement of public policy in expanding coverage of finance among the general public has had a beneficial impact. It is true that public policy experience with subsidised credit in some developing economies, and with housing credit in some advanced economies, has not been good. But inclusive finance emphasises affordable access to simple products, and not excessive leverage or at the cost of prudence. Inclusive finance is not a substitute for the primacy of fiscal policy with regard to social welfare.

My submission is that we are in a world of expanded mandates for central banks, and inclusive finance should not be excluded from such mandates. Perhaps central banks could satisfy themselves and the society at large that, between the markets and regulations, finance is serving the minimum needs of most common people while maintaining efficiency and stability. That would be the cornerstone for restoring trust and confidence in the financial sector. Central banks could explore avenues for using technology and financial innovations that meet the needs of common people.

Economic policies and the financial sector

Experience with the crisis has brought into focus three inter-connected complexities that have to be continuously addressed by the financial sector. These are: the balance between state and market as appropriate to the financial sector; the balance between real and financial sectors, where the latter should enable the real sector to perform; and finally, balancing the conduct of macroeconomic policy at the national level with the dynamics of the global macroeconomic environment. Public policy is conducted at the national level, but at the same time, globalisation of economies, often driven by technology, is a reality, and the global macroeconomic environment is an outcome of national policies in a framework of nebulous global governance arrangements. The challenge for national central banks is to find space for the conduct of their own policies in an increasingly inter-dependent global economy.

Macroeconomic policies and the financial sector

It is tempting to debate the pros and cons of developments in the financial sector without full recognition of the macroeconomic environment and of the functioning of product and factor markets. The right balance between free markets and appropriate financial sector regulation is ideally explored in the light of the significant role of macroeconomic policies in maximising benefits and minimising costs of the financial sector to development and welfare. During the "Great Moderation", low and stable inflation was attributed to the success of monetary policy, ignoring the impact of the globalisation of trade and, to some extent, immigration in some economies. There was admittedly a spillover effect of monetary policies on stability in the financial sector. There is a realisation that, ideally, countercyclical monetary and fiscal policies should supplement countercyclical policies in the regulation of the financial sector in a variety of ways to ensure financial stability. For instance, consideration is being given to taxation of the financial sector, on institutions and on transactions, as a supplement to regulation of the financial sector in the interest of stability, and possibly growth and equity. Further, policies relating to management of public debt have a bearing on the functioning of

the financial sector. For example, financial sector entities, particularly banks, either as part of portfolio management or through statutory pre-emption, hold significant government debt as assets. There is a recognition that large swings in capital flows could have an adverse impact on the financial sector. There is also awareness of the potential use of prudential regulation to manage capital accounts. Persistent and unsustainable current account deficits or surpluses may have the potential for destabilising the financial sector.

The macro policy framework at the national level, which is admittedly critical for good finance, is determined by the sovereign with legitimacy and accountability to its citizens. But macro policies at the national level have to take account of the deep and growing linkages between national economies and the global economy. An important issue, therefore, is the scope and limits for international coordination of national economic policies.

It is instructive therefore to briefly analyse the evolution and efficacy of the most recent efforts at global coordination of the macroeconomic environment through the mechanisms of Summits of the G20. The initial stage of coordination through the G20 Summits was to avoid collapse in the financial system and to moderate the slide in the global economy through macroeconomic responses, in both monetary and fiscal areas. There were simultaneous actions. The uneven recovery that followed led to differences in short-run policy actions among countries, but this was recognised as inevitable under the circumstances. However, there was an effort to identify long-term structural issues and attempt to address them. There was some agreement in very broad terms, but differences persist on the sources of global imbalances and the appropriate correctives at the national level.

More recently, country specific commitments to correct some imbalances have been attempted, but differences on the measurement of needed correctives and the timeliness of actions are stark. A possible reason for these differences is that short-term motivations at the national level seem to run counter to the longer-term interests of the global economy. There are unmistakable signs of diminishing returns from the G20, despite initial achievements and the promise of greater coherence in future.

One positive development has been that the democratic deficit at the level of global financial architecture has been somewhat narrowed. But there is, as yet, no coherent global macroeconomic policy. The global macroeconomic environment is the result of the interaction between macro policies at the national level and national markets that are at different stages of development and that have differing degrees of integration into global markets.

It is true that successful arrangements for global coordination while retaining space for national public policies are working well in certain sectors, such as aviation, telecoms and the internet. But they seem to get into difficulties in regard to macroeconomic policies and finance. Clearly, there is a need to explore why global agreements work reasonably well in some sectors, leading to acceptable and assured outcomes, while when it comes to macro policies and finance such agreements appear difficult to arrive at – and what we can learn from them.

Global finance and global governance

The basic assumption underlying the benefits of globalised finance is the existence of competitive efficiency in global financial markets. The assumption can be, and has been, questioned on several well-known grounds, namely: the lack of a sound international reserve currency system; the absence of credible lender of last resort facilities at the global level; and the dominance of a handful of rating agencies and accounting firms without adequate evidence of market discipline or effective rules for their functioning. The leading rating agencies and accounting firms, along with few leading business news agencies, have continuous dealings with each other, which tends to reinforce the exercise of their oligopolistic power over markets. Further, operations of international banks/conglomerates specialising in cross-border flows, combining traditional banking and risky investment

banking operations, have close business and operational links with rating agencies, accounting firms, etc. The concentration of global financial power in a few entities with close mutual connections has considerable potential to undermine competitive forces.

In assessing the competitive efficiency of global financial markets, it may be useful to make a distinction between the role of multinational banks which have subsidiaries or branches in different countries but predominantly operate in domestic markets, and that of international banks which specialise in cross-border financial activities, especially flows on capital accounts, both short-term and long-term. Experience has shown that multinational structures that relied less on wholesale funding and forex swap markets have been less vulnerable to crises. International banks are able to operate across different financial markets and countries with significant divergence in fiscal regimes as well as regulatory regimes. They have often been found to deal in financial flows of suspect legality in one country, though not always in both countries involved. International banks have the opportunity and incentive to conduct operations involving tax avoidance. Because of these operations, international banks enjoy significant influence over the political economy in several countries. In the prevailing environment of global financial markets, some large global financial conglomerates are larger and, perhaps, more powerful than some of the central banks.

It is clear from the experience of the euro area that, in effect, the sovereign becomes the source of extraordinary intervention as the ultimate risk bearer in times of crisis. The problem arises when the sovereign's capacity for such intervention is constrained by globalisation: this may be beneficial in many respects, but it could undermine the capacity of the sovereign to tackle the financial sector problems that arise. The conduct of fiscal policy itself is dominated by consideration of the view of global financial markets on the sovereign's solvency and its capacity to support the financial sector under distress. Extraordinary intervention by the sovereign and related fiscal measures are thus subject to the credit rating agencies' appraisal of their solvency (Sen, 2012). These considerations may have a bearing on the conduct of both financial sector regulation and macro policies at the national level.

In brief, my submission is that the prospects for credible and acceptable global governance arrangements to ensure a workable global economic policy and environment within which global finance could contribute to growth and stability, do not appear very bright. I am not addressing a more fundamental issue: whether global economic governance, ensuring common economic policies for all nations, would eliminate the benefits of diversity. Too much global policy coordination might lead to the universalisation of risks of policy mistakes. The main contention is that good finance is essentially a function of good economic policies, and such good policies are primarily national, though significantly impacted by the global macroeconomic environment – which, as already mentioned, is not a product of design. Approaches to regulation of the financial sector will, therefore, continue to be national, in a global environment that is not necessarily favourable.

Regulation of the financial sector

There is a recognition that policies relating to regulation of the financial sector must optimise the benefits of the financial sector while minimising the costs or risks associated with it. There are several dimensions to striking this balance, which this august audience is well aware of and involved with. I selected three themes for consideration today: the optimal level of financialisation, appropriate innovation in the financial sector, and the effectiveness of financial sector regulation.

Optimal Financialisation

Not long ago, many countries recognised the costs of excessive regulation of finance and of financial repression. More recent events seem to indicate that excess financialisation of an economy may also contribute to the crises. It may be that finance is good for economic

development over a certain period, but only if practised in moderation. The idea of optimal financialisation seems to have been accepted implicitly by the financial sector reform measures being contemplated in many advanced economies. At the same time, several developing and emerging economies are considering measures to develop the financial sector, in particular financial markets. In their quest for optimal financialisation, the countries that are attempting further deregulation and development of financial markets would benefit from an understanding of how excess financialisation manifests itself. However, the manifestation of excessive financialisation may not be confined to finance, and may extend to commodity markets, corporates and households.

The financialisation of commodity markets happens both by virtue of deregulation of trade in commodity market exchanges and by virtue of the excessive liquidity that happens to be readily available. The correctives in public policy with regard to excessive financialisation of commodity markets may be at times beyond the scope of financial sector regulation.

During recent years, there has been a significant financialisation of household budgets, particularly in advanced economies. The changes in demand for certain goods are often dependent on credit conditions. Future cash flows are often determined by the market value of pension funds and other sources of social security over a lifetime. It is not clear whether limiting the leverage of financial intermediaries would by itself constrain the excess leverage in household budgets.

There has also been financialisation of corporates. Corporates are not only exposed to the financial markets in relation to their underlying operations in terms of what they produce or sell, but also in terms of treasury operations.

This excessive financialisation occurred in many advanced economies for other reasons. Incentives were created to multiply the transactions in the financial sector in the form of income from commissions related to transactions. Further, complexity was introduced with regard to some of these innovations, often to undermine the regulatory prescriptions regarding transparency or capital adequacy, or to mislead the counterparty. Shadow banking enabled undermining of regulatory prescriptions. Most recent initiatives with regard to reforms in regulation address these issues.

For many developing and emerging economies, who are progressing on the path towards optimal financialisation, it is necessary to avoid excessive financialisation, and more importantly to explore the impact of finance on growth, ideally on the basis of empirical evidence. Research has associated higher growth with the development of the financial sector, but more recent evidence on trade-offs between growth in the real sector and the financial sector is equivocal. The experience of Asian emerging economies so far indicates that the beneficial effects of deregulated finance relative to free trade may be overstated. Further, institutional rigidities and the state of factor and product markets vary between countries, and they do interact with level of financialisation.

This subject is explored in a recent paper titled “Reassessing the impact of finance on growth” (Cecchetti & Kharroubi, 2012). The paper investigates how financial development affects growth at both the country and the industry level. The paper shows, based on a sample of developed and emerging economies, that the level of financial development is good only up to a point, after which it becomes a drag on growth. It also shows that a fast growing financial sector can be detrimental to aggregate productivity growth. This is a line of enquiry which should be further explored to arrive at what constitutes the optimum level of financialisation.

A recent Working Paper of the International Monetary Fund entitled “Too much finance?” seems to confirm some of the broad conclusions of the BIS Paper I referred to (Arcand et al, 2012). Let me summarise the main findings.

First, there is a positive and robust correlation between financial depth and economic growth in countries with small and intermediate financial sector. Second, beyond a threshold there is

a negative effect of financial sector; that threshold is when credit to the private sector reaches 100% of GDP. Third, the negative effect is not confined to crisis periods, but extends to tranquil conditions also, possibly leading to misallocation of resources. Fourth, it is possible but not clear that bank lending and asset based lending components of credit will have positive effects. Finally, analysis suggests that there are several countries for which a smaller financial sector would be desirable.

The global financial crisis also brought into focus the downside of excess debt, but then the issue is: what is excess debt? Debt sustainability in terms of sovereign debt has been analysed extensively in the past, but the issue is the real effects of debt – not only of sovereign debt but also other elements of the national economy. This has been explored by an interesting paper which poses the question, "When does debt go from good to bad?" Using a data set of OECD countries over thirty years, it concludes that the threshold is around 85% of GDP for government debt, 90% for corporate debt, and 85% for household debt (Cecchetti, Mohanty and Zampolli, 2011). The subject should be researched further, since the issue of excess debt is closely related to excess financialisation, and the thresholds for excess debt may be lower for developing and emerging economies than for the advanced economies.

Excessive financialisation can also occur due to public policy failures in achieving socioeconomic development, resulting in the passing of an undue burden to the financial sector in the form of generating a range of quasi-fiscal activities. Improvements in overall governance structures and efficiency in the provision of public services can also contribute to limiting excessive financialisation outside the fiscal ambit.

My submission is that more research is needed on what constitutes optimum financialisation and leverage, which could be different for developing and emerging economies than for advanced economies, despite signs of some convergence in macroeconomic and financial sector issues. In any case, the direction of public policy relating to the financial sector in the near future will be characterised by increasing financialisation in some countries which have less developed finance, and restraining financialisation in others where it has gone too far.

Appropriate innovation in the financial sector

Operationally, an important issue is the point at which an innovation requires regulators' attention. Should it be before introduction in the market, or after receiving complaints from an affected party? Or should it rely on monitoring of every innovation and assessing suo motu whether there are harmful effects? Often, many innovations look attractive in the short run because risks are back-loaded on some and rewards are front loaded on others. In finance, pressure on regulators to regulate is also back loaded, and is often too late. Different industries have different approaches and tools to regulate, and the point at which regulators' jurisdiction is activated varies across industries. For example, in pharmaceuticals, the regulator has to approve ex-ante, while in regard to restrictive trade practices it may be ex-post.

In many industries, regulations address issues relating to innovations. For example, in the pharmaceutical industry, considerable experimentation is demanded and ex-ante approvals are required for marketing. In engineering systems, the consistency of innovations with network in which they are to be applied is often required to be certified, by either an industry body or the regulator. In many others, innovations are left to the market test, unless they happen to have ex-post, negative effects, in which case public policy may consider intervening. In brief, there are several industries which have been subject to different systems of regulation, and they have stood the test of time. The financial sector should be able to draw lessons from such experiences, recognising the unique characteristics of the financial sector. Such lessons will also help in differentiating between technological, process and product innovations.

Markets are, indeed, a source of many innovations, but there are examples in many industries where the public sector has been active in promoting innovations. There is merit in central banks encouraging innovations in the financial sector that have the potential to serve the public. I agree with Chairman Ben Bernanke when he said, referring to striking the right balance between consumer protection and responsible innovation, "our goal should be a financial system in which innovation leads to higher levels of economic welfare for people and communities at all income levels" (Bernanke, 2009).

My submission is that central banks in particular, and regulators in general, could be more proactive in promoting and incentivising appropriate innovations in the financial sector, and drawing on the experience of other industries may be of considerable value in evolving policies towards financial innovations.

Effectiveness of regulation

There is considerable agreement that better and more effective regulation is of vital importance to the financial sector, and that more regulation is not necessarily better. At the same time, the experience with self regulation, principles-based regulation, and the use of internally generated models of risk management have proved to be sub-optimal. Hence, there is a need to consider mechanisms to make regulation more effective, to limit unnecessary regulatory burdens or to contain the cost of compliance with regulators' prescriptions. I wish to explore some practical ways of enhancing effectiveness.

A possible reason for deficiencies in regulation in the pre-crisis period may have been the loss of information as part of a process of deregulation and a lack of mechanisms to monitor events in the fast changing world of finance. Regulatory effectiveness can be improved by enhancing the monitoring of transactions, and analysing them rigorously. No doubt, technology enables market participants to operate in a fraction of seconds, but the same technology is available for regulators too, to collect information, monitor and analyse in an equally fast manner. Modern technology minimises the costs of reporting and, to some extent, analysis by regulators. Close monitoring by regulators may enhance compliance with regulations and help in fine tuning the regulatory prescriptions on on-going and timely basis.

In debates relating to public policy on public utilities, issues of regulation, competition and ownership were considered in an integrated manner. That used to apply to the finance industry also, before deregulation and privatisation became the preferred policies. The global financial crisis is leading to a serious reconsideration of the extent, nature and effectiveness of regulation. There may be merit in considering, in an integrated fashion, appropriate regulation and its effectiveness in relation to competition and public ownership.

First, there is a recognition of the danger of "too big to fail" and "too powerful to regulate" financial conglomerates. Resolution regimes and the adoption of living wills are being considered to address this issue. It is often argued that it is difficult to unbundle them in a non-disruptive fashion. Under the circumstances, the option of public ownership of those too-big-to-fail institutions could also be reopened, keeping in view the advantages of diversity. Second, the crisis necessitated an increase in public sector ownership in the banking industry, mainly due to large bail-outs. The exit from this unintended expansion in state ownership of banks ought to consider the costs and benefits of options that may include divestment or continuing with state ownership along with appropriate participation in management. Third, a case for an approximate mix of public sector and private sector banks in a financial system could be examined. Such a mixed model for the structure of the banking sector or financial sector in general would lend stability through diversity. Differing priorities and practices enabled public sector institutions to retain a public sector character and not merely to replicate the functioning of private sector counterparts. The problem of information asymmetry may be moderated if public sector banks co-exist, assuming that they have fewer incentives to withhold information from regulators, and are often subject to legislation relating to the right to information. It is not necessary that a bank or a non bank financial entity should

be owned entirely by government or only by private shareholders. A variety of combinations of public and private ownership and control can be considered.

In revisiting the issue of regulation in conjunction with competition and ownership, it is necessary to recognise the lessons from public sector banking in the 1970s and 1980s, particularly in developing and emerging market economies. The problems in the past with public sector banking were on due to financial repression attributable to macroeconomic policies, the lack of appropriate global standards of regulation, the existence of monopoly status, and technological obsolescence, in addition to standards of governance in public systems in general, and public ownership in particular. In the context of the global financial crisis, the practices of some entities that were virtually public sector, such as Freddie Mac and Fannie Mae, do not provide reassurance that public sector character would in itself be benign. Experiences with some banks in the public sector in Europe may also be instructive. The temptation to politicise public sector banking may persist, but the need for professionalisation in the public sector should not be underestimated. The new realities consequent upon the crisis indicate the potential for a redefined role for public sector financial institutions, provided that the experience prior to deregulation and privatisation, as well as select cases related to the global financial crisis, are also kept in mind.

The use of fiscal and related instruments to supplement regulatory effectiveness could be considered in earnest. Information generated for purposes of taxation is likely to be of great practical use for regulators in monitoring financial sector activities. Levying financial transaction taxes could be considered, with rates that discriminate against excessive speculation. The cross-border activities of financial intermediation could be brought within the tax net, and thus the regulatory ambit, by adopting the issuance principle (financial institutions located outside the country would be obliged to pay the tax if they traded securities originally issued within the country) and the residence principle (instruments issued outside the country but subsequently traded by at least one institution within the country would be liable). Further, evasion could be discouraged by adopting the example of stamp duty in United Kingdom, and of Brazil, where non-payment of the tax makes legal enforcement of such contracts difficult.

There is also significant merit in considering anti-avoidance rules in taxation for regulation of the financial sector as well. Thus, if the sole purpose of an instrument or institution in the financial sector is to avoid a regulation, such transactions can be considered void for the purposes of regulation. Thus, a distinction can be made in financial sector regulation, as in the case of taxation, between planning, avoidance and evasion. Above all, taxation and the use of information thus acquired for regulation of financial sector would considerably enhance the effectiveness of both fiscal and financial management.

Concluding remarks

I believe that society expects central banks to ensure trust and confidence in money and finance, and hopes that they avoid the pitfalls of capture, while the common person seeks inclusive finance. It is not easy for central banks to deliver all this, but they should not ignore society’s expectations.

In these efforts, central banks need to preserve space for public policy at the national level consistent with their obligations to the global economy. The financial sector may draw lessons from global coordination in other industries, especially in managing networks.

Global trends in financial sector regulation may see simultaneous re-regulation in some countries and deregulation in others. Innovations, by definition, are difficult to put into preconceived straitjackets, and a disaggregated contextual approach would be appropriate. Above all, better regulation warrants effective regulation. Consideration of regulation, competition and ownership in an integrated manner, enhanced monitoring of financial market activities and the use of fiscal tools to supplement regulation could be helpful in this regard.

Friends, society has put its trust in central banks. Central banks have to ensure that bank managements and the financial sector in general serve the masses, and not merely the elite or the financially active. In the ultimate analysis, central banks are trustees, agents to look after the interests of the masses.

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