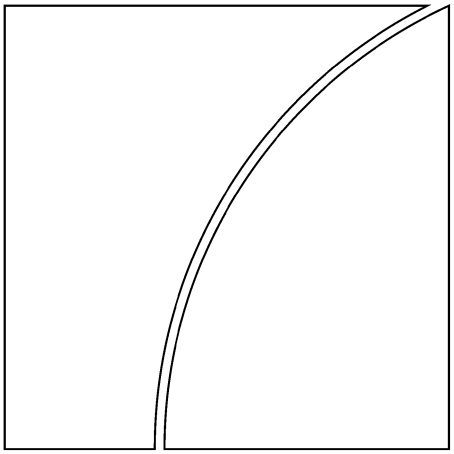
BANK FOR INTERNATIONAL SETTLEMENTS

BIS Papers

No 62



Financial sector regulation for growth, equity and stability

Proceedings of a conference organised by the BIS and CAFRAL in Mumbai, 15–16 November 2011

Monetary and Economic Department

January 2012

CAFRAL
CENTRE FOR ADVANCED FINANCIAL RESEARCH AND LEARNING
Promoted by Reserve Bank of India

Papers in this volume were prepared for a conference organised by the BIS and the Centre for Advanced Financial Research and Learning (CAFRAL) in Mumbai on 15–16 November 2011. The views expressed are those of the authors and do not necessarily reflect the views of the BIS or the institutions represented at the meeting. Individual papers (or excerpts thereof) may be reproduced or translated with the authorisation of the authors concerned.

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ISSN 1609-0381 (print)
ISBN 92-9131-088-3 (print)

ISSN 1682-7651 (online)
ISBN 92-9197-088-3 (online)

Preface

The failure of regulation and the short-sightedness of the private sector were the root causes of the crisis. The balance of emphasis has shifted from encouraging innovation designed to yield short-term gains for a few to ensuring sustainable financial sector development that helps many. How can we make this new orientation operational? What does this enhanced regulation mean for growth and for equity? Are the implications of regulatory reforms different for emerging market economies (EMEs) whose growth momentum was dented by the crisis? In tailoring regulatory reforms, how can we harmonise the interests of the advanced and emerging economies? Addressing these questions was the main thrust of CAFRAL's inaugural international conference, organised jointly with BIS, on "Financial Sector Regulation for Growth, Equity and Stability in the Post Crisis World" on 15–16 November 2011 in Mumbai.

The conference provided a forum for central bankers, financial sector regulators, academics and practitioners from both developed and emerging markets to deliberate on several dimensions of these issues. There was much discussion on some controversial questions. The discussions illuminated not only the multidimensional linkages between the financial sector and the sovereign but also the influence of the international financial architecture on global financial stability. We need to work hard to better understand these connections.

The key message that emerged from the discussions is that the costs of financial instability in terms of lost growth and foregone welfare can be huge and that it is therefore right for regulatory reforms to give primacy to securing financial stability. Banks must serve the real sector, and not the other way round. Participants also agreed that the financial sector development which serves the needs of the real sector provides sustainable earnings for financial firms. Higher capital requirements for financial institutions may raise the cost of credit in the short-term. But these costs will fall over time: better capitalised banks will find they can fund themselves more cheaply. They will also be able to increase their market share at the expense of poorly capitalised banks. The benefits of financial stability will surely outweigh the loss of short-term gains.

A consensus also developed around the incorporation of equity as an explicit objective of financial policy, especially in countries with a large population of those without access to formal financial services. There was, however, a lively debate on how best to achieve this in practice. Supervisory authorities worldwide have to refine and develop their macroprudential toolkit. The macroeconomic aspects of systemic risk that arise from global influences require special attention in EMEs. Pragmatic capital account management will accordingly have to form an integral part of policy in many countries. But such measures should provide a clear and predictable framework of rules that help the private sector nurture the more stable forms of capital movement. International capital mobility offers many gains if the risks are managed effectively.

We are indeed happy that the papers presented and the proceedings of the conference are being made available to a wider audience through this publication.

D Subbarao
Governor
Reserve Bank of India

Jaime Caruana
General Manager
Bank for International Settlements

Acknowledgements

Particular thanks are due to Louisa Wagner of the BIS and K. Kanakasabapathy (former Advisor Reserve Bank of India) who co-ordinated the preparation of the papers and discussion summaries for publication under a very tight deadline. We are also grateful to Blaise Gadanecz and Nigel Hulbert for editing these papers.

Contents

CAFRAL–BIS Conference
on
"Financial Sector Regulation for Growth, Equity and Stability in the Post Crisis World"

15–16 November 2011, Mumbai

Day 1 – 15 November 2011

11.45–12.45 ***Inaugural session - Addresses by D. Subbarao, Governor, RBI and Jaime Caruana, General Manager, BIS***

14.00–16.00 ***Session I on "Financial Sector Regulation and implications for Growth in the Post Crisis World"***

Chair: Andrew Sheng, Chief Adviser to the China Banking Regulatory Commission

Background paper presented by *: Anand Sinha, DG, RBI*

Outline:
In developing economies, financial sector policies are expected to be tuned to sub-serve the broad objective of ensuring growth with equity. This session will discuss the regulatory philosophy in relation to growth and development in the pre-crisis, mid-crisis and post-crisis periods with a focus on emerging market economies (EMEs). Beginning with a review of studies regarding macro-economic impact of Basel III capital and liquidity regulations, the background paper will explore a model for India for the assessment of macro-economic impact of these measures.
Specific questions that could be explored in this session are :

- Will the new regulatory approaches and measures impinge and run counter to the growth objective?
- The needs of the trade and the infrastructure sector being so vital to growth what are the implications of the capital leverage and liquidity requirements for these sectors? What are the specific factors that would weigh in the calibration of macro prudential measures for EMEs?
- What are the specific difficulties that are likely to be faced by EMEs in the implementation of Basel 3?

16.30–18.30 ***Session II on "Implications of the Evolving Regulatory Framework for Equity in the post crisis World"***

Chair: Stephany Griffith-Jones, *Financial Markets Programme Director, Columbia University*

Background paper presented by *Prof. M S Sriram, IIM, Ahmd.*

Outline:
The regulation of the financial sector is embedded in the larger economy and has implications on the economic behaviour. In general we find regulation to be re-active rather than pro-active.

Specific questions that could be explored in this session are:

- Why are equity and inclusion important and are these objectives at cross purposes with regulation?
- Can an inclusive regulatory philosophy minimize the risks of a crisis and soften the impact of cyclical behavior?
- How do other elements of the eco-system – the public policy, markets, and regulations - that are outside the purview of the regulator /central bank treat inclusiveness, thereby impinging the behavior of the financial sector?
- How does the regulatory system develop a longer-term horizon to stay invested in the "poor"?
- How do we look at exotic financial instrument innovations that are built on the portfolios of the poor and its relation to the real economy?

What should be a stable regulatory approach and philosophy be given the learning from the crises of the past?

Day 2 – 16 November 2011

10.00–10.45 *Special address by **Y.V. Reddy**, Former Governor, RBI*
Topic: "Regulation of Financial Sector in the Macro Policy Context"

11.00–13.00 ***Session III on "Macro perspectives on Financial Stability in EMEs"?***

Chair: John Lipsky, First Deputy Managing Director, IMF

***Background paper presented by:** Philip Turner, Head, Monetary & Economic Dept., BIS*

Outline:

The risks affecting the financial system are not simply aggregations of the risks of individual institutions. This so-called "systemic" aspect of risk has at least three dimensions viz. macroeconomic variables beyond the control of domestic monetary or fiscal policies, externalities and pro-cyclicality. The financial system may amplify macroeconomic or global financial system shocks.

Specific questions relevant to EMEs that could be explored in this session are:

- What are the policy targets considering that volatile capital flows and currency mismatches are forces that are of special importance for EMEs?
- What are the policy instruments that work best for macro prudential objectives? How should adjustment in such instruments be coordinated with monetary policy?
- How interventionist should the authorities be? Do less developed financial systems require more intervention?
- Which body should be at the controls for macro prudential policies (central bank, bank regulator, ministry of finance)?
- How to arrange the oversight of those responsible for macro prudential policies?

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Andrew Sheng	Chief Adviser to the China Banking Regulatory Commission
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John Lipsky	Special Adviser to the Managing Director, International Monetary Fund
Anand Sinha	Deputy Governor, Reserve Bank of India
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M S Sriram	Fellow, Institute for Development of Research in Banking Technology [IDRBT], Hyderabad
Annapurna Neti	Fellow Indian Institute of Management, Bangalore

Financial regulation for growth, equity and stability in the post-crisis world[1]

Duvvuri Subbarao

Let me start by telling you about the motivation for the conference theme.

Failure of regulation, by wide agreement, was one of the main causes of the 2008 global financial crisis. It is unsurprising therefore that reforming regulation has come centre stage post-crisis. The progress in regulatory reforms over the last two years has been impressive, but the agenda ahead remains formidable. Regulation will bring in benefits by way of financial stability, but it also imposes costs. There are some ball park numbers for what the Basel III package might entail in terms of growth, but there has been no rigorous thinking on what the whole gamut of regulatory reforms currently on the agenda might mean for growth, equity and stability in terms of costs and benefits over time and in different regions of the world. Thinking through these vital and complex issues is the main motivation for the theme of this conference – Financial sector regulation – equity, stability and growth in the post-crisis world.

There was another strong motivation for the choice of the conference theme. The crisis, as we all know, was brewed in the advanced economies, and much of the post-crisis reforms are accordingly driven by the need to fix what went wrong there. The reform proposals were discussed at international forums like the FSB and the BCBS. What has struck me though is that the agenda and the deliberations have been dominated by advanced economy concerns. As emerging economies, we have had a seat at the table in these international forums, but we haven't been able to engage meaningfully in the debate as we have not related to the issues. The stability of the advanced economy financial sectors is, of course, important to us. After all we live in a globalizing world, and what happens anywhere has impact everywhere. What concerns us, though, is that these global standards are going to be applied uniformly but their implications for EMEs will be different given the different stages of our financial sector development and our varied macroeconomic circumstances. We hope that this conference will provide a forum for generating an emerging economy perspective on issues of growth, equity and stability in the context of the post-crisis thinking on financial sector regulation.

I have great pleasure in welcoming all the delegates to this first CAFRAL-BIS international conference. You have travelled from around the country and across the world to be present here, and we value your participation in this conference. I would like to acknowledge, in particular, the presence here of Mr. Jaime Caruana, General Manager of BIS and the co-host of this conference, Mr. Andrew Sheng, Ms. Stephanie Griffith Jones and Mr. John Lipsky, all three eminent thought leaders, who will be chairing the various sessions, and my predecessor at the Reserve Bank, Dr. Y.V. Reddy who, during his term in office, earned a formidable reputation as a zealous guardian of financial stability.

I struggled to determine what I should say in this inaugural address. One option would be to attempt a comprehensive overview of all the issues that might come up in the subject

[1] Inaugural address by Dr Duvvuri Subbarao, Governor, Reserve Bank of India at the First CAFRAL-BIS international conference on "Financial sector regulation for growth, equity and stability in the post-crisis world", Mumbai, 15 November, 2011.

sessions. Such double guessing would clearly be presumptuous on my part given the depth and breadth of experience you bring to this forum. I will attempt something less ambitious. What I will do is raise five questions straddling the three dimensions of the conference theme – growth, equity and stability in the context of financial regulation – and sketch out an answer to each of them in the hope that we will get more informed answers by the end of the conference. I will fall back on the Indian experience, which I know best, to illustrate some of what I say. I believe our experience will be relevant and applicable across a broad swathe of emerging and developing economies.

Question 1: If financial sector development is good, is more of it better?

Development experience evidences a strong correlation between financial sector development and economic growth, with the causation possibly running both ways. Economic growth generates demand for financial services and spurs financial sector development. In the reverse direction, the more developed the financial sector, the better it is able to allocate resources and thereby promote economic development.

In India, we have experienced causation in both directions. We embarked on wide ranging economic reforms following a balance of payment crisis in 1991. Very soon we realized that the growth impulses generated by the liberalizing regime could not be sustained unless we also undertook financial sector reforms. That is an illustration of growth triggering financial sector development. For an example of the causation in the reverse direction, we have to look no further than India's remarkable growth acceleration in the period 2003–08 when we clocked growth of 9+ per cent. Many factors have been cited as being responsible for this – higher savings rates, improved productivity, growing entrepreneurism and external sector stability. But one of the unacknowledged drivers of that growth acceleration has been the impressive improvement in the quality and quantum of financial intermediation in India, evidencing how financial sector can spur growth.

Given the historical experience, it is tempting to believe that if financial sector development aids growth, more of it must be better. I am afraid that will be misleading. We must look for a more nuanced response, especially in the light of the lessons of the crisis.

In the world that existed before the crisis – a benign global environment of easy liquidity, stable growth and low inflation – the financial sector kept delivering profits, and everyone became enticed by a misleading euphoria that profits would keep rolling in forever. Herb Stein, an economist, pointed out the truism that "if something cannot go on forever, it will eventually stop". But no one paid attention. The financial sector just kept growing out of alignment with the real world.

It will be useful to put some numbers on how, across rich countries, this misalignment kept on increasing. Take the case of the United States. Over the last 50 years, the share of value added from manufacturing in GDP shrank by more than half from around 25 per cent to 12 per cent while the share of financial sector more than doubled from 3.7 per cent to 8.4 per cent. The same trend is reflected in profits too. Over the last 50 years, the share of manufacturing sector profits in total profits declined by more than two thirds from 49 per cent to 15 per cent while the share of profits of the financial sector more than doubled from 17 per cent to 35 per cent. The large share of the financial sector in profits, when its share of activity was so much lower, tells a compelling story about the misalignment of the real and financial sectors.

The world view before the crisis clearly was that the growth of the financial sector, in and of itself, was desirable, indeed that real growth can be got by sheer financial engineering. Our faith in the financial sector grew to such an extent that before the crisis, we believed that for every real sector problem, no matter how complex, there is a financial sector solution. The crisis has made us wiser. We now know that for every real sector problem, no matter how

complex, there is a financial sector solution, which is wrong. In the pre-crisis euphoria of financial alchemy, we forgot that the goal of all development effort is the growth of the real economy, and that the financial sector is useful only to the extent it helps deliver stronger and more secure long term growth.

How does financial sector regulation come into all this? It comes in because the financial sectors of emerging economies are still under development. How should they respond to the lessons of the crisis, particularly in reshaping their regulations? Is a larger financial sector necessarily better for growth? For equity? Is there such a thing as a 'socially optimal' size for the financial sector? What are the weights to be attached to growth and stability in the objective function of regulation? Are the weights stable over time, or if they should vary, on what basis? As we seek answers to this long list of questions, the basic tenet that must guide our thinking is that it is the real sector that must drive the financial sector, not the other way round.

Question 2: Financial sector regulation, yes, but at what cost?

Even as efficient financial intermediation is necessary for economic growth, the financial sector cannot be allowed an unfettered rein; it needs to be regulated so as to keep the system stable. This we knew even before the crisis. What we have learnt after the crisis is that the quantum and quality of regulation matters much more than we thought.

In the years before the crisis – indeed even before the Great Moderation – a consensus was building around the view that if the burden of regulation is reduced, the financial sector will deliver more growth. That consensus has nearly dissolved. We now know that financial markets do not always self-correct, that signs of instability are difficult to detect in real time, and that the costs of instability can be huge. Global income, trade and industrial production fell more sharply in the first twelve months of the Great Recession of 2008/09 than in the first twelve months of the Great Depression of the 1930s. Three years on, the crisis is still with us; it has just shifted geography. And there is still enormous uncertainty about when we might see its end and with what final tally of costs in terms of lost output and foregone welfare.

So, the emphasis of post-crisis regulatory reforms on making the financial system stable is understandable. But a relevant question is, where do we strike the balance between growth and stability? In other words, how much growth are we willing to sacrifice in order to buy insurance against financial instability?

For illustrative purposes, let us take the Basel III package. A BIS study estimates that a two percentage point increase in the target ratio of tangible common equity (TCE) to risk-weighted assets (RWA) phased in over a four year period reduces output by a maximum of 0.3 per cent. It is argued though that as the financial system makes the required adjustment, these costs will dissipate and then reverse in the medium term, and the growth path will revert to its original trajectory. A BCBS study estimates that there will be net positive benefits out of Basel III because of the reduced probability of a crisis and reduced volatility in output in response to a shock. An IIF study, however, estimates a higher sacrifice ratio – that the G3 (US, Euro Area and Japan) will lose 0.3 percentage points from their annual growth rates over the full ten-year period 2011–20.

What are the implications of these numbers relating to growth sacrifice for EMEs? Let me take the example of India. Admittedly, the capital to risk weighted asset ratio (CRAR) of our banks, at the aggregate level, is above the Basel III requirement although a few individual banks may fall short and have to raise capital. But capital adequacy today does not necessarily mean capital adequacy going forward. As the economy grows, so too will the credit demand requiring banks to expand their balance sheets, and in order to be able to do so, they will have to augment their capital.

In a structurally transforming economy with rapid upward mobility, credit demand will expand faster than GDP for several reasons. First, India will shift increasingly from services to manufactures whose credit intensity is higher per unit of GDP. Second, we need to at least double our investment in infrastructure which will place enormous demands on credit. Finally, financial inclusion, which both the Government and the Reserve Bank are driving, will bring millions of low income households into the formal financial system with almost all of them needing credit. What all this means is that we are going to have to impose higher capital requirements on banks as per Basel III at a time when credit demand is going to expand rapidly. The concern is that this will raise the cost of credit and hence militate against growth.

A familiar issue in monetary policy is an inflexion point beyond which there is no trade-off between growth and price stability. Is there a similar inflexion point in the growth-financial stability equation? If there is, how do we determine that point?

Question 3: Does regulation have a role in achieving equity?

That takes me to my third question: does regulation have a role in achieving equity?

The dichotomy between growth and equity is standard stuff of development economics. For a long time, the orthodoxy was that if we took care of growth, equity followed automatically a la a high tide raising all boats. Experience has taught us that reality is more complex. Received wisdom today is that growth is a necessary, although not a sufficient, condition for equity. To achieve equity, we need growth that is poverty sensitive – that is growth to which the poor contribute and growth from which the poor benefit.

How does this standard question translate in the context of financial sector regulation? This is a question that we in India struggle with. Should stability be the sole objective of our regulation, with other instruments being deployed to achieve equity? Or should equity be a variable in the objective function of regulation?

To seek answers, we must ask a variant of the above questions. Is the financial sector inherently equity promoting, or at least equity neutral? Our experience in India has been that left to itself, the financial sector does not have a pro-equity bias. Indeed, it is even possible to argue that the financial sector does not necessarily reach out to the bottom of the pyramid.

Our response to counter this bias has been to use regulation to encourage socially optimal business behaviour by financial institutions. Let me just list a few of our affirmative action regulations. We have a directed credit scheme, called priority sector lending, whereby all banks are required to ensure that at least 40 per cent of their credit goes to identified priority sectors like agriculture and allied activities, micro, small and medium industries, low cost housing and education[2]. We have a 'Lead Bank' scheme under which there is a designated commercial bank identified for each of the over 600 districts in the country with responsibility for ensuring implementation of a district credit plan that contains indicative targets for flow of credit to sectors of the economy that banks may neglect. We have largely deregulated licencing of bank branches; banks are now free to open branches freely in population centres of less than 100,000 – with two stipulations: first at least a quarter of the branches should be located in unbanked villages with a maximum population of 10,000; and second, their performance in financial penetration will be a criterion for giving banks branch licences in metro and large urban centres.

[2] The ratio and the composition of the priority sector are different for foreign banks in consideration of the fact that they do not get 'full national treatment' on some regulatory aspects.

By far our most high profile campaign in recent years has been our aggressive pursuit of financial inclusion. Why is financial inclusion important? It is important because it is a necessary condition for sustaining equitable growth. There are few, if any, instances of an economy transiting from an agrarian system to a post-industrial modern society without broad-based financial inclusion. As people having comfortable access to financial services, we all know from personal experience that economic opportunity is strongly intertwined with financial access. Such access is especially powerful for the poor as it provides them opportunities to build savings, make investments and avail credit. Importantly, access to financial services also helps the poor insure themselves against income shocks and equips them to meet emergencies such as illness, death in the family or loss of employment. Needless to add, financial inclusion protects the poor from the clutches of the usurious money lenders.

The extent of financial exclusion is staggering. Out of the 600,000 habitations in India, less than 30,000 have a commercial bank branch. Just about 40 per cent of the population across the country have bank accounts, and this ratio is much lower in the north-east of the country. The proportion of people having any kind of life insurance cover is as low as 10 per cent and proportion having non-life insurance is an abysmally low 0.6 per cent.

These statistics, distressing as they are, do not convey the true extent of financial exclusion. Even where bank accounts are claimed to have been opened, verification has often shown that the accounts are dormant. Few conduct any banking transactions and even fewer receive any credit. Millions of households across the country are thereby denied the opportunity to harness their earning capacity and entrepreneurial talent, and are condemned to marginalization and poverty.

Over the last few years, the Reserve Bank has launched several initiatives to deepen financial inclusion. Our goal is not just that poor households must have a bank account, but that the account must be effectively used by them for savings, remittances and credit. Our most ambitious initiative has been the 'Business Correspondent' model or branchless banking which, leveraging on technology, helps reach banking services to remote villages at a low overhead cost.

In the context of this conference theme, the issue is the following. Financial inclusion is equity promoting. Banks, however, may see this more as an obligation rather than as an opportunity. Given that scenario, should we pursue financial inclusion through moral suasion or issue a regulatory fiat? What combination of regulatory incentives and disincentives would be optimal?

As I leave this topic, I must also add that using regulation, or political direction in a larger sense, for achieving equity has not been a practice unique to emerging and developing economies. It is quite common in rich societies as well. In his bestselling book, Fault Lines, Raghuram Rajan persuasively argues that America's growing inequality and thin social safety-nets created tremendous political pressure to encourage easy credit and keep job creation robust, no matter the consequences to the long-term health of the financial system. That is a thought we must ponder over.

Question 4: Should we make banking boring?

Post-crisis, there is a deluge of ideas and suggestions on reforming banks, banking and bankers. Analysts with a historical perspective believe that the seeds of the 2008 crisis were sown when the separation of banking from securities dealing was undone. What really contributed to the disproportionate growth of the financial sector relative to the real sector that I spoke about earlier was investment banking and securities dealing. It is the huge leveraging by this segment that fuelled the crisis. Hence, as the noted economist and Nobel

laureate Paul Krugman has argued, the way to reform banking is to once again make it boring. It is worth exploring this question as it has implications for growth, stability and equity.

Taking a long term historical view, Krugman argues that there is a negative correlation between the 'business model' of banking and economic stability. Whenever banking got exciting and interesting, attracted intellectual talent and bankers were paid well, it got way out of hand and jeopardized the stability of the real sector. Conversely, periods when banking was dull and boring were also periods of economic progress.

To support his thesis, Krugman divides American banking over the past century into three phases. The first phase is the period before 1930, before the Great Depression, when banking was an exciting and expanding industry. Bankers were paid better than in other sectors and therefore banking attracted talent, nurtured ingenuity and promoted innovation. The second phase was the period following the Great Depression when banking was tightly regulated, far less adventurous and decidedly less lucrative – in other words banking became boring. Curiously, this period of boring banking coincided with a period of spectacular progress. The third phase, beginning in the 1980s, saw the loosening of regulation yielding space for innovation and expansion. Banking became, once again, exciting and high paying. Much of the seeming success during this period, according to Krugman, was an illusion; and the business model of banking of this period had actually threatened the stability of the real sector. Krugman's surmise accordingly is that the bank street should be kept dull in order to keep the main street safe.

Krugman's thesis of 'boring banking' is interesting, but debatable. It raises two important questions. Is making banking boring a necessary and sufficient solution to preventing the excesses of the pre-crisis period? And what will be the cost of making banking boring? Both questions cause much confusion, the first because it has too many answers and the second because it has too few. The Dodd-Frank Act of the US is a response to the excesses of investment banks. In Europe, the responses are somewhat different. Abstracting from the specifics, I will argue that it is neither possible nor desirable to make banking boring.

The narrow banking of the 1950s and 1960s was presumably safe and boring. But that was in a far simpler world when economies were largely national, competition was sparse, pressure for innovation was low, and reward for it even lower. Bankers of the time, it is said, worked on a 3 – 6 – 3 formula: pay depositors 3 per cent interest, lend money at 6 per cent and head off to the golf course at 3 pm. From the 24/7/365 perspective of today, that may appear romantic but is hardly practical.

The boring banking concept does not appear persuasive even going by more recent evidence and on several counts. First, recall that during the crisis, we saw the failure of not only complex and risky financial institutions like Lehman Brothers but also of traditional banks like Northern Rock. What this demonstrates is that a business model distinction cannot be drawn between a utility and a casino; and if it can, it does not coincide with the distinction between what has to be safe and what need not be. Second, in an interconnected financial sector, how can a 'boring' bank realistically ring-fence itself from what is happening all around given all the inter-connections? Third, will not the co-existence of utilities and casinos open up arbitrage opportunities? During 'tranquil' periods, financial institutions with higher risk and reward business models will wean away deposits from narrow banks. But when problems surface and stresses develop in the financial sector, the position will reverse with the deposits flowing back into the so called 'boring banks', triggering procyclicality. Finally and most importantly, what will be the cost of boring banking in economic terms? Does restraining banking to its core function just to keep it safe not mean forgoing opportunities for growth and development?

What is the lesson from this discussion of 'boring banking' for the EMEs where universal banking is in early stages and trading of the kind witnessed in the North Atlantic systems is nowhere comparable? It is important for the EMEs to draw the right lessons – markets may not be self-correcting but they cannot be substituted by central planning and micro

management. Making markets competitive, open and transparent while putting in safeguards to curb excessive trading can help EMEs to enable financial markets to play their rightful role in efficient allocation of resources.

Question 5: Why is burden sharing across countries still off the reform agenda?

The last question I want to raise concerns cross-border equity, in particular the burden sharing on account of the external spillovers of domestic regulatory policies. Why is cross-border equity still off the agenda in any international meeting? I know I am asking that question somewhat provocatively, but that is deliberate. Let me explain.

The crisis challenged many of our beliefs, and among the casualties is the decoupling hypothesis. The decoupling hypothesis, which was intellectually fashionable before the crisis, held that even if advanced economies went into a downturn, EMEs would not be affected because of their improved macroeconomic management, robust external reserves and healthy banking sectors. Yet the crisis affected all EMEs, admittedly to different extents, discrediting the decoupling hypothesis.

The decoupling hypothesis was never persuasive given the forces of globalization. But the forces of globalization are asymmetric. What happens in systemically important countries affects EMEs more than the other way round. The regulatory policies that the advanced economies pursue have knock-on impact on the growth and stability of EMEs. I need hardly elaborate – capital flows engineered by the multi-speed recovery and the consequent volatility in exchange rates, the spike in commodity prices triggered by their financialization, the shortage of the reserve currency because of the flawed international monetary system and the constant threat of protectionism.

As all these problems confronting EMEs are a consequence of the spillover of advanced economy policies, should their solution remain the exclusive concern of EMEs? Isn't there a case for sharing the burden of adjustment? How do we evolve a code of conduct for building in cross-border equity concerns into financial regulation? I do hope these questions will figure in our discussions over the next two days.

Conclusion

Let me now conclude. I have raised five questions straddling growth, equity and stability in the context of the post-crisis approach to regulation:

(i) If financial sector development is good, is more of it better?

(ii) Financial sector regulation, yes, but at what cost?

(iii) Does financial regulation have a role in achieving equity?

(iv) Should we make banking boring?

(v) Why is burden sharing across countries still off the reform agenda?

I realize I have raised more questions than answers. For considered answers, I look to the insights and intelligence of the delegates at this conference.

One last thought. Even as I have annotated my five questions from the perspective of emerging economies, I realize that these concerns are not unique to them. We only have to look around the world. What began with demonstrations in Madrid this spring has coalesced into something on a much grander scale. The discontent has traversed from southern Europe across the Atlantic and has inspired the 'Occupy Wall Street' movement in New York's

Zuccotti Park and beyond. Despite its amorphous nature and its refusal to formulate a set of demands, the protest campaign across the world is fired by a simple, but powerful idea – that the elite cannot go on doing obscenely well even as the rest keep moving backwards. The message from this collective rage is that growth itself can be destabilizing if it has no equity dimension. That is a sobering thought.

Before I leave this platform, let me place on record my deep appreciation for the intellectual and logistic effort that has gone into organizing this conference by the team at CAFRAL led by Usha Thorat and the counterpart team at BIS led by Philip Turner. We owe them a great deal.

I wish the deliberations over the next two days all success.

Financial and real sector interactions: enter the sovereign *ex machina*

Jaime Caruana[1]

Introduction

I am delighted to join Governor Subbarao and his colleagues at the Reserve Bank of India at this conference on "Financial sector regulation for growth, equity and stability in the post-crisis world". And I would like to thank Usha Thorat, the first head of the Centre for Advanced Financial Research and Learning, for the invitation.

All credit is due to Governor Subbarao and Usha Thorat for this important initiative. One of the lessons of this crisis is our need to better understand the complex interactions between the financial system and the real economy. CAFRAL, as a centre of excellence for research and learning in banking and finance, will greatly contribute to building and sharing this knowledge. And this in turn will promote better regulation and supervision.

The Reserve Bank of India has a strong tradition of expertise and action in this area. Let me also compliment Y V Reddy, who, as Governor, conceived of a global hub for policy research that would be of practical use to policymakers, central bankers and bankers. As India's financial sector becomes increasingly important in the global economy, it is reassuring that there is both a vision and an institution to guide its aspirations. The BIS is honoured to contribute to these efforts and co-host this international inaugural conference.

I especially appreciate the optimism in the title's reference to the post-crisis world. Such optimism is more apparent here in Asia than in Europe.

In my remarks today, I would like to step back and consider somewhat schematically the interactions between the financial and the real sectors. As the latest events have reminded us, financial stability depends not only on the link between banks and the corporate and household sectors[2] but also on their links with the sovereign. The sovereign must be prepared to act as ultimate backstop for the financial system. But this requires that fiscal buffers be built up in good times. Otherwise, the sovereign can itself become a source of financial instability as its credit risk damagingly interacts with that of banks and other private sector entities.[3] Sovereigns must now earn back their reputation as practically risk-free borrowers. And as history has taught us, sovereign solvency is a precondition for the central bank's success in dealing with threats to monetary and financial stability.

In what follows, I will first outline the link between the financial sector and the private sector over the financial cycle – the link that has so often been at the root of financial crises. I will then bring the sovereign into the picture. Finally, I will discuss the relationship between bank capital and growth.

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[1] General Manager, Bank for International Settlements.

[2] The portion of the speech that discusses this link is partly based on Basel Committee on Banking Supervision, "The transmission channels between the financial and real sectors: a critical survey of the literature", *BCBS Working Papers*, no 18, February 2011 (www.bis.org/publ/bcbs_wp18.htm).

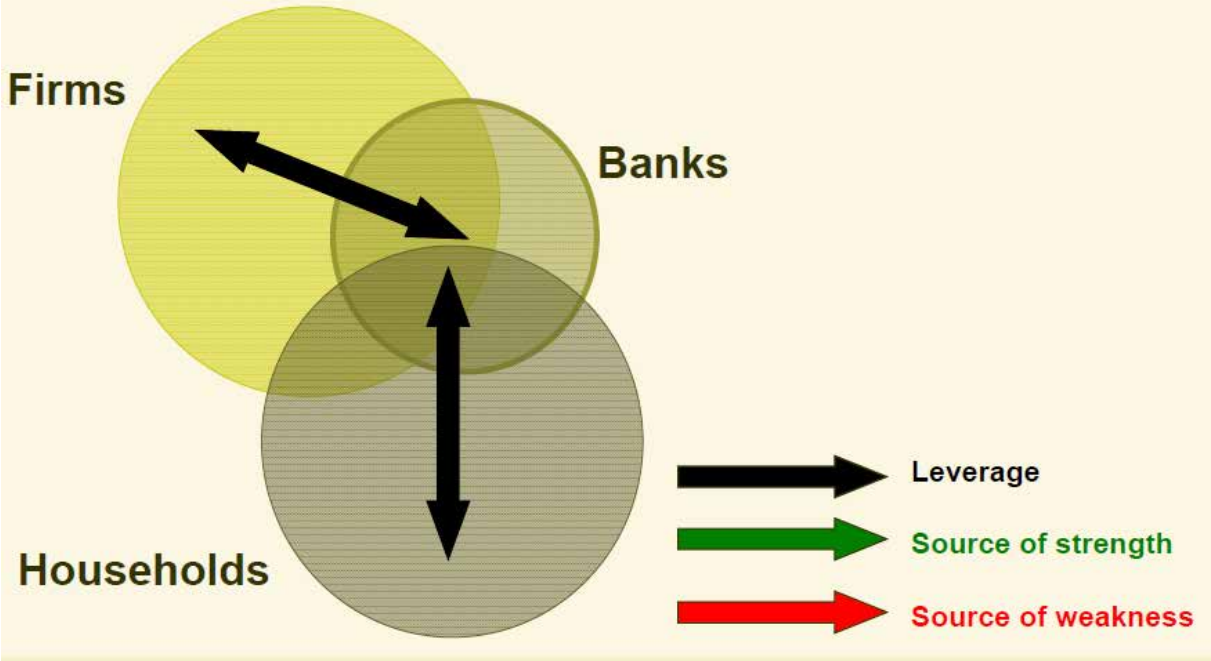
[3] This is further elaborated in Committee on the Global Financial System, "The impact of sovereign credit risk on bank funding conditions", *CGFS Publications*, no 43, July 2011 (www.bis.org/publ/cgfs43.htm).

Financial-real sector interactions: business and/or household debt crises

Let us consider first the interactions between the financial system and the business and household sectors in the boom phase of a financial cycle. In Graph 1, the black arrows point in both directions. This indicates that, even as the flow of bank credit is leveraging up those sectors, the banking system is leveraging itself up in the process of extending credit. Several mechanisms are at work in this phase.

Graph 1

Boom in corporate and/or household lending



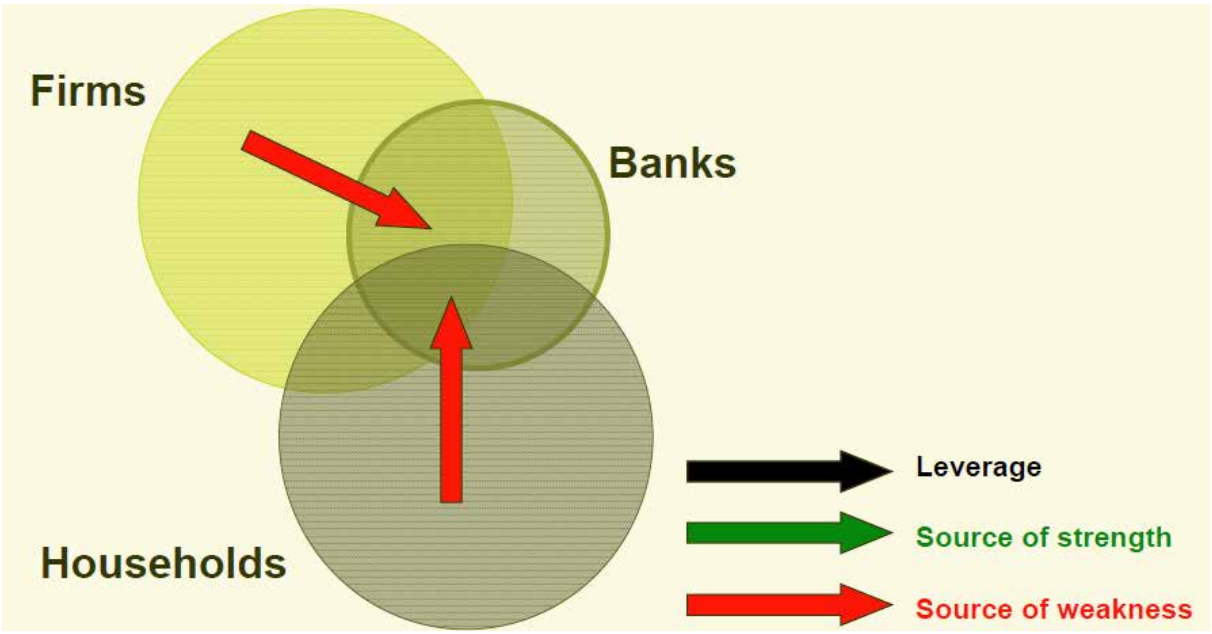
From the borrower side, stronger demand and income as well as higher asset prices tend to cut the cost of funding. Stronger aggregate demand makes for stronger cash flows and, for businesses, it increases the abundance of internal funds, which are cheaper than externally raised funds. Higher asset prices lift the net worth of firms and households, hence easing their access to bank credit, in terms of both volume and price. More abundant cheap internal funds and greater access to external credit lower the effective cost of debt. This leads firms to invest more in structures, capital goods and inventory. Households, meanwhile, are encouraged to spend more on housing and consumer durables.

On the lender side, strong demand and higher asset prices reduce loan losses, raise profits and strengthen capital. More profitable and better capitalised banks attract wholesale funding more cheaply. And if banks hold onto assets that are rising in price, their capital gets a direct boost.

But excessive leverage leaves banks more vulnerable to any subsequent downturn in economic activity and asset prices. At the same time, they are hit with a rising tide of delinquencies and defaults. As shown in Graph 2, loan losses during the bust become a major source of weakness for banks, as indicated by the red arrows pointing from the corporate and possibly household sectors to the banks.

Graph 2

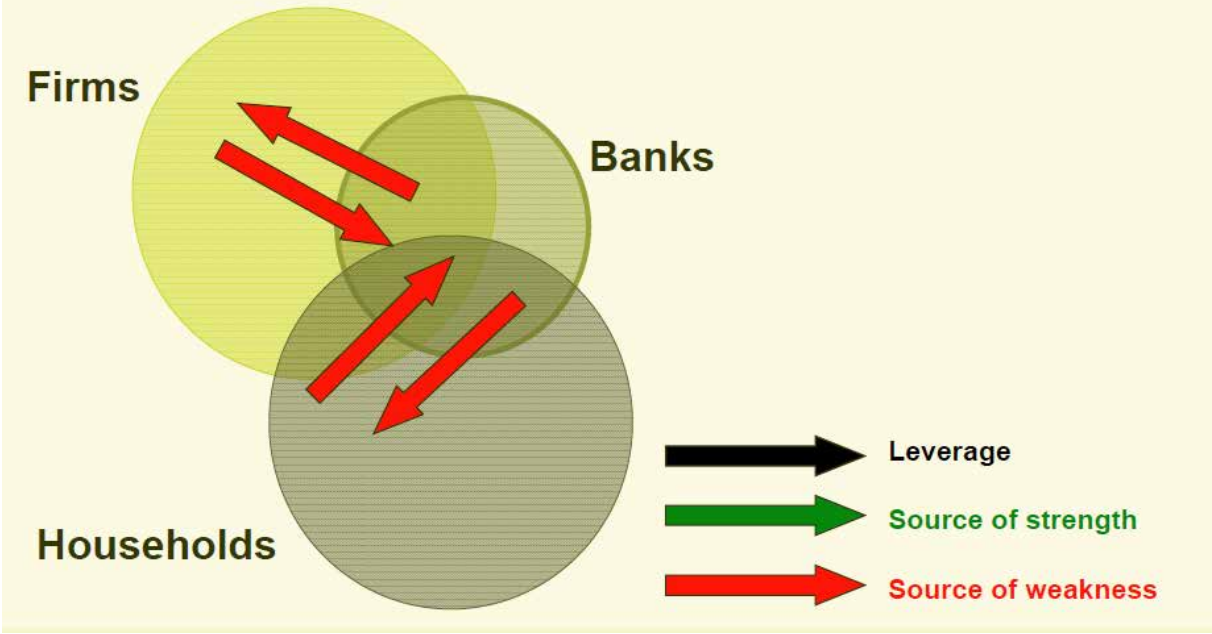
Bust in corporate and/or household lending



When borrower distress undermines their balance sheets, banks are prevented from extending credit even to healthy borrowers. It is this combination of weak balance sheets and capital deprivation that prevents credit from flowing. In Graph 3, this is indicated by red arrows pointing from the banking sector to the business and household sectors.

Graph 3

Bust in corporate and/or household lending leading to credit crunch



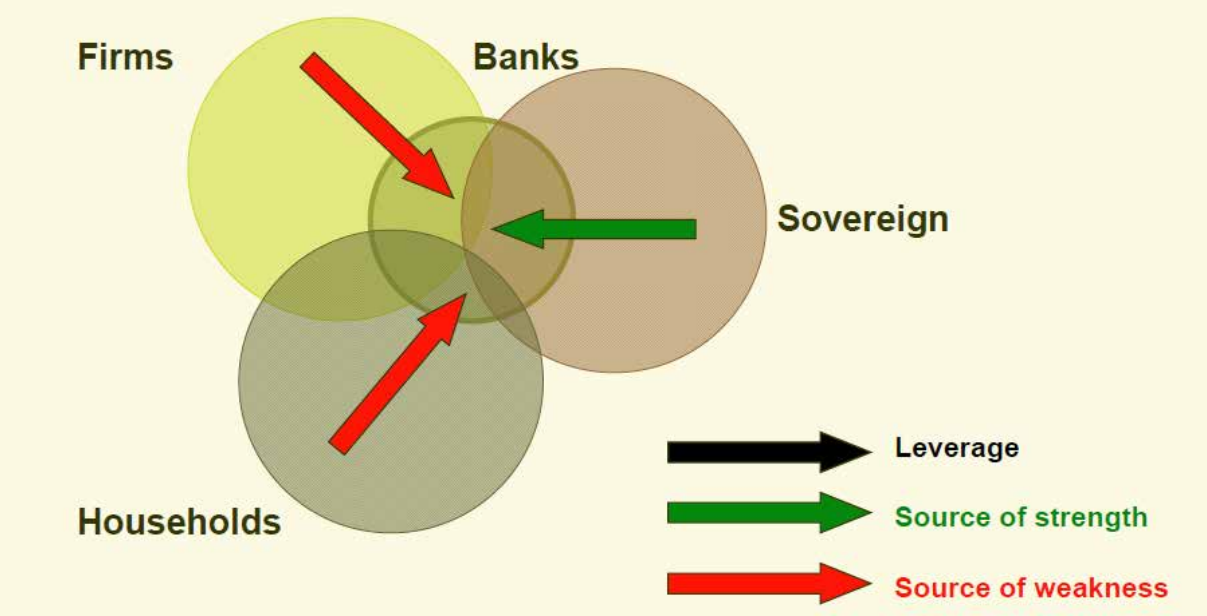
India is fortunate that the Reserve Bank took macroprudential measures in the middle of the last decade to slow the growth of household indebtedness. For several countries, indeed, the recent international crisis originated mainly in the household sector.

If the banking sector becomes a source of weakness for healthy firms and households, then the distress of these borrowers can ramify widely through the economy. Banks will find that raising external equity becomes especially difficult as problem loans escalate, not least if investors have trouble assessing the size and distribution of losses.

Under severe circumstances and in the absence of effective resolution regimes, governments may be forced to inject equity into banks. This is shown in Graph 4, where the sovereign props up the banking system. In effect, the sovereign becomes a *deus ex machina*, the supernatural intervention that resolves some ancient Greek tragedies.

Graph 4

Bust in corporate household and/or lending leading to government recapitalisation of banks



Enter the sovereign

Alas, as we have learned, the story does not end here. The sovereign and banks can prove, and have proved to be, sources of weakness for one another.

Channels for transmission of bank risk to sovereigns

A remarkable feature of Europe's sovereign debt strains is the role played by sovereigns that had spent years apparently on the right side of the Maastricht criteria, keeping a prudent lid on both deficits and debt. Anyone predicting sovereign debt downgrades in 2005 would hardly have listed Ireland or Spain.

In the event, hidden weaknesses in financial sector balance sheets fed through to the sovereign. Graph 5 shows this in the case of Ireland, with a generalised version of the mechanism presented in Graph 6. There are two important transmission channels from banks to sovereigns.

Graph 5

Irish CDS spreads[1]

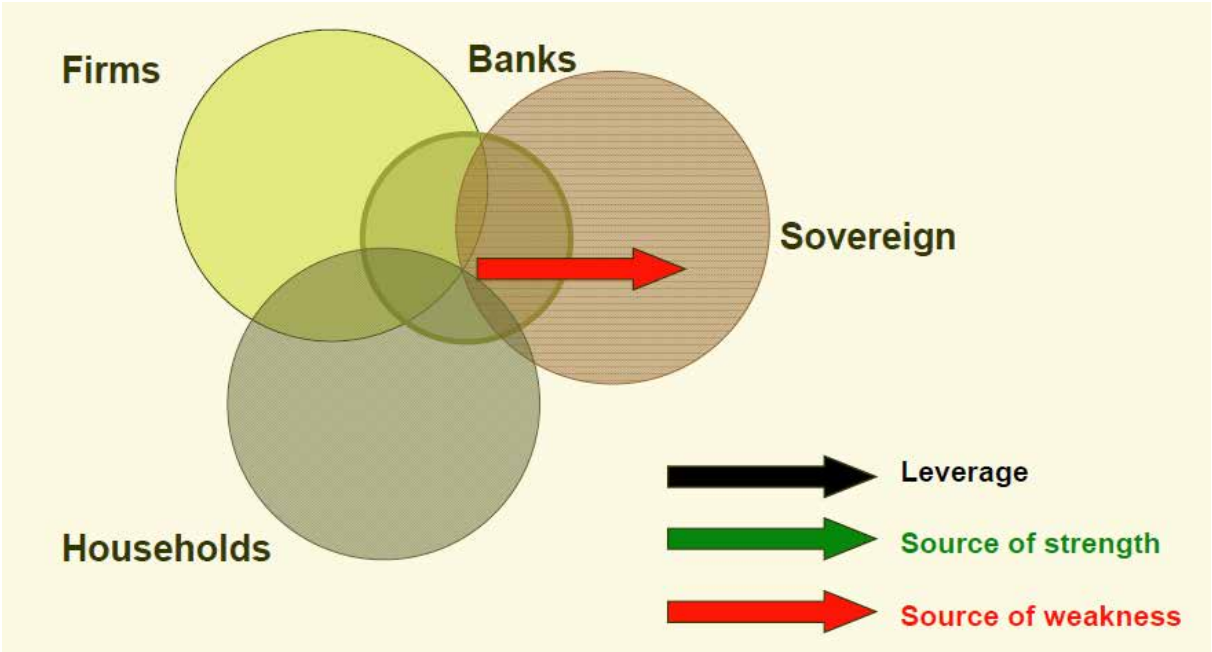
In basis points

[1] Five-year on-the-run CDS premia. [2] Simple average over a sample of domestic financial institutions.

Source: Markit.

Graph 6

Banks as source of weakness to sovereign



First, private credit booms can flatter the public sector's accounts. In the boom phase, all sorts of unsustainable revenues temporarily improve the fiscal accounts and tempt policymakers to reduce tax rates and to increase long-term spending commitments. As Governor Honohan of the Central Bank of Ireland put it:

> "The tax revenue generated by the boom came in many forms: capital gains on property, stamp duty on property transactions, value added tax on construction materials and income tax from the extra workers – immigrants from the rest of Europe, from Africa, from China, flooded in as the construction sector alone swelled up to account for about 13 per cent of the

> numbers at work (about twice the current level, which is closer to what would be normal)."[4]

Research on Spain points in the same direction. When the boom comes to an end, these boom-related revenues fall away, revealing underlying fiscal deficits. And then when the banks run into trouble, the cost of rescuing and recapitalising them does grievous damage to the public accounts. This has important policy implications regarding the size of the fiscal space needed to prevent this situation.

Second, as described before, other less direct effects come into play as the balance sheets of banks and other financial institutions deteriorate. If institutions have failed to build up sufficient capital and liquidity buffers during the boom, credit constraints become more significant, over and above any perceived deterioration in borrower quality. This can quite unnecessarily choke off the credit supply and, unless balance sheets are repaired quickly, may lead to serious distortions in its allocation. This further dampens economic activity, thus widening the public sector deficit.

All this raises deep questions about the implications of private sector boom-bust cycles for trend output and growth.

The policy conclusion is that the sovereign must build up sufficient reserves in good times to draw on in bad times. Fiscal policy also has a macroprudential responsibility.

Channels for transmission of sovereign risk to the financial sector

Of course, the sovereign can run up its own deficits and debt to the point where it becomes a source of weakness to those that hold that debt, including domestic banks. This can happen either as a result of the financial cycle I have just described, or quite independently from it. The link is shown on Graph 7.

This is a recurring story,[5] recently best exemplified by Greece. One can see in credit default swaps on the Greek sovereign and Greek banks how the impairment of the sovereign's creditworthiness has affected the banks' creditworthiness (see Graph 8).

Deterioration in the perceived creditworthiness of sovereigns can hurt the financial sector through a number of channels. I shall concentrate in a moment on the direct balance sheet exposures to the sovereign. But let me first mention the other three channels highlighted in the CGFS ("Panetta") Report.

First, deterioration in the sovereign's creditworthiness weakens bank balance sheets, increases counterparty risks and raises the cost of bank funding via new bond issues. It also reduces banks' access to credit from repo and derivative markets, owing to the reduced value of government collateral.

Second, implicit or explicit government guarantees of banks and their borrowers lose value. Despite the changing policy toward systemically important institutions, the rating agencies give big banks in major countries more credit for sovereign support than they did before the crisis.

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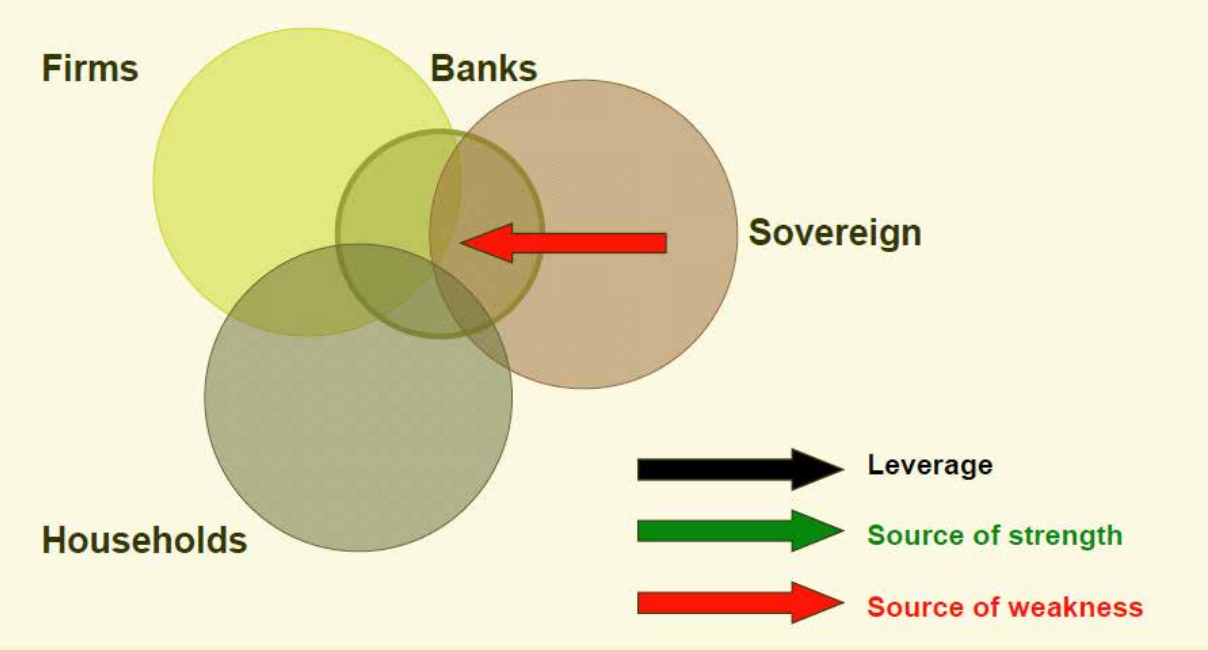
[4] "Banks and the budget: lessons from Europe", speech to SUERF Conference, Dublin, 20 September 2010 (www.bis.org/review/r100921b.pdf?frames=0).

[5] C Reinhart and K Rogoff, *This time it's different: Eight centuries of financial folly,* Princeton University Press, 2009.

Third, the loss of the sovereign's creditworthiness can induce fiscal consolidation. Even if necessary and overdue, this may undermine credit demand and weigh on the quality of private sector debt in the short term.

Graph 7

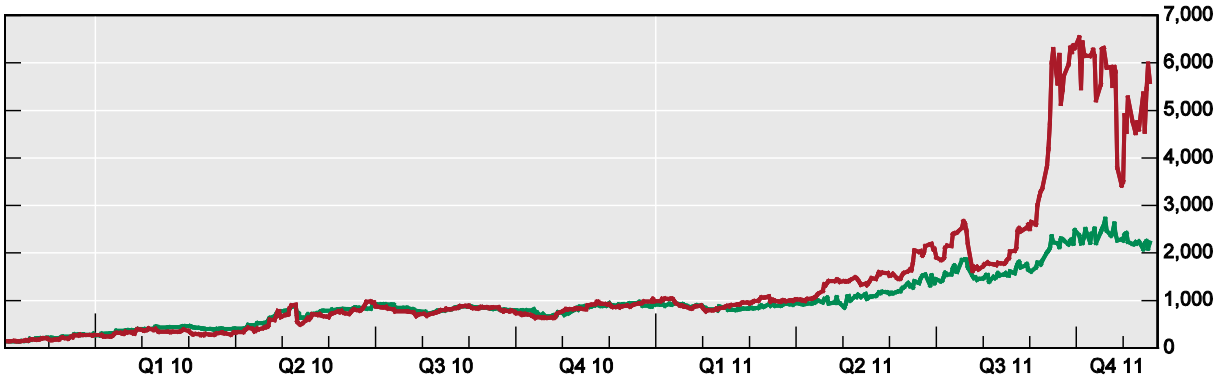
Sovereign as source of weakness to banks



Graph 8

Greek CDS spreads[1]

In basis points



[1] Five-year on-the-run CDS premia. [2] Simple average over a sample of domestic financial institutions.

Source: Markit.

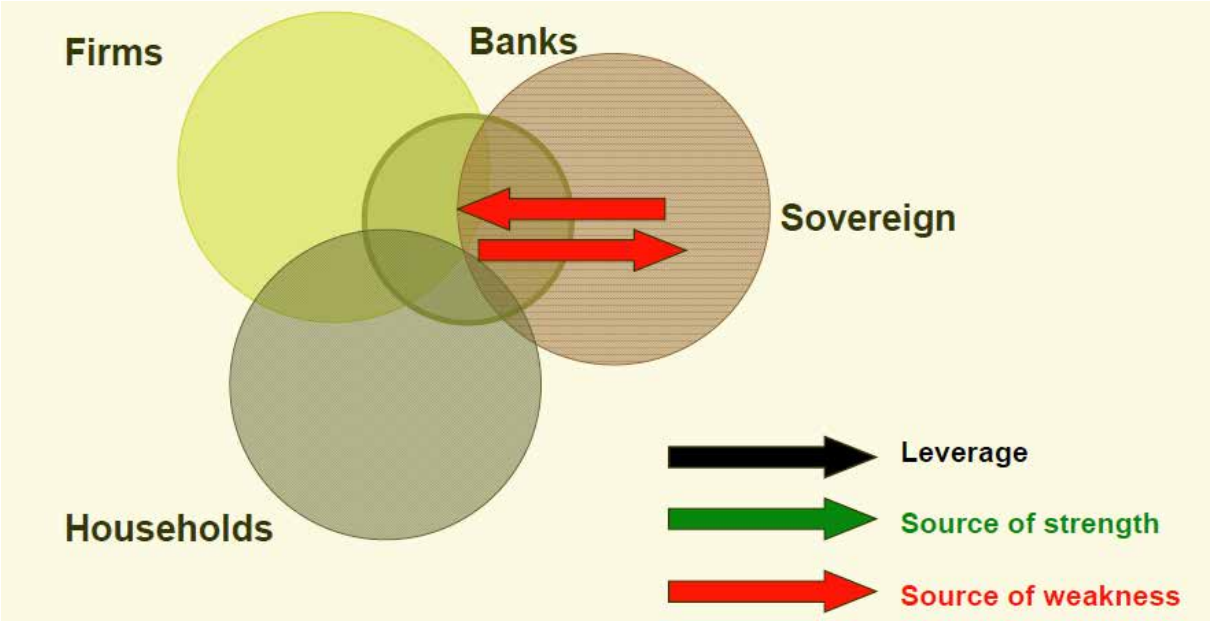
In most economies, banks have sizeable exposures to the home sovereign, showing a strong home bias. Not surprisingly, holdings of domestic government bonds as a percentage of bank capital tend to be larger in countries with high public debt. Thus, among the countries severely affected by the sovereign crisis, banks' holdings are relatively largest in Greece and smallest in Ireland. To some extent, accounting shields banks from the immediate impact of declines in the market prices of sovereign bonds. Indeed, across EU countries, most of the domestic sovereign exposure (85% on average) is held in the banking book. Then, in addition to the domestic exposure, there are exposures to other sovereigns. These can

weaken the home sovereign when its banks need support to deal with exposures to the foreign sovereigns.

Given these two-way influences, there is a clear and present danger of malign feedback from banks to sovereigns and from sovereigns to banks. In Europe today, just such a pernicious feedback loop joins the sovereign's credit risk with that of the banks. This is shown in the abstract in Graph 9 and in the data for Italy, Spain, Belgium and France in Graph 10. In Graph 11, this feedback becomes a source of weakness in the business and household sectors and jeopardises the normal flows of credit.

Graph 9

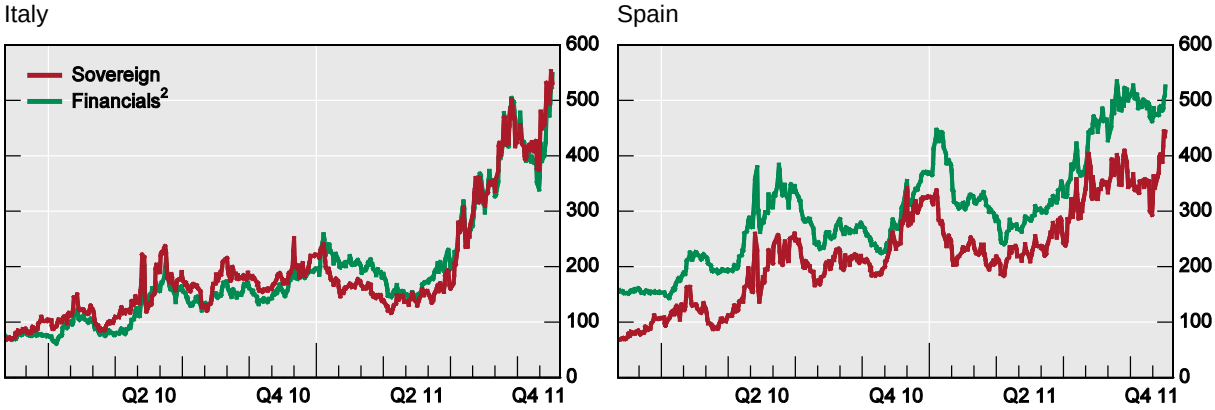
Sovereign and banks as two-way sources of weakness

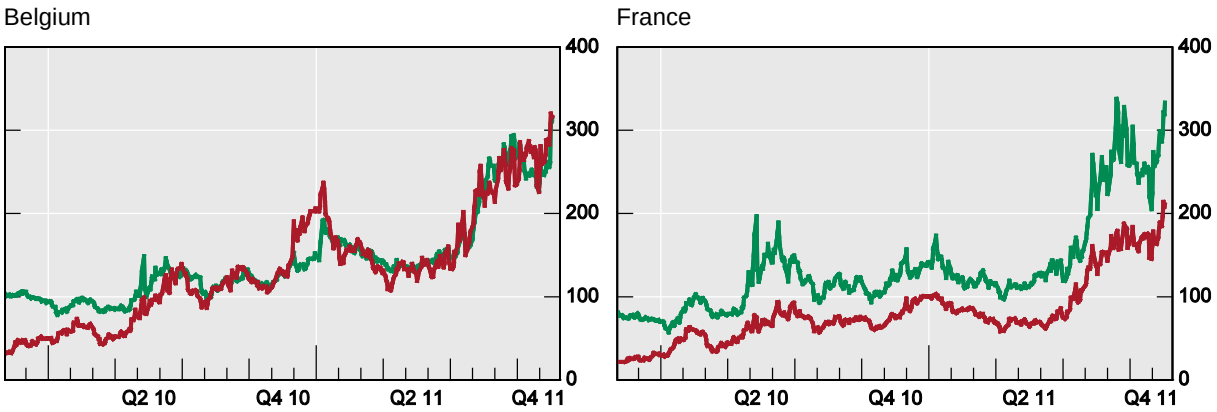


Graph 10

CDS spreads[1]

In basis points



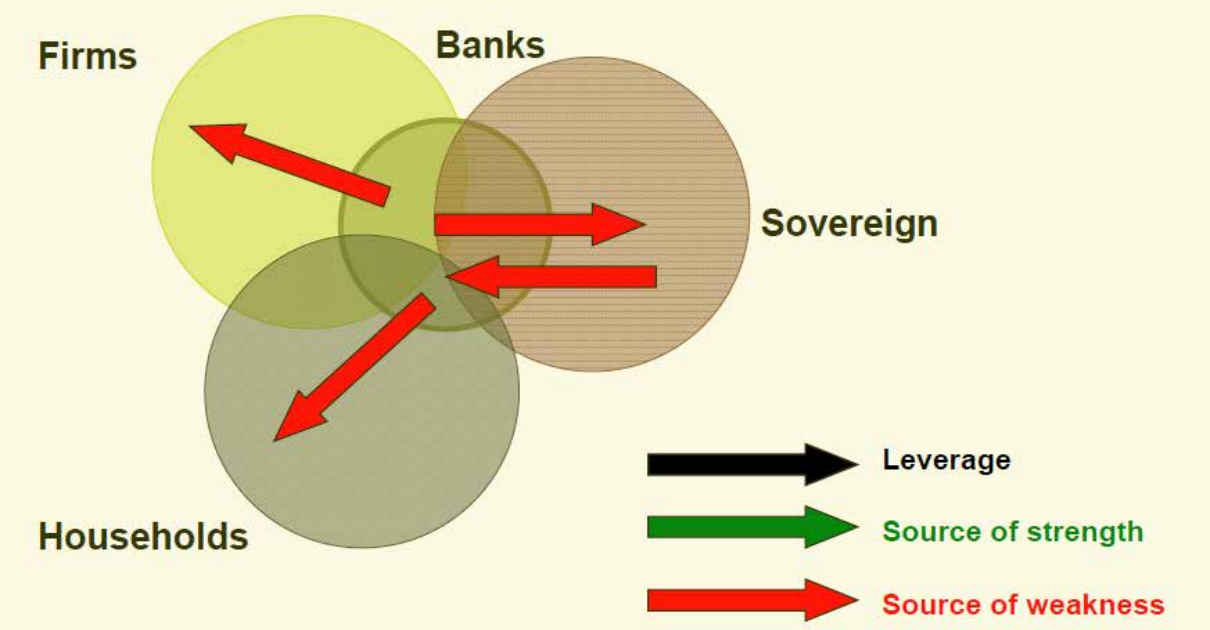


[1] Five-year on-the-run CDS premia. [2] Simple average over a sample of domestic financial institutions.

Source: Markit.

Graph 11

Sovereign and banks as two-way sources of weakness leading to credit crunch

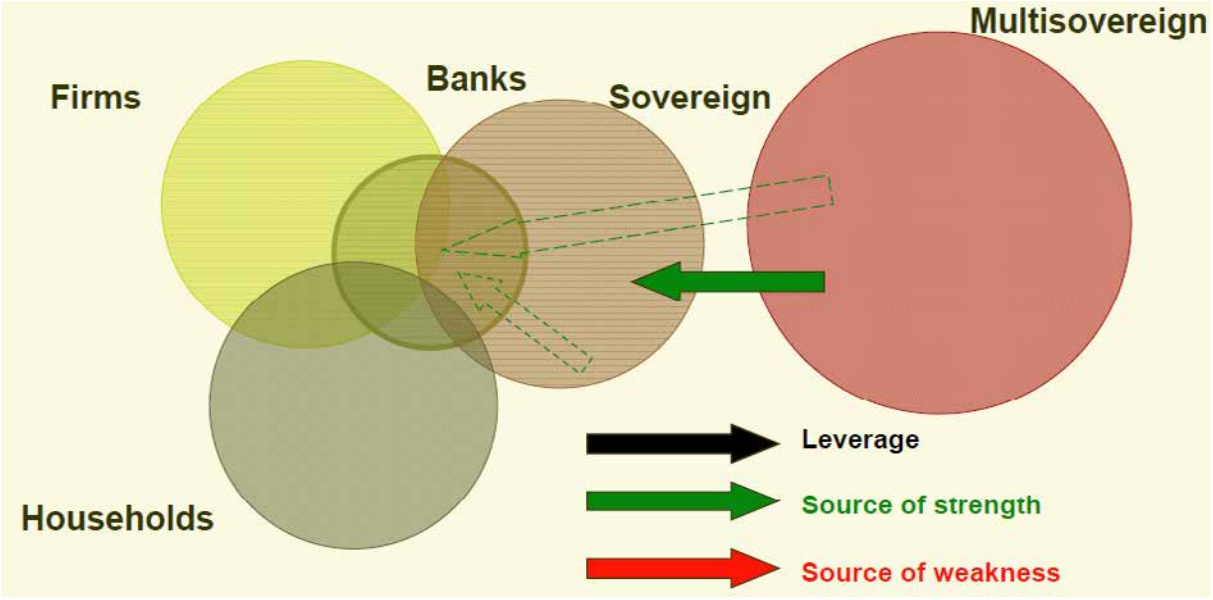


When sovereign debt morphs from a risk-free into a "credit risk" instrument, the consequences are likely to be severe. They are likely to include disruption to the financial system and abrupt deleveraging by banks, harming the real economy and employment. Sovereigns need to earn back their risk-free status by credible and tangible fiscal consolidation. Structural reforms are desirable to allow faster trend growth. In the meantime, credible multilateral financing backstops can concentrate the minds of market participants on fundamental improvements rather than market dynamics. This is shown in Graph 12. Speed is critical if contagion is not to spread.

When a sovereign crisis leads to rapid deleveraging, the financial spillovers to other economies can be significant. This is particularly true for countries where cross-border credit grew strongly ahead of the crisis. An important feature of cross-border credit flows is that they tend to exacerbate domestic credit cycles.

Graph 12

Multi-sovereign backstop for sovereign and banks



Given the dynamics of sovereign and bank interactions, there has been some discussion of the role of bank regulation. In that context, let me remind you of the treatment of sovereigns in Basel II and III.[6] Let me reiterate that, in an ideal world, sovereigns would have managed their debt in a macroprudential fashion. Then they would have presented so little credit risk that it would not much matter what bank risk managers thought of their default probability. It is this practically risk-free status, together with the confidence it engenders, that sovereigns must now win back.

However, this ideal world is not the one we now live in. Large, sophisticated banks that base their credit risk on their internal ratings are required by Basel II and Basel III to discriminate among risks. The Basel II internal ratings-based approach for calculating capital to be held against credit risk does not imply a zero risk weight, even for highly rated sovereigns. It calls instead for a granular approach that allows for a meaningful differentiation of sovereign risk. Banks need to assess the credit risk of individual sovereigns using a granular rating scale, one which accounts for relevant measured differences in risk with a specific risk weight per sovereign. Such an approach will bolster banks' capital and help them repair their balance sheets, thereby increasing their financial strength and bolstering confidence in their funding positions. In passing, let me note that the 3% leverage ratio in Basel III in effect sets a floor on sovereign holdings.

Capital and growth

More and better capital will go a long way towards achieving a more resilient financial system. Some have expressed concerns that strengthening bank capital could slow growth

[6] H Hannoun, "Sovereign risk in bank regulation and supervision: where do we stand?", speech to the Financial Stability Institute High-Level Meeting, Abu Dhabi, United Arab Emirates, 26 October 2011 (www.bis.org/speeches/sp111026.htm).

and delay recovery. From the outset, policymakers have devoted a great deal of careful analysis to this question. In the process, we have made some real advances in our understanding of how additional capital might affect growth. This was very much a cooperative enterprise in which many central banks participated with a variety of models.

Two studies conducted last year under BIS auspices found that the costs of better capitalised banks are likely to be modest, and far outweighed by the benefits. And this applies both in the transition phase and in the steady state.

On the one hand, the Macroeconomic Assessment Group formed by the FSB and the Basel Committee looked at whether banks might attempt to reduce lending during the transition to higher capital. They found that this would have a rather small impact on the economy, with reduction in annual growth rates limited to 3 to 5 basis points during the time that the extra capital is being built up. In addition, the impact on activity would be only temporary, as GDP would return to its trend path afterwards. So the impact would be quite minor. And indeed, this conclusion is supported by what we have so far observed: many banks have already increased their capital ratios, ahead of schedule, and this without any noticeable impact on lending spreads or tightening of lending terms.

On the other hand, the long-term economic impact (LEI) group was tasked to study the long-run costs and benefits of the requirements, ie after the transition period that the MAG analysed. The LEI group found that additional *permanent* GDP costs should be small. By contrast, the benefits from reducing crisis risks will be substantial. The costs will be low because investors will come to recognise that soundly capitalised banks are less risky, and will demand a lower return on equity. This limits any long-term widening in credit spreads. At the same time, there are huge potential gains from the reduced risk of financial crises and the attendant GDP losses. The LEI group found that, with capital ratios at or even above the proposed Basel III minimum of 7%, the benefits would greatly exceed the costs.

Moreover, the transition period will be long enough for banks to achieve the higher capital ratios without skimping on their lending and so derailing the recovery. In fact, the persistence of vulnerabilities argues in favour of building strength now – and even for going faster than the Basel III schedule where possible. The reason is simple: a sound recovery hinges on having a secure financial system. Businesses and households will not regain the confidence to plan, to invest and to innovate until they have regained their trust in the financial system and its durability.

With this reference to research that has informed policymaking in real time, let me close with an admission and a plea. I admit that we policymakers and central bankers face conceptual challenges in striking the right balance between growth, equity and stability. And I make a plea for research, knowledge-sharing and training that can prepare supervisors to meet these difficult challenges. This is a mission that I am very confident that CAFRAL will fulfil with distinction.

Overview

Usha Thorat

Introduction

The more insular environment of the early 1980s for global finance was followed by an era of liberalisation and deregulation facilitated by the revolution in information and communication technology. This radically transformed the global financial system. The funding requirements of global trade, investment and output were met, in no small measure, by the financial system contributing to the steady growth and prosperity in the world. Regulation in its part evolved and responded to the innovations and the developments in the financial sector. The philosophy underlying it increasingly moved towards deregulation, rather towards encouraging innovation. The overarching view was that that the markets knew best and were self-correcting. But as innovation overtook itself and financial sector growth became an end in itself, the excesses morphed into a global crisis leading to a host of challenges for regulation. In responding to these challenges thrown up by the crisis, regulation has had to evaluate and take a new path, in particular, by looking at systemic risk and systemic stability. This is what has been attempted over the last three years and the end is still not in sight. In the process, stability, rightfully so, has taken the centre stage. But that alone is not sufficient. The other objectives of the society – growth and equity – are equally important to get out of the debt crisis, attain sustainability and ensure equity through employment-generating growth, which is so important for social stability.

While this has been largely a trans-atlantic scenario, the issues for EMEs have been different. EMEs did not contribute to the crisis but had to bear its consequences. For EMEs the imperatives of equitable growth continue to be real and strong. Consequently, regulation seeks to blend in their context the concerns of growth and equity with those of stability.

To what extent does the framework of financial sector regulation adopted globally in the post-crisis period impinge on the growth objective, especially for the EMEs? Should and can equity be a specific objective for financial sector regulation? What are the targets, instruments and institutional arrangements for macroprudential policies to address systemic risk in EMEs? What are the implications of the linkages between the real sector financial sector and sovereign for growth, equity and stability? How does the global financial architecture impinge on national policies? In order to think through these and related questions, the Centre for Advanced Financial Research and Learning (CAFRAL) and the Bank for International Settlements (BIS) jointly organised a conference for regulators and central banks during 15-16 November 2011 in Mumbai.

The symbol chosen to represent the theme for the conference was the tree of life – representing the global ecosystem with its interconnectedness and symbiotic relationship between the different parts, particularly between the real sector and the financial sector.

Regulation and growth

The issues relating to regulation and growth can be seen from a global perspective and from an EME perspective. From a global perspective, three issues emerge as relevant in the context of the discussion on the implications of regulation for growth. The first is whether there is a tradeoff between growth and stability; the second, whether there is any “optimal” size or composition of the financial sector; the third, whether regulation can directly target

growth and equity or whether through targeting stability, it provides a necessary but not a sufficient condition for ensuring growth and equity.

The relationship between growth and finance is usually seen as positive but there have been different views. Recent events have shown that excessive growth in the financial sector can become a source of instability and can become a drag on the growth of the real sector . All recent studies on the implication of the new capital and liquidity requirements on growth point out that there could be some adverse impact on growth. However, the sacrifice in growth is negligible – even after taking into account the varying results of different studies – seen in the context of the sharp drop/slowing down in world trade, output and investment in the aftermath of the crisis with its concomitant impact on equity. Hence the trade-offs, if any, between growth, equity and stability are only in the short run. The overwhelming objective of financial sector regulation is stability, so that both growth and equity objectives are met in a sustainable manner.

On the question of the optimal size of the financial sector, Governor Subbarao points out that over the last 50 years, the share of the financial sector in aggregate profits more than doubled from 17 per cent to 35 per cent. “The large share of the financial sector in profits, when its share of activity was so much lower, tells a compelling story about the misalignment of the real and financial sectors.” But how does one judge the optimal share (or, for that matter, the optimal scope or composition) of the financial sector? In answering this question, it may be necessary to consider enlarging the scope of the indicators used for determining financialisation. According to former Governor Reddy, financialisation is not confined to measures of credit, leverage and derivatives, it should encompass financialisation of the commodity markets, household budgets, corporate, and the government besides the financial sector itself. He suggests that it would be useful to attempt an empirical cross-country assessment of the appropriate size of the financial sector conducive to sustained and stable growth. Similarly, jurisdictions need to take a view on the optimal structure of the banking system. This involves issues such as the share of the public sector financial institutions and foreign banks; and in both cases an important factor is to what extent the regulator can have sufficient oversight. In the former, this relates to independence of the regulator from the political interests and in the latter, whether the presence of foreign banks is through subsidiaries or branches and the effectiveness of the home-host relationships. In the post-crisis period, the subsidiary route has emerged as a preferred mode of presence from the host country perspective, even though subsidiaries also cannot be ring-fenced completely. The need for subsidiaries may not be there if it were possible to work out a more effective resolution regime.

On the third issue of whether banks should confine themselves to the traditional role of boring banking, the cross-country experience shows that while global finance contributed to growth in world trade, investment and output, some countries have achieved high and consistent growth rates without too much innovative banking or even too much growth in investment banking. The counterfactual would be the continuation of real sector growth in these countries in the same manner without development of sophisticated financial markets. Analysing this would require cross-country comparisons of the composition, coverage and penetration of the financial sector and links with growth, stability and equity. This would help our understanding the optimal composition of financial sector development appropriate to each country. The need for “good” innovation like “good” cholesterol to facilitate both growth and equity and the need for good regulation to encourage such type of innovation needs stressing.

Turning to the EME perspective of regulation and growth, there are two separate sets of issues. The first covers issues of implementation. Regulation should be easy to understand and easy to implement. This is particularly important for EMEs and, it would not be too radical to think of a ‘reduced form’ Basel framework for EMEs. Implementation of Basel II/III is particularly challenging for EMEs because of the lack of sophisticated risk management systems, appropriate IT and staff skilled in quantitative techniques. There is also a lack of

historical data necessary for the estimation of expected credit losses and operational losses. Even if considered more appropriate, EMEs would find it challenging to pursue the sectoral approach for countercyclical provisioning (which is more appropriate for many EMEs than the agreed Basel metric of aggregate credit to GDP). The challenge is that sectoral approaches might be perceived as non-compliant by the markets.

The second set of issues relating to EMEs is the implications of regulation for growth especially for the specific financing needs of trade, SMEs and infrastructure investment. EMEs would gain in general from the new regulations through spillover effects. These measures are expected to lead to a more resilient banking sector in the developed markets which need sound institutions and markets to stimulate growth, which in turn is vital for the growth momentum to be sustained in the EMEs.

It was noted that trade finance was critical for most EMEs and it was the first channel of transmission of the global crisis affecting the real sector instantaneously. The Basel III measures relating to trade credit have been modified recently to take into account the concerns expressed by EMEs, although the ring-fencing of trade credit in the wake of any disruption in global markets could well be considered as part of the international agenda for reform.

SME financing, even in normal times, is considered as non-viable business on risk-adjusted basis especially when banks have the option of investing in risk-free sovereigns. This sector not only faces a liquidity crunch in the wake of a crisis on account of shrinking cross-border flows but also because domestic large businesses tend to hold up payments due to such SMEs at such times. This consideration apart, banks are usually not as willing to reschedule loans for SMEs as for large businesses. Many countries took special measures to support SME financing in the post-crisis period. Such intervention is generally through: policy mandate (directed credit); subsidised credit guarantee schemes assignment of lower risk weights and provisioning (Basel already allows 50 per cent weights); and ensuring the better availability of credit records and credit information. Ultimately, it comes to a more robust manner of assessing credit risk to this sector to improve efficiency even in the presence of State support and guarantees.

The impact of regulation on the financing for infrastructure investment would also be an issue in EMEs. Stipulation of ‘net stable funding ratio’ (NSFR) may increase cost of infrastructure credit. There is also a view that current exposure norms for single/group exposures prescribed under Basel norms need to be scaled down. This could create a problem in jurisdictions where even the current norms are considered to be constraining infrastructure development. In the absence of alternate longer-term sources of finance for infrastructure, the maturity transformation role has to necessarily borne by the banks. Here again State intervention through provision of credit enhancements may be needed to facilitate bank funding of infrastructure while recognising the problems of moral hazard. However, such enhancements may not in all cases eliminate the problem of exposure norms. Banks also have to cope with a lack of information on financing – so they cannot be sure that the assets being financed by them are not being financed in parallel by others.

Regulation and equity

The impact of regulation on equity can be examined at the macro level as also at the micro level. Macroeconomic and macroprudential policies tend to ignore the impact of such policies on the poor. This is echoed in Andrew Sheng’s comment that, over the past 30 years, the growth in the wage rate and the deposit rate have been lower than the real growth rate. This has led to wage and financial repressions that have contributed to the poor subsidising the rich, at the national as also at the global level. In an important sense, the anti-inflationary stance of the monetary authority is the most appropriate “pro-poor” policy. Policymakers

must ensure that monetary and regulatory policies curb excess financialisation which can cause undue volatility in exchange rates and commodity prices that become difficult for the small businesses and the poor to sustain. At the micro level, finance by itself does not have a pro-equity bias – indeed the seeking out of collateral to mitigate risk can be said to have an anti-equity bias. Similarly economies of scale dictate serving large and valuable customers rather than the many small customers. Hence, mainstream finance does have a "pro-big and pro-rich" bias. This raises three important questions. Should equity be a specific objective of regulation? If so, will this run counter to the objective of securing stability? How do regulators balance the objectives of equity and stability?

The Chair of the session, Stephany Griffith-Jones, argued that 'Too small to be counted', is too real an issue to be ignored by financial regulation and it is imperative for equity to be an explicit objective for regulation. The important caveat she added is that, if instruments for pro-poor growth are to be effective on a sustainable basis, they need to be supported by broader policy and institutional framework with simplified regulation – reliance on credit alone could be dangerous. This resonates with Governor Subbarao's reference to the risk to the financial system of using easy credits to keep job creation robust – something that was brought home in the subprime crisis.

The requirement of the financial sector to adopt specific pro-poor policies, according to Reddy, can be justified because of the implicit subsidies to those who have a banking franchise (deposit insurance, bailouts due to the public utility and systemic importance of the banking system etc). There is increasing support for the view that some prescriptions about the allocation of credit and pricing of transactions in order to achieve the equity objective are likely to win greater acceptance than they did in the pre-crisis period. This is not to advocate regulatory forbearance or relaxation of prudential norms, but to support the use of regulatory prescriptions to encourage financing of directly productive activities which support self-employment and small businesses in the real sector. Similarly, there is merit in incorporating incentives for financial inclusion in the regulatory regimes of developing countries.

The provision of safety nets could indeed be one form of protection for the poor. As financial crises of different dimensions recur periodically, regulation therefore needs to ensure that the engagement of poor with the formal financial system is within a framework which supports their survival during downturns. There should be sufficient space for them to limit their losses. This could be achieved through some form of insurance/credit guarantees. Similarly ring-fencing of trade credit in future crises could be an important area for regulatory reform while drawing up living wills of financial institutions entities.

The paper presented by Sriram alludes to the need to expand time horizons for engagement of the financial sector with the poor as the current accounting standards, regulatory guidelines and institutional behaviour focus on the short term. The small stakeholders suffer the worst since their engagement is seen as a charge on current profits, irrespective of long-term gains. It is here that the role of alternate non-bank channels becomes important. Perhaps a different regulatory approach to entities which are not governed purely by market forces and which can afford to take a longer term view – such as social enterprises – can be given appropriate policy and fiscal support to innovate within certain thresholds.

Specific innovations taking advantage of information and communications technology (ICT) solutions to achieve scaling up of outreach, reducing transaction cost while ensuring sufficient safeguards, relate to the use of the business correspondent model and mobile banking. Experiences in Brazil, India and various countries in Africa highlight the win-win aspects of these innovations. The mobile telephone companies have a larger footprint than banks in China and India: getting them to help provide financial services through mobile banking for the poor is both a challenge and an opportunity in these and other EMEs. Both banking regulation and payment system regulation need to respond to the challenge and

opportunities of rapid and dynamic changes taking place in the ICT sector that can make financial inclusion a reality.

An important issue raised in regard to 'credit worthiness' of small clients was that banks need to think innovatively beyond credit bureaux and develop a mechanism based on transparency of transactions – much as eBay does for its sellers. Transaction history, based on cash flows, could be a strong indicator of credit worthiness. This could overcome the problem of collateral for small borrowers.

Regulation and stability

The sources of systemic risk in EMEs are several and some of them go beyond the scope of national financial sector regulator/s. Even if EMEs have perfectly flexible exchange rates (and in most cases they do not), the monetary and fiscal policies of significant reserve currency countries have impact of systemic nature on EMEs especially through volatile and undependable capital flows. Hence capital account management becomes very much part of the tool kit to ensure macroeconomic and financial stability in EMEs. Other macroeconomic factors are the nature and extent of cross-border lending, inadequacy of resolution mechanisms for cross-border financial institutions and the perimeter of regulation. The extent of sovereign paper holdings in the financial sector and erosion of confidence in what is otherwise considered a risk-free paper could also threaten financial stability as is currently the case in the euro area. This is an important lesson for the EMEs. The microeconomic aspects of systemic risk relate to externalities – interconnectedness, procyclicality and contagion. Equally important is the quality and effectiveness of supervision.

The practical issues in implementing macroprudential measures pointed out by Philip Turner relate to data gaps, operational targets, choice of instruments and institutional arrangements.

In the case of EMEs, data on system-wide currency and maturity mismatches as also on the highly geared counterparties in the more innovative segments of domestic capital markets need to be collected and monitored at regular intervals. In view of the interconnectedness between the financial sector, macro economy, businesses, households and sovereigns, there could be a problem of choosing the right indicators to measure systemic risk. Each jurisdiction will need to build up an integrated indicator which reflects the global buildup of risk; comparable parameters locally, as also local risk build up including exposures and leverage of local financial institutions. Even if such a metric is built up, a judgment call would need to be exercised on when to invoke the instruments or tools as there is a risk of too early or too late an intervention.

This calls for coordination between monetary and macroprudential policy, and adequate preparation of the market through appropriate communication of the authorities' intention to bring in macroprudential measures unless the risks subside. Usually, the desired change in monetary policy and macroprudential policy would be in the same direction. But circumstances may arise when macroeconomic and macroprudential policies will need to move in opposite directions. It may be difficult to have clear demarcations and in practice the two may have to be framed jointly although there could be a hierarchy in the decision making process. The choice of policy tools is largely a country-specific issue and use of greater number of instruments in a modest way would generally be less distortionary (and therefore more effective) than heavy reliance on just a few instruments.

As regards institutional arrangements for macroprudential policies, there is a dominant opinion in favour of the levers being in the central bank in view of the close link between monetary policy and macroprudential policy, the expertise within central banks due to active participation in financial markets, and the central bank role as lender of last resort. The focus on macroprudential regulation has brought a new equilibrium between central banks and supervisory authorities which may have interesting connotations even where both the

activities reside within the same body. There are concerns that the monetary authority may lose some independence in the process. Whatever the model, there would be a need to shield the body responsible for these policies from both political and commercial interests of the financial industry. Central banks, being independent of the political cycle as well as of the industry, are well-placed to "take away the punch bowl" before excess leads to disaster.

While return to the risk-free status of the sovereign is imperative for financial stability, in the interregnum, there is need for supervisors to ensure that financial institutions undertake a realistic risk assessment of sovereign assets. Such assessments will have to be based on more fundamental parameters rather than market assessments which could be extremely volatile. In the euro area, deleveraging by financial institutions which is affecting the short-term interests of the economy is less on account of the demand for recapitalisation but more on account of the overall macroeconomic environment. In the longer term, only well capitalised banks will be able to attract both capital and debt from the markets. The need to bring in systemically important shadow banking in whatever form into the macroprudential framework is strongly underscored.

Macroeconomic policy and financial regulation

In his inaugural address, Jaime Caruana set the tone in broadening the topic of the conference to go beyond regulation to macroeconomic policies impacting the objectives of stability and growth. While discussing the linkages between the real sector and the financial sector he drew attention to the fact that "financial stability depends not only on the link between banks and the corporate and household sectors but also on their links with the sovereign. Given these two-way influences, between banks and sovereigns, there is a clear and present danger of malign feedback from banks to sovereigns and from sovereigns to banks." He drew the analogy with macroprudential policies that emphasise the building up of buffers in good times to be drawn down in bad times. He said that one lesson from the crisis is the need to build headroom in the government budget in good times to be able to have enough policy space to support the economy in a downturn. Otherwise the government itself could become a source of instability "as its credit risk damagingly interacts with that of banks and other private sector entities. Sovereigns must now earn back their reputation as practically risk-free borrowers. And as history has taught us, sovereign solvency is a precondition for the central bank's success in dealing with threats to monetary and financial stability". A sound recovery hinges on having a secure financial system. Businesses and households will not regain the confidence to plan, to invest and to innovate until they have regained their trust in the financial system and its durability. Structural reforms are desirable to allow faster trend growth.

In a wide-ranging speech, Reddy covered the synergies and tradeoffs between the objectives of growth equity and stability and the use of macroeconomic policy and financial regulation to balance these objectives in an optimal manner. He did this against the background of globalisation and the weak international financial architecture. Alluding to Caruana's query about the optimism implied in conference title as to whether we are really in a post-crisis period, Reddy said that the risks have been passed on to the sovereign, and there are now significant threats to economic political and social stability. Re-regulation or rebalancing of regulation by itself may not be enough to achieve the optimal share or size of the financial sector that would be conducive to growth and stability. It may be useful to do a cross-country study taking into account the diverse experiences of different countries in regard to composition of financial sector, growth and stability using five related factors, viz, the macroeconomic environment in which the financial sector operates; the share of financial sector in the total economic activity; the composition of the financial sector in terms of banking, non-banking, derivatives etc; the framework of regulation of financial sector and the quality of supervision of the sector. The possible dualism in growth of the financial sector

reflected in underserving of certain sectors and excessive financialisation in others should be analysed by EMEs. Alternative paths of development of financial sector need to be considered, keeping in view the lessons from the global financial crisis.

A lively discussion on the role of global imbalances and persistence of the paradox of the "uphill" flow of capital from the EMEs to developed countries was provoked by John Lipsky. Neither Reddy nor Sheng saw the capital flows to developed countries reversing in the near future: public debt is growing faster than GDP in advanced countries; demographic factors are putting pressure on government budgets; there is limited scope for increased savings in advanced countries; and there is no credible alternate to the dollar as the reserve currency, Nor did they see the euro area problem, essentially being internal, as contributing to global imbalances. But slower growth in Europe could have sizeable adverse spillover effects.

Global financial stability depends on three key infrastructure elements: the reserve currency; the lender of last resort; and the prevalence of oligopolistic conditions in the rating industry, the accounting profession and news/wire agencies. Describing the present system as a non-system, where there is no market discipline on the dominant reserve currency, multiple reserve currencies or fully floating exchange rates cannot be seen to be solving the problem due to presence of network externalities and the absence of a credible global lender of the last resort. There is scope for regulators to ensure that CRAs follow the rules of the game and are subject to market discipline. Equally, informed institutional investors must build their own capabilities for proper risk assessment.

Global finance and the presence of large international banks also bring into sharp focus the issue of autonomy and effectiveness of the national financial regulator. To quote Reddy "globalisation of finance in the context of serious market imperfections and absence of globally enforceable rules could, by virtue of close linkage of finance with other macro policies at national level, restrict the space available for national authorities to conduct macro-policies".

Conclusion

The conference brought to light the intricacies of interrelationships of regulation and macroeconomic policies not only with respect to growth and stability, but also with respect to equity. The conference provided an opportunity for regulators and policymakers to focus on the issues from the angle of the EMEs. Divergent views were aired frankly. We were able to debate the global implications of national policies while making suggestions on regulation and macroeconomic policies in the backdrop of the current global financial architecture. The conference also provided suggestions for initiating several areas of empirical research. It has opened up to CAFRAL new vistas to explore in planning its future activities. And it contributed to the international financial cooperation that is the vocation of the BIS. By sharing knowledge on policy issues confronting central banks and financial supervisory authorities, the aim is to promote not only better regulation and supervision worldwide but also deeper mutual understanding.

Financial sector regulation and macroeconomic policy

YV Reddy

The Bank for International Settlement (BIS), the Centre for Advanced Financial Research and Learning (CAFRAL), and the Reserve Bank of India (RBI) need to be complimented not only for the excellent logistics, but also the outstanding background papers that have been prepared for the conference. I had in fact prepared a draft for delivery today, but discarded it after listening to the stimulating presentations made by Governor Subbarao and Jaime Caruana, and to the discussions that followed. I, therefore, decided to revise my presentation in order to supplement the proceedings of yesterday by posing a series of questions and exploring some possible answers.

The theme for the Conference is very valuable and path breaking since it raises fundamental issues contextually and is also forward looking. Contextually the subject covered in the Conference provides necessary correctives to the pre-occupation in the current debates on financial regulation relating it with the issue of maintaining financial stability as a response to the global financial crisis. It is also forward looking in the sense that it recognises the possible contributions that the developing and emerging market economies, particularly Asia, could make to the evolving debate on the subject, in view of their potentially enhanced role in the global economy in future. Fundamentally, it is of great significance, because the title of the Conference recognises the main purpose of public policy relating to the financial sector, viz, ensuring growth with stability while addressing the issues of (social) equity. The trade-off between growth and stability, and their inter-linkages have been recognised as being inherent in financial regulation, but equity considerations have come to the fore in global debates in the very recent past, mainly as a consequence of the adverse impact of the crisis on welfare of large segments of population. This Conference, in a way, recognises the instrumentalist view of the role of the financial sector in public policy and asserts its primary goals as growth, stability and equity. By sponsoring this conference, the BIS is also rightly projecting itself as a truly global institution, for which Jaime Caruana and Philip Turner deserve full credit. Governor Subbarao and Usha Thorat are simultaneously placing India as an active participant in the journey towards a better global financial system in the interest of global economy as a whole.

A world in crisis or post-crisis world?

Jamie Caruana made a profound statement in a casual manner when he said in his speech: "I especially appreciate the optimism in the title's reference to the post-crisis world. Such optimism is more apparent here in Asia than in Europe". It is generally agreed that a possible collapse in the financial sector was avoided in 2008. There has also been some recovery in the global economy. Hence, many analysts tend to describe the current situation as a post-crisis world. There are others who argue that we are still living through the crisis, and hence it is premature to proceed on the basis that the phase of crisis management is behind us.

It is undeniable that the crisis in the financial sector has been significantly moderated, but the process of correction of the excesses of the past, especially high leverage in some advanced economies, is far from complete. In a sense, therefore, there are risks to the financial sector, though it may not be a continuing crisis situation. However, in the process of managing the financial crisis, a fiscal crisis has ensued, since excess leverage has been shifted from the balance sheets of private financial sector to the public/government sector. In particular, the current situation, in the euro area and potentially in the United States and the United

Kingdom, evidently represents a continuation or a spillover of the crisis from the financial sector. It is also clear that unemployment continues to be high in many of the advanced economies. There is a stalling of growth and employment generation in developing and emerging economies too. In a way, therefore, the fallout of the financial crisis and the consequent strain on government finances has been the economic crisis afflicting many parts of the world. Economic activity appears to be far from normal. Furthermore, in managing this combination of financial, fiscal and economic crises, another crisis situation has surfaced at the political level. As part of a political deal to manage the crisis, for instance, two Prime Ministers (of Greece and Italy) had to make way for the appointment of technocrats. Managing the political economy at a national level as a fallout of global financial crisis means facing unprecedented challenges, be it in the United States or China or India. In addition, there is widespread pressure on social cohesion in several countries. This is illustrated by spontaneous mass movements, both in advanced economies such as the United Kingdom and the euro area, and in developing economies such as parts of Asia and the Arab world. Perhaps there is more to come ahead of us due to further spill over into several social segments. These developments are in some ways a reflection of a broader rebalancing on several fronts that has been triggered by the crisis in the financial sector.

In brief, therefore, the financial crisis may be over if viewed from a narrow perspective, but from broader and longer-term perspectives, we are still living through the crisis. One important lesson from these developments is that in the conduct of macro policy, it is difficult to define the boundaries of the financial, fiscal, and monetary environments, and they cannot be treated in silos, particularly under extraordinary circumstances involving rebalancing on several fronts.

Re-regulating or rebalancing the financial sector

It may be useful to distinguish between re-regulation and the rebalancing of regulatory structures and policy regimes as a result of the broader lessons from the crisis so far. Excessive deregulation was one of the causes of the global financial crisis, but it was not a global phenomenon. Excessive deregulation of the financial sector was generally confined to the United States, the United Kingdom and other European countries. The standards of regulation even in advanced economies have not been uniform as the contrasting examples of Canada or Australia with the United States or the euro area would illustrate. It is true that excessive deregulation was a key feature of systemically important economies which had severe negative consequences for the global economy. But that does not mean that contagion itself is due to globally pervasive excessive deregulation of the financial sector. It would therefore, be unrealistic to generalise that public policy should attempt re-regulation in all jurisdictions. Moreover, several incidents that have come to light indicate considerable regulatory forbearance in the systemically important countries, that was disproportionate to the inherent weaknesses in their financial systems. It can be argued that in some cases, the issue was more of ineffective supervision than of excessive deregulation. Better supervision does not mean more regulation but striking the right balance between regulation and supervision.

Empirical studies comparing developments in Canada and the United States may shed some light in this regard. Both have close trade integration; both have open capital accounts; and both have floating exchange rates. Yet the financial sector in Canada has not been as vulnerable as in the United States. Part of the reason may lie in the macroeconomic policy environment which is instructive, but a large part may have something to do with the nature and quality of regulation and supervision.

In many developing economies, neither shadow banking nor toxic financial derivatives have been prevalent: so re-regulation may not be warranted. Many emerging market economies

may not need large-scale capital infusions in banks or changes in incentives that are now being advocated for advanced economies. But they may have certain symptoms of what may be broadly described as repression in the financial sector. The current debate often addresses the correctives needed for what may be described as excessive financialisation; but it does not specifically address the issues of managing development of the financial sector in economies that may be far from such excesses. More important, the linkages between the macroeconomic environment and the financial sector may be somewhat different in countries with under-developed financial sectors than in those with overleveraged financial sectors. Perhaps it would be appropriate for the developing countries to consider the paths of development of their financial sectors to reach the optimal level, keeping in view the lessons from the global financial crisis.

In brief, therefore, the major thrust of regulation of the financial sector may be in terms of defining the perimeter and the substance of regulation. The lessons we have learnt about the framework for financial sector regulation that is appropriate to each country point to the rebalancing of existing regulatory systems. Hence, with the task ahead being ideally described as rebalancing, some re-regulation of the financial sector may be appropriate in many advanced economies. In the effort of rebalancing in each country, the global perspectives gained from the crisis become particularly relevant in view of the contagion that was experienced.

Optimal level of financialisation

Governor Subbarao in his address indicated that a developed financial sector would serve the interests of the real sector, but that does not mean that more of the financial sector would always lead to better outcomes. He made two profound statements, and they are closely related: “Is there such a thing as a ‘socially optimal’ size for the financial sector?”, and “It is the real sector that must drive the financial sector, not the other way round”. While it may be difficult to define what is optimal, we have experienced excessive financialisation that could damage the real sector. We must strive to understand this phenomenon. Excessive financialisation is generally taken to mean excessive leverage or excessive expansion of credit through leverage, or excessive recourse to exotic derivatives. But excessive financialisation has several additional aspects that are relevant for economic analysis and policy.

First, there has been significant financialisation of commodity markets. It happened both by virtue of deregulation of the commodity markets and by virtue of the excessive liquidity that happened to be readily available. This phenomenon has arguably resulted in excessive volatility in commodity markets. In standard economic analysis, the price of a commodity is determined by the law of supply and demand. In the case of excessive financialisation, commodities become an asset class, and hence the price is determined not only by demand and supply of the commodity in the real sector but also by the demand and supply for the commodity as a financial asset. A persistent disconnect between the spot prices of commodities and the underlying demand and supply conditions – that is mainly caused by the conditions in financial markets – is evidence of financialisation of commodity markets. Persistent volatility in commodity prices, due more to commodities as an asset class than to trading could imply avoidable costs in the process of price discovery and possible distortions in the market. The correctives in public policy in regard to excessive financialisation of commodity markets extend beyond the scope of regulation of financial sector.

Secondly, there has been significant financialisation of household budgets, particularly in advanced economies. The changes in demand for houses or scooters or cars are often dependent on credit conditions, rather than on the standard assumptions about income and price elasticities of demand. Even the expected cash flows, including in particular social

security, are determined by the market value of the pension funds and other sources of social security over people's lifetimes. Not only current consumption, but also the future streams of income derived from savings are determined by the conditions of the financial market.

Thirdly, there has been financialisation of corporates. Corporates are exposed to financial markets not only through their underlying operations of producing and selling, but also through their treasury operations. Many corporations derive incomes from their treasury operations, often totally unrelated to their main business activity, and they may take significant risks on this account. Their treasury operations are not necessarily restricted to the jurisdiction of a single country, especially when they have cross-border operations. Many large corporations have built up large cash surpluses in recent years as they held back investments in the real economy. The cross-border treasury operations of corporates often fall outside the scope of regulation of the financial sector, and the impact of this phenomenon on the effectiveness of macroeconomic policy is unclear.

Fourthly, there has been excessive financialisation of the financial sector itself in many advanced economies. In other words, incentives in the form of commissions related to transactions led to multiple layers of transactions. Some innovations were like mirrors of reality; as the mirrors multiplied, the distortion of the original object became all the greater. Further, complexity was injected in regard to some of these innovations to circumvent the regulatory prescriptions on transparency or on capital adequacy, or to mislead the counterparty. The comparisons of the growth of the financial sector as a percentage of GDP, the growth of profits of financial institutions as a percentage of profits of all the corporates engaged in economic activity, the remuneration of managers in the financial sector relative to others, and the share of shadow banking systems as well as derivatives in the total activity of the financial sector, would be useful indicators of the extent of financialisation of the financial sector. Analysis of the indicators of excessive financialisation with reference to the record of economic growth and stability in the countries may be useful. The analysis could encompass advanced economies such as Canada, the United States, Sweden, Norway, Japan, Australia, and emerging market economies in Asia, in particular China and India, and Latin America. In brief, empirical evidence may be a good pointer to the excessive financialisation, and thus throw some light, at least in broader terms, on the optimal level of financialisation for each country.

Composition of financial sector, growth and stability

Governor Subbarao, who has earlier expressed himself against making banking too boring, elaborated on the issue when he said: "Is making banking boring a necessary and sufficient solution to preventing the excesses of the pre-crisis period? And what will be the cost of making banking boring?" This issue can be restated in broader terms as one of optimal composition of financial sector. It is not only the level of financialisation of an economy, but also the nature and composition of the sector that may be relevant for growth and stability. East Asia had displayed significant growth, and faced a major episode of instability in recent decades. As a result of the crisis, it changed its policies relating to financial sector. Malaysia followed one distinct model of crisis management and the others another model. Both helped Asia to come out of the crisis stronger. In the recent decades, Latin America had displayed lower growth rates than East Asia, but witnessed far higher instability than east Asia. Latin American economies are characterised by impressively liberalised financial sectors. East Asia, on the other hand, displays a strong presence of traditional banking and, in particular, a lower market share of foreign banks. China has displayed remarkable growth and impressive stability in the recent decades, and is characterised by a financial sector dominated by state ownership, significantly regulated and highly directed (by public policy). India also represents a high growth economy with stability and a financial sector which, as in the case of China, is

dominated by traditional banking and by state-owned financial institutions. Similarly, it is possible to identify several advanced economies with varying levels of growth and record of stability, emanating among other things from differing patterns of financialisation.

The diverse growth and stability experiences of different countries with quite different financial sector structures would therefore require enquiry into five related factors, viz:

(i) the macroeconomic environment in which the financial sector operates;

(ii) the share of the financial sector in total economic activity;

(iii) the composition of the financial sector in terms of banking, non banking, derivatives etc;

(iv) the framework of financial sector regulation; and

(v) the quality of supervision of the sector.

There may well be instances of over-regulation, but under-governance. Regulation and supervision can play a role in influencing the composition and the quality of the financial sector. Hence, analysis of the trade-offs between growth, stability and regulation may include considerations of the composition and quality of the financial sector – which encompasses both the conduct of the markets and the conduct of regulation, including supervision.

It is also possible that there is excessive financialisation in one segment of the economy, say the financial sector, and there may be several segments of real sector (such as agriculture and SMEs) or regions or sections of the population that are under-served by financial sector. The initiatives in regard to financial inclusion by the G20 resolutions represent the recognition of the possible dualism in the growth of the financial sector. Cross-country comparisons of the composition, coverage and penetration of the financial sector and its links with growth, stability and equity, may be valuable for understanding the desirable composition of the financial sector appropriate to each country.

Coupling or decoupling of developing and emerging market economies

There was a reference in the discussions to the validity of the decoupling hypothesis in view of the experience with the global financial crisis. It is useful to consider the evolution of this debate. Before the global financial crisis erupted, the benefits of global integration and possible downsides were highlighted. In the initial stages of the global uncertainties in 2007-08, there was a hypothesis that the developing and emerging market economies are significantly decoupled from one another despite the global integration that had taken place. The hope was that their economies would grow in a way that could compensate for loss of momentum in economic activity in the crisis-hit advanced economies. Subsequently, as a result of the contagion observed in the global economy in 2008-09, the hypothesis of contagion and coupling overtook the hypothesis of decoupling. In 2010 and 2011, with impressive recovery in the emerging economies, the decoupling hypothesis again took centre stage. More recently, the picture has been far more confusing, and in any case, a significant divergence between the emerging and developed economies in economic performance in terms of parameters such as unemployment, growth and inflation, is being observed. It is very clear that the economies are in many ways coupled; but much depends on the structure of a national economy, and the nature of its integration with the rest of the global economy. At a conceptual level, the debate reflects both the incomplete global integration of economies and the continued importance of public policy at the national level. The issue of the financial sector is more complex because externalities are more pervasive than in the goods sector. Thus, it may be useful to explore the importance of differentiating between the financial and goods sectors in assessing coupling and decoupling. The main link between international trade in goods and international finance is trade finance. The margins

for the financial sector are low in trade finance, and so are the risks. The immediate impact of any disruption in the financial sector from the advanced to developing economies occurred through trade finance. A second level of contagion is through financial flows, and this happens on account of the gross capital flows in the short run and not over an extended period. Sentiment and herd behaviour influence gross capital flows, and this is, perhaps, an important source of coupling. A third level of contagion is through the demand and supply of goods and services that determine current account balance. This is influenced by the trade linkages. For example, the impact of the global financial crisis on China was more through trade and sentiment, than through financial flows. It may be useful to analyse the coupling and decoupling in terms of the nature of contagion through different, but related channels.

An important policy issue would be the need to identify global regulatory regimes that immunise global trade finance from the vagaries of volatile financial markets. It may be useful to explore the possibility of treating trade-finance as one similar to payment system and retail banking in a country; this would argue for ring-fencing this activity from investment banking and other riskier cross-border financial activities.

Globalised financial markets and competitive efficiency

The current policy initiatives at the global level on the financial sector basically assume that global financial markets are good for achieving efficiency and stability in all countries, provided they are well regulated at the national level with a global perspective in view. The thrust of global initiatives is to provide for the harmonisation of national regulations, by prescribing minimum standards of regulation for all countries, and coordination between national regulators especially on matters relating to cross-border presence and systemically important financial institutions. Further, the financial sector and its regulation should be put in the context of the macroeconomic conditions in the country, and its functioning is subjected to what may be described as basic infrastructure for global financial markets to function efficiently in the country. It is useful to explore the state of infrastructure for global financial markets in assessing the scope for efficiency in global finance through market mechanisms.

First, the international monetary system has generally been described as a non-system. The US dollar is the dominant reserve currency. The supply of this currency is determined by the Federal Reserve, which is statutorily mandated to make such supplies available to serve the interests of the United States. If the interests of the United States coincide with that of the global system, there may be no serious problems, but that may not necessarily be the case. There have been no globally agreed rules to govern the supply of this dominant international reserve currency since the fall of the Bretton Woods system. There is no serious alternative to this currency, and thus there is no market discipline in ensuring efficiency and appropriate supply to meet the demand. There is recognition that it is a non-system, and there is a search for finding a solution to this problem. The option of a currency of another country that could replace the US dollar as the dominant international reserve currency will not solve the basic problem of the present system, namely, “my (domestic) currency, but your (global) problem”. It is possible to argue that several reserve currencies could be encouraged, but there is no system that could possibly achieve this. The SDR (Special Drawing Rights), which is a unit of accounting based on a basket of currencies, is currently being advocated. However, this may provide the benefit of diversification, but will not solve the problem of the possible inconsistency between the national goals of certain countries and the interests of global economies. In brief, global financial markets suffer from a monetary non-system.

Secondly, globalised finance would require a lender of last resort to address problems of sudden illiquidity. Such a lender of last resort should ideally have capacity to create or destroy money. More importantly, such an institution should be able to take some solvency risk since a lender of last resort has to make judgements about solvency. There is no

institution in global finance to undertake this responsibility. The IMF is some sort of a lender of last resort, but its infirmities in terms of governance, ideology, trust and reputation are recognised and under discussion. There are still no mechanisms for the orderly restructuring of sovereign debt in cases of default or potential default. The implicit assumption of the absence of credit risk in regard to sovereign debt creates a huge incentive for the financial sector to be less than a responsible lender. It is difficult to conceive efficient global markets in a system that does not have a credible monetary system and is without an effective lender of last resort.

Thirdly, the existing infrastructure for global financial markets comprises, *inter alia,* credit rating activity dominated by two entities; the accounting functions are dominated by four entities; and the dissemination of information by two news agencies. Their infirmities are also well known. The issue is whether such an infrastructure contributes to the comfort of efficiency in global financial markets.

Fourthly, it may be useful to draw a distinction between multinational banks which have subsidiaries or branches in different countries (but predominantly operate in domestic markets) and international banks which specialise in cross-border financial activities, especially influencing capital account flows, both short-term and long-term. International banks are able to operate across financial markets in different countries with significant divergence in fiscal regimes as well as regulatory regimes. They may be involved in financial flows of suspect legality in one country, though not in both countries. Because of these operations, international banks enjoy a significant influence over the political economy in several countries.

Under these circumstances, two fundamental issues arise. The first is the validity of the assumption that global financial markets have an inherent tendency to be efficient and to self-correct. The second is the compatibility of autonomy in macroeconomic policies and the autonomy of financial sector regulation at the national level with the globalisation of finance. In brief, the globalisation of finance in the context of serious market imperfections and the absence of globally enforceable rules could, by virtue of the close linkages of finance with other macro policies at the national level, limit the space available for national authorities to conduct effective macro-policies.

Financial and real sectors

Jamie Caruana has described the interactions between the financial and real sectors in a very clear-cut fashion. The analysis is essentially in the context of the cyclical nature of financial activity being reinforced by its relationship with the real sector, and the cyclical nature is equally applicable to both the borrower and the lender. From a developing country perspective, some interesting issues arise. First, the major problem for developing countries relates to the financing of the structural transformation of the economy. The critical issue is whether the deregulated financial sector is reasonably efficient in the allocation of resources for structural transformation. In many advanced economies, such structural transformation was not necessarily financed through developed financial markets. It is possible to hold that the financial markets have a tendency to focus too much on the short-term outlook, and this may drive the political economy, and also macro-policy, towards a similar time horizon. This may lower household savings.

Secondly, to the extent that the real and the financial sectors interact with each other on several fronts, the issue of synchronisation between the development of factor markets and goods markets in relation to the development of financial markets would become critical. It is possible to argue that the financial sector may exacerbate the market distortions in the real economy due to the existence of structural rigidities. A deregulated financial sector may take advantage of structural rigidities rather than inducing their corrections. This would raise the

issue of sequencing and harmonising of reforms and deregulation in the real and financial sectors.

Thirdly, Jaime Caruana has brought to attention an important aspect of external flows in the relationship between real and financial sector, “An important feature of cross-border credit flows is that they tend to exacerbate domestic credit cycles”. Since the financial markets of emerging and developing economies are not large, even modest levels of cross-border credit flows by global standards could have enormous influence on the domestic credit cycles. In this situation, the requisite policy tools both in macroeconomic terms and in terms of regulation of the financial sector may have to be multi-dimensional and have to be reasonably effective. In this light, a combination of macro-policies, prudential regulation and capital controls may be warranted. Such a management of the capital account would involve differentiation by residential status of an entity, or by denomination of currency.

Fourthly, I agree with Jaime Caruana when he says, “Sovereigns must now earn back their reputation as practically risk-free borrowers. And as history has taught us, sovereign solvency is a precondition for the central bank’s success in dealing with threats to monetary and financial stability”. The critical issues for many emerging and developing economies are that credit rating agencies heavily influence the view on sovereign solvency. The current global financial architecture as already explained shows that the odds are loaded heavily against developing and emerging market economies, though some advanced economies have been facing issues in this regard, in the recent past. In these circumstances, there is an additional burden on the part of policy makers in developing countries to assure sovereign solvency.

Fiscal and financial sector linkages

Jaime Caruana has referred to the two-way influences and said: “There is a clear and present danger of malign feedback from banks to sovereigns and from sovereigns to banks”. It may be interesting to recall that the two-way influence has often been benign: the government provided reinforcement of trust to the banks, and the banks ensured success of the government’s borrowing programmes. This cozy arrangement between the government and the banking sector worked smoothly, as long as both of them operated within the confines of a sovereign entity. This is no longer the case. In any case, the global financial crisis has brought about what may be termed the significant fiscalisation of the financial sector and the noticeable financialisation of fiscal policy.

First, traditional deposit insurance itself provided some sort of subsidy in as much as it has never been a commercially viable proposition. The recent extraordinary market interventions by monetary authorities have taken the characteristic of providing fiscal support to financial sector. The bail-out by the fiscal sector signifies a more direct subsidy to financial institutions. In some cases, capital has been injected by the government into banks, and in a few cases, banks have been nationalised. In managing the crisis and the subsequent exit policies, the boundaries between monetary and fiscal policies became unclear, and quasi-fiscal costs are not easy to compute. At the same time, there are on-going discussions in regard to the financing of direct and indirect fiscal support that had to be extended to the financial sector. This includes considering a financial sector transactions tax, including a Tobin Tax. However, there is significant opposition to these measures by national governments on the ground that the financial sector would move to other jurisdictions.

Jaime Caruana’s observations on the sovereign as ultimate risk bearer are specifically relevant for economies which do not happen to be fiscally strong but desire to deregulate the financial sector in the belief that such measures would be benign. Jaime Caruana said, “In effect, the sovereign becomes a deus ex machina, the supernatural intervention that resolves some ancient Greek tragedies”. The problem arises when the sovereign’s capacity for

supernatural intervention is constrained by globalisation which may be beneficial in many respects, but could undermine the capacity of the sovereign to tackle a crisis in the financial sector. Thus, the financialisation of fiscal policy occurs because the conduct of fiscal policy is itself dominated by the consideration of the view of the global financial markets on the sovereign's solvency and its capacity to support a financial sector in distress. The phenomenon of fiscal policies being significantly constrained by views of the financial markets is being witnessed by advanced economies. In brief, the supernatural intervention by the sovereign through fiscal measures is subject to the blessings of the credit rating agencies on the state of their solvency. This state of affairs is bound to have a bearing on the conduct of both regulation of financial sector and macroeconomic policies.

Financial sector and macroeconomic policies

It is recognised that the regulation of the financial sector should serve the broader goals of human endeavour, namely, growth, stability and equity. Public policy in general and macroeconomic policy in particular share similar objectives. Markets are considered to be efficient when subjected to appropriate regulation, and thus are ideal means of achieving these goals. Both macroeconomic policy and regulation of the financial sector have to ensure that there is an appropriate balance between the State and the market, between fiscal and financial, and between the financial and real sectors. Accountable governance arrangements are available only at a national level, and both the regulation of the financial sector and macroeconomic policy are conducted at national levels. Under these circumstances, an appropriate space for public policy at a national level in regard to both financial sector and macroeconomic policy broadly defined is essential. Public policy has to guard itself against the erosion of such policy space. Simply stated, the extent and nature of sovereignty of a sovereign in a globalised economy with globalised finance is critical in designing and implementing coordination between regulation of the financial sector and macroeconomic policies.

Summary of the discussion

In the discussion that followed Dr Reddy's speech, several issues concerning nature and direction of capital flows, persistence of global imbalances, exchange rate regimes and reserve currency choices and the political economy of macroeconomic policy framework and implementation surfaced. After some discussion, views converged on all important issues.

Exchange rate regimes and Reserve Currency

If the tendency of more and more countries adopting flexible exchange rates continues, exchange rates would get determined by economic fundamentals and countries will not have to accumulate reserves. Will this be a way of avoiding dependence on one reserve currency? This is premised upon the assumption that if there are multiple exchange rates, then there can be multiple reserve currencies and there would be no need for any single currency as a means of international payment and store of value. But, there will still be a need for a numeraire, and there are network externalities. Furthermore, there is increasing evidence that exchange rate by itself is not neutral to other macroeconomic policies, apart from the fact that some of the advanced economies themselves intervene in foreign exchange markets.

What we have ended up with is a non-system where it is perfectly legal to follow fixed exchange rates with closed capital markets or open capital markets or more flexible systems with open capital markets. But, more and more we see some hybrids of flexible rates, but influenced by periodic interventions with capital markets not being completely open. Above all, self correcting mechanism of market forces also does not work, as evident from the recent crisis. In this environment, the feature of a non-system is likely to continue for quite some more time. A universal flexible exchange rate regime by itself is not a solution.

Capital flows and Global Imbalances

One of the goals of the international monetary system is to deal with global imbalances. It is paradoxical that capital continues to flow uphill from developing economies to developed economies. Yet, there is no scope for this paradox changing in the near future. The public debt to GDP ratio of advanced economies has increased three fold to four fold while the share of GDP of the advanced economies as a share of the total global economy has declined. Public debt of the advanced countries is going to demand a large share of global capital on the demand side. Second, the age or demographic profile implies that fiscal stress will continue. On the supply side, the likelihood of savings to GDP increasing is not significant. Because of globalization, the labour force in advanced economies is worried about keeping their jobs and maintaining the same standards of living for themselves and for the next generation. So, there is no possibility of large public debt requirements of advanced countries being met without matching capital flows from the emerging markets.

Dr Sheng however viewed that the logic of the Triffin dilemma is that if the growth of the reserve currency country is slower than the rest of the world, the reserve currency country has to provide liquidity to the rest of the world and by definition the reserve currency country must run a current account deficit and the rest of the world has to finance the reserve currency country. And capital is not flowing downhill or uphill, it is nothing but the reverse side of current account deficit.

In so far as the Eurozone is concerned, it does not have economic imbalances *vis-à-vis* the rest of the world and the problem is internal to Eurozone. However, to the extent there is

moderation in economic growth in the Eurozone, it definitely will affect the rest of the world due to spillover effects.

Ring fencing Trade Finance

Trade finance has followed the restructuring of the global economy. With rapid globalization of the manufacturing process, the growth of trade in inputs has grown more rapidly than growth in trade in final products and this has driven trade credit and the underlying forces have been much more non-financial than financial. When the crisis erupted in 2008, the first to be affected was trade finance and it was an area which hurt the real sector the most. If we can regulate trade credit so that it is ring fenced in a period of crisis, it would be of benefit to all. This could be through capital account management on which there is more consensus today. Most of the living wills seem to sacrifice trade credit in the first instance and it is desirable if through regulation, ring fencing of trade credit is ensured in the same way as we accept payments systems are important for current transactions and can justify their ring fencing.

Credit Risk Assessments

The primacy given to CRAs during the crisis was a mistake. Nevertheless, the process of securitization of finance places the largest burden of credit analysis on the end investor. Therefore, what is more mysterious is the comprehensive failure of the institutional investors who had the fiduciary responsibility to their clients while investing in instruments -which they probably did not understand- only on the basis of third party recommendations. While the large investors are supposed to have their own analysis, in the case of the institutions it was a business decision to outsource this activity. But, what is more important is for regulators to review their guidance on using external rating agencies for regulatory purposes and ensure that the CRAs follow the rules of the game.

Political economy of Policy framework and implementation

How does one deal with political and financial interests while bringing about an optimal regulation of the financial sector from the real economy perspective? Both political interests and financial markets have short term views, whereas the regulators have a long term view. The financial regulators may have become somewhat independent of the political leadership, but the acceptability of the regulations to the financial markets is still vital. When interests converge there is no problem; but, when they diverge there is a problem. In the final analysis, the regulatory instruments act as a constraint on the regulated institutions and markets. Occupy Wall Street is a sign of the people's spontaneous reaction to the way the financial markets function and their nexus with politics.

The political interference on specific regulatory decisions is varied. By and large, the desire is that there should be no political interference on regulatory decisions, in the short term. But, from a longer term perspective, regulation reflects the political thrust at any point of time.

Opening remarks

Dr Andrew Sheng

I feel honored to be present here and chair this important session. The opening speeches by Governor Subbarao and Mr Caruana have given excellent overviews of the key issues on regulation in the face of the challenges of growth and equity. Before we turn to Deputy Governor Anand Sinha[1], who has written an excellent paper on regulatory implications for growth, let me present some broad related issues as I see them.

Is finance helpful to growth and is it helpful to equity? First, the problem is that standard finance theory has been turned on its head. The orthodoxy is that finance is initially helpful to growth, but as Governor Subbarao rightly pointed out, there could be issues about how much or to what extent finance can support growth. Perhaps, finance can go too far in terms of leverage, which can indeed hurt growth if it becomes a generator of speculative bubbles, instead of a facilitator of stable growth.

Moreover, the question whether finance helps social equity is very debatable. The Chairman of the United Kingdom FSA, Lord Adair Turner, has written an excellent paper recently on credit growth and social optimality[2]. I think it is a worth reading by all of us. The paper argues that finance cannot grow forever, and especially it cannot grow by leveraging. But, we have now turned the whole finance theory on its head. This is because all economic theory and finance theory start from the assumption of normality. But we are not living in the normal world. We have prices that are totally distorted all over the place. What is the price of capital? It is zero or near zero because of quantitative easing and zero interest rate policies in the advanced markets. What is the price of labour? It is very cheap because of huge supply of young mobile labour force from the emerging markets. What is the price of commodities? They are highly volatile because of speculation.

We are therefore living in the world of massive price distortions. But these distortions have an equity element. What do I mean by this? If the growth in wage rate is lower than the real growth rate, which is happening in many parts of the world, that means workers are subsidizing the rest of the economy. That is exactly what has happened since 1989, when 3 billion workers joined the global labour force. The world had suffered a massive wage shock whereby wage rates have been kept way below real growth rate of the world. So, in a sense, the poorer workers of the world are subsidizing the better off countries.

Secondly, as we all know from finance theory, if the deposit rate is lower than the real growth rate, then there is financial repression. Since currently, global interest rates are near zero, there is massive financial repression. This financial repression means that the savings of the poor people are again financing the over borrowing of the rich. The combination of "wage repression" and financial repression is the underlying reason for growing income and wealth inequity around the world.

The third question that we are debating hotly in the emerging markets today is what is the biggest source of profit margin for banks? Today, it is no longer from the banks operating the payment system. Actually, increasingly profits from banks are from wealth management or from private banking – managing the wealth of the affluent customers. Instead of actually

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1 Anand Sinha, "Financial Sector Regulation and Implications for Growth in the Post-Crisis World", CAPRAL November 15-16, 2011

2 Adair Turner, Speech at Southampton University, 29 September 2011, available at fsa.gov.uk

adding value for the customer, in many parts of the world – even in sophisticated markets like Hong Kong – certainly we have heard about the investors who bought Lehman Brothers bonds and lost almost most of their money when Lehmans failed. These bonds were rated to be very very good. So, even middle class and poor people are now asking whether the banking sector is looking after their interests or not?

There is a risk that finance today has become not only an engine of speculation that can hurt investors, but because of incipient inflation, access to borrowing creates inequality. Governor Subbarao's view on financial inclusion suggests that besides many people not having access to financial services for savings and transaction services, they do not have access to borrowing too. The latter effectively means that people who are not even able to borrow are subsidizing those who are readily able to borrow. In effect, those who are able to over borrow have greater wealth and leverage opportunities than those who do not have access to financing in a period of inflation and therefore wealth and income is getting more and more concentrated.

Furthermore, finance today is knowledge centric and those people who have superior knowledge have a huge advantage over those who do not have knowledge about finance. Consequently, the whole financial system is at present designed to be concentrating income and wealth, not flattening and that is an issue that I think we need to deal with in order to achieve social stability.

Let me now try to relate the current financial crisis with the real world as I see it. Since I have left the official sector – although I remain an advisor to the China Banking Regulatory Commission – I have become more aware of the impact of finance on the real sector. I look at this crisis with amazement. In 2008, when Lehman Brothers failed, trade stopped. What we care most about today is trade and jobs. Jobs are destroyed in the real economy when trade stops. When Lehman Brothers, which had nothing to do with trade – it is not even a trade bank – failed, the whole trade finance almost crunched to a stop. After three years of reform, have we ring-fenced trade financing from another possible incidence like Lehman Brothers? And can anybody swear to me that another incidence like Lehman Brothers will not happen? In fact, counterparty risks between the major banks are now bad, which is causing contraction of credit in the European markets. To deal with institutional failure, the current trend is to ask the financial institutions to have a living will. It is my understanding that if you look at the living will of many banks, you will note that the first thing that they will cut in the event that they are failing is trade finance. This is because trade finance is highly short-term – usually 30 or 90 day credit – and self-liquidating. But if trade financing is not obtainable, trade cannot continue and jobs will be destroyed. So, we have solved the problems of finance industry, but we have not solved the problems of trade and the real sector.

In the post-crisis reforms, I congratulate the Basel Committee for sorting out some of the issues of capital adequacy and liquidity requirements. But the banking system worldwide is struggling with provision of credit to the SMEs. We all understand that SME financing has high risk, high cost and even though the bulk of SME funding is short-term, the most important credit is revolving credit over the long term. If I were a banker, I would be the last to lend to the SMEs, why? This is because if a bank is provided central banking funds at zero interest cost, its first preference is to buy long term government sovereign bonds. The more it owns government sovereign credit, the more the profit from the maturity mismatch, positive carry with almost zero credit risk. If I lend to SMEs, everybody knows that a minimum of 10% would be non-performing loans. If the whole economy worsens, it could be even 20%, 30%, or 40%. So, why should I venture lending to such sector? These issues are totally dynamic and interrelated to each other. We know that access to credit is crucial for the real sector to survive. But during the cyclical downturn, it is the poor people who have difficulty in accessing credit. Consequently, are we surprised that in China and other places, the kerb market and the shadow banking in the emerging markets is growing. If the SMEs have difficulty getting money from the formal financial sector, it will try to get funding from the

informal markets at very high interest rates, putting these SMEs in a vicious circle. Thus, if the formal sector is not going to respond positively to the demand for credit from the real sector and channel credit to what Professor Richard Werner calls credit that do not generate GDP growth, then we will confront looming problems of disconnect between finance and the real sector.

Finally, let me address the demand for infrastructure investment. In advanced markets where infrastructure is readily available, there is ample understanding that infrastructure investment is crucial for their growth. But, in emerging markets infrastructure investments for many of the poor areas is absolutely critical to the solution of poverty. This is the real problem that I have learnt based on my experience in China. Banks have a tendency to overlend to infrastructure because they have a collective problem of the fallacy of composition. No single bank knows that the highways, the airports and water works that they are financing are not going to be credit worthy. If every local authority embarks on similar projects, the collective whole may be a huge oversupply. Neither the local authority, the bank or even the financial regulator knows the collective picture. This may have been available under central planning, but there is a lack of system-wide information that creates the fallacy of composition.

The whole idea of imperfect information in these areas of credit management for the banking system as a whole is very difficult, where we have not paid too much attention. The recent trend towards macro-prudential regulation and supervision requires banks, financial regulators and central banks to pay attention to system-wide information and carefully assess pro-cyclical herd behaviour. Bank management incentives for banks to become larger through scale and also one-stop customer supermarkets have led EMEs banks to want to replicate Citibank, whereas the emerging market investment banks want to replicate Goldman Sachs. And hence they concentrated on consumer financing which are considered to be low risk and tended to ignore the more difficult areas of SME and long term infrastructure financing that is crucial for growth, stability and inclusivity.

Look at what is happening with the core bank businesses of payment systems, savings protection and wealth management. The payment mechanism function has now being commoditized and cannibalized. Banking is facing new sources of competition because technology is switching payment systems into mobile phones. To make small payments, you don't need a bank anymore; you don't need high branch costs and more paper trail, because mobile payments are so convenient and easy, provided the data security problems can be resolved. Consequently, if banks are not careful, they cannot make money in the payment area and they will face concentrate on the activity of wealth management for their clients, where they can make money from transaction, custody and advisory fees. But, look at what is happening recently in the area of retail customer wealth management. The banks have taken lot of high intermediation fees upfront by selling complex and high-risk products that may not be suitable (in terms of risk profile) to retail customers and then the consumers and investors have found that they have lost money. This is hugely damaging to the faith and trust in the banking system. Here, I am generalizing for both advanced markets and emerging markets. Even the sophisticated middle class investors have begun to question whether the banking system is meeting their needs or not. The fundamental question that Governor Subbarao has asked is completely valid. The banks need to revamp their controls and systems and the incentives, particularly to ensure that the conflicts of interest are not at the expense of the consumers.

We now move on to the impact of Basel III on growth, and here I want to give my personal views. I totally agree that Basel III has made tremendous progress. I think the Basel III rules are very relevant for advanced markets. The emerging markets has not objected to Basel III because it was recognized that they were not that badly affected by the crisis in the advanced markets. However, in the post crisis scenario, the emerging markets realize now that it is the time to rethink. I agree with Mr Caruana that it is not yet exactly the post crisis period. But, we may be in the middle of a turning point. What we really need to think through is to what extent the banking rules should fit more in with emerging markets conditions *per*

se. I am not saying that the whole set of Basel III rules is not vital. All I am saying is that the key lies in implementation. This is a really difficult issue.

We need to come back to the very fundamental rules of regulation which I think are absolutely important. For regulation to be effective, it has to be easy to understand, easy to implement and easy to use. But, if it is too complicated, people do not get it in the sense that they do not understand the core principles involved. In fact, if it is too complicated, it could lead to regulatory arbitrage, which is exactly what is happening. Consequently, to a large extent, my personal view is whether it would be possible to evolve a set of Basel III rules that are very much like that of IFRS, the International Financial Reporting Standards which has been simplified for SME usage. In short, whether we could use a more simplified set of Basel III for emerging markets that fit in more with ground conditions of less advanced EME markets.

Emerging markets do not have too much skilled bankers, regulators and central bankers to implement very complex rules. They need to prioritize and devote attention to the most important areas of reform that fit in with local conditions. The more complex the fit, the more likely that implementation will go wrong.

I have focused on implementation because I am practical. It is better to get a simple system better regulated, than a complex system that is half implemented with incomplete understanding by bankers and regulators alike. We need to focus on the most important and urgent problems first, because resources are scarce and the political will to do some hard reforms is never going to be easy.

I am offering these thoughts on the topic of regulation, growth and equity in a constructive manner to stimulate more debate on these important issues.

Thank you.

Financial Sector Regulation and Implications for Growth

Anand Sinha[1]

Abstract

Growth with equity is the foremost objective in all economies in the world today, especially in the emerging market economies (EMEs), where the poor still make up a sizeable proportion of the population. To ensure growth and development with equity, financial sector policies are expected to be tuned to sub-serve these broad objectives. Though there is no unanimity among economists, including Nobel laureates, on the relevance of finance for growth, the crisis has provided ample evidence that a stable financial system will have a positive impact on both growth and equity and an unstable one will harm both these economic objectives. There could, however, be conflicts in the short and medium term between the objective of financial stability on the one hand, and growth and equity on the other hand. But there cannot be any dispute that in the long term all three objectives are simultaneously achievable. This paper highlights the interaction between prudential and other financial sector and macroeconomic policies and goes on to review financial sector regulation in the pre-crisis, mid-crisis and post-crisis periods, with a special focus on issues specific to the EMEs in the implementation of Basel II and III. The paper argues that even though the EMEs find implementing the Basel capital regulations a major challenge, in the long run following these standards will contribute to strengthening their banking systems. The paper also emphasises that some aspects of regulation can be oriented towards achieving the development objectives of EMEs without necessarily sacrificing prudent regulation and financial stability considerations, and that EMEs can supplement their development objectives with other well designed financial sector policies.

JEL classification: E58, G21, G28

Keywords: Bank regulation, Basel II, Basel III, economic development

Introduction

Growth with equity is the foremost objective in all economies in the world, especially in the emerging market economies (EMES),[2] where the poor still comprise a sizeable proportion of the population. Since governments are concerned about the poor being left out of the development process, they tend to focus on ensuring that public policies promote inclusiveness and equity. In addition, it is common for governments to emphasise certain activities/sectors from the perspective of development. Consistent with such an approach towards growth and development, financial sector policies are also tuned to subserve the broad objective of ensuring growth with equity.

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[1] Paper presented by Anand Sinha, Deputy Governor, Reserve Bank of India, at the CAFRAL-BIS International Conference on Financial Sector Regulation for Growth, Equity and Financial Stability in the post-crisis world, Mumbai, 15–16 November 2011. Rajinder Kumar and Sarat Chandra Dhal are the co-authors of this paper.

[2] In this paper, the terms "emerging market economies" and "developing countries/economies" are used interchangeably.

However, there is no unanimity on the relevance of financial sector in promoting growth. Eminent economists, including Nobel laureates, have sharply disagreed on this issue, with views ranging from the total irrelevance of finance to Nobel laureate Merton Miller's remark that asserting that financial markets contribute to economic growth was a proposition too obvious for serious discussion. There is a more restrained conclusion, too, which rejects the idea that the finance-growth nexus can be safely ignored without substantially limiting our understanding of growth. Nevertheless, the evidence from the current crisis should irrefutably establish that a well functioning financial system has a central role to play in the growth and development of an economy.

Failure of regulation is widely accepted as one of the main causes of the current crisis. Reform of regulations, covering more dimensions than in the past and with much greater intensity of supervision and oversight by international bodies, has therefore come to occupy centre stage for ensuring the well functioning financial system that is so vital for economic growth. The new regulations embodied in Basel III have much more onerous requirements, particularly in terms of capital and liquidity, than hitherto. These rapidly evolving global standards have received support from all quarters, including EMEs.

Nevertheless, some disquiet is expressed in certain quarters about the relevance of these reforms in their entirety to the EMEs and the likely impact on their growth prospects. The argument goes like this: The post-crisis reforms are driven by the need to fix what went wrong in the advanced economies and, inevitably, there will be a price to pay in terms of growth forgone in ensuring a more stable and resilient financial system. Applying these regulations uniformly may have different implications for EMEs given the different stages of their financial sector development and varied macroeconomic circumstances. More specifically, the concerns raised are: (a) whether these regulations need to be applied in their entirety to EMEs whose financial systems hardly have the features of the financial systems in the advanced economies which led to the crisis, and (b) that the attendant slowdown in growth in EMEs may be a disproportionate price to pay given that these are structurally transforming economies where poverty and inequity alleviation are extremely vital, much more than for advanced economies. For the regulatory reforms to be efficient without hampering a future economic recovery, therefore, policymakers are urged to assess their impact on crucial drivers of economic growth like trade finance, long-term financing and credit availability to small and medium-sized enterprises (SMEs), to adapt the regulations where necessary to mitigate their negative impact, and to take additional measures to promote economic growth.

The above concerns can be paraphrased as follows:

- Will the new regulatory approaches and measures impinge upon, and run counter to, the growth objective?
- Has overall post-crisis regulation altered the balance in favour of stability rather than growth, to the disadvantage of EMEs?
- What would the impact of increased capital and liquidity requirements be on the flow of credit to the commercial sector in general and to the trade, SME and infrastructure sectors in particular?
- What can EMEs expect to gain from Basel III? Are Basel III and other post-crisis regulations really relevant for them when they did not experience or contribute to the recent financial market turmoil in the developed economies?

This paper is essentially a position paper and reviews the regulatory philosophy in relation to growth and development in the pre-crisis, mid-crisis and post-crisis periods, with a focus on EMEs, as a backdrop to discussing the issues concerning EMEs outlined above.

The rest of the paper is organised in four sections. Section 1 highlights interaction among prudential and other financial sector and macroeconomic policies. Section 2 provides a review of pre-, mid- and post-crisis policies. Section 3 deals with issues specific to EMEs in the implementation of Basel norms. Section 4 analyses current economic situation in EMEs and contains concluding remarks from an EME perspective.

1 Interaction among prudential and other financial sector and macroeconomic policies

Financial sector policies can be broadly classified into the following categories:

- Prudential policies to ensure safety and soundness of the financial system (financial stability)
- Regulatory and supervisory policies
- Depositor and consumer protection policies
- Financial inclusion policies
- Other policies for ensuring an adequate supply of credit to economically important sectors such as SMEs, infrastructure etc
- Market structure and competition

1.1 Objectives of prudential policies

Prudential policies comprise macroprudential and microprudential policies. The objective of macroprudential policies is to detect and prevent the build-up of vulnerabilities in the financial system as a whole which may culminate in systemic risk. Microprudential policies are focused on ensuring the safety and soundness of individual financial institutions. Together, macro- and microprudential policies aim to ensure the stability of the financial system, aiding it in efficiently allocating resources to the real economy.

The Basel II capital regulations, risk management standards and other prudential standards such as those related to provisioning, asset classification and large exposure norms form the basis of microprudential regulation. Several features of Basel III considerably enhance the microprudential regulations and would contribute to making individual banks/banking groups much safer. However, the novel feature of Basel III is the recognition of the need to address systemic risk, which it does through macroprudential policies.

1.2 Interaction between prudential policies and other financial sector policies

However, while financial stability is a necessary condition to achieve other objectives of financial sector policies as well as growth and macroeconomic stability, it is not a sufficient condition to attain these objectives. While prudential policies (Basel II, Basel II.5, Basel III and the Core Principles for Effective Banking Supervision) can, by delivering financial stability, facilitate growth and other objectives of financial sector policies, other policies will have to be implemented to balance numerous considerations such as growth imperatives, the flow of credit to disadvantaged and preferred sectors, consumer protection, financial inclusion and equity etc. At times, it becomes extremely challenging to balance these considerations and, if adequate care is not taken, other financial sector policies may impact financial stability negatively. For instance, allowing excessive credit growth to feed GDP growth without keeping a tab on the build-up of systemic risk in segments of the economy may have serious consequences for financial stability. A loose monetary policy for an extended period may result in substantial financial sector imbalances, as was the case in run-up to the current crisis. Flawed financial inclusion policies may not only increase the indebtedness of households without raising their standards of living, they may even destabilise the banking system or part of it. The subprime crisis is one example of a seriously flawed financial inclusion and consumer protection policy. Similarly, increased dependence on a few large financial institutions for financial services may lead to moral hazard issues – the “too-big-to-fail” syndrome. Therefore, it is important that a set of sound financial sector policies (including prudential policies) be followed to deliver the various objectives – growth with equity against the backdrop of financial stability.

1.3 Managing conflicts between prudential and other financial sector policies in the short to medium term

In the short to medium term, there could be conflicts between prudential and other financial sector policies. Some of the apprehensions in the context of EMEs are that (i) the liquidity and much higher capital requirements under Basel III would adversely affect growth (a major concern for EMEs); (ii) the

additional risk sensitivity of Basel II would slow down credit flows to SMEs, a sector which even otherwise is unattractive to banks; (iii) the proposed Net Stable Funding Ratio (NSFR) would raise the cost of infrastructure financing; and (iv) adhering to single/group exposure norms would seriously hamper infrastructure financing in countries like India. It therefore becomes important to manage these conflicts. In such situations prudential policies could be made accommodative without compromising financial stability objectives. For instance, an extended period for Basel III implementation and recent amendments to Basel II trade finance rules (waiver of the one-year maturity floor under the AIRB for short-term letters of credit and waiver of the sovereign floor for claims ie short-term letters of credit on banks using the standardised method for credit risk) are cases in point.

Where prudential policies cannot accommodate the conflicts, other supportive policies need to be applied. For instance, a slowdown in growth due to higher capital requirements, in normal periods, can be cushioned by monetary policy; SME and infrastructure financing can be facilitated by guarantee schemes and other measures.

2 Financial sector regulation in the pre-, mid- and post-crisis world

2.1 Regulation in developed countries

During the period preceding the crisis, financial sector regulation in the developed countries was characterised by progressive deregulation of various aspects of the functioning of financial firms under the assumption of market efficiency. Dimensions of deregulation included removal of overall policy constraints on banks' ability to perform their core functions; encouraging universal banking; permitting non-bank financial entities to undertake financial intermediation; placing greater emphasis on financial markets to allocate resources; and increased integration of financial markets. The financial innovation in areas such as structured finance and derivatives was encouraged through minimal use of intrusive regulatory policies, consistent with the philosophy that regulation generally stifles innovation. This policy did reduce costs and enhanced efficiency in several areas, and the overall impact of such regulatory policies was assessed to be unarguably positive until the eruption of the global financial crisis.

Another important feature of financial regulation in the developed countries was an almost exclusive focus on institution-specific regulation and almost complete absence of macroprudential regulation despite the increase in the size and complexity of activities of large banks, banks' exposure to lightly regulated or unregulated activities, and growing leverage and interconnectedness of banks and other financial entities. The Geithner Report[3] noted that in the United States no regulator saw its job as protecting the economy and financial system as a whole. Existing approaches to bank holding company regulation focused on protecting the subsidiary bank, not on comprehensive regulation of the whole firm. Investment banks were permitted to opt for a different regime under a different regulator, and in doing so escaped adequate constraints on leverage. Other firms, such as AIG, owned insured depositories but escaped the strictures of serious holding company regulation because the depositories that they owned were technically not "banks" under relevant law. All these features resulted in inadequate and lax regulations which contributed to the crisis.

2.2 Regulation in EMEs

During the past two decades many developing countries have liberalised their financial markets and introduced sound policies to strengthen the stability of the their financial systems. The stimulus for these reforms in many cases was provided by the financial crises which had occurred in the 1980s and 1990s or formed part of broader programmes of financial sector reforms funded by loans from the World Bank or other multilateral agencies. Conditionalities related to bank regulation and supervision were a prominent feature of World Bank financial sector adjustment loans. Prudential reforms,

[3] "Financial Regulatory Reform, A New Foundation: Rebuilding Financial Supervision and Regulation", US Department of the Treasury, June 2009.

generally modelled on the pattern of the United States or European countries, have been adopted by most of the developing countries. Basel capital regulations and other risk management guidelines are yet another important force behind the regulatory and supervisory improvements implemented in the developing countries. Thus the strengthening of the financial system and prudential regulation and supervision combined with the adoption of sound macroeconomic policies and a limited shadow banking system greatly helped to cushion the impact of the crisis. Another remarkable feature was that, unlike the advanced economies, many EMEs employed macroprudential tools which helped to contain the build-up of systemic risk and increase the resilience of their financial systems.

2.2.1 India's position

In recognition of the critical role of the financial sector, structural reforms in the financial system were introduced in India in the early 1990s. In the post-reform period, the focus of the regulatory and supervisory policies of the Reserve Bank of India (RBI) was to strengthen the Indian banking system in terms of capital adequacy, asset quality and risk management practices. The development of financial markets and gradual and calibrated introduction of new financial products also received significant attention under RBI's regulatory policies. A notable feature was that RBI had prescribed sound liquidity regulations along with capital regulations and had extensively used countercyclical prudential policies. At the time of crisis, the banking system was well capitalised and did not have significant exposure to toxic assets or the shadow banking system.

Table 1

Countercyclical prudential regulation: variation in risk weights and provisioning

	Capital market		Housing		Other retail		Commercial real estate		Non-deposit taking systemically important non-financial companies	
Date	Risk weight	Provisions (%)	Risk weight	Provisions (%)	Risk weight	Provisions (%)	Risk weight	Provisions (%)	Risk weight	Provisions (%)
Dec 04	100	0.25	75	0.25	125	0.25	100	0.25	100	0.25
July 05	125	0.25	75	0.25	125	0.25	125	0.25	100	0.25
Nov 05	125	0.40	75	0.40	125	0.40	125	0.40	100	0.40
May 06	125	1.00	75	1.00	125	1.00	150	1.00	100	0.40
Jan 07	125	2.00	75	1.00	125	2.00	150	2.00	125	2.00
May 07	125	2.00	50–75	1.00	125	2.00	150	2.00	125	2.00
May 08	125	2.00	50–100	1.00	125	2.00	150	2.00	125	2.00
Nov 08	125	0.40	50–100	0.40	125	0.40	100	0.40	100	0.40
Nov 09	125	0.40	50–100	0.40	125	0.40	100	1.00	100	0.40
Dec 10	125	0.40	50–125[1]	0.40–2.00[2]	125	0.40	100	1.00	100	0.40

[1] The provisioning requirement for housing loans with teaser interest rates was increased to 2.0% in December 2010. It remains at 2% till one year after reset of the interest rate to a higher rate and thereafter is 0.4%. For other housing loans the provisioning requirement remains at 0.4%. [2] The risk weights for housing loans vary according to the amount of the loan and the loan-to-value (LTV) ratio as below.

Loan amount	LTV ratio (cap of 80% for loans above ₹ 2 million and 90% for loans up to ₹ 2 million)	Risk weight (%)
Up to ₹ 3 million	≤75%	50
	>75%	100
₹ 3 million to below ₹ 7.5 million	≤75%	75
	>75%	100
₹ 7.5 million and above		125

Source: Reserve Bank of India.

Table 2

Coordination between monetary and prudential policies

	Monetary tightening phase (September 2004–August 2008)	Monetary easing phase (October 2008–April 2009)	Monetary tightening phase (October 2009 to date)
Monetary measures			
Repo rate	300	–425	250
Reserve repo rate	125	–275	300
Cash reserve ratio	450	7400	100
Provisioning norms			
Capital market exposures	175	–160	0
Housing loans	75	–60	160[1]
Retail loans other than housing loans	175	–160	0
Commercial real estate loans	175	–160	60
Non-deposit taking systemically important non-financial companies	175	–160	0
Risk weights			
Capital market exposures	25	0	0
Housing loans	–25 to 25[2]	0	0–25[3]
Retail loans other than housing loans	25	0	0
Commercial real estate loans	50	–50	0
Non-deposit taking systemically important non-financial companies	25	–25	0

[1] The provisioning requirement for housing loans with teaser interest rates was increased to 2.0% in December 2010. [2] Risk weights on housing loans of relatively smaller size classified as priority sector was reduced from 75% to 50% in May 2007, which was not a countercyclical measure but rather an attempt to align the risk weights on secured mortgages with the provisions of Basel II, which was to be implemented with effect from March 2008. On the larger loans and those with a LTV ratio exceeding 75% the risk weight was increased from 75% to 100%. [3] The risk weight on loans above ₹ 7.5 million was increased to 125%.

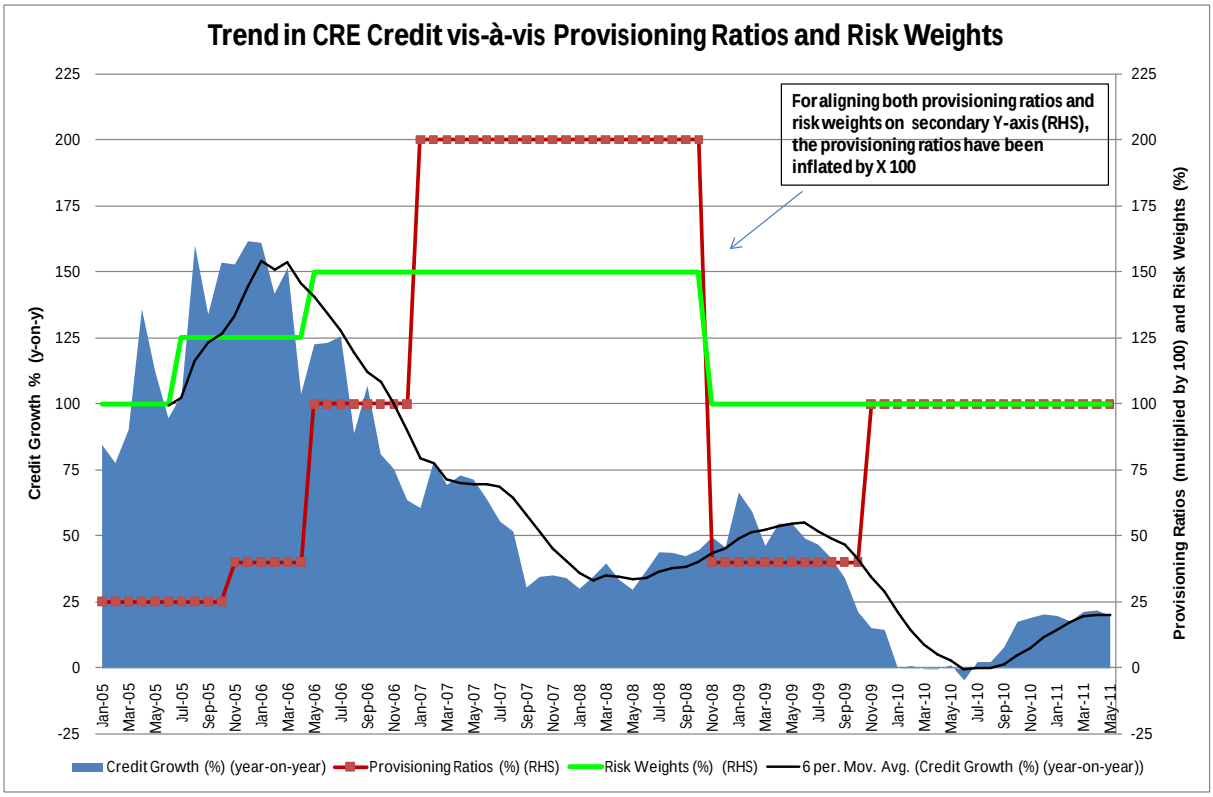
Source: Reserve Bank of India.

RBI started following macroprudential policies to address procyclicality and interconnectedness issues much earlier. The countercyclical policies consisting of time-varying countercyclical capital and provisioning policies were implemented from 2004 onwards when the credit growth in certain sectors such as commercial real estate, personal loans and the non-banking financial sector started rising significantly on the back of large credit growth and 9% plus growth in the three years preceding the crisis. These policies focused on banks due to their centrality and criticality in the Indian financial system. They operated in close coordination and in synch with monetary policies. Tables 1 and 2 indicate the time-varying risk weights and provisions for certain segments and the movement in monetary measures and the countercyclical prudential norms respectively during both boom and downturn.

Chart 1 below illustrates the moderation of the credit cycle for commercial real estate (CRE) in response to the tightening of capital and provisioning requirements.

Chart 1

Impact of macroprudential policies on CRE credit



Source: Reserve Bank of India.

In brief, RBI's methodology and experience in operating countercyclical policies during the period 2004–08 and the subsequent downturn are as follows:

(i) The view regarding the implementation of countercyclical policies was based on tracking of various indicators in the economy, notably general credit growth and sectoral credit growth. This was complemented with market intelligence and some feedback from the Annual Financial Inspections of banks. No detailed statistical analysis or modelling was used. The decisions were judgmental based on constant monitoring of the macroeconomy and were not rule-based.

(ii) RBI, being the monetary authority as well as the regulator and supervisor of banks, non-banking financial companies and important segments of markets, ie the forex, government securities and money markets, had the necessary information and overall view of the risks building up in the system. It was, therefore, well placed to operate countercyclical policies.

(iii) Monetary policy and the countercyclical policy were in the same direction (Table 2). Such a coordinated response was facilitated due to RBI's wide regulatory ambit. If policies are not well coordinated, the costs of implementing such policies may be high.

(iv) It was important to deal with sectoral exuberance through countercyclical policies even as monetary policy, while dealing with the inflation scenario, dealt with generalised exuberance. The interest rate alone, being a blunt instrument, would not have been able to handle the sectoral exuberance, or else the cost to the economy would have been higher.

(v) A combination of risk weights and provisioning requirements for standard assets were used as countercyclical policies. It would appear, however, that varying the provisioning requirements may have been more effective than varying risk weights in moderating credit flow to the specific sectors. This is because, since the average capital adequacy ratio of banks operating in India has been well above 12% for many years (as of December 2010, it was above 14%), risk weights may not always be effective in dampening the growth of credit as banks can continue to finance riskier sectors yielding higher returns by allowing their capital adequacy ratios to fall by a few basis points while still remaining well above the regulatory requirements. To the extent higher risk weights translate into an increase in interest rates, demand for credit may come down. On the other hand, varying provisioning requirements would be potentially more effective as it would impact the profit and loss account, to which banks are more sensitive.

(vi) It would, however, be premature to draw any conclusion with finality about the relative effectiveness of various macroprudential tools. For example, while the countercyclical provisioning policy did seem to work in moderating the credit boom in commercial real estate in India, it is generally acknowledged that dynamic provisioning, which was pioneered by Spain, could not contain the housing sector boom in Spain though it did increase the resilience of the banking sector, which enabled Spanish banks to withstand the financial crisis better than banks in other advanced economies. Today, the choice of instruments for countercyclical policies and their relative effectiveness, as also the interaction of these policies with other policies, particularly monetary policy, is a major area of research.

(vii) The countercyclical policies were able to dampen exuberant credit growth in the targeted sectors. However, their effect was asymmetrical during the downturn. Despite aggressive easing of monetary policy and prudential measures in a countercyclical fashion, the credit supply did not increase adequately. Credit growth slowed down substantially due to, among other things, subdued credit demand and risk aversion among banks.

(viii) Since the monetary policy and countercyclical policies have operated in tandem, it is difficult to isolate the effect of countercyclical policies from that of monetary policy.

Reserve Bank of India had also taken a number of measures to address systemic risks arising out of interconnectedness among banks, between banks and non-banks, and from common exposures. These included the following:

- prudential limits on aggregate interbank liabilities and cross-holdings;
- restrictions on exposures to complex activities and products;
- monitoring of financial conglomerates;
- monitoring of common exposures (sensitive sectors);
- enhancing transparency and risk mitigation in OTC transactions through trade repositories and CCPs;
- strengthening the regulatory and supervisory framework for non-banking financial entities.

During the pre-crisis period, Indian banks experienced strong balance sheet growth in an environment of operational flexibility. The financial health of banks improved significantly, in terms of both capital adequacy and asset quality. Financial markets became well integrated. Banks and other financial institutions have undeniably been major partners in supporting the impressive growth rates posted by the Indian economy in the post-reform period.

2.3 Regulation in developed countries during the crisis

While the United States was the epicentre of the crisis, many other advanced economies – mainly in Europe – were also drawn into it. As soon as the gravity of the crisis and its causes started becoming apparent, measures were initiated both to contain its impact and to address the major gaps in regulation and supervision of the financial sector that lay behind it. The first set of measures comprised steep cuts in policy rates and provision of adequate liquidity to distressed financial institutions, immediate capitalisation of viable institutions, orderly resolution of non-viable entities to minimise loss to the banks' depositors, and ensuring adequate credit to the commercial and household sector during the recession. The second set of reforms constituted a massive agenda for financial sector reforms under the aegis of G20, which have been in the process of implementation for the last two years to ensure the long-term stability of financial systems around the world.

The crisis tested the strength and usefulness of various policy instruments. It became clear that if the crisis is a crisis of confidence, only the lender of the last resort can salvage the situation. The role, appropriateness and extent of disclosures required of distressed financial institutions during the crisis also became important. The Federal Reserve and other central banks expanded eligible collateral beyond sovereign securities and also expanded eligible counterparties for central bank operations.

The crisis pushed the United States and many other advanced economies into recession and measures had to be taken to ensure that the financial sector continued to provide the necessary support to help the real sector come out of recession at the earliest opportunity. The financial sector policies were expected to complement the massive fiscal package introduced by governments in these countries.

2.3.1 Measures taken to assist SMEs in OECD countries

SMEs are generally hit hardest during financial crises, because in the normal course of events they are also perceived by banks as the riskiest corporate borrowers. Considering their importance for the economy, particularly in terms of employment generation and export potential, special measures were taken to ensure that their financial position was not irreparably damaged due to the crisis.

Many OECD countries put in place anti-crisis packages to assist SMEs, combining, in different proportions, the following lines of action:

- *stimulation of demand* (consumption packages, infrastructure programmes, tax policies);
- *credit enhancement* measures, including *recapitalisation of banks* which, in some cases, included explicit provisions or mechanisms to preserve or enhance banks' capacity for financing SMEs such as public credit guarantees, insurance, factoring for receivables and better payment discipline by governments;
- *labour market measures* (reduced employment taxes or social security charges and extended temporary unemployment programmes); and
- measures aimed at helping SMEs to maintain their investment level and more generally their capacity to respond in the near future to a possible surge in demand through investment grants and credits, accelerated depreciation, and financing of research and development.

In Japan, the government reduced the corporate tax rate from 22% to 18% for SMEs with ¥8 million (€61 thousand) or less in annual income in the coming two years. In the Netherlands one of the tax brackets was reduced from 23% to 20% for both 2009 and 2010 for amounts up to €200,000. Canada increased the income threshold for which the small business rate applies. The Czech Republic, France and Spain refunded VAT payments.

Some governments undertook moves to shorten payment delays for public procurement (Australia, France, Hungary, Italy, the Netherlands, New Zealand and the United Kingdom) and enforce payment discipline (France). The European Commission suggested that public authorities should pay their bills within 30 days. In parallel, the Commission committed itself to speed up payment for goods and services so to fully respect the targets for paying bills. In the United Kingdom, the government cut payment times to 10 days. Governments also eased tendering and procurement procedures and policies (Australia, France, the Netherlands, New Zealand and the United Kingdom). Lastly, in order to maintain employment, some governments gave wage subsidies to enterprises so that employees could receive full wages while working part time.

Extension of loans and loan guarantees was a widely used policy measure to increase the access to finance. In some countries, governments found the response of the newly recapitalised banks to the needs of SMEs unsatisfactory or insufficient even though guarantees were available. These countries resorted to discipline measures that in some cases complemented the incentives, in order to pressurise banks to continue lending to enterprises. Belgium and France appointed a "credit mediator", who at regional and central levels could intervene to ease difficulties and help enterprises obtain bank funding. The United States chose to strictly monitor, on a monthly basis, the credit activities of banks that had been rescued by public funding. Furthermore, it requires all banks to report on a quarterly basis. Ireland enacted a legally binding code of conduct on SME bank lending. The Belgian Ministry for SMEs gave pre-fund agreements directly to SMEs which could be taken to the banks to obtain guaranteed loans.

2.4 Regulatory response of emerging market economies

2.4.1 Macroeconomic situation of EMEs at the onset of the crisis

As a result of various reform measures, especially the financial sector reforms, most countries in Asia-Pacific enjoyed a sound set of economic and financial fundamentals. Standards of living were significantly higher after years of robust growth with fairly well behaved inflation, healthy banking systems, sustainable government fiscal positions and sustainable and sizeable foreign exchange reserves. However, there were some vulnerabilities, not least those arising from the increased financial and trade openness that was part and parcel of the growth story. Greater openness exposed the region to unexpected spillovers from the international financial crisis in the west. For example, these financial vulnerabilities eventually translated into large portfolio flows, such as in Korea, Malaysia and Singapore, and fragility of household balance sheets owing to rising indebtedness, such as in Australia, Korea and New Zealand.

Table 3

Selected global economic indicators during pre-crisis period

Average annual growth rates, in per cent

	1992–99	**2000–07**
World real GDP	3.1	4.2
Advanced economies	2.8	2.6
Emerging and developing economies	3.6	6.5
World prices in US dollars		
Manufactures	–0.6	2.8
Oil	–0.9	18.8
Non-fuel primary commodities	–1.5	7.9
Consumer prices		
Advanced economies	2.4	2.1
Emerging and developing economies	47.2	6.7

Source: IMF, *World Economic Outlook*, 2010.

From 2001 to 2007 the world economy grew faster than in any other six-year period over the past 30 years (Table 3). Global real GDP grew at an average rate of 4.2% during the period 2000–07 as against 3.1% during 1992–99. Over the last decade, GDP per capita has risen by 30% on average. Most developing countries, including sub-Saharan Africa, participated in the boom. The average growth rates experienced by the emerging and developing economies went up significantly from 3.6% (1992–99) to 6.5% (2000–07). Average private net capital flows to the emerging economies during the

period 2000–07 were $233 billion and in 2007 alone they were $605 billion. The current account surplus of emerging and developing economies went up from $124.8 billion to $654.3 billion during the period. The foreign exchange reserves held by these countries reached $4.37 trillion and were growing further. The share of world foreign exchange reserves held by emerging markets had jumped from about 37% in 2000 to nearly 64% in 2007.

Another important aspect of the period was the sustained improvement in productivity across all regions. The productivity growth had helped businesses to report higher profit growth despite the substantial increase in commodity prices during the period. While technological improvements led to higher productivity in advanced economies, the structural transformation undertaken by many EMEs helped them achieve strong productivity growth. The IMF has concluded that strong productivity growth has been supported by a combination of technological developments, an increasingly open global trading system, rising cross-country capital flows and more resilient macroeconomic policy frameworks and financial systems.

Equity markets also showed a secular uptrend during the period. Emerging Asian and eastern European equity markets nearly tripled from 2001 to 2007, while Latin American markets more than quadrupled. Credit growth also remained buoyant during the period.

During the initial phase of the crisis, EMEs remained largely resilient. This was due to improved fundamentals, adequate reserves and strong growth. In many EMEs macroeconomic stabilisation programmes had created a climate of reduced distortions and minimal external imbalances, making them less sensitive to external shocks. EME banking systems entered the crisis period from a position of strength. Profitability as measured by the median return on assets for larger EMEs was around 1.5%. By 2007, large EMEs had regulatory capital ratios significantly in excess of the Basel-mandated 8%, with median ratios of around 13%. Median non-performing loan (NPL) ratios were less than 3%. Moreover, some EMEs had a regulatory architecture in place – in terms of countercyclical capital requirements, loan-to-value (LTV) ratios etc – which made their banking systems better capable of facing a downturn. However, some EMEs where domestic credit growth was fuelled by external funding and large current account deficits were vulnerable to a credit crunch. Eastern Europe, for example, had a group of countries with high current account deficits financed by private debt or portfolio flows. In these countries, there was concern related to a sharp drop in capital flows.

It was feared that banks and financial institutions in advanced economies might reduce funding to local subsidiaries; EME corporate credit risks might increase; EME financial institutions might become vulnerable to financial contagion through exposure to subprime or other structured products; and that a spike in exchange rate volatility could slow or reverse flows into EME fixed income assets.

2.4.2 Impact of the crisis and response of commercial banks

Decline in exports

As the crisis progressed, EMEs were hit significantly. In the final quarter of 2008, the world economy saw a severe drop in export demand that coincided with a significant reversal in international bank lending and a substantial reversal in foreign portfolio investment. Exchange rates in many EMEs depreciated, equity prices declined and the cost of external financing rose sharply. Stagnant growth in advanced economies led to a sharp contraction in economic activity in EMEs with significant declines in exports and industrial production. There was depressed consumer and investor spending in the advanced economies which further reduced the demand for EME exports, which reinforced capital outflows. Heavy reliance of many EMEs on external demand raised concerns about the recovery this time. India and a few other EMEs which were relatively less dependent on exports faced a lesser impact.

Decline in external funding/capital flows

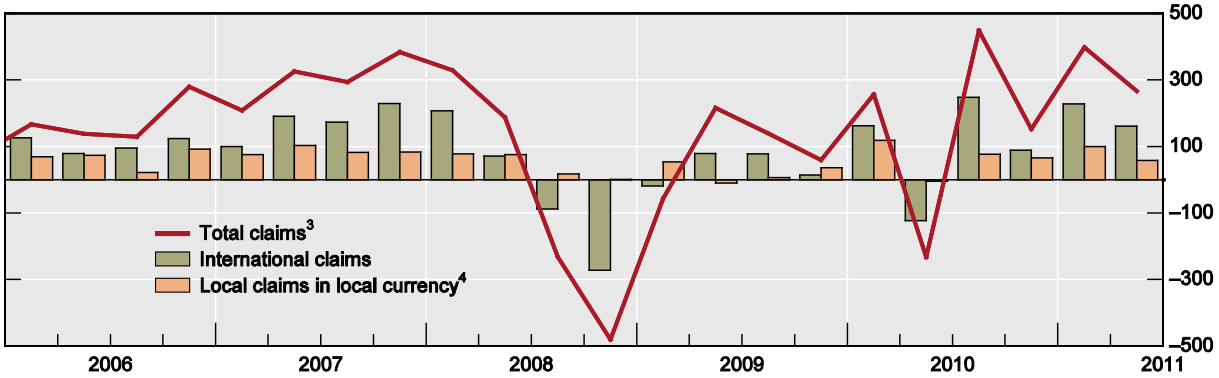
With international banks withdrawing funds from some emerging markets in the third quarter of 2008, the reversal of portfolio equity inflows accelerated, spreads on international sovereign bonds widened sharply and domestic bond yields rose in many EMEs. Countries with high fiscal deficits and those sensitive to a slump in commodity prices were the hardest hit. For those EMEs which had a better external position, the impact on capital flows was through the corporate sector. In international debt markets, primary issuances were frozen and secondary market trading of emerging market bonds declined significantly. The reversal in cross-border banking flows also became extremely severe. Countries with more developed local bond markets may have fared better in the face of capital outflows; however, there is no clear-cut evidence for this. The severe contraction in external demand

compounded the financial crisis and there was a cumulative effect on capital inflows. These effects were more visibly felt in the area of trade finance. The effect of the crisis on forex markets was quite significant in both spot and swap markets. Chart 2 shows the trends in banks' consolidated lending to EMEs during the period 2006–09 according to the data available to the BIS.

Chart 2

BIS reporting banks' consolidated lending to EMEs(Adjusted)[1]

Changes in stocks,[2] in billions of US dollars



[1] Emerging market consolidated positions of banks headquartered in 30 reporting countries. [2] Quarterly difference in outstanding stocks. [3] Sum of international claims and local claims in local currency (unadjusted); international claims comprise cross-border claims in all currencies and local claims in foreign currencies; local claims relate to those booked by reporting banks' foreign offices on residents of the country in which the foreign office is located. [4] Adjusted for exchange rate movements by converting all changes in local claims at the exchange rate prevailing in Q2 2011. Note that total claims (red line) are computed using unadjusted local claims.

Source: BIS consolidated banking statistics on an immediate borrower basis.

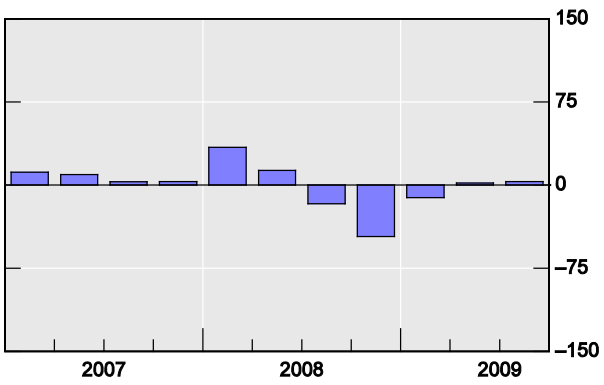
One of the main channels of transmission of the crisis to EMEs was cross-border bank lending. Difficulties in cross-border funding affected domestic liquidity conditions through at least three channels: funding costs, heightened counterparty risk and shortening of the maturity structure. Cross-border bank lending declined steeply during the crisis, leading to a credit crunch and liquidity problems in many EMEs. EMEs with a dominant foreign bank presence were particularly affected. Under these circumstances banks with a heavy reliance on wholesale funding were hit hard. It appears that, during the crisis, supply factors, in particular liquidity and capital constraints of international banks, played a significant role in cross-border lending. Organisational structures (decentralised vs centralised capital and liquidity management) and risk monitoring by central banks substantially affected the intensity of the decline in cross-border lending. Chart 3 shows reversal of financial flows according to BIS data during 2008 and 2009.

Chart 3

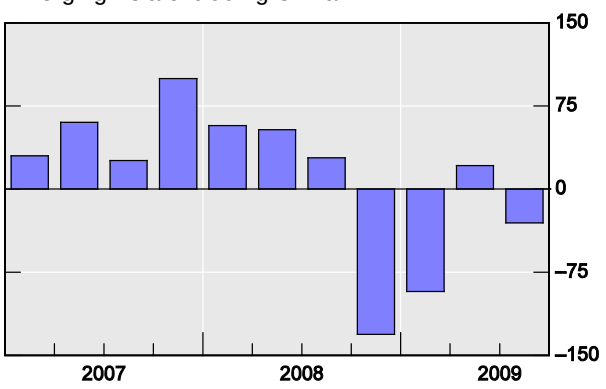
Reversal of financial inflows[1]

In billions of US dollars

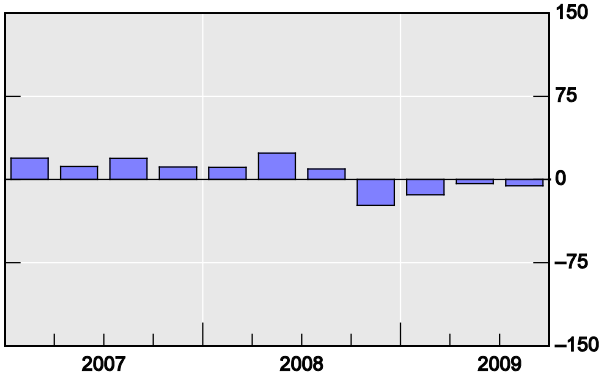
China



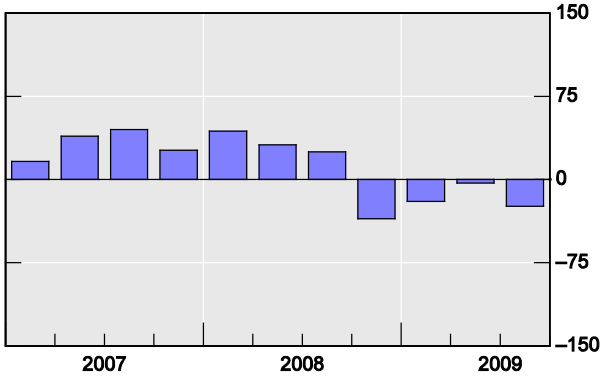
Emerging Asia excluding China[2]



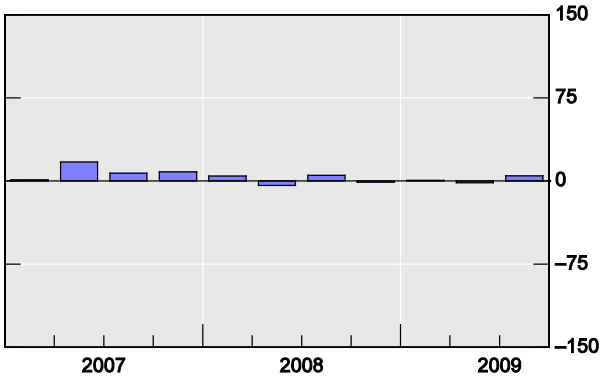
Latin America[3]



Emerging Europe[4]



Africa and Middle East[5]



[1] External loans of BIS reporting banks vis-à-vis EMEs; estimated exchange rate adjusted changes. [2] Hong Kong SAR, India, Indonesia, Korea, Malaysia, the Philippines, Singapore and Thailand. [3] Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. [4] The Czech Republic, Hungary, Poland, Russia and Turkey. [5] Israel, Saudi Arabia and South Africa.

Source: BIS.

2.4.3 Changes in banks' balance sheets/business models

The crisis led to a temporary reorientation of the way banks function in many EMEs. There were changes in bank funding (maturity and sources of funding); in bank lending (in terms of loan maturities, required collateral, types of borrowers, etc); and in liquidity management (evidence of a build-up of liquid assets, shortening of lending maturities, etc). In fact, banks adjusted both the asset and the liabilities side of their balance sheets. On the liabilities side, banks were forced to reduce their reliance on wholesale markets and were required to focus on increasing retail deposits. On the assets side, due to risk aversion as well as a slump in demand, banks reduced the growth of new loans to firms and households, reoriented their balance sheets towards less risky types of lending and increased their holdings of government bonds. On the liquidity side, there was a shortening of the maturity of their assets, less reliance on the interbank market and more emphasis on central bank liquidity facilities. Foreign as well as domestic banks adjusted to the crisis in the same way. The funding model mattered more for adjustment than the bank ownership. Since in most EMEs securitisation of domestic bank loans was neither widespread nor complex, they escaped the worst consequences of the "originate to distribute" model.

Foreign bank subsidiaries in some EMEs transferred capital and liquidity to their parents. This raised concerns in some countries. In countries where foreign banks had significant presence, it led to a liquidity and credit crunch. This has led to a reassessment of the relative merits of the two models of foreign bank operations, viz operations through "branches" and operation through "subsidiaries". The subsidiaries model of presence signals a greater commitment as it is based on funding and lending locally.

2.4.4 Local money and debt markets of EMEs during the crisis

The money and debt markets of the advanced countries were affected significantly during the crisis due to increased risk aversion and perceptions of counterparty risk. This further spilled over to foreign exchange (FX) markets. There was a significant widening of Libor-OIS spreads, implying tremendous problems in the interbank markets. The effects on EMEs were relatively muted until the failure of Lehman Brothers in September 2008. However, after that the impact was more direct. As a result of deleveraging pressures in advanced countries, there were large capital inflow reversals, notably in cross-border bank lending, as discussed earlier. International debt markets for emerging market issuers were virtually closed and trading collapsed, irrespective of the credit quality of borrowers. The shock affected asset prices across several markets including EME sovereign bonds and equities. Exchange rates depreciated in many countries, although in some cases heavy FX market intervention dampened exchange rate volatility. In some EMEs, funding pressures also arose in domestic money markets. However, the worst stress episodes seemed to have declined significantly by the end of 2008 and declined further after rebounding around February–March 2009.

2.4.5 Action taken to improve the situation in EMEs

Policy actions taken by central banks in developed economies helped lower the stress. Substantial central bank funding and financial rescue efforts, including the provision of dollars in Federal Reserve swap lines with some central banks of advanced economies, helped stabilise global funding markets. As market sentiment stabilised, the reduction of policy rates towards zero in developed economies increased the attractiveness of emerging market assets, eventually contributing to improvements in financing conditions and a resumption of capital flows.

Increased IMF resources and the launch of the Flexible Credit Line helped to boost investor confidence in EMEs in general. In Europe, regional coordination between private and public sectors averted a collapse of capital flows to emerging Europe. Swap lines with central banks improved foreign exchange liquidity in EMEs and massive liquidity injections by central banks at the epicentre of the crisis reduced acute deleveraging pressures and supported investor risk appetite. EMEs also initiated various measures as part of their domestic monetary policies aimed at easing liquidity and credit conditions, which included establishment of financing facilities, guarantees by sovereigns and changes in regulations, reserve requirements and policy rates. In some cases central bank action was directed towards the smooth unwinding of foreign currency derivatives positions and other complex issues. Some central banks extended maturities, accepted new types of collateral and also new counterparties in implementing open market operations. Others reduced reserve requirements, in some cases in ways that provided support to priority sectors. These actions in some cases led to increased confidence, thereby reducing uncertainty about counterparty risks or the availability of financing, and resulting in a marked improvement of the risk perception towards EMEs. A big difference from past crises was that many EMEs had more room to ease macroeconomic policies to counter a severe tightening of financing conditions and an economic downturn. Further, the general strength of domestic banking systems played an important role (eg by helping to stabilise deposits). Policy responses to the crisis may be grouped mainly into three categories: reserve-enhancing measures, measures to strengthen financial sectors and fiscal stimulus packages.

Central banks drew heavily on foreign reserves accumulated over a period of time, justifying the accumulation of large reserves. The crisis clearly demonstrated that self-insurance in the form of large reserves is needed although it may prove to be costly in some cases. Central banks also resorted to innovative ways to support local currency financing.

Towards the end of 2009 and in early 2010, demand in EMEs started to recover strongly. In many countries, including India, headline inflation rates rose, necessitating a tightening of monetary policies. Concerns were raised that with low interest rates continuing in advanced economies, tighter monetary policy in EMEs would lead to higher capital inflows resulting in currency appreciation. Resisting appreciation could lead to faster credit growth and the development of asset price bubbles. Many EMEs tried to use capital controls to ward off excessive inflows. It was thought that macroprudential policies had a better prospect of succeeding under such circumstances. Although international financial integration seemed to offer many benefits to capital-deficient EMEs, like capital inflows that augment internal capital accumulation, in many countries it may be that cross-border flows and cross-border bank lending accentuate the crisis.

2.4.6 Measures taken to address problems of SMEs

To increase the incentives for banks to lend to SMEs, the Bank of Korea (BoK) raised the aggregate credit ceiling by more than 50% (from KRW 6.5 trillion in November 2008 to KRW 10 trillion in March 2009). The BoK introduced the Foreign Currency Loans Secured by Export Bills Purchased scheme in order to provide incentives for banks to be active in handling trade financing for SMEs.

In Malaysia, special funds aggregating $400 million were established to assist viable SMEs, provide continued support for enhancements in efficiency and productivity, and help them manage temporary cash flow problems. In addition, a special guarantees scheme with allocation of $3.4 billion was formulated to increase SMEs' access to finance and increase productive investments in new ventures. Malaysia had established a debt restructuring scheme called the Small Debt Resolution Scheme (SDRS) in 2003 to facilitate loan restructuring and financing solutions for small businesses. In May 2009, the Bank Negara Malaysia expanded the scheme to include the debt resolution of distressed SMEs with multiple financial institutions.

In Philippines, Bangko Sentral ng Pilipinas (BSP) launched a credit enhancement scheme in the form of the Credit Surety Fund Programme (CSFP) in the second half of 2008 to facilitate unsecured borrowings from banks by micro, small and medium enterprises (MSMEs) that are members of cooperatives. Loans granted by banks under the CSFP are eligible for rediscounting with the BSP.

In Thailand, in February 2009, through the Small Business Credit Guarantee Corporation (SBCG), the government approved the portfolio guarantee scheme for SMEs. Under this scheme, the SBCG partially guarantees commercial banks' SME loan portfolios. The credit guarantee limit is set at THB 40 billion for a period of five years with a provision that the loss incurred by the SBCG will be compensated by the government within a limit of THB 2 billion. Other measures taken by the Thai government to support credit expansion included approval of the THB 927 billion credit fast track project to accelerate the credit approval procedures of seven state banks in order to offset the reduction in commercial banks' credit extension and setting out plans to recapitalise certain government specialised financial institutions (SFIs).

2.5 India's position

Measures to improve liquidity

The Indian economy was hit by the global crisis due to its rapid and growing integration with the global economy. Under the impact of an external demand shock, there was a moderation in growth in the second half of 2008/09 compared to the robust growth of 8.8% per annum in the preceding five years. With regard to financial markets, India witnessed a reversal of capital inflows following the collapse of Lehman Brothers. Due to a heavy sell-off by foreign institutional investors (FIIs) there was a significant downward movement in the domestic stock markets. The withdrawal by FIIs and the reduced access of Indian entities to external funds exerted significant pressure on dollar liquidity in the domestic FX market. This created adverse expectations on the balance of payments outlook, leading to downward pressure on the Indian rupee and increased FX market volatility. While the banking system was sound and well capitalised, some segments of the financial system such as mutual funds and non-banking financial companies came under pressure due to reduced foreign funding and a subdued capital market. Moreover, the demand for bank credit increased due to the drying-up of external sources. Against this backdrop, RBI stepped in with liquidity-supplying measures – both in the rupee and in foreign currency – and the government implemented fiscal stimulus measures. In order to help banks to lend without getting constrained by capital, the risk weights and general provisions on exposure to the sectors which had been hit hard by the crisis were reduced as a countercyclical measure in tandem with a 425 basis point reduction in policy rates during the period October 2008 to April 2009.

Measures to support SMEs

Considering the importance of SMEs for the Indian economy, SME financing has constantly engaged attention of financial sector policies of the government and RBI. As a result of these policies, credit to this sector from public sector banks witnessed a threefold rise from ₹ 67, 600 crore ($13.5 billion) on 31 March 2005 to ₹ 1,90,958 crore ($38.2 billion) as on 31 March 2009. However, access to credit for these units witnessed curtailment due to the subsequent downturn, triggered by the recent global financial crisis. It was at this stage that the government and RBI took several measures to ensure holding on operations and support for the units affected. Banks were advised on 31 October 2008 to consider restructuring of the dues of viable Micro and Small Enterprises (MSEs) wherever warranted,

and to continue to disburse loans against the sanctioned limits. RBI extended special refinance of $1.4 billion to Small Industries Development Bank of India (SIDBI) to enable it to onlend to banks and financial institutions towards incremental SME loans. Banks were advised to carve out and monitor separate sub-limits of large companies to meet payment obligations to micro and small enterprises. The Micro, Small and Medium Enterprises (MSME) Refinance Fund of ₹ 2000 crore ($400 million) was instituted and banks were asked to contribute towards this fund against their shortfall in their lending to the weaker sections as low-interest deposits with SIDBI to be used by the latter for providing assistance to the MSME sector**.**

2.6 Financial sector regulation in the post-crisis world

Towards the end of 2008, it became clear that weaknesses in financial sector regulation and supervision had contributed to the crisis significantly. The efforts to reform financial sector regulation began under the aegis of G20, and the Financial Stability Board and the Basel Committee on Banking Supervision (BCBS) embarked on an ambitious agenda for regulatory reforms. During the next two years, a number of initiatives were taken by the BCBS with the objective of improving the banking sector's ability to absorb shocks arising from financial and economic stress and to reduce the risk of spillover from the financial sector to the real economy. The first instalment of these measures announced in July 2009, now called Basel II.5, included strengthening of the trading book capital requirements, higher capital requirements for resecuritisation products held in both the banking book and trading book and strengthening of guidance on Pillar II. In late 2010, the BCBS issued the Basel III document enumerating measures focused on improvements in the definition of regulatory capital, introduction of a leverage ratio as a backstop for risk-based capital requirement, capital buffers, enhancement of risk coverage through improvements in the methodology to measure counterparty credit risk and liquidity measurement standards. A brief description of these measures is given below.

Raising the quality, consistency and transparency of capital: Common equity should be the predominant form of capital and will form 75% of Tier 1 capital and 4.5% of risk-weighted assets. Tier 1 capital should be at least 6.0% of risk-weighted assets and total capital (Tier 1 capital plus Tier 2 capital) should be at least 8.0% of risk-weighted assets. Deductions from capital and prudential filters will be applied generally at the level of common equity instead of total capital as hitherto. Innovative hybrid capital instruments with step-up clauses or other incentives to redeem are gradually phased out. In addition, Tier 3 capital instruments have been eliminated. Finally, to improve market discipline, all elements of capital are required to be disclosed along with a detailed reconciliation to the reported accounts.

Minimum requirements to ensure loss absorbency at the point of non-viability: The terms and conditions of all non-common Tier 1 and Tier 2 instruments issued by banks must have a provision that requires such instruments, at the option of the relevant authority, to be either written off or converted into common equity upon the occurrence of the trigger event. The trigger event is the earlier of: (1) a decision that a write-off, without which the firm would become non-viable, is necessary, as determined by the relevant authority; and (2) the decision to make a public sector injection of capital, or equivalent support, without which the firm would have become non-viable, as determined by the relevant authority.

Risk coverage – counterparty credit risk: Measures have been introduced to strengthen the capital requirements for counterparty credit exposures arising from banks' derivatives, repo and securities financing activities. These reforms will raise the capital buffers backing these exposures, reduce procyclicality and provide additional incentives to move OTC derivative contracts to central counterparties, thus helping reduce systemic risk across the financial system. They also provide incentives to strengthen the risk management of counterparty credit exposures. Going forward, banks must determine their capital requirement for counterparty credit risk using stressed inputs. This will address concerns about capital charges becoming too low during periods of compressed market volatility and help address procyclicality. Banks will be subject to a capital charge for potential mark to market losses associated with deterioration in the creditworthiness of the counterparty (the Credit Value Adjustment (CVA) is a measure of diminution in the fair value of a derivative position due to deterioration in the creditworthiness of the counterparty). Standards for collateral management and initial margining have been strengthened. Banks with large and illiquid derivative exposures to counterparties will have to apply longer margining periods as a basis for determining the regulatory capital requirement. Additional standards have been adopted to strengthen collateral risk management practices.

Addressing reliance on external credit ratings: To mitigate the reliance on external ratings of the Basel II framework, measures have been proposed that include requirements for banks to perform their own internal assessments of externally rated securitisation exposures, the elimination of certain "cliff effects" (sharp increase in applicable risk weights) associated with credit risk mitigation practices, and the incorporation of key elements of the IOSCO *Code of Conduct Fundamentals for Credit Rating Agencies* into the Committee's eligibility criteria for the use of external ratings in the capital framework.

Macroprudential elements of Basel III: The introduction of macroprudential elements in the form of the capital conservation buffer, countercyclical capital buffer and leverage ratio are the hallmark of Basel III. These elements are intended to reduce the procyclicality of capital regulations and control the build-up of systemic risk. In November 2011, the BCBS issued guidance on the regulation of global systemically important banks (G-SIBs).

Capital conservation buffer: A capital conservation buffer of 2.5% of risk weighted assets, comprising Common Equity Tier 1, is to be built up outside periods of stress. This would be above the regulatory minimum, and can be drawn down as losses are incurred during periods of stress. When buffers have been drawn down, banks can build them up either through a reduction in distribution of dividend, share buyback and staff bonus payments or raising capital from the private sector. The balance between them is to be discussed with the supervisor as part of the capital planning process. Table 4 below shows the minimum capital conservation ratios a bank must meet at various levels of the Common Equity Tier 1 capital ratios:

Table 4

Individual bank minimum capital conservation standards

Common Equity Tier 1 ratio	Minimum Capital Conservation Ratio (expressed as a percentage of earning)
4.5% – 5.125%	100%
>5.125% – 5.75%	80%
>5.75% – 6.375%	60%
>6.375% – 7%	40%
>7%	0%

Source: BCBS.

The capital conservation buffer will be phased in as of 1 January 2016 at 0.625% of risk-weighted assets and become fully effective on 1 January 2019.

*Countercyclical capital buffer***:** The countercyclical capital buffer is aimed at ensuring that banking sector capital requirements take account of the macrofinancial environment in which banks operate. National authorities will monitor credit growth and other indicators which may signal a build-up of system-wide risk and, accordingly, they will put in place a countercyclical buffer requirement as and when circumstances warrant. This requirement will be released when system-wide risk crystallises or dissipates. The buffer will be implemented through an extension of the capital conservation buffer and vary between zero and 2.5% of risk-weighted assets, depending on the extent of the build-up of system-wide risks. Banks are required to meet this buffer with Common Equity Tier 1 or other fully loss-absorbing capital. Further, banks will be subjected to the restrictions on distributions also if the capital level (capital conservation buffer plus countercyclical buffer) falls below the required levels. Banks will have to ensure that their countercyclical buffer requirements are calculated and publicly disclosed at least with the same frequency as their minimum capital requirements. The countercyclical buffer regime will be phased in in parallel with the capital conservation buffer between 1 January 2016 and year-end 2018 and will be fully effective from 1 January 2019.

Leverage ratio: The Basel Committee has introduced a simple, transparent, non-risk-based leverage ratio as a supplementary measure to the risk-based capital requirements. The ratio is implemented with the objective of constraining the build-up of leverage in the banking sector and reinforcing the

risk-based requirements with a non-risk-based "backstop" measure. The Committee has proposed testing a minimum Tier 1 leverage ratio of 3% during the parallel run period from 1 January 2013 to 1 January 2017.

Regulation of G-SIBs: The Basel Committee will group G-SIBs into different categories of systemic importance based on the score produced by the indicator-based measurement approach. G-SIBs will be initially allocated into four buckets based on their scores of systemic importance, with varying levels of additional loss absorbency requirements applied to the different buckets. Based on policy judgment informed by the various empirical analysis, the Basel Committee has determined that the magnitude of additional loss absorbency for the highest populated bucket should be 2.5% of risk-weighted assets at all times, with an initially empty top bucket (fifth bucket) of 3.5% of risk-weighted assets. The magnitude of additional loss absorbency for the lowest bucket should be 1.0% of risk-weighted assets. The magnitude of additional loss absorbency is to be met with Common Equity Tier 1 as defined by the Basel III framework. The G-SIBs will also be subject to tighter supervision.

Liquidity standards: Basel III has introduced two new liquidity standards to ensure that liquidity risk concerns are addressed. In the short term, banks will be required to maintain a buffer of highly liquid securities measured by the Liquidity Coverage Ratio (LCR). This liquidity buffer is intended to promote resilience to potential liquidity disruptions over a 30-day horizon. It will help ensure that a global bank has sufficient unencumbered, high-quality liquid assets to offset the net cash outflows it could encounter under an acute short-term stress scenario of 30 days. The scenarios may include a significant downgrade of the institution's public credit rating, a partial loss of deposits, a loss of unsecured wholesale funding, a significant increase in secured funding haircuts and increases in derivative collateral calls and substantial calls on contractual and non-contractual off-balance sheet exposures, including committed credit and liquidity facilities. Another liquidity risk measure, the *Net Stable Funding Ratio (NSFR),* requires a minimum amount of stable sources of funding at a bank relative to the liquidity profiles of the assets, as well as the potential for contingent liquidity needs arising from off-balance sheet commitments, over a one-year horizon. The NSFR aims to limit over-reliance on short-term wholesale funding during times of buoyant market liquidity and encourage better assessment of liquidity risk across all on- and off-balance sheet items. The objective of the NSFR is to promote resilience over a longer time horizon by creating additional incentives for banks to fund their activities with more stable sources of funding on an ongoing basis. The NSFR has a time horizon of one year and has been developed to provide a sustainable maturity structure of assets and liabilities. The NSFR is the ratio of the "available amount of stable funding" to the "required amount of stable funding". This should be more than 100%. However, the liquidity requirements are still subject to an observation period. The LCR will be introduced in 2015 and the NSFR in 2018.

3 Issues specific to EMEs in the implementation of Basel norms

The overarching objective of regulations designed in the aftermath of the crisis is to improve the resilience of the banking system to withstand macroeconomic shocks and minimise the chances of recurrence of financial crisis on the scale of the subprime crisis. At a more granular level, these measures seek to improve regulation and supervision of financial institutions, establish comprehensive supervision of financial markets, minimise regulatory arbitrage between the banking system and the shadow banking system, protect consumers and investors from financial abuse, promote sound compensation practices and provide governments/central banks and supervisory authorities with more tools to minimise the probability of occurrence of financial crises. While the ultimate aim of all these measures is undeniably to support and promote growth and development, there are likely to be immediate costs from higher capital and liquidity requirements under Basel III. EMEs also face several challenges in implementing Basel II and III on account of the state of development of financial markets and risk management practices as well as due to some structural issues. These are analysed under the following broad headings:

- Challenges in implementing Basel II
- Challenges in implementing Basel III – macroeconomic impact and estimates
- Difficulties in implementing countercyclical prudential policies
- Impact on trade finance

- Impact on financing of SMEs
- Impact on financing of infrastructure
- Structure of the banking system and optimum level of financial activity
- Fiscal consequences

While EMEs face several challenges as mentioned earlier, it must also be recognised that they have strengthened their regulatory and supervisory standards and architecture considerably over the last 15 years, in an attempt to match the international best practices and standards. To this end, most EMEs have adopted a regulatory approach that follows the standards set in the Basel I and Basel II frameworks. Basel II reflected a significant departure from Basel I in terms of greater recognition and coverage of risks with the addition of capital for operational risk, recognition of banks' internal risk models, emphasis on risk management systems and practices, enhanced coverage of risks under Pillar 2 and emphasis on market disclosures. The implementation of Basel II in EMEs has been driven mainly by the appreciation of the benefits to be realised in terms of financial soundness through promoting sound risk management systems and efficient use of capital. The flexibility and menu of approaches for measurement and management of various risks by banks has provided opportunities for banks and regulators in EMEs to implement Basel II**.** EMEs have, consequently, made considerable progress in implementing the Basel II Framework, even though most of them are yet to migrate to the advanced approaches.

The past 10–15 years have seen significant improvement in risk management practices in a number of emerging markets. There has been greater emphasis on market discipline requiring greater transparency in governance and prudent accounting. Prudential oversight of financial institutions has, increasingly, focused on promoting financial stability, rather than only on ensuring compliance with rules. The adoption of technology has also helped in strengthening the risk management practices in several ways such as (i) improvements in valuation techniques; (ii) quantification of various risks, particularly of market risks through the use of value-at-risk (VaR) calculations and stress tests; (iii) risk-based pricing of credit; and (iv) provisioning and allocation of capital on the basis of risk assessment.

During the last 10 years or so, banks in EMEs have based their lending decisions increasingly on intensive risk assessment. Collateral is no longer seen as an alternative, but as a supplement, to proper credit appraisal for mitigating risks. A survey of central banks shows that the use of various quantitative risk management techniques by banks in emerging markets has expanded significantly. Valuations are increasingly based on market prices; scoring models are used to assess the credit risks of households and of small business borrowers; portfolios are stress-tested for various adverse scenarios; and the pricing of and provisioning for credits are increasingly based on quantitative risk assessments. Banks' boards in the EMEs are increasingly focusing on detailed quantitative reports in the oversight of risk exposures. Efforts to instil greater rigour into risk assessment are probably beginning to bear fruit, and this means that risks are being better managed in most emerging markets.

3.1 Challenges in implementing Basel II

If banks have to achieve closer alignment of capital requirement with their risk profile, the answer lies in the implementation of the advanced approaches of Basel II by larger banks. The adoption of the advanced approaches also helps in better understanding and quantifying Pillar II risks. However, adoption of the advanced approaches is much more challenging than that of the standardised approaches. As per a 2010 Financial Stability Institute survey, only eight Asian countries, one Latin American country and one African country had implemented the Internal Ratings-Based Approach (IRB Approach) so far. The Advanced Measurement Approaches (AMA) for operational risk had been implemented by six Asian countries and one African country. Implementation of advanced approaches by EMEs is constrained by a number of factors.

In the advanced economies, the evolution of quantitative risk management techniques preceded the conception of Basel II. The risk modelling techniques pioneered by large international banks in the western countries provided the fundamental building blocks for Basel II. Therefore, it has been relatively easy for large international banks in advanced economies to migrate to the advanced approaches. The EME banks have not generally been using sophisticated quantitative techniques in their day-to-day risk management. This makes implementation of the advanced approaches by EMEs very challenging. Moreover, banks do not have the requisite database for calibration of various

parameters of the risk models for which five to seven years of data are required. Most of these data would have to be collected only prospectively or built up, if possible, from the historical database after a decision to implement the advanced approach is taken by a bank. This would be a daunting task or would result in a long wait.

In India, the Indian Banks Association (IBA) has recently set up an operational loss data exchange, but it would take time to collect and offer valid data to banks for the purpose of operational risk modelling. As most of the Indian banks do not have Basel II compliant operational loss data for past years, the IBA exchange would be able to offer data only for future years.

Almost all advanced approaches of Basel II require stress testing of capital adequacy. Stress testing would involve identifying possible events or future changes in economic conditions that could have unfavourable effects on a bank's credit, operational and market risk exposures. In India, it has been particularly challenging to select sufficiently stressed plausible scenarios for stress testing because there is no history of systemic banking crises. Further, designing plausible scenarios and estimating their financial impact on banks requires a significant amount of quantitative modelling both of macro and micro level risk factors. Given that the stress testing by banks in EME economies is not based on such models, a lot of work would need to be done by them in this regard.

Adoption of the advanced approaches places a huge responsibility on the board of directors and senior management of banks to ensure the integrity of various systems, procedures and controls. In addition, they are required to possess a general understanding of the bank's risk management systems. Finding board level persons with a sound understanding of these aspects is going to be a challenge for EME banks, given that there are not many senior people with related expertise in these countries. Staffing of the internal audit function of banks and finding external auditors with appropriately skilled people are issues for banks in EME economies.

"Use Test" is one of the fundamental requirements for migration to the advanced approaches. For example, internal ratings and default and loss estimates must play an essential role in the credit approval, risk management, internal capital allocations and corporate governance functions of banks using the IRB approach. To comply with this requirement, banks should have been using a rating system that is broadly in line with the minimum requirements under Basel II for at least three years prior to qualification. Similarly, operational loss experience and VaR-based limits should have been in use by banks to be eligible for the AMA for operational risk and the Internal Models Approach (IMA) for market risk, respectively. Since these processes have not been much in use in EMEs, these have to be put in place before banks can consider migration to the advanced approaches.

Risk quantification requires modelling capabilities and banks have to employ staff with requisite qualifications and experience. While in the case of public sector banks in India this aspect is constrained mainly by inflexible compensation systems, in general there is a dearth of qualified personnel in EMEs for this purpose as not many local universities would offer good-quality graduate and postgraduate courses in quantitative finance. The entire responsibility for creating a trained workforce in quantitative finance presently rests with the banks.

Basel III modifications aimed at greater coverage of risks are almost exclusively focused on advanced approaches resulting in significantly higher capital requirements. This may result in banks having to keep significantly lower capital for similar exposure if they are following the standardised approach. There would thus be an inbuilt incentive not to move to the advanced approaches under Basel II. For instance, the introduction of Stressed-VaR under the IMA under Basel III has raised the capital requirements significantly for trading book exposures. Since, at present, most of the banks in EMEs follow standardised approaches for computing capital charge for market risks, there is a potential disincentive for EME banks to migrate to the advanced approaches.

The calibration of parameters of Basel II was based on the quantitative impact studies, wherein the sample consisted predominantly of banks functioning in advanced economies. However, the standard is intended to be implemented uniformly, though it may not reflect the risks faced by EME banks appropriately. While these issues can be dealt with under Pillar II, the drawback is that under Pillar II there can only be capital add-ons and no downward adjustment is permissible. Moreover, the use of Pillar II by EME banks is also constrained as, unlike Pillar I, the development of Pillar II has to undergo an evolutionary process.

Even in the face of all these challenges, larger banks in EMEs should try to migrate to these approaches over the next few years as the move to advanced approaches would significantly raise

their standards of risk management. The larger banks in EMEs would be in a position to absorb the fixed costs required for implementing the advanced approaches.

3.2 Challenges faced by EMEs in implementing Basel III

Basel III entails a much higher level of quality and quantity of capital as well as much stiffer liquidity requirements. While these requirements have generated apprehension about the impact on growth and equity (see the concerns highlighted in the Introduction), EMEs are likely to face several challenges even from an operational perspective.

3.2.1 Capital

Capital requirements for banks in EMEs are likely to rise substantially under Basel III for various reasons. Given that most EMEs are developing countries experiencing high growth rates, their incremental credit requirements are going to be much larger. Higher credit growth would obviously lead to larger capital requirements.

It is likely that with the increase in sophistication of financial markets in the EMEs, the derivatives transactions aimed at hedging and redistribution of risks amongst various players also increase substantially. Considering the newly introduced Credit Valuation Adjustment (CVA) capital charge, the rise in the volume of derivative transactions could potentially be another major source of additional capital requirements going forward.

The leverage ratio could be yet another source of increased capital requirements as the off-balance sheet exposures in the form of letters of credit for trade finance will be counted at their full value as against the 20% credit conversion factor currently being applied for capital adequacy purposes. Since trade finance is of particular importance for EME growth, the leverage ratio will have a greater impact on them due to the higher cost of trade finance credit. It will increase the cost of trade credit particularly for SME borrowers engaged in export business.

Securitisation markets in EMEs are still developing and generally have simpler structures, but have nonetheless been affected due to the financial crisis. However, going forward, these markets are likely to be one of the main channels for credit risk transfer along with credit derivatives. The increase in capital requirements specifically for resecuritisations coupled with very strict standards for due diligence by investors is likely to increase capital requirements for market participants undertaking such transactions.

Additional Tier 1 instruments are now required to have a write-off or conversion feature which allows them to absorb losses in a bank as soon as the bank is treated as non-viable by the authorities. Raising capital through these instruments in EMEs would be very challenging given that the capital markets in these countries may not have the required depth and sophistication to price and trade such instruments.

Higher capital requirements on cross-holdings in the capital instruments of other banks / financial entities and banks' investments in other financial entities will put strain on those financial entities which were hitherto depending upon banks / other financial institutions for raising capital. This could be of particular concern to banks in EMEs where the participation of retail investors is low for various reasons including higher volatilities.

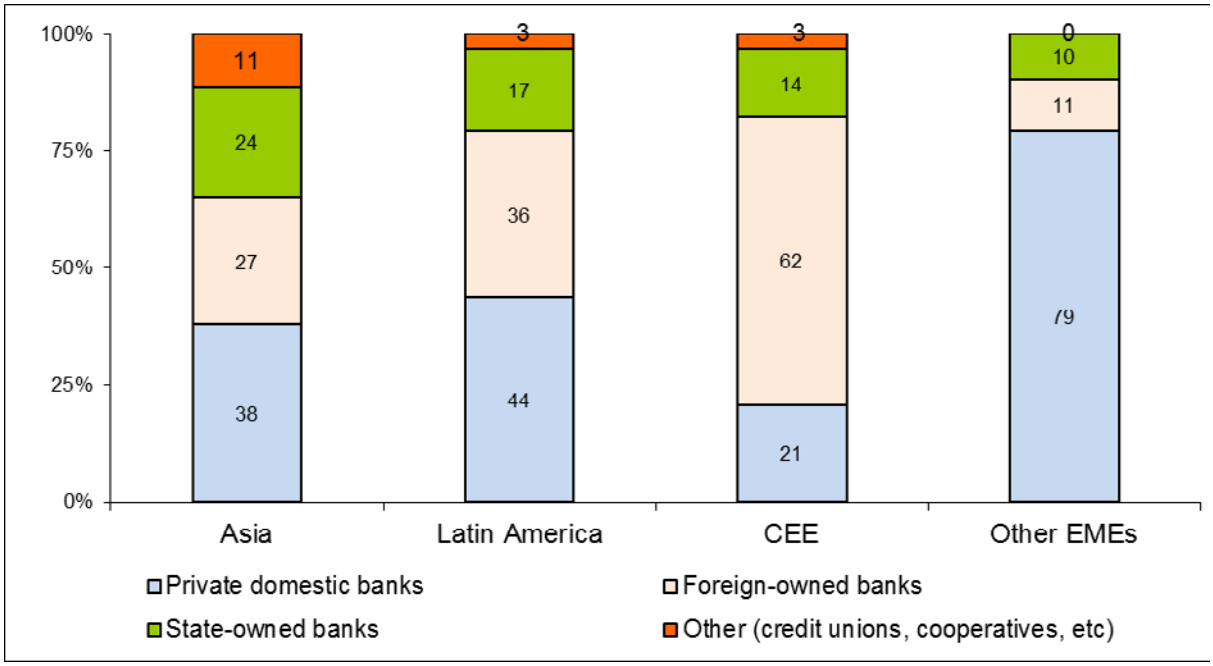
Implementing the countercyclical capital buffer will also present several challenges, which are elaborated on below.

In view of their existing higher capital ratios, including equity capital ratios, banks in EMEs can be expected to comfortably meet the higher Basel III capital requirements in the initial phase. However, going forward, as the capital requirements increase owing to the factors described above, banks will have to raise significant amounts of capital from the markets, which may present difficulties due to inadequate participation by non-institutional investors. This may also put fiscal pressure on governments in jurisdictions where the banking system is dominated by public sector banks.

Chart 4

Ownership structure of emerging market banks, 2009

As a percentage of total banking system assets



Source: BIS, Central bank questionnaires.

3.2.2 Liquidity standards

The Basel III liquidity standards (Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR)) seek to address concerns relating to liquidity risk faced by banks. While the LCR is aimed at ensuring that banks keep an adequate reserve of high-quality liquid assets to take care of outflows for a stressed period of 30 days, the NSFR seeks to limit the maturity mismatches in banks' balance sheets. Implementation of these standards raises some issues.

The requirement to have a buffer of high-quality liquid assets may put more downward pressure on the income of banks in EMEs relative to those in advanced economies as sovereign bonds are the only form of eligible assets in these jurisdictions. In order to reduce the pressure on income due to this factor, it would be necessary to have a liquid market for high-quality corporate bonds in which banks can invest to meet the LCR requirements.

Relatively shallow capital markets in EMEs may restrict banks' ability to bolster the liquidity buffer or elongate the maturity structure of their liabilities. The absence of specific deposit insurance in some EMEs will also have an adverse impact on the liquidity ratios.

3.3 India's position

As regards the impact of Basel III, major comfort exists in Indian banks' having a high Tier I ratio with high common equity proportion. Hence, shifting deductions from Tier I and Tier II capital to the common equity will not be a major constraining factor for Indian banks. Further, some of the deductions are either not relevant in India or are already being made as per existing RBI guidelines. Thus, sufficient cushion is available with banks to absorb the enhancement in the equity and Tier I capital requirements. However, at individual bank levels, some banks may be required to raise additional capital. The step-up clause in capital instruments already issued by banks such as Innovative Perpetual Debt Instruments (IPDI) and subordinated debt may put them under some strain, as they will have to be phased out over a period of 10 years beginning 1 January 2013. However, the share of such instruments is not very significant for Indian banks. Further, compared to international

standards, banks in India have significantly less exposure to OTC derivatives, which reduces the impact of the enhanced capital requirements on account of counterparty risk. This advantage will, however, be offset to a certain extent because at present the bilateral netting of counterparty exposures is not permitted due to legal issues.

Overall, therefore, the transition of the Indian banking system to Basel III will be smooth. Nevertheless, going forward, raising additional equity capital to meet the needs of an economy growing at a high rate and undergoing structural changes would be a challenge. The credit-to-GDP ratio for India is currently at a low of 55%, which should increase rapidly due to the intensive drive for financial inclusion and the likely shift towards manufacturing activities from services in future.

As there is a large gap between the existing Tier I capital ratio of Indian banks (around 9%) and the leverage ratio requirement (3%), Indian banks are not likely to be constrained by this measure either.

In India, banks are statutorily required to hold minimum reserves of high-quality liquid assets. Currently, such reserves (Statutory Liquidity Ratio – SLR) are required to be maintained at a minimum of 24% of demand and time liabilities. Since these reserves are part of the minimum statutory requirement, RBI faces a dilemma whether and how much of these reserves can be allowed to be reckoned towards the LCR. If these reserves are not reckoned towards the LCR and banks are to meet the entire LCR with additional liquid assets, the proportion of liquid assets in total assets of banks will increase substantially, thereby lowering their income significantly. RBI is examining to what extent the SLR requirements could be reckoned towards the liquidity requirement under Basel III.

Since, in general, dependence on bank borrowings is greater in EMEs than in the advanced economies, the increased cost of funds due to Basel III regulations is believed to have a more negative impact on the growth of EMEs, even though some studies suggest otherwise.

3.4 Macroeconomic impact of Basel III – a review of studies

Despite a consensus in the G20 for a major overhaul and tightening of regulatory and supervisory norms, there have been concerns about the macroeconomic costs and benefits of the new Basel III proposals at a time when the global economy has been in severe economic recession. EMEs have particular concerns about the macroeconomic impact of Basel III as growth is vital for them for eliminating poverty and inequality. These concerns in the given scenario are no less important for advanced economies, which continue to reel under the impact of the crisis. This has fuelled discussions in the form of research studies and reports in several quarters on this issue. A key feature of these studies is that they provide alternative perspectives and different estimates on the impact of higher capital and liquidity measures on economic growth attributable to differences in the transmission mechanism, methodology, data, sample period and coverage of countries and banks, as briefly discussed in the following paragraphs.

3.4.1 BIS studies

To phase in the new regulations in a manner that is compatible with the global economic recovery, the BIS and the FSB undertook studies to assess the macroeconomic effects of the transition to higher capital and liquidity requirements. In February 2010, a Macroeconomic Assessment Group (MAG) was set up by the BCBS and FSB which submitted an interim report in August 2010 and a final report in December 2011. The MAG's quantitative analysis was complemented by consultations with academics and experts in the private sector as well as with the IMF. The MAG applied common methodologies based on a set of scenarios for shifts in capital and liquidity requirements over different transition periods. These scenarios served as inputs into a broad range of models (semi-structural large-scale models, reduced-form models and bank augmented DSGE models) developed for policy analysis in central banks and international organisations.

The MAG analysis proceeds on the basis that since it is more expensive for banks to fund assets with capital than with deposits or wholesale debt, banks facing stronger capital requirements will seek to use a combination of increasing retained earnings and issuing equity as well as reducing risk-weighted assets. The approach will depend at least in part on the length of time over which capital needs to be increased. If the time span is shorter then banks are likely to emphasise equity issuance, shift in asset composition and reduced lending. In a longer implementation schedule, banks will have more flexibility as regards mechanisms and they may put more reliance on raising additional capital primarily through retained earnings, which will substantially mitigate the impact on credit supply and eventually on aggregate activity. Based on evidence from past episodes, the MAG analysis assumes that banks will

initially increase lending margins and reduce the quantity of new lending. Any increase in the cost and decline in the supply of bank loans could have a transitory impact on growth, especially in sectors that rely heavily on bank credit. In the longer term, however, as banks become less risky, both the cost and quantity of credit should recover, reversing the impact on consumption and investment.

Based on the above intuition, the MAG analysis was largely formulated on a two-step approach, though other models – reduced-form estimations and bank augmented DSGE models – were also used. The first step involves estimating the effect of higher capital targets on lending spreads and lending volumes using statistical relationships and accounting identities to predict how banks will adjust. The second step takes these forecast paths for lending spreads and volumes as inputs into standard macroeconomic forecasting models in use at central banks and regulatory agencies. These models are then used to estimate the effects of changes to lending spreads and bank lending standards on consumption, investment and other macroeconomic variables.

In its final report the MAG assumed that the Basel III-mandated minimum common equity Tier I capital ratio of 7% would be attained by the global banking system at the end of the eight-year transition period from a starting point of 5.7% and banks would raise their capital ratio by 1.3% (7% – 5.7%) in a linear fashion over the eight-year period. The MAG study carried out 97 simulations in which some models additionally (ie in addition to the increase in lending spreads) assumed banks constrained credit supply beyond what is reflected in the increase in lending spreads, and many models also assumed a monetary policy response to lower output levels and reduced inflationary pressures. Based on the unweighted median estimate across 97 simulations, the MAG estimates that bringing the global common equity capital ratio to a level that would meet the agreed minimum and the capital conservation buffer would result in a maximum decline in GDP, relative to baseline forecasts, of 0.22%, which would occur after 35 quarters. In terms of growth rates, annual growth would be 0.03 percentage points (or 3 basis points) below its baseline level during this time. This is then followed by a recovery in GDP towards the baseline growth path. The estimated maximum GDP impact per percentage point of higher capital was 0.17%.

In addition to the reports of the MAG, the BCBS has also brought out a study focusing on the Long-term Economic Impact (LEI) of the stronger capital and liquidity requirements, ie assuming banks have completed the transition to the new levels of capital and liquidity. Taking a conservative approach, the results assume that institutions pass the added costs arising from strengthened regulations on to borrowers in their entirety while maintaining pre-reform levels for the return on equity, interest cost of liabilities and operating expenses. Thus, the costs of meeting the standards may be close to an upper bound. The higher cost of bank credit lowers investment and consumption, in turn influencing the steady state level of output. The LEI study suggested that the main benefits of a stronger financial system reflect a lower probability of banking crises and their associated output losses. Another benefit reflected a reduction in the amplitude of fluctuations in output during non-crisis periods. However, the net benefits remain positive for a broad range of capital ratios with the incremental net benefits from the reduction in the probability of banking crises gradually declining to become negative beyond a certain range. Long-term net benefits involve calculating the expected yearly output gain associated with the reduction in the frequency and severity of banking crises.

3.4.2 IIF study

The International Institute of Finance (IIF), a private sector institution, has also come up with two reports on its assessment of the net cumulative impact on economic activity of the proposed financial sector reforms. The interim report published in June 2010 formed the basis of the final report unveiled in September 2011. In the final report the IIF covered only five jurisdictions, which in its view were likely to be the *most* affected by the Basel III measures. The report assumes a financial system where banks fund themselves at particular prices (interest rates) on one side of their balance sheet and lend to the private sector at a spread set by a mixture of their own objectives and broader economic conditions. The report also assumes that since shareholder positions are diluted by requiring more equity, post-tax profits and lending rates must increase to offer shareholders the same rate of return. Therefore, banks' desired lending rate can be expressed as the weighted average of the relevant funding rates, with the weights reflecting the relative shares of those liabilities employed to fund the risk assets on banks' balance sheets. The central estimate of the IIF's final report, which incorporates a wider subset of regulatory measures than the interim report at both national and international level, is that level of GDP will be 3.2% lower than it would otherwise be (ie relative to the baseline scenario) after five years with an output loss of 0.7% per annum. This is several magnitudes higher than the MAG's estimate of an output loss of 0.03% per annum.

In its final report of September 2011, the IIF argued that the BIS-MAG, by incorporating national models of countries with a low impact of Basel III norms, pulled the median estimates of output losses down. The IIF supported its higher estimates of the impact of regulatory reform on all key variables, namely lending rate, credit volume, GDP level and GDP growth, compared to the BIS estimates with a variety of explanations. First, the definition of regulatory change employed in the IIF approach is claimed to be broader in scope as well as more precise, resulting in higher estimates. Second, the BIS study included economies for which the impact of the proposed regulatory change was smaller, biasing the average impact downward. Finally, the IIF study, in the light of considerably restricted latitude for monetary policy in the near future, argued against the assumption of monetary policy stance found in the BIS model.

On the other hand, the BIS viewpoint on such a big difference between the BIS/FSB estimate and that of IIF is that the IIF study assumes a much larger increase in the lending rate, largely reflecting the withdrawal of implicit government support. The study has also not assumed any changes in dividends, compensation policies and operational efficiency, nor the benefits coming from a more resilient financial system, including lower funding premia that safer banks need to pay. The MPG and IIF estimates are given in the table below.

Table 5

Estimates of macroeconomic impact of Basel III

	BIS study – MAG	**IIF study**
Components of Basel III considered	Increase in equity capital (1.3%)	Increase in equity capital and liquidity requirements
Period under consideration	35 quarters	Five years
Drop in GDP (%) after full implementation	0.22	3.20
Average annual drop in GDP (%) with full implementation	0.03	0.7
The overall effect of a one percentage point capital increase	0.17	–

Source: Bank for International Settlement, Institute of International Finance.

3.4.3 Other studies

The researchers at the OECD and IMF have provided alternative estimates of the economic impact of the Basel III measures. However, the IMF study while estimating the increase in lending rates on account of Basel III norms, does not provide an estimate of the macroeconomic impact.

The OECD study by Slovik and Cournède (2011), employing the IIF dataset provided in the June 2010 IIF Interim Report, combined the IIF banking sector model with the OECD macroeconomic model to assess the macroeconomic impact of the Basel III measures. The study estimated sensitivities of bank lending spreads to a 1 percentage point increase in capital requirements for the three main OECD economies. In the OECD study, it was assumed that an increase in bank capital will affect overall bank funding costs. Banks were assumed to adjust their lending spreads to compensate for the change in funding cost, with the costs of equity and debt financing assumed to remain constant. The analysis was based on input data from aggregated bank balance sheets averaged over the last three pre-crisis years (2004–06). The potential impact of Basel III on bank lending spreads was computed by combining the estimated bank lending spread sensitivities with the remaining bank capital increases required to meet Basel III requirements effective in 2015. The average increase in lending spreads by banks was estimated to be 15 basis points to meet the capital requirements targeted by the Basel III proposal by 2015. Also, the OECD study estimated an average increase in lending spreads of 50 basis points by 2019. The study found that in the three main OECD economies, a 1 percentage

point increase in the ratio of bank capital to risk-weighted assets could result in an average negative impact of 0.20% on the GDP level five years after implementation, leading to a 0.04 percentage point decline in annual GDP growth. For adjustment taking place ahead of the schedule, the negative impact of Basel III on annual GDP growth was estimated to be in the range of 0.05 to 0.15 percentage points over the medium term.

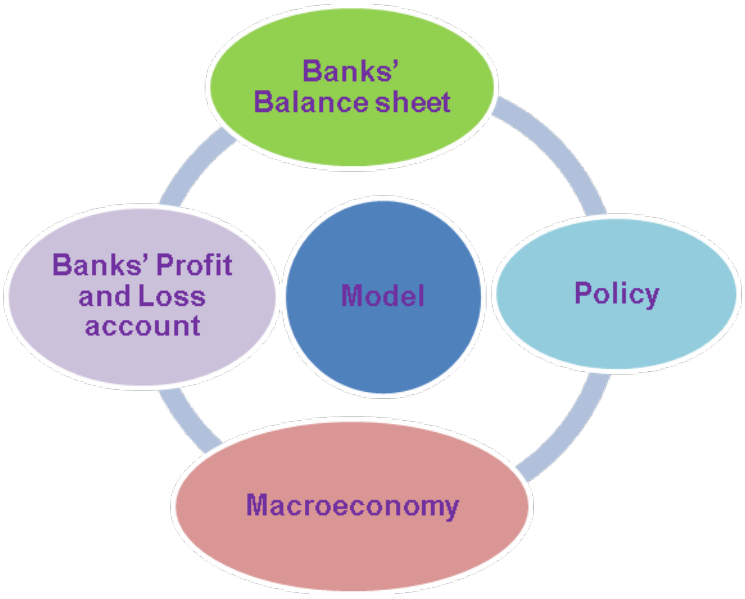
3.4.4 A model for India for the assessment of the macroeconomic impact

The Indian context

In the Indian context, RBI has developed a small macroeconomic model for analysing the macroeconomic implications of the Basel III proposal, especially the higher capital charge. The model comprises four blocks to capture the interaction among the banking sector's balance sheet and profit and loss account, the macroeconomy and policy instruments (Chart 5). The macro-variables (GDP, consumption, investments) and the banking sector's balance sheet and profit and loss account variables constitute a set of dependent/endogenous variables. Variables like policy rates, the Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), Capital to Risk (Weighted) Assets Ratio (CRAR) etc are the exogenous variables. All endogenous variables are solved simultaneously. The model takes into account the monetary transmission mechanism through both the credit and interest rate channels. The model involves estimation of changes in GDP consequent upon a rise in capital requirements in increments of 1 percentage point. A brief discussion on key features of the model is provided in Annex 1.

Chart 5

Indian model approach



Source: Reserve Bank of India.

The Indian banking system: some stylised facts

The empirical validity of the model derives from some stylised facts about the Indian banking system. The composition of liabilities and assets holds the key to the macroeconomic impact of the changes in the balance sheet induced by the capital requirements. On the liabilities side, aggregate deposits account for the bulk (about four fifths) of banks' total liabilities. Capital and reserves and surpluses account for about 7% of total liabilities. Banks do not depend much on borrowing from RBI on an annual basis. The share of other liabilities in total liabilities remained more or less steady in the last five years. On the assets side, loans and investment account for the bulk of total assets: about four fifths. A large part of investment is accounted for by investment in SLR securities. Banks' balances with RBI account for CRR balances. In terms of the profit and loss account, interest income on

advances and investments accounts for about 80% and non-interest income for about 20% of total income. Interest expenditure forms the bulk of total expenditure and consists mainly of interest on deposits. The remaining expenditure is on account of operating expenses including wages and salaries as the major component.

Macroeconomic impact

The model was simulated for the period 1996/97 to 2008/09 using the estimated structural equations. The key findings of the model pertain to the simulated impact of an increase in the capital requirement (CRAR). The impact of GDP could be attributable to the impact through credit and lending rate channels in the model. Simulation results suggest that a 1 percentage point increase in the CRAR could be associated with a 25 basis point reduction in average annual credit growth and a slightly higher 35 basis point increase in the lending rate. Also, a 5 percentage point increase in the CRAR could lead to about 100 basis point reduction in average annual credit growth along with a 150 basis point increase in the lending rate. Consequent upon the reduced credit volume and increased lending rate, a 1 percentage point increase in the CRAR could be associated with a 35 basis point reduction in the real GDP growth rate. A 5 percentage point increase in the CRAR could be associated with a significant 153 basis point reduction in real GDP growth (Table 6). These findings are subject to key assumptions of the model. The actual outcome will depend upon the actual increase in the capital charge and the change in capital buffer, if any.

Table 6

Impact of a CRAR increase on average real GDP growth

(simulation period 1996/97 to 2008/09; in per cent)

Scenario	GDP growth
Actual	6.96
Simulated	6.58
CRAR = 1.0	6.23
CRAR = 2.0	5.91
CRAR = 3.0	5.60
CRAR = 4.0	5.32
CRAR = 5.0	5.05

Source: Reserve Bank of India.

3.4.5 A comparative analysis of the models

The comparability of the predictions of the Indian study with that of the studies by international institutions is quite restricted due to differences in the sample period, assumptions and methodology adopted. As the Indian study is country-specific, any meaningful comparison can be achieved only with respect to the relevance and realistic nature of assumptions vis-à-vis the assumptions employed in other studies. In the Indian context, quantity adjustments in bank credit have to be accorded an equal if not greater role in the initial years as opposed to the price channel for various reasons. Moreover, country-specific reasons such as the decision of public sector banks to enhance their capital base are dependent upon the government's ability to contribute its share for preventing dilution of its stake as the majority stakeholder; and certain other features of the Indian banking system like directed lending may play an important role. Another aspect is that the international studies postulate an adjustment in banks' profitability through partial absorption of the required increase in lending rates due to increased capital requirements. However, the Indian study imposes a profitability constraint, wherein banks are subject to a cost plus markup (profitability) pricing model of loans. The bank's choice of capital influences its loan rate, since the marginal cost of loans takes into account the cost of deposits and equity. This profitability constraint could be quite binding, particularly during this adjustment process.

The Indian approach entails a simplified model providing a parsimonious description of the underlying macroeconomy and bank balance sheet relationships, which can be subjected to further refinements. The model for India has some limitations and the findings can be regarded only as preliminary evidence. First, the model involves static analysis, and a dynamic model could be expected to provide refinements to the findings. Illustratively, a dynamic model could facilitate analysis of a calibrated adjustment period for the capital requirement and the associated time path for the growth impact reflecting upon the convergence of the economy to the growth path. A dynamic model involving optimising behaviour of households, business, banks and other intermediaries reflecting upon the growth potential and threshold rate of inflation could be expected to provide robust results. Second, some of the structural equations could be re-estimated in alternative ways involving non-linear relationships among the variables with advanced statistical techniques. Third, the model does not take into account asset quality relating to non-performing loans and marked to market losses on account of the investment portfolio. Fourth, structural changes in the future may affect the model's outcome. Finally, the preliminary estimate in the RBI model of a dip in GDP growth of 0.35% is based on certain critical assumptions about Indian banks' capital requirement. Illustratively, within the framework of a static model, it assumes immediate adjustment of the CRAR in line with Basel III norms, unlike the significantly longer adjustment period of 35 quarters and five years assumed in the MAG and OECD models respectively. With a longer adjustment period, the impact of the higher capital charge on economic growth in the Indian context could be expected to be more or less comparable with the modest estimates of the BIS and OECD studies. Also, the RBI model assumes that with Basel III, banks will continue to maintain the existing capital buffer. In this context, it is to be noted that Indian banks are currently maintaining a capital buffer by way of the actual CRAR 250 to 450 basis points higher than the regulatory requirement of 9%. With Basel III, which emphasises the quality of capital, banks may not continue with the existing magnitude of the capital buffer. Furthermore, the impact of Basel III would depend upon whether banks faced a capital constraint. In the Indian context, public sector banks, which account for a major share in the banking system, may not face a capital constraint if the government engages in recapitalisation of banks or dilution of shareholding in order to enable banks to mobilise capital through the equity market at a cheaper cost and support the growing credit needs of the producing sector. Here, the government's approach would critically depend upon the fiscal policy stance. In view of these limitations, efforts are being made to upgrade the model for evaluation of the macro impact of the new Basel III norms and arrive at a more realistic and robust assessment of the impact on economic growth.

The discussions above indicate that, over a broad range of estimates, it appears there would be an unavoidable but affordable trade-off with growth in the short term for ensuring long-term stability. Realistically speaking, in today's globalised world there is simply no option of following significantly different financial sector policies as the spillover effects are large. The decoupling theory fashionable not too long ago stands completely debunked and, if anything, the euro zone crisis has added more weight against the decoupling theory. Macroeconomic and financial stability in the world can come only if all major economies follow responsible macroeconomic and financial sector policies including prudential policies.

As regards implementing Basel III in India, there are a few issues to be settled: (a) should the implementation schedule be accelerated in view of a comfortable transition given that some jurisdictions have done so, and (b) should regulations continue to remain more stringent when implementing Basel III where they are already more stringent than the provisions of Basel III? These issues could possibly be decided by further developing the model and assessing the impact on growth.

Banks everywhere, including in EMEs, will initially find raising equity costlier as their return on equity (RoE) will be compressed due to the higher cost of equity. However, it can be expected that investors will come to accept lower RoE from banks when they perceive a much safer and sounder banking system. The initial phase does provide a challenge to banks, particularly in EMEs, to maintain RoE by increasing productivity through better use of technology and skilled human resources.

3.5 Difficulties in implementing countercyclical prudential policies

The BCBS has recommended the credit-to-GDP ratio as the metric for determining the build-up of the countercyclical capital buffers. This may be complemented by other market-based indicators. This metric is, however, not suitable for many EMEs, including India, as they are undergoing rapid structural changes because of which the upward deviation of the credit/GDP metric from trend would not, necessarily, be on account of the build-up of systemic risk. The trend would have structural

components also. For the credit/GDP metric to be applied, it would be necessary to segregate the cyclical component from the structural component. This is not an easy task.

RBI has found the sectoral approach more suitable for implementing countercyclical policies because generally the credit boom is not uniform across all sectors. Certain sectors experience much higher growth than others. Basel III does not provide any guidance on this. EMEs can formulate their own policies to deal with sectoral credit booms just as India has done. However, this will lack the reciprocity arrangements under the Basel III framework and could dampen the effect of the measures or render the measures ineffective due to cross-border flows. While it is possible to accommodate any deviations from the recommended framework under the "comply or explain" framework, the risk is that markets could see it as non-compliance. Going ahead, with some banks moving to IRB, implementing the sectoral approach could be challenging. Another challenge is to deal with the asymmetrical effect of countercyclical policies during the upturn and downturn of the economy. Clearly, it would appear that countercyclical policies may not be able to maintain the supply of credit during downturns, as is borne out by the Indian experience, due to the "disaster myopia" of both borrowers and lenders resulting in risk aversion, as also market pressure and expectation of higher capital ratios as the perceived risk is high. There is, therefore, a need to sharpen communication for countercyclical policies along much the same lines as central banks have perfected the art of communicating monetary policy, to make countercyclical policies more effective during downturns in particular, as well as to enable the markets to make nuanced judgment on deviations in the "comply or explain" framework.

Operating countercyclical policies will require judgments regarding the business cycle projections and identification of periods of excessive credit growth. This will be particularly challenging in EMEs where it will be difficult to distinguish excessive credit growth from the increased credit growth due to structural changes in rapidly growing and transforming economies. Any wrong judgment in this regard may involve substantial costs in terms of forgone growth. EMEs will need to develop expertise in identifying business cycles and in identifying the structural and cyclical components in credit growth, which will be a very challenging task.

3.6 Countercyclical provisioning policies

Countercyclical provisioning policies complement the countercyclical capital buffers. The BCBS and IASB are engaged in developing guidance on this issue. Only a few countries, such as Spain, Peru and Colombia, have implemented such an approach (dynamic provisioning framework). Though India has also implemented a similar approach, it is largely judgmental and is not exactly a dynamic provisioning framework. Implementation of a countercyclical provisioning framework in EMEs may be constrained due to the lack of historical data.

3.7 Impact on trade finance

The global financial crisis impaired the access to trade finance. Many observers have attributed this to particularly marked increases in the cost of trade finance and decline in its availability. Surveys conducted by the Bankers' Association for Finance and Trade (BAFT) and the IMF and by the International Chamber of Commerce have confirmed that banks, particularly at the height of the crisis, had been reducing lending in support of international trade and making it available on more restrictive terms and at higher prices, driven by both increased perception of default risk and higher capital requirements under Basel II. There was also a shift in trade financing towards more traditional secured but higher-cost instruments.

It is estimated that EMEs, whose trade expansion is a main driver of their economic growth, were most affected by the shortages in trade finance. It has been reported that there was also a general reassessment of risk caused by the financial crisis, which tightened the trade finance availability to EMEs. Spreads on the opening of letters of credit were up from 10–15 basis points above Libor to 300 basis points in some EMEs.

In order to mitigate problems relating to trade finance faced by SMEs, national governments, government-supported agencies and multilateral institutions had announced various measures to enhance trade finance availability. Multilateral institutions had also announced expansion of their trade facilitation programmes.

Since early in the financial crisis widespread concern had been expressed over the adverse impact of Basel II and its successor, Basel III, on trade finance. The regulatory impact on trade finance includes

a general increase in banks' cost of funds due to the rise in capital requirements and introduction of liquidity standards, the increased focus on counterparty risk rather than product or performance risk, higher asset value correlations in the case of interbank exposures, and the one-year maturity floor for certain trade finance instruments under the advanced internal ratings-based approach (AIRB) for credit risk and the sovereign floor for risk weights on interbank exposures and leverage ratio (see below).

Trade finance involves interbank exposures in the context of letters of credit. Therefore, the Basel II provision which stipulates the risk weight for the relevant sovereign as the floor for trade finance exposures, and the Basel III provision which stipulate an increase in asset value correlation by 25% in respect of interbank exposures, are likely to have a negative impact on trade finance.

Another important proposed measure with implications for global trade finance is the new leverage ratio. This will result in increased cost of trade finance and will affect EMEs more (see Section 3.2.1).

Following consultations with the World Bank, the World Trade Organisation and the International Chamber of Commerce, the BCBS has evaluated the impact of Basel II and III on trade finance in the context of low-income countries. As a result of this evaluation, the Committee adopted two changes to the treatment of trade finance in the Basel II and III capital adequacy framework in October 2011. The one-year maturity floor for issued and for confirmed letters of credit – instruments that are particularly relevant for low-income countries when they import goods – has been waived. This would reduce capital requirements for banks engaged in trade finance and which use the AIRB. The other change agreed by the Committee is relevant for banks using the standardised approach for credit risk. When a bank confirms a letter of credit, it has an exposure to another bank (the bank that issues the letter of credit – the "issuing bank"). In the case of a low-income country which imports goods, the issuing bank is usually domiciled in the importing country and typically does not have an external credit rating. Under the regulatory capital framework, where the risk weights are based on external ratings of bank counterparties, claims on an unrated bank are subject to a risk weighting of 50% or, in the case of short-term claims, 20%. The risk weighting applied to this bank exposure cannot, however, be lower than the risk weighting of the sovereign in which the issuing bank is incorporated. In the case of low-income countries, this is typically 100% (the so-called "sovereign floor"). Waiving this floor to allow the risk weighting to move below 100% will help reduce capital requirements for banks engaged in trade finance and thus foster the import of goods for low-income countries.

3.8 Impact on financing of SMEs

SMEs are considered to be the riskiest among corporate borrowers owing to difficulties in credit risk assessment, high transaction costs and high intrinsic risk. This is due to a lack of reliable and audited financial data in many cases. SME financing and other aspects of development financing have traditionally been very constrained, including in the advanced economies, even under the pre-Basel I regime. These constraints are attributable to a market failure in small business finance which is well documented in the academic literature. A well designed and well targeted policy intervention is required to improve welfare. Papers[4] in the *Journal of Financial Stability*, Volume 6, Issue 1 (April 2010) note that while domestic credit to the private sector has been growing in EMEs at rates higher than GDP, there is anecdotal and increasingly statistical evidence that SMEs have not benefited from the financial deepening to the same extent as other borrower groups. One solution has been the widespread use of government-backed loan guarantee programmes throughout the developed and developing world. Well over 2,000 such schemes exist in almost 100 countries. Thus, more than half of all countries, and all but a handful of the OECD countries, have some form of credit guarantee schemes, usually targeted at some sector, region or category of firms or individuals which is thought to be underserved by the financial sector. In addition, all multilateral development banks have guarantee schemes as well as loans and other instruments. The other tools are directed lending, ceilings on

[4] P Honohan, "Partial credit guarantees: principles and practice"; T Beck, L F Klapper and J C Mendoza, "The typology of partial credit guarantee funds around the world"; M Cowling, "The role of loan guarantee schemes in alleviating credit rationing in the UK"; F Columba, L Gambacorta and P E Mistrulli, "Mutual guarantee institutions and small business finance".

interest rates, interest subvention or guarantees of central or state governments or of specified institutions. There is a view that the more risk-sensitive Basel II & III will further constrain the flow of credit to SMEs. This does not appear to be an entirely correct conclusion because the underlying premise is that since under Basel I there was no risk discrimination from other corporates for capital purposes, the credit flow to SMEs was less constrained. Obviously, this cannot be the case as banks would certainly make a distinction in credit allocation and pricing based on their perception of riskiness. In this context, it may be noted that SMEs which come under the "regulatory retail" portfolio under Basel II are assigned a preferential risk weight of 75%.

The question, therefore, is whether the prudential standards for lending to SMEs should be relaxed. This would not be prudent. The solution would lie in extending external support by way of guarantees and other measures For instance, in India, well before the introduction of even Basel I, there have been measures such as a credit guarantee scheme (not operative now) operated by the Deposit Insurance and Credit Guarantee Corporation (DICGC); cover to exporters and banks provided by the Export Credit and Guarantee Corporation (ECGC); directed lending (priority sector – 40% of net bank credit); and an interest ceiling on small loans and export credit. Subsequently in 2000, ie in the Basel I era, a Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) was set up which guarantees collateral-free and/or third-party guarantee-free credit facilities to micro- and small enterprises granted by member lending institutions. In fact, it is interesting to note that the requirement in India of lending to borrowers below ₹ 2 lakh (US$ 4,000) at a rate not exceeding Bank Prime Lending Rate (BPLR) has caused some distortion in the pricing of loans. Reflecting the maturity of the markets, the stipulation of the BPLR system was withdrawn and replaced by a Base Rate system under which lending rates on loans below ₹ 2 lakh (US$ 4,000) have been deregulated.

SMEs that do not qualify as regulatory retail credit are subject to an external rating-based risk weight under the standardised approach of Basel II. EMEs face significant challenges in applying this approach. First, the rating agencies in these countries may not have adequate credit history to model the default rate. Second, the volumes are huge and difficult to cope with. Third, the ratings could increase the cost of credit. Fourth, even with a good rating the availability and pricing of credit depends on other factors. Finally, SME borrowers may not be able to present well audited accounts and facts about markets and business dynamics that can be relied upon by credit rating agencies.

3.9 Impact on financing of infrastructure

In EMEs, in the absence of other avenues of finance such as a developed corporate bond market, banks are the major providers of credit to corporates. Since corporates in EMEs are growing at a fast rate, banks are constrained in meeting their credit requirements due to the exposure ceiling under the large exposure rules. These rules particularly constrain financing of infrastructure, where credit requirements are huge and infrastructure development is extremely crucial for growth. Infrastructure financing may be further impacted after the revision of the large exposure rules which is under way in the Basel Committee. In addition, owing to new liquidity standards, infrastructure lending would increase the requirements of stable long-term sources of funds for banks, which in turn, while correcting the asset/liability management mismatch, would increase the cost of funding and consequently that of infrastructure financing, with implications for growth. In the long term, such cost considerations would have policy implications for the commercialisation and pricing of infrastructure services in these countries. However, there are limits to relaxing prudential standards for infrastructure finance. Risk mitigants in the form of credit enhancement, liquidity support, take-out financing, etc would need to be provided by government and multilateral institutions to support bank finance to the infrastructure sector. Similarly, the development of the market for corporate bonds and credit derivatives would be crucial.

3.10 Implications of the financial crisis for banking system structure, financial markets and the optimum level of financial activity

The crisis has highlighted the usefulness of a bank-dominated financial system in EMEs for supporting a high rate of growth with financial stability. During the crisis, EME jurisdictions with a smaller foreign bank presence showed higher resilience. The crisis also underscored the fact that large and complex financial institutions can cause severe negative externalities to the financial system and the economy.

In the light of these lessons from the crisis, EMEs will have to deal with issues like the appropriate mix of public sector and private sector banks; the balance between domestic and foreign banks; and the desirability of large financial institutions to meet their large financing needs, etc. The Growth

Commission, in its special report "Post-crisis growth in developing countries" issued in 2010, discussed a "utility model" of banking for the developing countries which seems very similar to the UK Vickers Report recommendation of ring-fencing retail banks. Under the utility model, a portion of the banking system that offers a limited range of services, such as deposit and savings accounts, holds a restricted range of safe assets, is segregated and heavily regulated. As this provides a kind of reassurance in bad times, the rest of the system can afford to be relatively less regulated and explore more sophisticated business strategies and lead financial innovation.

EMEs will have to carefully evaluate what proportion of their financial system should comprise large financial institutions and what simple financial intermediaries. EMEs will necessarily require large banks to meet their developmental needs, particularly for financing infrastructure and large industrial projects. Large banks also provide economies of scale and scope. There is no known way yet to determine the tipping point when "large" becomes undesirable, ie when the negative externalities outweigh the positives. What will have to be ensured, however, is that the large banks are not allowed to have complex structures. In India RBI has discouraged complex structures, for example by discouraging step-down subsidiaries and limiting the involvement of banks and banking groups in non-financial activities. Recently RBI has been pushing for a financial holding company structure which will ensure simplicity of structure. One option could be to adopt a three-tier structure of financial institutions comprising a few large financial conglomerates, a good number of large standalone banks and other financial intermediaries, and a reasonable network of small and medium-sized local banks. Different categories of financial intermediaries can also be subjected to differential regulation and supervision.

Efforts to reform and strengthen the public sector banks in EMEs should continue. Greater home-host cooperation is needed to ensure effective implementation of the cross-border resolution frameworks, maintenance of liquidity and countercyclical capital buffers.

The crisis has highlighted the importance of decentralised bank structures. Regulation of the organisational structure of international banks' local operations is an important issue for EMEs as, possibly, this could be used as a channel for mitigating supply shocks. For example, decentralised bank structures could have better protected the local operations of international banks from global shocks. This is the reason why some EMEs, like India, favour the subsidiarisation approach to foreign bank presence. Apart from easing the resolution process this will also provide greater regulatory control and comfort to the host jurisdictions. In a banking crisis situation, a subsidiary structure would enable the host country authorities to act more independently. However, there are downside risks too, inasmuch as a subsidiary structure makes it easier for the parent bank to withdraw support compared to a branch and therefore financial stability is likely to be vulnerable if these foreign bank subsidiaries dominate the domestic banking system. Any policy formulation in this regard will have to factor in these downside risks. For example, the Discussion Paper released by RBI regarding the presence of foreign banks in India proposes a cap on the total capital of foreign bank branches and subsidiaries as a proportion of the total capital of the Indian banking system while extending near national treatment to the foreign bank subsidiaries.

Asian countries have been developing financial markets with a view to reducing the fragility of financial intermediation. The relatively lower level of development and integration of the financial markets than in the United States and Europe turned out to be fortunate for these countries. For example, structured credit markets, where problems first originated in the United States, were in their infancy in Asia and the Pacific. Also, while Asia-Pacific markets were gradually opened to foreign participants, extant restrictions on transactions with non-residents partly insulated domestic financial markets from disruptions occurring abroad. However, in the long run, these countries will have to realise the benefits of further development of financial markets while managing vulnerabilities to external shocks transmitted through financial markets. Even though the financial markets were not necessarily a source of shocks, they were an important factor in transmitting and spreading the shocks. Increasing the flexibility of monetary policy operating procedures and the capacity of standing facilities; reducing counterparty and operational risks in over-the-counter markets; and increasing transparency of trading activities, prices and exposures could go a long way in developing these markets further to realise the growth potential.

There is a need to assess the optimum level of financial activity in an economic system given its potential to distort asset and commodity prices away from genuine supply-demand. The recent crisis has discredited the belief that growth and development of the financial sector necessarily leads to economic development. The contribution of the financial sector to employment and output growth in the economy, especially the real sector, is being assessed more carefully now. It has been observed

that the financial sector has recently focused more on redistributing wealth to itself rather than creating wealth. EMEs need to determine what level of sophistication of financial markets is appropriate for them – socially and economically suboptimal financial innovation needs to be shunned. Structured and derivatives products will need to be carefully evaluated in terms of the pace of introduction and their suitability and appropriateness for customers. Consumer protection policies and their implementation will have to be strengthened considerably in order to strike a judicious balance between financial innovation and financial stability.

Increased capital requirements will have fiscal consequences. In the light of heightened risks and weakened bank balance sheets, particularly in the advanced economies, governments have had to recapitalise many banks and/or guarantee their liabilities. This has had major implications for the fiscal position of several governments.

3.11 Fiscal consequences of Basel III

EME banking systems (eg those of India or China) have a high proportion of state-owned banks. Governments will have to contribute large additional equity capital in these banks to meet the Basel III requirements. This is likely to have implications for the fiscal position, particularly for India, and delay the achievement of fiscal prudence targets set under the fiscal management programmes. In the long term, however, the capital investment by governments should have a positive impact on the fiscal position of governments as a safer and sounder banking system in the backdrop of financial stability would generate steady returns on equity investments.

4 Current economic situation in EMEs and the way forward

During 2010, though the global economy showed signs of resuscitation, downside risks continued to hover as the recovery remained fragile. Whereas the advanced economies had to combat risks emanating from high unemployment and low growth, emerging market economies grappled with new challenges arising from strong domestic demand, rapid credit growth, relatively accommodative macroeconomic policies and large capital inflows. While growth was low in advanced countries, it was relatively higher in EMEs. This "two-speed recovery" posed different policy challenges for the countries. More specifically and importantly, volatility in oil prices during the period due to the flare-up in North Africa and the Middle East also accentuated the downside risks.

During this period, stronger growth in the EMEs compared to developed countries has resulted in copious capital inflows (Table 7). These flows have been aided by the easy monetary policy of the advanced economies in terms of extended periods of low interest rates and ample liquidity in the system. Such large capital inflows accompanied by strong domestic demand and buoyant credit growth are perceived to overheat the economies and build up systemic vulnerabilities. During the first half of 2011, the net capital flows to emerging markets remained strong due to higher nominal interest rates, strong growth and appreciating currencies. Emerging market corporate debt has also elicited interest and has absorbed a large part of inflows. The positive aspect of this development is that such inflows provide a source of funds for companies that were credit-constrained and were on margin. However, the downside is that sudden inflows may lead to mispricing in the asset class and may also result in complacency leading to lowering the standards of due diligence. Another trend that is being witnessed is that of "exporting credit risk" abroad by companies in emerging markets by way of overseas international debt issuance (eg by Chinese real estate firms) due to tight prudential regulations, domestic credit conditions, lower interest rates in developed countries, etc.

The capital inflows to the emerging markets have resulted in pressure on financial markets in terms of inflationary pressure, a sharp increase in asset prices and possibly higher leverage. These flows have placed constraints on the efficacy of the transmission of monetary policy as any hike in rates would result in an increase in the interest rate differential, leading to additional inflows. However, in some EMEs, such as Brazil (Petrobras issue of $70 billion) and China (Agricultural Bank of China issue of $22 billion), large issuance of equity and debt could absorb the inflows, thereby offsetting the rise in asset prices. Large credit growth was witnessed in Latin American countries. To counter strong and copious capital flows, some EMEs introduced capital control measures (Brazil, Peru, Chinese Taipei). In fact, Brazil was amongst the first emerging markets to raise taxes on foreign fixed income investment. In October 2009, the Brazilian government imposed the *Imposto sobre Operações Financeiras* (IOF, a tax on financial operations) and then in 2010, it further hiked it. Other countries

too, rather than controlling the volumes, managed inflows using prudential measures that endeavoured to enhance stability and stem the volatility resulting from such flows.

Table 7

Emerging and developing economies: net financial flow

(in billions of US dollars)

Region	Type	2009	2010	2011[1]	2012[1]
Emerging and developing economies	Private financial flows, net	267.4	482.3	574.7	610.9
	Change in reserves[2]	–508.2	–892.2	–1,130.6	–1,061.4
Central and eastern Europe	Private financial flows, net	26.6	79.5	99.6	109.6
	Change in reserves[2]	–29.0	–37.1	-22.5	–15.4
Developing Asia	Private financial flows, net	196.1	319.5	320.7	308.2
	Change in reserves[2]	–452.4	–592.7	–712.0	–745.4
Latin America and the Caribbean	Private financial flows, net	34.4	99.3	160.4	128.7
	Change in reserves[2]	–49.3	–103.5	–120.2	–62.6
Middle East and North Africa	Private financial flows, net	62.1	10.5	–20.0	17.1
	Change in reserves[2]	21.5	–102.8	–145.0	–122.1

[1] Projections. [2] A minus sign indicates an increase.

Source: IMF, *World Economic Outlook*, September 2011.

It is interesting to note that the growth in bank lending in emerging markets during 2007–10 was higher than in the previous five years leading to the crisis. The factors contributing to this trend include high domestic growth, more avenues for local banks due to foreign banks pulling back in overseas operations, and favourable domestic policies for bank lending. Incidentally, it may also be mentioned here that after the banking crises in the 1990s, EMEs strengthened their banks' capital levels. There were, however, knock-on effects through other channels. During 2010, the bigger banks in emerging markets had comfortable regulatory capital ratios. However, rapid growth in credit has the downside risk in terms of overheating of the economy and increased vulnerabilities. The traditional source of funds, viz current and savings account deposits, has been replaced by external financing. Emerging market banks issued a record $110 billion in dollar-denominated debt in 2010, led by banks in Russia, Korea and Brazil.[5] Whereas the larger banks extended the duration of their liabilities and used most of the sale proceeds for new lending, small and medium-sized banks in Brazil, Peru and Chile relied on global wholesale funding markets. All these factors, including rapid credit growth, balance sheet releveraging and rising asset prices, may ultimately lead to deteriorating bank asset quality. In addition, it is pertinent to note that emerging markets are highly vulnerable to the vagaries of capital flows, especially in a global downturn where a sudden stop of capital inflows and increase in funding costs may stress the capitalisation of banks in emerging markets. According to the September 2011 *Global Financial Stability Report*, "capital adequacy of banks in emerging markets could be reduced by up to 6 percentage points in a severe scenario combining several shocks".

Against this background, the focus of the policy intervention by EME regulators has been two-pronged – on the one hand, ensuring financial stability by containing the build-up of systemic leverage that leads to a build-up of systemic risks, and on the other, adopting a tighter macroeconomic policy

[5] IMF, *Global Financial Stability Report*, April 2011.

stance. As the capital flows may prove to be long-lasting, macroeconomic measures such as rate hikes, flexible exchange rates and fiscal tightening are more likely to succeed in combating overheating and maintaining financial stability. On the fiscal front, better management of public finances is likely to reduce the sovereign risk premium, which in turn is likely to reduce the pressures on the banks.

Emerging market policymakers need to guard against a build-up of financial imbalances, making use of both conventional and macroprudential measures. The rapid growth in credit raises risks of deteriorating asset quality, and policymakers need to closely monitor the health of bank balance sheets, preferably using economic capitalisation measures when testing for resilience to adverse shocks. The corporate sector is also facing the problem of leveraging that may make corporate balance sheets more vulnerable to external shocks.

EMEs need to appreciate that the ongoing structural transformations and public confidence in the economic reforms of the real sector would be seriously shaken in a situation of financial instability. Therefore, there can be no doubt that financial stability is as important for EMEs as for the advanced economies. Consequently, all regulations which are being contemplated for ensuring financial stability should be implemented by the EMEs, because the recent events have shown that in today's globalised world "decoupling" is simply not possible. However, equally imperative is to pace the adoption of the new regulations and to use it and supplement it through other financial sector policies so as to sustain the developmental efforts of the EMEs. Inevitably there will be a trade-off with growth in pursuit of financial stability, but the objective should be to ensure that the transitory sacrifice in growth remains "affordable". The conclusions of the official studies in this regard are comforting. There is a view that there should be special dispensation to ensure adequate allocation of credit and softer pricing for segments which are vital for developmental objectives. This is not to advocate regulatory forbearance or relaxation of prudential norms, but to support through our policies the financing of directly productive activities in the real sector. Empirical evidence has suggested that the policies followed by India and China have resulted in positive outcomes for growth and stability. Similarly, there is merit in incorporating incentives for financial inclusion in the regulatory regimes of developing countries. On the whole, the balancing of the twin objectives of financial stability and growth with equity has never been so challenging for EMEs. It is important that the prudential policies and other financial sector policies are sound and reinforce each other to achieve the objective of growth and equity against the backdrop of financial stability. Any suboptimal financial sector policy, whether prudential or otherwise, would affect all these objectives through a negative feedback loop as elaborated in Section 1 of this paper.

Ensuring an uninterrupted flow of credit to SMEs and the infrastructure sector will remain a high priority for EMEs for many years to come. EMEs should improve the capacity of their banking systems to meet the demands of these sectors without compromising their financial soundness. Regulators will inevitably find themselves in innumerable conflicting situations while balancing the financial stability objectives and growth of these sectors, which need to be resolved with foresight and through external intervention (government, credit guarantee schemes, etc).

As discussed in this paper, EMEs will have to make additional efforts to (a) develop capabilities and resources for implementing a macroprudential approach to supervision and regulation; (b) strengthen technology and skills to improve banks' risk management practices and stress testing, particularly in the context of the advanced approaches under Basel II; (c) implement an effective liquidity risk management framework; (d) effectively use the Supervisory Review and Evaluation Process in identifying bank-specific risks; (e) promote an enhanced home-host supervisory relationship; (f) develop financial markets; and (g) find solutions for infrastructure financing, which is a huge challenge.

EMEs will also have to choose the structure of their banking and financial systems carefully in the light of the crisis. While there is merit in having larger banks to meet the financing needs of the economy, particularly for infrastructure and large industrial projects, their structures cannot be allowed to become complex. EMEs also need to strengthen their resolution regimes in accordance with the guidance being developed in this regard by the BCBS and FSB.

Overall, the emerging regulatory framework is very challenging for EMEs, and not only from the perspective of containing the downside risk to growth. EMEs would be far better off meeting those challenges they are capable of.

Annex 1

A model for assessing the macroeconomic impact of the enhanced capital requirement for banks in India

The Indian model is based on some key assumptions and features. First, banks are expected to maintain the capital buffer in line with the baseline scenario. Second, banks are subject to a cost plus markup (profitability) pricing model of loans for sustaining the financial intermediation service role. Third, banks are subject to balance sheet constraint or asset-liability management subject to various regulatory requirements such as the Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR) with respect to investment portfolio and the prudential parameter, the Capital to Risk (Weighted) Assets Ratio (CRAR). Fourth, monetary transmission occurs through both the credit and interest rate channels. Fifth, for operational simplicity, it is assumed that the risky asset for banks mainly refers to loans and advances, though some part of investment could also carry a marginal risk weight.

The model begins with banks' balance sheet. On the liabilities side, aggregate deposits, the major component, are estimated through a structural equation, determined by household financial saving and the deposit interest rate. Banks' capital is assumed to be exogenous. Accretion to reserves and surpluses are determined by banks' profit. Other components of liabilities, including banks' borrowing from RBI, are assumed to be random walk, determined by the previous year's level. On this basis, total liabilities are estimated. By the balance sheet identity, total liabilities should equal total assets. On the assets side, investment is determined through a structural equation subject to the SLR requirement. Reflecting the portfolio choice, banks decide on SLR holdings in excess of the requirement in response to the differential between the yield on government bonds and the cost of deposits. The supply of loans and advances is determined by capital and reserves and surplus divided by the CRAR parameter. The final adjustment on the assets side takes place through other assets. In terms of the profit and loss account, the expenditure side determines interest expenditure on deposits, the deposit rate of interest multiplied by total deposits. The deposit rate of interest is determined through a behavioural equation, influenced by its own lag and the interbank call money interest rate reflecting the policy effect of the liquidity and price channels of the monetary transmission mechanism. Similarly, the yield on government bonds is influenced by the call money rate to account for the pass-through of monetary policy. The operating expenditure to assets ratio is assumed to be random walk, similar to the previous year. Operating expenditure in absolute level is determined by the operating expenditure ratio multiplied by total assets. Total expenditure is determined as interest expenditure and operating expenditure. Banks' profitability ratio (profit to asset ratio) is determined by the additional capital requirement and the previous year's level of profitability, thus, taking into account the cost of capital channel due to the increase in the capital requirement. The required level of profit is determined by the profitability ratio multiplied by total assets. Total expenditure plus required profit and provisions impose a constraint on the income side. Income from investment is determined by the yield on investment multiplied by resources deployed for investment. Other non-interest income is assumed to be random walk. Thus, total interest charged on loans is determined as total expenditure plus profit and provisions less income from investment and other non-interest income. The loan interest rate is determined by the total interest on loans divided by loans outstanding. In the macroeconomic block, private consumption, investment, government expenditure, net indirect tax and net exports are determined through structural equations. The link to banks' balance sheet is established through the investment equation; both the loan interest rate and the amount of loans in real terms are expected to affect real investment. A rise in the capital requirement (CRAR) will scale down loans and raise the loan interest rate, and thus adversely affect investment and real activity. The model operates on a static balance sheet of the Indian banking system where the resource side grows with household saving and GDP. Capital is allowed to grow only on account of internal accruals. The risky asset allocation takes place with the constraint imposed by the risk capital available. A reduced capital level results in deleveraging. An increased capital requirement impacts the lending rate, which in turn impacts credit growth. GDP growth is impacted by a reduction in credit growth and rise in the rate of interest. The model's structural equations were estimated using the ordinary least squares methodology and annual data for the period 1993/94 to 2008/09. The model was simulated for the period 1996/97 to 2008/09.

Specification of the Indian model: structural equations and constraints			
Equations	**Banks' balance sheet**		**Specification**
I	Liabilities	=	Capital + Reserves & surpluses + Deposits + Others
S	Δ(Deposits)	=	F[Financial savings, deposit rate]
I	Deposits	=	Deposits(-1) +Δ(deposits)
I	Capital	=	Capital(-1) + re-capitalisation (ΔCapital)
I	Reserves & surpluses	=	Reserves(-1)+ accretion: Δ(reserves)
S	Δ(Reserves & surpluses)	=	F[Profit]
I	Other liabilities	=	Other liabilities (-1)
I	Assets	=	Loans + Investment + Reserve balances with RBI + Others
I	Loans	=	(Capital + Reserves)/CRAR
I	CRAR	=	CRAR(-1) + Δ(CRAR)
I	Investment	=	Investment(SLR) + Investment (Non-SLR)
I	Investment SLR	=	SLR*Deposits
S	ESLR (SLR-SLR*)	=	F(yield-deposit rate, ESLR(-1))
I	Investment Non-SLR	=	Investment Non-SLR(-1)
I	Cash and Reserve balance with RBI	=	CRR*Deposits
I	Other assets	=	Assets (Liabilities) – Loans – Investment - cash reserve balances with RBI
	Profit and Loss account		
I	Total Expenditure	=	Interest on Deposits + Operating Expenses
I	Interest on deposits	=	Deposit rate * Deposits
S	Deposit rate (Rd)	=	F[call money rate, Rd(-1)]
I	Operating expenses (OE)	=	OE ratio(-1)*Assets
I	Total Income	=	Interest income Loans + Interest income Investment + Other income
I	Interest income Investment	=	Yield (Rg)*Investment
S	Yield (Rg)	=	F[Call money rate, Rg(-1)]
I	Other Non-interest income (OY)	=	OY ratio(-1)*Assets
I	Profit	=	Profit ratio(-1)*Assets
I	Loan interest	=	Total expenditure + Profit +Provisions- Interest Income on Investment - Other income
I	Loan rate (RL)	=	Interest on loans/ Loans
	Macro economy		
I	Real GDP at constant MP	=	Private consumption + Government consumption + Gross domestic capital formation + net exports
I	Real GDP at FC	=	GDP(MP) – Net indirect tax
S	Net indirect tax (NTX)	=	F[real GDP, NTX(-1)]
S	Private consumption	=	(GDP(-1), interest rate)
S	Household financial saving	=	F(nominal GDP (-1), deposit rate)

S	Investment (real gross domestic capital formation)	=	F[Real GDP(-1), Loan interest rate (RL), Δ(Loans/WPI)]
S	Government expenditure	=	F[Real GDP (-1)]
S	Net exports (NFY)	=	F[Δ(Exchange rate), NFY(-1)]
S	WPI	=	F[real GDP, WPI(-1)]
S	GDP deflator (DFL)	=	F[WPI]
I	Nominal GDP	=	Real GDP*DFL

Note: F: Function, S: structural equation ,I : identity/constraint , Δ:first difference operator, (-1):one period lag.

Variables definition: D=deposits, HFS: household financial saving, Y=real GDP, Yn: nominal GDP, C: private consumption, I: investment, G: government expenditure, NFY: net exports, NTX: net indirect tax, L: loans or bank credit, Pw: wholesale price index, Pd=GDP Deflator, Rd=deposit interest rate, Rg=yield on government bonds, RL=loan interest rate, Rp=policy rate (interbank call money rate), KRS: banks' reserves and surplus, Pft: profit, ZSLR: excess SLR holdings ratio, Zliab: liabilities of banks other than capital, reserves and surplus, and deposits, π:profitability ratio, k: capital to risk weighted asset ratio.

Figures in brackets indicate the 't' statistic, which is about 1.8 for the 10% level of significance and 2.0 for the 5% level of significance.

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Summary of the discussion

The session focused upon several issues raised by Mr Anand Sinha in the context of both advanced and emerging market economies (EMEs). Keeping in view, broader interlinkages between the financial sector and the real sector, the need for better coordination between financial regulation and macroeconomic policies for sustaining growth was emphasized. Given the nature and origin of the recent crisis, the particular attention was on the banking regulation.

Mr Zanota's presentation on Basel III Liquidity Framework

Preceding discussions, Mr Zanota from the BCBS Secretariat had the opportunity of presenting an overview of the key elements of the Basel III liquidity framework. This framework is new and since there is no long track record, a longer implementation period has been envisaged. The primary objective of this new framework is to increase resilience of the banking system to liquidity shocks and sensitize banking system to liquidity risks by ensuring appropriate funding – both of short term and long term – thus minimizing dependence upon public sector in times of stress. He indicated that while capital requirement standards both in terms of quantity and quality were more challenging for international banks than for banking systems in EMEs, in contrast, the Basel standards with regard to liquidity were expected to impact EMEs more; this is because of larger intermediation through credit in the absence of vibrant money and bond markets.

The framework has standards defined in terms of two ratios, namely, one a short term ,Liquidity Coverage Ratio (LCR) to be implemented by 2015 and the other a long term, Net Stable Funding Ratio (NSFR) to be implemented by 2018. The LCR would ensure that high quality liquid assets adequately cover net liquidity outflows; and the NSFR would ensure stable funding including equity to cover illiquid part of assets.

Three critical items, however, are still under review – definition of highly liquid assets; inflow/outflow assumptions and use of the buffer in stress conditions. The revision in definition will try and address the problem of jurisdictions such as Australia and South Africa, which do not have fiscal deficits and hence are not issuing significant sovereign paper.

Before concluding, Mr Zanota observed that financial stability is a broader question including the well-functioning markets, infrastructure and institutions and therefore, banking regulation alone would be insufficient to address broader policy objectives. Developments in areas such as insurance, accounting and markets would be equally important.

Discussion

Impact on Growth

During the discussions that followed, while sharing the various country experiences, the consensus was that while the new regulatory requirements would have some impact on growth the medium and long term benefits would outweigh these costs. In particular, with a common agreement for global minimum standards, it is expected that the dimension and frequency of the crisis cycles would be reduced.

Comparing the differing results of the IIF and BIS studies on the impact of the Basel III regulations on growth, it was noted that the IIF study assumed that higher capital would result in demand for a higher ROE by shareholders. This however is surprising since Basel III norms would make banks less risky, not more. The IIF study used a simplistic model as against the BIS model, which was based on the data provided by central banks using their own models. Other reasons for the differences in the results were on account of the sample of banks used by IIF being dominated by large systemically important banks. The assumption of more than 300 bps increase in cost of lending was also unrealistic. The study also assumes that credit and growth are proportionately related and did not take into account

the non-linearity of the reaction function. Another view was that when the impact of Basel III is studied, what was relevant were the global net benefits.

It was further noted that the impact of the new capital requirements is not very significant for the smaller and traditional banking systems – an assessment borne out by the BIS impact studies. The large banks especially those with aggressive trading desks were the ones most severely impacted. In their case, growth was driven by credit and leverage which became unsustainable. Another reason why the smaller non-trading banks were less affected was on account of the quality of capital which in their case was closer to what is required under Basel norms while in the case of the large trading banks, the share of core equity was very low.

As most developed countries are facing close to or at the lower zero bound interest rate, there is little scope for monetary policy to mitigate adverse conditions and hence the impact on growth especially in the near term cannot be underestimated. Other issues raised were the need to still make some calibrations to the risk weighting system, especially for smaller retail banks to provide for greater harmonization.

Macro prudential measures

With regard to dynamic provisioning, the Spanish experience was said to be positive but it had obvious limitations in taming the lending cycle without other macro-economic policies acting in conjunction. In contrast, in the Indian case, where counter cyclical additional risk weights and provisions for certain sectors were taken in conjunction with monetary policy and fiscal measures could have the desired effect of taming the lending cycle to certain asset classes.

On countercyclical buffers, a view was expressed that in a rule based system there is a clear and simple formula for building up of the buffer, but there is no formula that applies to release the buffer. The release of the buffer is very important for counter cyclical instruments because otherwise the credit crunch will be more severe.

In the context of cross border flow, it was noted that trade credit seized up in the wake of the crisis and this disrupted growth for many EMEs. Further cross border lending by large banks either directly or through subsidiaries was also severely affected and EMEs dependent on such funding /credits had to face severe liquidity crunch. The need for active management of the capital account in a manner integrated with prudential regulation especially macro prudential measures for ensuring sustainable growth especially in EMEs is now being recognized explicitly by the IMF. India is a good example in this regard. Merely dealing with flows is not enough as very often the capital controls are rendered less effective because operations shift to derivatives. It will therefore be necessary to look at the examples of Brazil or South Korea in terms of exerting equivalent regulation on derivative products which often mimic capital flows.

In the context of high build-up of short term external liabilities creating structural liquidity problems in countries like South Africa and South Korea, it was clarified that such issues are being considered while evolving norms for high quality liquid assets.

Directed credit and credit enhancements /guarantees

It was noted that Basel capital regulations allow capital relief for the SME sector. It was observed that credit allocation at the macro level alone would not be sufficient and this should be supplemented by micro level intervention for the credit flow to be effective. Ways to ensure credit flow to the SME sector which usually faces constraints in a crisis and post crisis situation were discussed. Some countries have a priority sector fund. A suggestion put forward by Ghana was to provide tax incentives for lending to this sector. In India, the priority sector lending targets do not carry any discriminatory or relaxed prudential standards and nor they have any interest rate caps. To deal with the problem of high NPAs in the SME sector, credit guarantee schemes have been adopted in several jurisdictions. But, to be efficient, guarantee schemes have to be based on understanding of the risk at the ground level. Credit risk in cases where guarantee is supported by the State is treated as zero under the Basel framework. It was urged that credit guarantee systems need to have some element of risk based premia – even if supported by the State. In case of infrastructure finance, sovereign credit enhancements could solve some of the constraints faced in both risk weights and exposure norms. If a non-government credit enhancer brought into the picture, the risk weight for the exposure actually does not alter very much as the risk weight of the guarantor is substituted for the risk weight of the underlying exposure. In some cases the exposure is also not altered. It was clarified that exposure

norms are risk neutral; they do not really factor in risk of the counter party. The basic reason is that it takes a view of what is the maximum loss that a bank will suffer if the counter party failed with due factoring in of the risk mitigants.

Subsidiary vs branch banking model

There was a discussion on the issue of Subsidiary vs Branch banking model. After the crisis, most countries have preferred to adopt the subsidiary model as they are seen to be ring fenced and more amenable to the host country regulations.

Concluding observations

The new regulations are expected to lead to a more resilient banking sector particularly in the advanced markets. EMEs are expected to gain through spillover effects. While concluding, the chair attempted to provide responses to questions raised in the paper, based on the discussion:

- Will the new regulatory approaches and measures impinge and run counter to the growth objective?

  The broad objective answer is no. There is no doubt some cost; but this is acceptable. It also needs to be viewed in the right context – the global crisis costing between 3 to 15 per cent loss in output, in comparison to giving up growth by 0.6 to 2 percentage points.

- Has the overall post crisis regulation alter the balance in favour of stability rather than growth to the disadvantage of SMEs?

  The answer is not clear; but, it is the quality of growth, the quality of capital and the quality of supervision which matter.

- How will the increased capital leverage and liquidity impact the flow of credit to the commercial sector in general and trade, SME and infrastructure in particular?

  This is country specific. It depends on how a particular country implements regulation to facilitate growth of certain specific sectors.

- What can the EMEs expect to gain from Basel III?

  Implementation of Basel III is yet to begin. EMEs need to focus on key Basel III issues of improving core principles, tightening supervision which will yield far more benefits. Certain aspects of Basel III are very difficult to implement because regulatory resources are limited. So there is a need to prioritise and to focus on the important issues.

- What is the relevance of Basel III and other post crisis regulation for EMEs?

  The spirit of Basel III is convergence amongst regulators to improve the quality of banks and the quality of supervisors to serve the real sector better. It is also about understanding the systemic risk better and strengthening global cooperation. The system should be more resilient to withstand the next shock when it comes.

Session II: Chair's initial remarks

Stephany Grifith Jones[1]

At the outset, I would like to thank Usha Thorat, Jaime Caruana and Philip Turner for organizing such an excellent conference. It is really a privilege to be here in India, particularly because it provides an opportunity to get valuable lessons and experiences from India. I like the expression in the theme: "too small to be counted". It is an interesting and rather an unusual subject making us to think not just about growth and financial stability, but to consider regulation in a broader development framework.

In the wake of the crisis, we talked a great deal about the need to curb harmful financial innovation, the kind of financial innovation that seems to be good mainly because it helps to maximize profits for parts of the financial system. It reflected a lot of creativity in financial engineering but has tended to generate more systemic risk rather than leading to better risk management and diminishing risk, which are the goals of the financial system. Many of the innovations developed by the financial sector, especially in the North Atlantic countries, therefore turned out to be problematic.

We have an opportunity in this session to discuss positive financial innovations that could truly serve the real economy, rather than undermining it. We should start from looking at the needs of the real economy and then the kind of institutional arrangements, and the kind of innovations and instruments that can best serve those needs. Such positive innovations are important in a number of areas – such as lending for investment in infrastructure, in renewable energy and growth linked securities for governments – but particularly so in instruments of lending which could provide sustainable financial services to the poor.

It is really surprising that there are simple instruments, sometimes escape our attention. I will just give you one example outside that of lending to the poor. The GDP linked bond is an instrument that would help the government to service more debt in times of high growth and less debt in times of poor growth or recession. It should have been so useful during the European sovereign debt and other crises; and it would have been also useful during booms, because it could help in cooling the economy. I wonder why such instruments have not been implemented.

A number of other positive innovations for lending to the poor can be identified, that have worked well in different countries; these include the use of business correspondents(for example in Brazil, these have very successfully helped extend financial services to remote villages at low transaction costs), the use of mobile phones (successfully used in countries like India, China, Taiwan) combined with the provision of payments services, in particular to women enabling safe keeping of money(in India for example). Provision of financial services goes well beyond provision of credit; it includes for example access to bank accounts, payments services and insurance.

I think lending to the poor and lending to the SMEs are of particular importance and we need to understand more about them. We have to start from the perspective of what is the sector's need and then what kind of credit, and how credit should be made sustainable so as to serve the needs of their growth. I think for example, simplicity is particularly important. I do not think

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that it would be appropriate for the instruments of lending to the poor to assume any level of complexity. I believe that simplicity in financial sector, when introduced would also help in general in simplifying regulation.

It is also important to provide good financial safety nets for the poor; this will avoid the current dilemma, where big financial actors are too big to fail, but the poor are too small to be counted (as the background paper so rightly argues). A key issue therefore is to protect the poor in times of crisis; this was for example not done in the US financial crisis, as TARP bailed out large banks, but did not rescue poorer mortgage holders. The US program was quite effective in saving the financial system which is no doubt important, but it was quite costly and was far less effective in helping the poor people, in particular who held the mortgages. Those people are either still struggling to keep the mortgages alive or actually have lost their houses. Economists like Stiglitz and Krugman have argued that the bailout packages should have been more symmetrical and far more protective of the poor people. Therefore, it is important to think not just about how to lend to the poor but also how to protect them when things go wrong, since they always have a less bargaining position in the financial sector. In this sense, it is important to empower the poor; movements like that of Occupy Wall Street attempt to help with that.

While designing instruments that will be supportive of pro-poor growth, we need to recognize that it has to also work in collaboration with other economic policies. Reducing poverty must simultaneously rely on other policy instruments, such as fiscal policy, redistribution of assets, and measures to increase productivity of the poor; this will avoid exclusive emphasis on credit as a way to raise welfare for the poor. Indeed, poverty alleviation and improved income distribution need to be a central aspect of a development strategy.

More broadly, one of the main causes of the North Atlantic financial crisis, according to eminent economists like Stiglitz and Krugman, is inequality of income; a similar diagnosis was made by Galbraith in his book of the 1930s, The Great Crash. Because incomes of the poorer parts of society do not grow enough, or even may fall, credit to them is seen as a way of boosting their level of consumption, whilst not increasing their incomes. This often may lead to lack of sustainability, and ultimately to problems both for the poor and the financial system. It is essential that lending to the poor is done on a sustainable basis as far as possible, to avoid outcomes such as incapacity to pay by the poor and insolvency of institutions lending to them. For example, sub-prime mortgages, though initially facilitated poorer people to buy homes, did so in an unsustainable way, leading to people either accumulating excessive debt and/or losing their homes. According to the Head of UK regulation , Lord Turner, some financial innovations have made parts of the financial sector ”socially useless”, or –even worse, damaging to the real economy. So, one should not rely exclusively on these kind of instruments, as valuable as they are, but, it has to be done in coordination with fiscal policy and other measures.

One of the key questions posed by Usha Thorat is: should equity or inclusiveness be included as an objective of regulation together with financial stability and economic growth? The answer is a resounding yes. It should clearly be an objective of regulation especially for emerging and developing economies. A very good UN report released about five years ago, which was focused on micro finance, actually said that access to finance for the poor should be a central objective of prudential regulation and supervision. One way to argue in its favour in technical terms is that it may provide some benefits of diversification. By lending to poor and to SMEs, the banking system, more generally the financial system can have a greater exposure to different segments of the economy which may not be synchronized through the economic cycle. In the same way, lending to emerging markets and other developing countries provides benefits of diversification to international banks which should have actually been very useful in the crisis and the post crisis period. So, it is certainly a valuable objective, but with a caveat I have already mentioned, that these have to be done on a sustainable basis. There are also certain pre-conditions for this to work outside the mainstream financial sector and also within it. Such preconditions would include for instance,

the establishment of credit bureaux, establishment of measurement, understanding of the measurement of risk profiles and adequate methodologies to evaluate financial services to the poor(See UN , 2006).

Financial regulation is important in a number of aspects that relate to equity. Good regulation must for example ensure the financial stability of institutions, so that the poor do not lose their savings; equally, financial regulation must ensure that the lending instruments used are sustainable, so the poor are not worse off as a result of their borrowing. Any trends that make either the financial institutions or the loans unsustainable need to be avoided; one example is avoidance of currency mismatches, which could arise if foreign lenders finance institutions which are lending to the poor. Should regulation of institutions lending to SMEs or the poor be lighter and less complex? Though this would have advantages, it has the problem that the risk of regulatory arbitrage must be avoided.

Another issue relates to what extent should there be mechanisms like guaranteed funds that will provide some kind of comfort to banks to lend to sectors which can improve equity and inclusiveness. For Governments, this poses the most difficult question, since guarantees generate a contingent liability. So, one need to think very carefully about how to restrict the contingent liability. There is an example from Europe, where the European Investment Bank not only provides loans to commercial banks on the condition that these banks pass on the advantages of cost when they on-lend to SMEs; it also in some cases provides guarantees that it will share first losses up to a certain level(which are financed by EU grants); this encourages private banks to lend more to SMEs than they would otherwise do; to avoid moral hazard, however, risks are shared between the EIB and the commercial bank(Griffith-Jones and Tyson, 2010). This mechanism has worked well particularly during the current crisis by helping to increase SME lending or to soften the reduction of lending to the SMEs.

Yet another aspect relates to the choice of delivery mechanism. An important issue is whether lending to the poor should be done mainly directly through State owned financial institutions or private ones. The experiences from Brazil and India in delivering through public banks are quite positive. The other way is to do it indirectly as I was already mentioning through guarantee mechanism, or through minimum levels of lending required from private banks provided they are done in a sustainable way. It has to be also well supervised. And the other element is to try and shape the kind of instruments that could be used by private banks through regulatory incentives. In this case, how far should regulators go to determine the proportion of lending that should go to the poor or SMEs? If this is not done, how can they encourage cross-subsidization of loans from other lending to that which is made to the poor? There are a number of experiences that seemed to work differently in different countries.

The key point is that the financial sector should be designed and regulated so it serves the interests of the real economy; indeed, the financial sector must not be a bad master, but a good servant of the real economy. Emerging and developing economies have the advantage that many of the vices and dysfunctionalities that have become so pervasive in many Western financial systems do not affect them as much; being a late starter has the advantage of being able to learn lessons, both good and bad ones, form other so-called more advanced systems. One good example is the need to curb or avoid the financialization of loans to the poor, for example via securitization and on selling packages of loans made to the relatively poorer segments of the society.

I do not think we can have an overall response and a lot is further to be discussed. I think the exchange of experiences that we have here should be actually very useful.

To recapitulate, the key questions that this session is aiming to address are:

First, why are equity and inclusion important and are these objectives at cross purposes with regulation?

Second, Can an inclusive regulatory philosophy minimize the risks of a crisis and soften the impact of cyclical behaviour?

Third, how do other elements of the eco-system – the public policy, markets, and regulation - that are outside the purview of the regulator and central bank treat inclusiveness, thereby impinging on the behaviour of the financial sector?

Fourth, how does the regulatory system develop a longer-term horizon to stay invested in the "poor"?

Fifth, in the context of inclusion, what are the implications of technology for regulation?

Too big to fail versus too small to be counted

M S Sriram, Vaibhav Chaturvedi and Annapurna Neti[1]

Abstract

Financial reform must not ignore the interests of small stakeholders – who must be regarded as too small to be counted. Making equity an explicit objective is delicate: it needs to be calibrated such that the vulnerable are not exposed to further risks. Policies outside the realm of financial regulation should support the aim of improving the lot of small stakeholders. Technology could be a game changer and the central regulatory authorities should usher in a policy that helps the inclusion agenda to embrace technology. The transaction costs could potentially be minimal and the fees charged to the vulnerable should encourage them to embrace formal financial systems.

JEL classification: D63, G01, G20, G21, G28

Key words: Equity, Crash, Crisis, Crisis, Financial, Financial, Regulation, Regulation, Micro Finance Institutions, Regulation, Regulatory, Policy

Introduction

The regulation of the financial sector is complex. The financial sector is embedded in the larger economy and has implications for economic behaviour. However, the pre-crisis template for regulation of the financial institutions epitomised specific focus, not looking at the broader systemic linkages. The global initiatives underway to repair the financial system do recognise or address some of these inter-linkages within the financial sector in the interest of financial stability. The links between the financial sector and the real sector, though, still seem to be outside the realm of financial sector regulation and more in the realm of public policy. This disconnect tends to exclude the interests of small stakeholders.

This paper focuses on the small. We move from the doctrine of "too big to fail" and examine a new doctrine – "too small to be counted". It is argued that just as the financial regulation attempts to incorporate the imperatives of growth and stability, it needs to have equity as one of the explicit objectives. However, the nature of engagement of financial regulation with issues of equity needs to be calibrated appropriately so that the financial integration of the vulnerable does not expose them to further risks and uncertainty. It also needs to be

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The authors are thankful to Smt. Usha Thorat, Shri. SN Chattopadhyay, Shri. G Padmanabhan, and Shri. P Krishnamurhty for very useful inputs and insights in writing this paper. The usual disclaimers apply.

supplemented with other supportive policies and institutional frameworks outside the realm of the financial sector.

We divide our arguments into eight sections. The first section examines different contours of financial exclusion inherent in the conduct of financial sector. The second section examines the philosophy of regulation and the required features of a forward-looking regulation. The third section looks at inclusiveness and why it is important to have an inclusive regulatory framework. The fourth section focusses on the interface between public policy and regulation. It also examines how the public policy concerns can be embedded in the regulatory framework. The fifth section diagnoses the problems that have come up in the financial sector using "horizons" as a base. We argue that businesses that exist for the purpose of turning profits tend to have short time horizons. Regulation being concerned with stability should have longer horizons. The sixth section examines how the modern world has moved towards providing solutions through 'paper' or financial instruments that are traded, without a strong association with the underlying economic activity. The seventh section discusses the opportunity that exists with technology and technological innovations. The last section is devoted to conclusions.

1. Contours of inequity

The have-nots are classified by varying degrees of handicap:

Identity is about how individuals, micro and small enterprises (MSME) deal with their existence. Informality depends on relationships, personal histories, memories, and networks. Formal systems embed memory in a retrievable codified form. With identity moving beyond photographs to biometrics, and technology becoming sophisticated, the costs of obtaining, establishing and maintaining identity escalates. This cost has to be absorbed somewhere.

Codified information on transaction history is not available as most information is informal and anecdotal. An entry-level problem in case of identity becomes a transactional problem once the client gets into the financial system. The poor suffer because of such codification. With technology and analytics taking deep roots in the banking system, Basel norms requiring an internal rating of portfolios to get the risk weights and capital adequacy, the reliance on machine generated codified data increases. As the financial institutions get more and more digitised, the barriers for the have-nots will only increase.

Safety nets help in insulating the entrepreneur from the enterprise. This is achieved through a limited liability clause. The poor individuals (household enterprise) and MSMEs (sole proprietorships, partnerships) usually have unlimited liability, which blurs the difference between entrepreneur and enterprise, transferring risks of the enterprise to the entrepreneur and vice versa. While unlimited liability (such as like personal guarantees) should be comforting, the danger of a personal downside affecting the enterprise weighs on the lender. Thus, these customers are perceived to be risky. If the risks underlying the activity are not covered then leverage is unknown. The liabilities from informal sources are opaque. The clients could even make a post facto informal deal, even if they are transparent ex-ante. When this category of clientele moves into the mainstream, they start with lightly regulated intermediary institutions. The leverage of such institutions is also unknown. It becomes complex when such institutions originate and sell their portfolio through market instruments such as CDOs or securitisation deals taking these assets off the balance sheet.

Access to bail-outs is available to the large players as they negotiate individually and resort to restructuring, settlement and other agreements. The small players will be taken note of when the crisis builds up to a systemic proportion. A single large player failing could pose a systemic risk. A large number of small players have to be simultaneously under stress to become systemic. Since the decision is about a collective, there is a moral hazard.

Write-offs may be seen as back-ending of welfare expenses. The state through its policy mandates the financial system to take exposure to vulnerable sectors, expecting them to operate on market principles. It then provides succour when it becomes impossible for the sector to continue competing on market principles. The write-off is a public policy weapon. The financial sector players must be insulated from public policy decisions having operational dimensions. However, with the movement towards market principles, the state seems to move towards one-time crisis management response, than pro-active welfare based responses.

Inability to cover the risk of an underlying economic activity: The ability to seek insurance cover – either because of the inability to identify the risk, or because of the infeasibility to assess the loss based on transaction size.

2. Philosophy of regulation: why are equity and inclusion important and why are they not at cross purposes with regulation?

In a profit- maximising world each player operates with a different horizon. In a scenario that is short sighted, there are tendencies to take from

- others – this could be: powerful versus the weak; developed versus developing regions;
- future – spending now before earning (for governments) and reporting profits from future incomes in current periods (for corporates)

Other arbitrages give advantage to one player over the other. A tightly controlled and highly regulated environment may lead to regimes while in a de-controlled environment the markets take over. Regulation smoothes the ups and downs created by asymmetries of the markets. Regulation should have longer horizons that help in regular self-correcting mechanisms to ensure that it does not result in a crisis situation. While regulation represents the spirit and signals how markets should behave, the players may use regulation literally, violating the spirit. It is important for regulation to be alert and agile. Thorat (2010)[2] argues that financial inclusion is not at cross-purposes with prudential regulation. Inclusion brings in a large number of clients, a diversified base both on the assets and liabilities and contributes to stability of financial institutions. This can be achieved without the provision of direct subsidies, if there is space for innovation, with adequate consumer protection.

The financial system is not equitous. The dimensions of inequity are extensively discussed in development literature. Understanding this from the regulatory perspective of financial systems provides a natural link between diagnosis and treatment. Intervention from the financial sector may call for subsidy. While subsidisation usually comes from the state, the financial sector can contribute by way of cross-subsidisation in the interest of public good and stability. The challenge of public policy is to design these subsidies.

Before the crisis of 2008, there was a cleavage between public policy and the financial sector. The functioning of financial markets, the approach to regulation reflected a disconnection with the socio-economic setting in which equity was an integral element. Linking financial sector policy-making to equity carried a pejorative connotation from the

[2] Thorat, Usha (2010): Financial Regulation and Financial Inclusion: Working Together or at Cross-purposes. Speech delivered at the Tenth Annual International Seminar on Policy Challenges for the Financial Sector. Washington, June 2–4, 2010

markets-based view of the financial sector. Using the financial sector for addressing objectives other than enhancing the growth and depth of markets was said to be distortionary. Countries like India were advised to move away from such a distortionary system. A crisis in the western world and strained sovereign balance sheets has led to a reassessment. While there is no evident change, there is an increasing realisation that for a sustainable growth model, the financial sector cannot be oblivious of the public policy objectives.

Conservatism expects the worst and prepares a buffer. Extreme conservatism avoids dipping into the buffer even in a crisis. Such regulatory philosophy denies the benefits of consumption of current surpluses in order to be prepared for a dark day. The liberal regulatory framework spots the opportunities for the current benefits to be invested in growth in the hope that greater profits can be generated if we prop the base in the present. In a crisis, the liberal regulatory regime will stare at a collapse, but in the run up to the collapse it would have seen a phenomenal growth. The fall would be from a greater height and the pain would be greater.

A conservative regulatory regime will make greater attempts to save institutions than a liberal regime. While the liberal regime would offer bail-outs for systemically important institutions, it would be matter-of-fact when the market consumes a few institutions, if there are minimal contagion effects. Such a regime would be less insular. When a crisis hits, the larger players are affected and the smaller customers are affected much more. From the view of larger equity, we need safety nets around the poor to ensure that the bail-outs available in formal space are also available to the vulnerable.

Sections of the population may be continually vulnerable with an adverse event leading them to precipice. This group (like farmers) represents a low capital base, high leverage and volatile incomes. These attributes could be applied to speculative businesses as well. Regulation should provide for structured cross-subsidisation by managing earnings. A stable portion of the income provides for these shocks on the fringes at the institution level rather than the level of economy. Regulation should distinguish essential, but inherently risky/volatile activity and volatility on account of pure speculation.

The role of regulation is in putting safety nets that prevents a freefall. While the concept of “too big to fail” is understood, we need to see what happens to the mass termed as “too small to be counted”. In the post crisis situation, inclusion is critical as a corrective measure.

We look at some initiatives taken by the governments in the post crisis scenario. The bail out of large players because of the systemic concerns is well known. We examine initiatives taken in favour of the poor. Why were these measures important? If they were important post-crisis, were they as important in a stable/growth scenario as well?

Box 1 highlights the problems of too small to be counted. There is insufficient data to take informed decisions and it is difficult to analyse the impact. The crisis brought out the vulnerability of MSMEs that were dependent on the larger economy because a drop in the demand for goods and services. The MSME and the poorer customer segment are more vulnerable to outer shocks. Very much the way the larger institutions (and economies) need to build up buffers (like reserves, capital adequacy and diversification of investible resources) that help overcome the sharp effect of a crisis, regulation should ensure that such buffers for the poor customers and the SME firms.

Sumarto, Suryahadi and Bazzi (2008)[3] argue that while the improvement in the macro-economic environment was necessary to reduce the vulnerability of the non-poor, the macro-economic upturns were insufficient to get the chronic poor out of poverty. The inclusive policy response in the post crisis scenario should be present even at stable state. This is evidenced by the Indian experience, where while the overall economic growth was spectacular, there were vulnerabilities in specific geographies and specific economic engagements. The suicides of farmers in parts of India are a case in point. Reddy (2010)[4] argued that de-regulation of financial sector was important to remove distortions and enhance efficiency, there was a case against excessive deregulation, where markets take over. Reddy argued that such freedom resulted in irresponsible lending exemplified by sub-prime in US and microfinance elsewhere.

Box 1

Rationale for Inclusion: Data for Decision Making

Do we have insular measures that minimise the impact of any crisis or measures that can be taken after a crisis? In a presentation at the Asia-Pacific Financial and Development Centre, Lucia Cusmano,[①] Senior Economist from the OECD, highlighted two important issues for SMEs:

1) a drastic drop in final demand for goods and services

2) a deterioration of credit conditions facing SMEs.

While these were identified, it was difficult for the policy makers to give a calibrated response, because these sectors did not have hard data that could monitor the effectiveness of the response. Inclusiveness has to be built during normal times, and data has to be gathered in normal course. Otherwise it is difficult for policy intervention.

Cusmano records the typical responses to such a crisis, where SMEs would: tighten the operating costs; exhaust inventories; and cut investments including innovation spending.

Such a response has an impact on the firms beyond the crisis period. It stunts their ability to be futuristic and continue to compete. Cusmano argues that such a response of banks is natural: they tighten credit the post-crisis scenario, while the state infuses liquidity as support.

A survey amongst the G-20 members' policy responses in 2009-10 (quoted by Cusmano) showed that various Countries adopted the following measures:

1. Government guarantees for working capital and investment credit
2. Strengthening of capital base by encouraging private equity and venture capital
3. Provision of direct credit
4. Export facilitation, credit, guarantees and capital to export support institutions
5. Credit mediation and monitoring.

[①] Cusmano, Lucia (2010): SME Credit Guarantee System: Support Structures, Best Practices and Responses to the Financial Crisis. Conference on SME Credit Guarantee Systems in Asia Pacific Region, Hangzhou, PR China June 16-18, 2010.

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[3] Sumarto, Sudarno; Suryahadi, Asep and Bazzi Sami (2008): Indonesia's Social Protection during and after the Crisis in Barrientos, Armando and Hulme, Hulme (Ed): Social Protection for the Poor and Poorest Concepts, Policies and Politics Basingstoke: Palgrave Macmillan.

[4] Reddy, YV (2010): Developmental Dimension to the Financial Sector. Lecture delivered at The Sixth M.R.Pai Memorial Award Function, Mumbai.

In analysing the Indonesian crisis of 1998–2000, Sumarto, Suryahadi and Bazzi show the difference between handling the crisis situation aimed at preventing people from slipping into chronic poverty and the post crisis responses. During the crisis having targeted subsidy programs, unconditional cash transfers, provision of subsidised food, employment generation, and public spending were important. The post crisis measures included withdrawing subsidies and having conditional cash transfers instead of un-conditional cash transfers. The informal social protection and coping mechanisms in the pre-crisis included reducing expenditure, borrowing to increase income. The financial sector can play a constructive role in ensuring that financial instruments mimicking coping mechanisms could be made available and the response burden of the state could be decentralised.

Inclusion defies the logic of deregulated markets and gets into the realm of the state. The state is inappropriate to deal with financial instruments and products needed for the non-lucrative parts of the economy, to be served by the markets. In such situations two scenarios emerge:

First: Markets discover asymmetries and players skim the market as seen in the sub-prime or microfinance markets. The logic of competition fails when the players adopt irresponsible behaviour. Regulation will have to step in with measures of customer protection.

Second: The regulation makes inclusiveness a part of the business by mandating targets for serving certain sectors. By mandating this on all financial institutions, the regime creates a level playing field, and forces them to cross-subsidise across their own portfolios. Such measures may lead to innovation. With technology kicking in, inclusion could happen to the extent that the mandates have to be achieved.

Both responses show that inclusiveness and development have to fall within the regulatory realm one way or the other and it only creates a well-diversified buffer spread across individual players, the banking institutions and with the economy as a whole. Ensuring capital formation at the household level and ensuring that there is no overleveraging of the unorganised sector during normal times becomes the role of regulation.

3. Logic of inclusiveness: can an inclusive regulatory philosophy minimise the risks of a crisis and soften the blow of pro-cyclical behaviour?

The policy that practices exclusion suffers from multiple asymmetries. Inclusiveness is essential for good regulation. The data from this segment should feed into the regulatory frame. If the systems were not inclusive, it would be difficult to capture the extent of exclusion because there is no data on what is excluded and it is difficult to estimate without a base/starting point. Regulation is premised on addressing externalities and informational asymmetries. The concepts of institutional soundness, prudence, fairness and transparency are the core of a regulatory framework. The market centric Anglo-Saxon model of the financial system is entrenched in developed economies. The model ensures fair conduct of transactions and a fair assessment of institutional prudence. This is reflected in the prescription of economic capital for risks that an institution is exposed to. Limitations of this approach were evident during the crisis. Using examples with reference to the MSME sector, we find that post crisis responses were impeded by the fact that data about the sector was not available.

Boxes 2 and 3 show that the two instances remained inconclusive on whether these measures had a desirable outcome and impact. These measures are being taken in a data vacuum. The logic of inclusion should start by understanding the excluded, measure the contours of the problem and examine the impact of the crisis. The policymaking should be inclusive, and this should happen in even in normal course and not in a post crisis situation.

Box 2

Possible Measures in a Crisis Situation

A report by the OECD[①] examines the ability of countries to deal with the crisis as dictated by their fiscal and monetary policies. The measures are: ensuring that the markets for SME output remain vibrant; increasing access to finance through injection of funds and provision of guarantees; The Turin Round Table recommended that governments concentrate first on reducing those taxes that are "profit-insensitive", taxes that are paid regardless of whether the SME is making a profit. This increases the ability of SMEs to finance working capital internally.

These measures aimed at:

(a) maintaining liquidity by using multiple measures to shorten payment delays for public procurement (Australia, France, Hungary, Italy, the Netherlands, New Zealand, and UK) and enforce payment discipline (France);

(b) rationalising taxes, particularly taxes not related to results such as VAT (Czech Republic, France and Spain) and tinkering with income tax slabs (Japan, Netherlands, Canada), so that more resources and liquidity is available for the SMEs for reinvestment;

(c) ensuring continued supply of investment and working capital credit in the light of stressed balance sheets through extension of loans and guarantees, which ensures the ability of the SMEs to continue to do business development.

However, the report concludes that “time is too short to draw conclusions about what are the ‘best practices’ as emergency measures.”

① OECD Centre for Entrepreneurship, SMEs and Local Development (2009): The Impact of the Global Crisis on SME and Entrepreneurship Financing and Policy Responses

Box 3

Specific Measures for SMEs in UK and EU in the post crisis scenario

In an accompanying paper, Milne (2011)[①] discusses the post crisis regulatory measures including the Project Merlin Agreements in the UK that mandated banks to increase their exposure to SMEs as a part of the package. Whether this measure represented a good or a bad outcome was unknown. Unless the overall economy recovered, this resulted in higher loan losses. He therefore concludes that we need measures *focussed on the practicalities of improving the supply of SME lending, and not on inappropriate aggregate lending targets.*

① Milne, Alistair (2011): Small business finance in the UK and the European Union: Before and after the crisis. CAFRAL Conference Paper. Mumbai.

While the deregulation process allowed market forces to play, the markets tend to be exploitative when exchanges are between unequals. The post crisis response has been inclusive – bail-outs to the big players while pump-priming the MSME segment to create jobs. This logic applies in normal situations. If regulation monitors the capital adequacy of MSMEs and encourages their leveraging with formal institutions, information asymmetry would reduce and aid forward-looking policy formulation. This approach is relevant in normal situations as it helps the players to build buffers and insularity. A conducive financial architecture for the MSMEs helps them to de-ancillarise and diversify into local and non-traditional markets by removing risk concentration. The plurality of institutional approaches

allows small players to experiment and also accommodate the needs of the disadvantaged in prudential prescriptions.

In a recent paper, Mattenheim and Butzbach (2011)[5] argue that alternative banks outperformed commercial banks and were insulated from the financial crisis. Using multi-country examples they argue that the alternative banks survived because (by being not-for-profit entities) they were not chasing profits, had a stakeholder-based governance and practiced social inclusion. These banks were not relying on capital markets for their liability products. Social inclusion need not be seen as a virtue. Localisation insulates capital sources to local areas and protects banks from the global upheaval, as the portfolio is likely to be local, and stable. In this context, alternative banking appears like a solution. However, for the mobility of capital a mix of local and global banking channels was needed. Narrow banking, and insulation from payment systems and global capital markets are important aspects to be seen when we advocate plurality of approaches. This approach isolates the effects of a crisis. Local institutions look at local markets and are inclusive, it is desirable to promote such institutions.

Inclusion by itself is not a virtue. This is demonstrated by the experience of sub-prime housing loans in US and microfinance in India. When microfinance emerged in the private sector, regulation responded positively by providing a supportive environment: (a) on-lending to Microfinance Institutions (MFIs) from banks were considered as a priority sector; (b) banks were advised to make lending to MFIs easy without a cap on end interest rates and (c) considering group guarantees as collateral for the purposes of asset classification, prudential and provisioning norms. MFIs were carrying forward the agenda of inclusion, and were fully aligned with the banking system. Even though what hit the microfinance sector last year was not a result of the global crisis, a reason for problems might be in the soft regulation provided by the central bank.

Box 4 shows that the issues commonly identified as a problem both in case of sub-prime and MFIs were: slicing of portfolios, which were securitised and sold in the markets; and the dynamics associated with being integrated with the global financial markets bringing in predatory tendencies in these institutions. Beirne (2008) identifies predatory lending (triggered by the need for a quick turnaround of profits) as poor analysis of the ability to repay; aggressive marketing of high-risk high-interest loans; promotion of complicated loan products not understood by clients; opaque charges and fees; and payment of illegal kickbacks. While there is enthusiasm in chasing the inclusion agenda, even this will have to go through a calibrated regulation. In a recent paper, Reddy (2011)[6] admits that it was a mistake to adopt soft regulation on a for-profit firm just because they were in the business of inclusion.

Irrespective of the regulatory imperatives, the state would be interested in this space and would take a proactive role, sometimes getting the banking system unawares, therefore it is important to have a regulatory regime that works in tandem with the public policy aspirations and also manage the tensions between commercial and welfare aspirations.

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[5] Mettenheim, Kurt von & Butzbach, Olivier (2011):Alternative Banking: Competitive Advantage and Social Inclusion, Paper presented at the Society for the Advancement of Social Economics 23rd Annual Conference Universidad Autónoma de Madrid, June 23–25, 2011

[6] Reddy, YV 2011: Microfinance Industry in India: Some Thoughts. *Economic and Political Weekly*, XLVI (41), October 08,2011. pp.41–49.

Box 4

Microfinance and Subprime: Are there similarities?

As MFIs tried to achieve the goals of poverty alleviation and sustainability, multiple changes and interplays could have precipitated the crisis. There was a substitution of grant funds by investments from commercial investors. MFIs shifted goals, strategies and practices, with emphasis on efficiency and productivity as against impact. The organisational form was transformed to gain acceptance from investors and regulators. However, both MFIs and regulators were unprepared for the pace of growth. MFIs were not equipped to assess the credit profile of the clients and could not provide inputs for the productive utilisation of loans. What started as not-for-profit activity snowballed into a major intervention for inclusion with a few large private sector players and multiple small medium and third sector players. Exponential growth coupled with soft regulation paved the way for the current situation.

Beirne (2008)[①] identified similarities between the sub-prime and MFIs. These were: providing access to financial services to the unreached segments; rapid, unsustainable growth followed by deluge of commercial capital; high interest rates; product innovation not backed by data; and reliance on technology that facilitated growth but distanced clients. In the case of microfinance, this was pronounced because social capital and trust (between borrowers, between borrowers and field officers) were the premises for healthy repayment rates.

McKee (2008)[②] also looked at similarities between sub-prime and MFIs. The issues identified were: offering unsustainable products to borrowers through predatory lending; wishful thinking that the current performance (increasing housing prices in sub-prime and repayment rates for MFIs) would continue; the provider and the user being far removed from each other through complex financial instruments; and soft-touch regulation.

Kiviat & Morduch (2010),[③] however, did not agree with similarities, but argued that these two issues come from different contexts. That both markets grew at a fast pace, had high interest rates and served the underserved clients was not sufficient to draw parallels because they came from different premises of owning a home and using the loan for a livelihood.

[①] Beirne, C. 2008. Subprime Lending: Lessons for the Microfinance Industry. MicroCapital White Papers. Retrieved October 01, 2011 from http://www.microcapital.org/downloads/whitepapers/Subprime.pdf

[②] McKee, K. 2008. Meditations on the US subprime crisis: Lessons and implications for the international microfinance industry Retrieved September 29, 2011 from http://www.microfinancegateway.org/p/site/m/template.rc/1.26.9143/

[③] Kiviat, B. & Morduch, J. 2010. Is Microfinance the new subprime? HBR Blog Network. Retrieved September 29, 2011 from http://blogs.hbr.org/cs/2010/11/is_microfinance_the_new_subpri.html

The post-crisis reform lost an opportunity in questioning the fundamentals. The focus on repairs overlooked structural weaknesses in the system. A key issue is the disconnect between the real and financial sector. Skewed pre-dominance of the financial sector was a challenge but nothing has changed. Financial sector has reclaimed its pre-crisis stature. The post-crisis repair has focused on the North Atlantic world. The issues are different in emerging markets, which need financial intermediation and penetration. The crisis and regulatory framework provide lessons on paths to be avoided. The focus of an inclusive agenda should be to reduce cost of capital and cost of transaction.

Systemic focus is the lynchpin for the new regulatory framework. This has links with large stakeholders whose actions may have systemic implications, particularly those that necessitate a publicly funded bailout. In this framework, the small get marginalised. The policy for dealing with future crises, precluding a fiscal cost, leave a vacuum in addressing the impact on small stakeholders. In such a situation, public policy interventions save the larger stakeholders yet again.

In this context, the principle of inclusion is important. The G20, as part of its efforts towards supporting the needs of the most vulnerable, developed a set of “Principles for Innovative

Financial Inclusion" (Box 5). The G20 Seoul Declaration of November 2010[7] reflects the commitment of all member countries to put these principles into practice.There is agreement between our arguments and the above principles.

Box 5

G20 Principles for Innovative Financial Inclusion

Leadership: Cultivate a broad-based government commitment to financial inclusion to help alleviate poverty.

Diversity: Implement policy approaches that promote competition and provide market-based incentives for the delivery of sustainable financial access and usage of a broad range of affordable services (savings, credit, payments and transfers, insurance), as well as a diversity of service providers.

Innovation: Promote technological and institutional innovation as a means to expand financial system access and usage, including by addressing infrastructure weaknesses.

Protection: Encourage a comprehensive approach to consumer protection that recognises the roles of government, providers and consumers.

Empowerment: Develop financial literacy and financial capability.

Cooperation: Create an institutional environment with clear lines of accountability and co-ordination within government; and also encourage partnerships and direct consultation across government, business and other stakeholders.

Knowledge: Utilise data to make evidence based policy, measure progress, and consider an incremental "test and learn" approach acceptable to both regulator and service provider.

Proportionality: Build a policy and regulatory framework that is proportionate with the risks and benefits involved in such innovative products and services and is based on an understanding of the gaps and barriers in existing regulation.

Framework: Consider the following in the regulatory framework, reflecting international standards, national circumstances and support for a competitive landscape: an appropriate, flexible, risk-based Anti-Money Laundering and Combating the Financing of Terrorism (AML/CFT) regime; conditions for the use of agents as a customer interface; a clear regulatory regime for electronically stored value; and market-based incentives to achieve the long-term goal of broad interoperability and interconnection.

Source: Official Website of the Toronto G20 (http://www/g20.utoronto.ca/2010/to-principles.html)

In terms of action, equity received lesser attention in the post crisis period. The impact of the crisis on stability and growth was visible in the developed economies and the immediate focus was to address these. Equity is fuzzy and lends itself to multiple interpretations. We argue is that inclusive regulatory policies are important for two significant reasons.

First: The nature of the problem is to be understood. Unless financial systems are inclusive, the dimensions of the problem will not surface and the policy responses would operate in a vacuum, without scope for analysis on the effectiveness.

Second: Inclusion provides a natural diversification for the financial sector. Since the poorer segments of the economy and the smaller firms usually operate in local markets, this segment is most likely to be insulated from the larger market vagaries.

[7] Leaders' Declaration, The G20 Seoul Summit, November 2010 *(www.g20.org/documents 2010/11/seoulsummit_declaration.pdf)*

Inclusiveness and development are in the regulatory realm. The sub-prime and the MFI experience shows that inclusion in itself is not sufficient. If the regulatory systems do not recognise the insular nature of inclusion, then it exposes the vulnerable sections to global volatility. Soft regulations encourage a large number of players to compete in the market. The power balance between the providers and users (who are vulnerable) is not equal, encouraging predatory practices. Regulation should recognise the motives of the institutional players. The for-profit players should be subjected to strong regulation that involves client protection, while the alternative banking channels whose governance is locally embedded could be subjected to softer regulatory regime. The experience of the European alternative banks has been good but it is not true of India. The governance structures of the alternative banking channels have to be deeply embedded with the local stakeholders. We should look at each player from the point of view of the expected behaviour than purely the form of incorporation.

4. Regulation and its interface with public policy: How do elements of public policy, markets, and regulations outside the purview of a central bank treat inclusiveness?

The regulation of the financial system can be a multi-targeted approach. Already, regulation is being imbued with a macro-prudential focus to address systemic risks. The monetary policy framework is modulated to incorporate signals from the financial sector. This can be extended to influence the design of financial regulation for furthering equity. This could be done without an explicit subsidy element. An inclusive regulatory regime should typically include an institutional and legal framework for a healthy credit culture even for inherently vulnerable segments with decentralised monitoring and heightened buffers. We recognise that certain portfolios (like agriculture) are risky because of the vulnerability and volatility of the underlying income streams. From the perspective of financial regulation and public policy, this portfolio should be with the banking system. We recognise that this portfolio will have a higher default due to the riskiness and require institution level buffers. The Indian experience shows that the mandating of inclusion of such portfolios through hard targets has worked but resulted in unintended consequences.

Box 6

Examining the quality of Interventions

In 2004–05, the Government of India directed that credit to agriculture should be doubled in 3 years, and the banking system pay attention and grow the “non-lucrative” sector. This was accompanied by an interest rate subvention of 2 per cent. The lending targets were achieved. However, there was no associated growth in agricultural production and productivity. Was the increased finance filling a latent gap, replacing costlier borrowings or being adversely used?

In 2008–09, a year after the doubling plan, the Government of India announced a write-off of agricultural loans amounting to around US$15 billion, thereby partly cleaning up the balance sheets of the banks. This raised the following questions:

(a) Did these two events have a causal relationship?

(b) What was the impact on the credit culture?

(c) What were the benefits for the banking system?

(d) Was there a better mechanism to use these resources more efficiently as not only public policy intervention that manifested itself through a regulatory regime?

The instance (Box 6) shows an imprudent policy intervention, affecting the performance of banks. However, if banks were carrying non-performing assets (NPA) where the exposure was taken by mandate, then these consequences had to be met by the state. By writing off loans and injecting liquidity, the state took the NPAs off the books – a back-ended subsidy to the vulnerable; a desirable public policy measure. But it affected the business of the banks system by influencing the credit culture. Policy interference in institutional credit has not always yielded positive results. Vaidyanathan (2008)[8] argues that borrowers expect loans to be written off, building a culture to default. Subsequent to such waivers, banks are cautious in disbursing fresh loans as seen after the write-off (Aiyar, 2008).[9] Cole (2009)[10] found that agriculture credit increases by around 5–10% in an election year, without a corresponding increase in output. Cole also finds evidence of targeted forgiveness immediately following elections, with a decrease in overdue repayments in agriculture credit, suggesting that write-offs are occurring.

On the positive side, such portfolios help in the diversification of risks, are insular to global economy and economic cycles. The activities depend on extraneous factors of productivity. The financial system should learn to deal with the peculiar cyclicality of the portfolio.

Inclusion is also about providing a payment & settlement system that does not impose heavy costs on the smaller customer, with graded fees; providing interoperability between channels and institutions; making remittances simpler; and having regulations to safeguard interests of the disadvantaged in transactions between unequals. With the technology backbone available to the banking system globally, this is achievable. Technology could be democratic when it comes to variable costs per use. Public policy should support such architecture for inclusion.

Regulation should provide a level playing field by mandating all institutions to deal with certain segments of the economy (such as agriculture, small industry, education, and housing). This ensures that market-based players cross-subsidise the mandated segment with profits from the other segments of their business. The state should constantly review the institutional architecture and provide support where necessary.

Managing volatility in variables such as interest / exchange rates is important. The ability of the vulnerable segment to absorb volatility is limited. For the small stakeholders, certainty about their present and future cash flows is critical in managing their finances. Volatility in extraneous exposes them to risks that they cannot manage. Interest and exchange rates have an impact on small businesses and they need viable derivative markets to hedge their risks.

State-directed solutions were inefficient and open to corruption, while the solutions from the market resulted in rent seeking. Both are to be addressed in the context of inclusiveness.

- Economic reform and de-regulation opened opportunities for smaller firms to grow. The barriers to entry were removed. The Statist approach made existing players with “rights” show monopolistic streak. Reform broke this logic.
- Market-based solutions were not always the best in the interest of inclusion. The markets operate for profit maximisation. A deal between two unequal players in the

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[8] Vaidyanathan, A. 2008. Farm loan waiver: a closer look and critique. The Hindu, March 06, 2008; Retrieved October 28, 2011 from http://www.hindu.com/2008/03/06/stories/2008030654731100.htm

[9] Aiyar, Swaminathan, S.A. 2008. Loan waiver: Not an election winner. The Times of India, March 09, 2008. Retrieved October 28, 2011 from http://swaminomics.org/?p=227

[10] Cole, Shawn. 2009. Fixing Market Failures or Fixing Elections? Agricultural Credit in India. American Economic Journal: Applied Economics, 1(1), January 2009, pp. 219–250(32)

market results in the vulnerable being exploited. In profit maximisation one of the parties is in a better position to seek rent.

- The vulnerable need ammunition to bring them to the negotiating table. This needs some safety nets on the "downside"; a power to stay while negotiating.

Inclusiveness ensures that the "excluded" are provided smaller windows/doors to access the services of the mainstream; the entry barriers are graded; it does not shut somebody from acquiring the strength to negotiate. It is about providing safety nets to the small not only in a post crisis situation but also in normal course.

Inclusiveness recognises people excluded at the frontiers. It is about proactively getting them on to the mainstream; recognising the difference between integration and inclusiveness. Integration is about passing the risks and rewards. When retail investors take direct positions and institutions do transaction and information intermediation (issuer/arranger/ rating services), it is integration – the investors lose the cushion of a regulated financial institution in between. In this approach the most vulnerable link is exposed to the risky part of the chain. In inclusion we believe that there should be systems of insularity and safety nets.

The regulation of the financial sector cannot operate in isolation of public policy. Public policy may ignore the logic of the financial system, when populist measures are taken. Bail-outs, write-off support from the exchequer, are political decisions. The challenge of a regulatory regime is to insulate the financial sector from idiosyncratic political decisions, and calibrate the policies according to the public policy moves. Public policy space can be engaged better with data if we recognise the public policy imperatives.

The public policy favours an inclusive system. Banking operates on commercial principles. While there could be mandates on inclusiveness that requires cross-subsidisation in the bank system, the challenge of the regulation would be to mandating the banking system on certain measures of inclusion that engages the public policy discourse in a desirable direction.

A critical issue in this regard is the functional efficacy of cross subsidisation in a free market enterprise, where the financial institutions may not want to lend to the poor and look only for public policy intervention. In this context it is important to recognise that the effective functioning of the financial sector requires an entire set of institutional, legal and infrastructural support which are inherently provided as part of public policy. The institutions, therefore, need to recognise this subsidy element and pass on part of it in the form of cross-subsidies to achieve the objectives of inclusiveness.

5. Horizons: how does the regulatory system develop long-term horizon to stay invested in the "poor"?

The incentive structures in the corporate and the banking world have shifted towards a significant element of variable pay linked to performance (and to the performance of the markets). The variable pay element can also take the form of instruments embedded in the market. With disintermediation in the financial sector, the shock absorbers are getting thinner. We find individuals, instruments, institutions all directly or indirectly invested in the market place. The horizons of the markets got shorter as the euphoria of announcing quarterly results gained pace. In general the business horizons will be shorter than regulatory horizons. Therefore market players have an in-built incentive to enhance profits/performance. The incentive to take profits from the future is stronger when the cash in performance is measured immediately and incentives can be encashed in a very short horizon. This is a recipe for a bubble build up.

The emerging accounting policies indicate a move towards fair value and mark to movement. The IFRS standards on recognising property and equipment at fair value, removes the intent

of a going concern recognised by the principle of conservatism. While there merits in fair value accounting with the associated disclaimers, this adds to the subjectivity on non-fructified transactions. The Basel III norms on capital adequacy ride on the IFRS valuation of assets. With subjectivity being employed on provisioning, prudential write off and coverage of non-performing assets, an added subjectivity makes the balance sheets of the banking system more opaque. These norms impose pressure in a crisis when the underlying markets slump and institutions book losses and lose capital adequacy for non-operational reasons.

If we consider the distortions in the shares of the real sector versus the services sector and the rate of growth of the services sector, the shift in the balance from "performance" the "reportage" is evident. Pure market based solutions, polarise the world between those who can (entrepreneurs) and those who cannot. Regulation cannot work under such assumptions. There is enough literature on the concept of financialisation and its effects as demonstrated by the complexity in which the sub-prime mortgages were entangled. In India for instance the growth of the software services sector got disproportionate rents of the efficiency induction into the real sector demonstrating the shifting power balance. Blackburn (2008)[11] argued that the regulatory machinery mimicked the developments in the market by endorsing the new instruments and engaging with the innovations rather than applying breaks on the related developments in the financial sector. An early warning signal from the economy came from the dotcom sector a decade earlier. However, the financial sector remained detached from the happenings and assumed that such a phenomenon would not hit the financial sector.

The regulatory horizons need to be longer and consider long-term implications. For instance, let us look at the implication of debt restructuring plans in two contrasting industries:

- In the airline or similar industries, when regulation permits a debt restructuring, there is a cyclical/counter cyclical performance logic that will generate optimism that the industry will recover because of other measures that will prop up the industry/firm.
- When we apply this logic to sub-prime or MFI loans, will the underlying economic activity recover or it results in postponing the haemorrhage? If it is an inevitable bad news, we only make the current management look good.

We argue that (a) the compensation and pay off structure of the financial structure has aligned with market indices; (b) the accounting standards and policies have provided options for recognising gains/losses that are not consummated through transactions for certain purposes, including that of capital adequacy; and (c) the crisis emanating out of an economic phenomenon that hits a particular industry is dealt through restructuring, basically postponing the problem to the future. The assumption of recovery might not be equally valid for all sectors and this has to be applied after understanding the nature of the underlying activity.

These are illustrations that inflate current profits and put the firms into multiple problems of profitability, capital adequacy and a resultant liquidity in case of a crisis. The crisis will also have a contagion effect when there is no insularity and the assets are sliced and dealt to other finance players in the market place. We need to address how this affects equity and inclusion. The answer for such a question is a bit circuitous but we shall attempt to give one.

If the horizons are shorter, institutions book higher quarterly profits. Every time profits are booked, the benchmark for a higher recognition of profits goes up. In such situations, firms become conscious of the transaction costs and the return on each deal. Investing and staying with poor customers takes longer to break even. These portfolios tend to be taken

[11] Blackburn, Robin (2008): The Subprime Crisis, *New Left Review,* No.50, March–April 2008. pp.63–106.

out of the transactional portfolio. The smaller clients in any case do not have a voice or the power to negotiate, and get left out. This is a result of regulation getting nearer the markets.

This situation is corrected with the state mandate. The markets also find arbitrage opportunities. In both the cases, it would make sense for the banks to engage with this segment directly. Specialised firms that deal with the segment emerge, operating in niche markets, and bundling the transactions. These bundles will find their way to the secondary markets. The state-mandated obligations and paper available as a result of an arbitrage due to market failure both emerge. The institutions hold papers that they trade at shorter horizons, but the underlying portfolio is looking for a longer horizon engagement as in case of housing mortgages. This mismatch in horizons creates tensions. In small crisis situations it is covered through rating, insurance and restructuring exercises that address the symptom. However, when the bubble builds, it is too large for the system to deal with, inviting a public policy intervention.

Box 7

Nudge and Push

In achieving the balance and including "have-nots", how do we ensure that regulation does not become repressive? We examine the difference between nudge and push. Push is a strategy where hard targets are set and players are penalised. The mandate to lend to the priority sector including agriculture and weaker sections in India is an instance of push. Nudge, on the other hand, opens regulations for innovation. Push controls rates; assigns areas for coverage; mandates connectivity through a prescription. Nudge encourages markets.

The concept of nudge can be seen through the example of microfinance in India. The regulatory intervention for MFIs started in 1999 by setting up a Task Force on Supportive Policy and Regulatory Framework. In 2000, a special cell was set up in the RBI to encouraging microfinance following the monetary policy announcement. In 2002, the RBI constituted multiple informal groups to examine delivery of microfinance. On the recommendation of these groups, banks were advised to provide linkage with Self Help Groups (SHG); incentivise branches financing SHGs; and make SHG financing hassle free. In 2005, the Khan Committee proposed a Business Facilitator and Business Correspondent (BC) model for expanding outreach, with a soft regulatory approach. In 2008, the Rangarajan committee recommended that MFIs should have greater legitimacy, accountability and transparency to have better access to funding (equity, debt and savings). In 2009, the Raghuram Rajan Committee recommended the entry of private well-governed deposit-taking small finance banks offsetting their higher risk from being geographically focused by requiring higher capital adequacy, a strict prohibition on related party transactions, and lower allowable concentration norms, relaxation of the BC model regulation, so that financial services can be provided by a wide range of local agents. It also recommended decontrol of Interest rates. The Economic Survey 2003–04 said that regulatory reforms to integrate MFIs with the formal financial architecture might help as would develop the concept of agent banking. The Economic Survey of 2008–09 recommended that microcredit should be extended to cover production, consumption and other credit needs such as housing and debt swapping. None of these reports or Committees mandated the banking system on anything specific, but were recommendatory, signalling where the central bank would wish the sector to move.

If the public policy mandates the banking system on inclusion, should such target be achieved through a lightly regulated leveraged agent? Are market-based solutions replacing welfare expenses? What were the purposes for which the clients were borrowing and were these purposes a function of the states' failure in delivering welfare? Institutions that fall under a regulatory framework are being mandated to serve these customers. These institutions are subject to the rigors of prudence – asset classification, provisioning and capital adequacy. However, the horizon problem pushes the players to aggregation and looking at regulatory arbitrage. They trading in mandates – a phenomenon that we discuss in the next section.

The regulatory approach of continuous modulation preventing short termism would be relevant. One externality caused by market solutions is the subservience to market movements. The more efficient the market, the greater the dependence. Accounting standards, regulatory guidelines and institutional behaviour all place value on the immediate. Small stakeholders suffer most since their engagement is seen as a charge on current profits, irrespective of long-term gains. It is important for financial sector regulation to accommodate a long-term perspective in designing policies for financial institutions.

Regulatory horizons have to work in tandem with public policy and expand horizons. Mundane accounting measures, which are rule-bound, should also keep this perspective to recognise earnings on the basis of 'form' rather than 'substance'.

6. 'Paper' Solutions: How do we look at exotic financial instrument innovations that are built on the portfolios of the poor and its relation to the real economy?

The last two decades have seen a shift in the discipline of finance. Though financial innovation has been associated with economic history, (Tuffano (2003),[12] Goetzmann and Rouwenhorst (2005)[13]), recent innovation was qualitatively different from its earlier variants. Translation of academic contributions into reality coupled with increase in computational power defined innovations. These innovations were aided by benign regulations. Even before the crisis, the influence of innovation on economic development was not settled. The crisis demonstrated the downside of unfettered innovation and strengthened the case for 'responsible innovation'. In the non-financial world, innovation is considered a virtue. However, the financial sector is different for three reasons: (a) the financial sector leverages on public funds; (b) the financial sector inherently has asymmetric payoffs; and (c) deep interconnectedness leads to an extremely sensitive contagion. All these accentuate the adverse outcomes of innovation.

Regulation has to distinguish between different sorts of innovation. The risks of unanticipated consequences tilt the balance of regulation in favour of conservatism. Disallowing unhealthy innovation must be the driving objective, even if it implies prevention of some useful innovation.

Even in the case of vulnerable segments of the population, the financial system thinks of financial instruments. Financial sector regulation can mandate targets but this should go hand in hand with a reality check. What, for instance, is the implication of mandating health insurance coverage to the poor? How does this play out, when the health centres are not functional? A study by Banerjee, Deaton and Duflo (2004)[14] showed that the poor in Rajasthan would use private doctors or local mendicants for treatment. The qualifications of the 'private doctors' showed that about 82% of them did not have a medical qualification. Providing a health cover for which the poor pay would be a dis-service as they cannot be

[12] Tufano, P., (2003): Financial Innovation, in G. Constantinides, M. Harris and R. Stulz (eds.), Handbook of the Economics of Finance (Volume 1a: Corporate Finance), New York, Elsevier

[13] Goetzmann W, and Rouwenhorst G, ed. 2005. The Origins of Value: The Financial Innovations that Created Modern Capital Markets. New York: Oxford University Press

[14] Banerjee, Abhijit; Deaton, Angus and Duflo, Esther (2004): Healthcare Delivery in Rural Rajasthan. *Economic and Political Weekly.* 39(09) Feb 28, 2004 pp.944–949.

compensated for a financial outflow. The innovations in the financial sector have to be meaningful and calibrated with the public policy.

Regulation in India does not permit non-banks to collect deposits. However, in an experiment undertaken by Kshretriya Grameen Financial Services [KGFS] in Tanjavur District of Tamil Nadu in India, the poor were offered Money Market Mutual Funds packaged as savings products[15]. If the banking system has not penetrated, is it fair for the poor to have access to liquid instruments such as money market mutual funds? How does regulation draw the line between selling a market-based product for want of basic services? How should the regulatory system deal with such an innovation? Should the poor be subjected to such solutions?

The logic of originate to sell is that the poor do not have access to financial instruments from the mainstream – deposits, loans, cash transfer facilities and it is necessary to find last mile service providers and integrate them through refinancing/ securitising/ outsourcing portfolios. If the players are lightly regulated, the regulatory arbitrage consists of:

- Negotiation on prudential norms (provisioning, capital adequacy, leverage) with a short-term horizon, thereby producing paper profits.
- The entire sub-prime superstructure was built on investors far removed from the users and there were layers of complex papers based on codified information.
- Vulnerable sections get sucked into the global financialisation machinery. Beyond stability is the objective of buffering the vulnerable. Connecting the real and financial sector is the most significant aspect of furthering the equity agenda.

Defending alternative banks and local institutions Mettenheim and Butzbach (2011)[16] argue that they had stability and better performance because they were rooted in the context and originating-to-hold than to-distribute. Berndt and Gupta (2009)[17] argue that a secondary market in loans creates moral hazard and adverse selection. The banks selling loan books in secondary markets did not outperform the peers in risk-adjusted abnormal returns.

The problem with originate-to-sell as a strategy in achieving inclusion is financialisation of the chain. The banking system intermediates between savers and borrowers. With the originate-to-sell model, the banking system, while performing the role, is transferring risks off its books to a player who is interested in juggling portfolios and not in the end-use. This superstructure distances the client from the provider of resources through a chain of paper – that is rated, evaluated, insured and traded. The paper so traded for all practical purposes should be brought to a closure by the institution interfacing with the ultimate borrower. However, the paper does not reside in the books of that institution:

- The institution dealing with the clients is over-leveraged on the assets under management. Prudential requirements are circumvented, by holding the portfolio off-balance sheet.
- The buyers of the paper represent funds from individual/ institutional investors.

The links in the chain are independently regulated without convergence, and the portfolio is lost in the complexity of evaluation, rating, insurance and trading. This is needed for complex multi-country, multi-year transactions needing intellectual prowess to evaluate and predict

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[15] Rajshekhar, M [2010]: The Local Touch *The Economic Times, July 22, 2010*

[16] Op.Cit.

[17] Berndt, A. & Gupta, A. (2009), "Moral Hazard and Adverse Selection in the Originate-To-Distribute Model of Bank Credit", *Journal of Monetary Economics*, vol.56 n.5: 725–743

the future. It is not necessary for simple loan transactions with the micro enterprises and entrepreneurs with short tenor relative certainty in the underlying activity.

In introducing complex transactions, the distance between the provider and user of resources (both of whom could be local) is stretched through a complex chain of transactions – each link seeking its rent, adding to costs. A better approach is to diversify risks through insulation rather than integration of such portfolios. From the perspective of equity, we argue that:

- Mandated lending for the poor undertaken by one type of institution (say banks) should not be tradable, in order to ensure that the mandates for the channel are met;
- If they are tradable, then the products should be available to the customers on the same terms that are available directly without passing on the channel costs to the customer.

The smaller the customer, the more difficult it is to negotiate with the financial system and thus it is the responsibility of the regulator to negotiate with the financial system. At each stage, regulation must examine if intermediary instruments are resulting in leveraging of the unregulated players, creating regulatory arbitrage, creating multipliers not related to the real economy and resulting in financialisation. Subject to these caveats, the portfolios should be insulated from the markets. While it is attractive to open the up-sides of a seamless global market, the smaller players need safety nets from the vulnerabilities of the downside, till they have buffers to manage it themselves or till they remain poor or marginal.

7. Technology as a Game Changer

An inclusive financial sector effectively allocates capital, lowering the cost of capital (Sarma, 2008)[18]. An underdeveloped financial sector impedes growth by limiting access to funds, especially to small entrepreneurs. Equitable growth over longer periods is possible only if accessible financial services are provided to all, irrespective of social or economic standing.

Technology is a critical game changer in providing access to financial services. It can significantly alter delivery channels and provide viable, cost-efficient solutions to reach out to all sections across geographic and demographic divides. Already, different models are being experimented in countries like Philippines, Brazil, Kenya, India, South Africa and Mexico. Apart from the costs, technology is a great leveller that removes biases in physical modes. The critical contribution of technology in serving the small stakeholders is in accurate targeting of customers on the basis of data. Advanced data management tools make it possible to analyse customers across multiple dimensions. Such analysis helps in enhancing product design, pricing and risk management on exposures to the small stakeholders.

In the past decade, the use of technology in the financial sector has grown manifold. Technological developments have led to innovations and development of alternate channels for inclusive financial service delivery. See Box 8 for innovative examples of ICT usage in Financial Inclusion. These branchless banking models reduce the transaction costs of providing services to remote areas, and making it easy to handle large transaction volumes. Examples of the products and services provided under the branchless banking model are:

[18] Sarma, M. 2008. ***Index of financial inclusion.*** Working paper No 215, Indian Council for Research on International Economic Relations.

Box 8

International experiences in use of ICT in financial inclusion

Correspondent banking in Brazil:

Brazil: Correspondent banking was introduced in 1973, but it gained legal acceptance only in 1999 through a resolution passed by National Monetary Council (Ansón & Gual, 2008).[①] This model was adapted to address the barrier of physical access where many municipalities did not have a bank branch. Capillary networks and agent points such as post offices, pharmacies, neighbourhood stores, lottery kiosks and other retailers have been used to extend the reach of financial services (Ansón & Gual, 2008).[②] The Central Bank of Brazil enabled the growth of this model by allowing regulated financial entities to hire agents anywhere in the country. It provided clearing services that could be delivered by the agents; the necessary guidelines on contracts; and the reporting requirements to the Central Bank of Brazil.

BancoPostal, a financial services organisation, was established by Correios (postal service provider) and Bradesco, a private bank. Bradesco leverages Correios' network to improve its outreach. Smart cards and PoS terminals are used for the transactions.

The Philippines: In the Philippines, technological and institutional innovations enabled the growth of two models of mobile financial services: the bank-based Smart Money and the non-bank-based G-Cash. It was permitted by the Central Bank of the Philippines on a "test and learn" basis, when little relevant regulation was in place. Both models continue under regulation on the issuance of electronic money. The Filipino e-money circular, tailored to the risks involved with the types of financial services, creates a level playing field for both bank and non-bank providers, while maintaining the integrity and stability of the financial system. Beyond the flexibility shown in permitting the original launch of Smart Money and G-Cash, the Central Bank of the Philippines has made space for innovation, entering into dialogue with industry to allow mobile financial services to evolve.

South African Bank of Athens's Wizzit (South Africa)

Wizzit operates in South Africa. Its mobile money system offers a set of basic features: cash in/out, payments, and airtime top-up. In addition, Wizzit provides debit cards that allow its users to interact with a range of POS devices and ATMs. Wizzit deploys over 800 "WIZZkids", previously unemployed individuals as sales agents. These agents engage in financial capability education when they also talk about the risks of cash transactions.

Safaricom's M-Pesa (Kenya)

In 2007, Safaricom, launched M-PESA a mobile money service. M-Pesa features money transfers, airtime, and bill payment services. Over 7 million people, a fourth of Kenyan adults, use the service. Safaricom's initiatives are centred on influencing usage patterns of their existing customers. M-PESA was the first non-banking mobile network offering financial services to its clients. Before getting permission to operate M-Pesa as a separate payments system, not covered by banking law, the Central Bank reviewed the technology platform to ensure it was secure and safe. It was ensured that all the customer funds would be deposited in a regulated financial institution and the interest accumulated on these funds has been allotted to a not-for profit organisation (Safaricom Trust), (Mas & Radcliffe, 2010).[③]

(Drawn from the Report of Financial Inclusion Experts Group)[④]

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① Ansón, José & Gual, Laia Bosch. 2008. Financial Access and Inclusion through Postal Networks: Evaluating the Experience of Brazil's Banco Postal. In José Ansón and Joëlle Toledano (eds) Postal Economics in Developing Countries, Universal Postal Union. Berne (Switzerland).

② Ansón, José & Gual, Laia Bosch. 2008. Financial Access and Inclusion through Postal Networks: Evaluating the Experience of Brazil's Banco Postal. In José Ansón and Joëlle Toledano (eds) Postal Economics in Developing Countries, Universal Postal Union. Berne (Switzerland).

③ Mas, Ignacio& Radcliffe, Daniel. 2010: Mobile Payments Go Viral:M- PESA in Kenya Retrieved October 30, 2011 from http://siteresources.worldbank.org/AFRICAEXT/Resources/258643-1271798012256/M-PESA_Kenya.pdf

④ G20 Financial Inclusion Experts Group, "Innovative Financial Innovation: Principles and Report on Innovative Financial Inclusion", May 2010

1. Financial services through post offices (savings, remittances) in Brazil, India or China;

2. Card-based no-frills savings accounts which can be accessed at post-offices and points of sale like supermarkets (eg MZANSI accounts in South Africa).

The role of public policy is that of an active facilitator. It may not be possible for financial institutions to bear the burden of technological investments at the scale required, and public funding for creating the backbone would serve the cause of inclusion.

The introduction of technology and its widespread usage leads to reduced outlays and reduced transaction costs, replacing the human interface and making it attractive for large players to participate in the inclusive market for the poor. The following issues need to be considered:

- As technology evolves from computerisation of banks to transactions involving ATMs to Internet and mobile-based transactions, some of the fixed costs of technology get externalised, with the banking system incurring only the handshake technology costs. Unlike investment in software and hardware for computerisation that was fully borne by themselves, banks could ride on investments made for communication facilities through the Internet, where they could bear only a part of the fixed and marginal costs and ride on the technology that was not designed exclusively for the banking system.
- When we move to mobile technology, even the costs of instruments at the point of sale (POS) are transferred to the customer, for whom, this is a smaller incremental cost because the instrument serves multiple purposes. It also reduces the handling of currency.
- The challenge for the regulatory system would be to reduce final use of cash, with settlements happening on a non-cash basis. While transactions are settled electronically, the instances of residual cash settlements are still high, particularly with that segment of the population that does not have access to technology. This must change.
- The recording of transactions itself is shifted to the customer, a cost advantage. The size of the transaction becomes irrelevant for the banks.
- The role of regulation is to provide interoperability, evolve operating and security standards, monitor payments systems and ensure that user charges are favourable. The benefit of the sunk costs on technology must be structured in favour of the poor.

Implications and Challenges for Regulation

In Brazil, the government channels its compulsory cash transfer programs through bank accounts and has stipulated that bill payments are to be considered as regulated banking activities, ensuring that the banking sector plays a role in financial inclusion (Mas, 2009)[19].

Kenya is an example of technology innovation and regulation working hand-in-hand to develop a model that offered adequate 'prudential comfort' to the regulator (Mas & Radcliffe, 2010). However, this regulation did not ensure a level playing field – banks in Kenya are not

[19] Mas, Ignacio. 2009 "The Economics of Branchless Banking" Innovations, 4(2) (Boston, MA: MIT Press, Spring).

permitted to utilise agent networks for customer transactions (Mas & Radcliffe, 2010), thus placing Safaricom at a perceived unfair advantage.

The Brazil model and Kenyan model throw up two distinct lines of arguments with respect to regulation – one in favour of involvement of banks in mobile and branchless banking services and other supporting diverse networks for encouraging innovation. Both these models however, have to be regulated by the banking and / or telecom regulations as the case may be. These models also give rise to concerns about bringing non-bank agents under the umbrella of financial sector regulation. Most of the mobile banking services are also subject to anti-money laundering acts of the respective countries. The Indian approach of going for a bank-led model was informed by two key considerations – security issues and the float. Allowing mobile companies as banking correspondents was intended to optimally leverage the footprint advantage that mobile companies have.

The final challenge is that clients can become easy targets for banks, banking correspondents and mobile network operators for cross-marketing their products and services. There are also regulatory challenges associated with mobile payments, issues related to client protection, financial awareness among the low-income. Unbanked groups have the potential to derail inclusion efforts. A rigid regulatory framework stifles innovation and restricts ease of access, undermining the financial inclusion goals. A lax regulatory framework may induce moral hazard and lead to failures and crises.

Most countries have explicitly laid out Know Your Customer (KYC) norms where the customer has to register / apply for mobile financial services through correspondents. National IDs are used where available (eg Kenya). Countries issuing national IDs are at an advantage when launching branchless or mobile banking services, as the cost of complying with KYC norms significantly comes down.

Subjecting customers across all segments to the same KYC norms may not be appropriate. Regulatory frameworks may have to define transactional limits below which customers can be exempted from KYC norms or be subjected only to a limited set of requirements.

8. Conclusion: what should be a stable state regulatory approach and philosophy be, given the learnings from the crises of the past?

The post-crisis reform process has been criticised for its potential impact on financial access, particularly in view of the cut in welfare expenditures because of strained fiscal balance sheets. The additional costs imposed on financial institutions to make the financial system safer are seen as impacting the access to finance by the small stakeholders. This paper argues that financial access is a multi-dimensional issue having nuanced dimensions and needs to be cohesively integrated into the broader financial sector regulation. While at one end, financial regulation addresses stability, it should engage intensely with the small not merely as a developmental objective, but more critically towards creating a systemic, well-diversified buffer spread across individual players, individual banking institutions and the economy.

The above framework requires a shift in the approach to financial sector regulation. The hitherto dominant paradigm of market-based regulation has limitations in integrating non-market objectives into the framework – be it stability or equity. Financial markets are one critical element of the financial system but they cannot encompass financial regulation. Financial regulation needs to have a broader mandate driven by the imperatives of all key elements – stability, growth and equity.

Regulation cannot be at cross-purposes with public and monetary policy. Internal cross-subsidisation and expansion of portfolios embracing the excluded might reduce the risk of a

public policy override. It is necessary to constantly monitor the portfolio of the vulnerable to ensure that there is no build-up that threatens the credit culture and the balance sheets of the players.

Inclusion could be mandated through either a push strategy (by setting hard targets) or through a nudge strategy (but creating an atmosphere for the players to look at the markets). In case the regulatory regime adopts a market-friendly nudge strategy, care should be taken to ensure that predatory practices do not reign, and consumer protection norms are in place.

The regulation needs to be inclusive to ensure that there is enough insularity from global volatility. To the extent possible, regulation should provide safety nets to the vulnerable. Risk exposures faced by small stakeholders need to be managed as part of public policy at a macro level. The framework for the functioning of markets needs delineation by the overarching regulatory umbrella. The greatest contribution of regulation to improving the lot of small stakeholders would be to enforce the grounding of the financial sector in the real sector.

Financial innovation, particularly the kind that involves the portfolios of the poor, cannot be unfettered and should be bound by regulatory prescriptions. International standard setters need to provide sufficient space to national authorities to address issues of small stakeholders in their given context.

Technology could be a game changer and the central regulatory authorities should usher in a policy that helps the inclusion agenda to embrace technology. The transaction costs could potentially be minimal and the fees charged to the vulnerable should encourage them to embrace formal financial systems.

Appendix 1

Review of the RBI approach towards financial sector regulation

Approach of the RBI in addressing the equity issues in the financial sector

Banks in India have played an active role in perusing 'social objectives'. The central planning and development model called upon the banks to contribute to these objectives, in the form of sectoral credit allocations, directed credit and regulated interest rates. It resulted in much inefficiency. The key focus during the reform process for the 1990s was to correct some of these inefficiencies without losing sight of the fundamental objectives. Even as the banking space was to align with the imperatives of modern banking, the connection with the real macroeconomic imperatives was to be maintained. It has been a big challenge on how to nuance/modulate prudential regulations, which inherently derive from a market-based model epitomised in the Basel principles, to align with the intended outcomes in terms of equitable growth. The priority sector guidelines, for example, have been revisited many times to ensure achievement of the intended objectives. Having such a mandate embedded in a market-based interest rate regime and non-dilutive prudential norms is no mean achievement.

The regulatory approach recognised that the objective of equity inherently involves subsidy. While subsidisation is a fiscal matter, the financial sector also contributed to cross-subsidisation in the interest of public good and financial stability. This element of cross-subsidisation was introduced in discreet/indiscreet forms – in monetary policy, prudential regulation, payment and settlement systems and in currency management and market regulation.

Monetary policy is guided by the key objectives of financial and price stability. Irrespective of the operational framework, these objectives have been a constant.

Prudential regulation has tightly regulated deposit taking institutions and systemically important financial sector segments. The other segments can be differentially regulated. The microfinance sector was regulated based on this approach. Even the revised approach was focused on ensuring that the interests of the vulnerable section are protected.

The non-banking finance companies (NBFC) initially expanded in an unregulated space. As it grew big and problems with regard to deposit taking companies surfaced, a regulatory framework was put in place. Deposit taking entities outside the banking space were restricted. Non-deposit taking finance companies grew significantly, leading to issues of regulatory arbitrage between banks and NBFCs. The regulatory approach was accordingly nuanced to focus on large systemically important non-deposit taking entities.

The cooperative sector had complex problems, including the existence of deposit taking entities registered as banks. There were regulatory overlaps between the central bank and the provincial laws. A unique arrangement for a joint oversight through an MoU between the central bank and the state governments was formulated. The central bank also committed to taking up the responsibility to train the personnel.

India has a stated policy of 'improving access' to payment and settlement services across all geographical/demographic sections. The ability to transact through non-cash modes has been acknowledged as a key game changer in financial inclusion. It is acknowledged that electronic payment removes the biases in physical modes making access easier. Numerous initiatives have been taken in this direction.

Prudential policy measures have been articulated with a larger objective of inclusion. The credit deposit ratio has been a key policy variable and is used as an indicator for addressing regional disparities in bank credit. In applying prudential guidelines, a differentiated approach is adopted for agriculture, MSME and small value housing loans for applying risk weights.

Under the Priority Sector Lending (PSL) Scheme, commercial banks in India are required to lend 40% of their advances to identified sectors – agriculture, MSME, microcredit, education, small value housing. There are sub-limits to be complied with, including a requirement of 10% of total advances to the weaker sections.

Under the Differential Rate of Interest (DRI) scheme, all commercial banks are required extend loans at concessional rate of 4% per annum to low-income groups for productive purposes. Borrowers with an annual family income of less than Rs.18,000 in rural areas and less than Rs.24,000 in urban areas are eligible to avail of the facility.

Financial Penetration has been used as an effective instrument for equity. Banks are free to open branches in habitations with population of less than 50,000 without restriction. At least 25 percent of the new branches have to be in unbanked centres. To improve banking penetration in the North-East, a relatively unbanked region, the RBI has offered to fund the capital and running costs of branches for five years, if the State Government is willing to provide premises and appropriate security. Banks have been given full freedom to open branches in this region without any restrictions. Banks in this region get a subsidy of up to Rs. 12,000 (~USD 240) per month for implementing satellite connectivity in their branches.

Under the banking correspondent model, a bank may use NGOs, retailers, corporates, or individuals for (i) disbursal of small value credit, (ii) recovery of principal / collection of interest (iii) collection of small value deposits (iv) sale of micro insurance/ mutual fund products/ pension products/ other third party products and (v) receipt and delivery of small value remittances/ other payment instruments. Banks will leverage ICT based solutions for this model.

The *Electronic Benefit Transfer (EBT) Scheme* gives a designated bank the mandate to disburse government payments to the beneficiary, using biometric smart cards, hand-held devices at the locations of BCs of the bank.

The *Financial inclusion Plan* envisages the provision of banking access to all habitations with population of 2,000 and above by March 2012. All banks have formulated a three-year financial inclusion plan with self-set targets for brick-and-mortar branches and business correspondents. The implementation of these plans is being closely monitored. To achieve greater financial inclusion, all banks should provide a basic banking 'no-frills' account with 'nil' or very low minimum balance as well as charges. This provides accessible to a vast population.

Customer service measures include mandating the calculation and payment of interest on savings on a daily product basis; all banks to reimburse customers, wrongfully debited on account of failed ATM transactions, within 12 days of the customer complaint (failure to re-credit the customer account within a stipulated time attracts a compensation of Rs.100 per day to the aggrieved customer); mandating interoperability of ATM/debit across ATM networks without any usage fees subject to a cap of Rs 10,000 per withdrawal and a maximum of five transactions per month in third party transactions; additional authentication/validation based on information not visible on the cards for all on-line card transactions; a system of “online alerts” to the cardholder for all types of card transactions irrespective of the amount and channel used and directing banks to provide to the facility of exchange of soiled notes, payment of taxes, disbursement of pension. The non-adherence to these directions is covered under the Banking Ombudsman Scheme. In addition, banks are required to make printed material used by retail customers available in trilingual form in English, Hindi and the concerned Regional Language. The banks are required to pay Suo motu compensation for delayed credit under electronic clearings, provide collateral free educational loans, and have guidelines on transparency in loan processing.

Strengthening institutional mechanisms for the cooperative sector: in keeping with the heterogeneity of the sector, the co-operative banks that are in various stages of computerisation need to be helped. In the MOU signed with the state governments, the RBI has committed to providing IT support to the sector. The minimum level of IT infrastructure

should have: (a) a computerised front-end ie customer interface; (b) an automatic back-end accounting (through software); (c) computerised MIS reporting; and (d) automated regulatory reporting.

Market regulation included guidelines on derivatives explicitly providing that in case of all OTC derivative transactions, the onus of establishing suitability and appropriateness of a client for any product lies with the seller. All pension funds/cooperative banks/mutual funds are allowed access to NDS-OM directly or through a Constituent SGL account for buying/selling Government bonds instead of access through an intermediary bank/broker.

Crisis measures undertaken by RBI included providing a sum of Rs.25,000 crore (as temporary liquidity support for financing agricultural operations) under the Agriculture Debt Waiver and Debt Relief Scheme to scheduled banks and NABARD. This amount was to be reimbursed later. SIDBI and the NHB were allocated Rs.2,000 crore and Rs.1,000 crore, respectively, against banks' estimated shortfall in priority sector lending in March 2009.

Appendix 2

Financial Inclusion through payment systems: measures taken by the RBI

The importance of empowering the financially excluded population can be traced to the mission statement for payments systems wherein one of the component is "Accessibility" – to reach various payment systems at reasonable cost to all segments. The social and economic imperative for broader financial inclusion is central to RBI. This has paved the way for finding innovative ways to empower the poor.

It has been well recognised that inclusive growth manifests itself as an effective developmental tool. Technology makes accessibility easier. RBI has encouraged payment systems that are ubiquitous. Scalability to accessibility to every section is the underlying philosophy. Following these, RBI has introduced several measures.

1. *Mobile Banking*: The operating guidelines for mobile banking were issued in late 2008 and relaxed in December 2009. This facilitated mobile banking transactions up to Rs.50,000, both for e-commerce and money transfer. Banks were permitted to provide money transfer facility up to Rs.5,000 from a bank account to beneficiaries not having accounts with cash payout facility at an ATM or Banking Correspondent.

2. *Pre-paid Payment Instruments*: Guidelines for issuance of pre-paid payment instruments in India (up to Rs.50,000) were issued to provide a framework for the orderly growth of this market. After the enactment of PSS Act, most of the non-bank entities who have received authorisation to operate a payment system are in this business segment. These entities have the capacity to reach out to the vulnerable and excluded population.

3. *Domestic Money Transfer*: Domestic money transfer through the formal banking channels was possible only when one had a bank account. This resulted in migrant population who could not open a bank account due to non availability of documents satisfying the KYC norms to resort to informal means remittances. To overcome the hurdle and to give impetus to financial inclusion following fund transfers were permitted (a) through cash pay in scheme wherein the remitter does not have a bank account but walks into a bank and request for a fund transfer to a beneficiary having a bank account. (b) through cash pay out scheme wherein the fund transfer is effected by the remitter from his bank account to a beneficiary who does not have a bank account (c) card to card (credit/debit/prepaid) P2P fund transfers up to Rs 5,000 per transaction subject to a cap of Rs 25,000 per month subject to certain conditions.

4. *Permission to Post offices to issue co branded cards with banks*: To take advantage of the reach of the 1,50,000 post offices in the country for delivery of financial services RBI permitted the Post offices to issue prepaid payment instruments co-branding with banks.

Approval given to NPCI to operate the Aadhaar Enabled Payment system(AEPS) and Aadhaar Bridge Payment system (ABPS) wherein the Aadhaar enabled identity under the UIDAI could be considered for verification at the various delivery channels. The AEPS includes the biometric authentication for any transaction processing the ABPS considers the UID number mapped with the bank account. Both ensure that the benefits under various social welfare schemes of the Government reach the intended beneficiary.

Summary of the discussion

The subject was particularly important because while the issue of trade-off between growth and stability has received much global attention, equity and inclusiveness related issues are yet not seen as an associated problem. In that context, a particular distinction made in the paper between lending to the poor and the subsequent process of financialisation has many negative lessons to offer, since it was the latter that contributed to the crisis. The discussions mainly led to sharing of country specific and product specific experiences particularly from emerging markets such as Bangladesh, Brazil, China and India with regard to policies and procedures for lending to the poor and providing larger financial access to those who were excluded.

Md. Abdul Quasem's opening remarks

Md. Abul Quasem, in his opening remarks, besides generally commenting upon the theme, shared the Bangladesh experience. He emphasized the importance of inclusive policy in small economies and the need for financial regulation to have a human face.

Irrespective of being too big or small, all units have the potential to survive. The SMEs in Bangladesh remained outside the threat of global melt down since they depended upon domestic supplies and markets. Though tax exemptions were not common, SMEs needed some public support. As SMEs needed to be nurtured, in Bangladesh central bank refinancing was made available to banks for their SME lending in the initial period. Gradually, private funding also came in and now the central bank monitors the bank funding to this critical sector to ensure geographical and demographic dispersion.

Micro-credit was another area which had shown significant growth and success. One of the reasons it managed to do so related to the relatively light touch regulations that the industry faces. A Micro-Credit Regulatory Authority (MRA) has been set up to achieve a right balance between ensuring adequate space for microfinance institutions to innovate and appropriate regulatory oversight which is also essential.

Commenting on the role of public policy, Md. Quasem stressed the importance given in particular to agricultural sector. Government had agreed to huge debt waivers to support agriculture, in spite of its potential adverse impact on credit culture. Mandated inclusion initiatives were sometimes construed as being distortionary such as the requirement in Bangladesh for banks and FIs to finance at least 15% of their total lending to women.

Referring to the role of alternate banks/not for profit entities in Bangladesh, he mentioned that even though most of these are outside the regulatory ambit, their role in financial inclusion has been laudable. Many of them have outperformed banks and remained insulated from the financial crisis. However, there has been some criticism of these entities getting endowment funds from the Government and then getting into commercial activities.

Md. Quasem raised the fundamental issue of the objectives of growth and commented that pursuance of growth per se had obvious limitations. It must be geared towards certain socio-economic objectives to remain sustainable and to lead a country towards a stage of all round development. The growth process also needs to take into account certain broader socio-economic and environmental concerns. Industrial growth for export earnings, for example, may be harmful if their effluents kill water bodies, aqua diversity, and ecology.

He argued that in some respects, smaller banks having diversified real sector exposure better serve the needs of local people as compared to big, multinational banks which are primarily focused on trading profits. It was necessary to monitor and restrict excess profits in

the post crisis scenario. In Bangladesh, banks and non-banking financial companies were required to appropriate 20% of profits to reserves, before distribution of dividends.

He agreed that technology could be the answer to many problems of the excluded. He mentioned that as in Philippines and Brazil, Bangladesh had also introduced mobile banking service for receiving and paying cash through point of service (POS) led by banks.

In conclusion, he mentioned that in the post-crisis context, the voices of small stakeholders needed to be heard by regulators as part of a caring, consultative and participatory approach while addressing financial policy issues.

Business correspondent model

Among various institutional arrangements, the huge success of the business correspondent model in Brazil, later implemented in India, was mentioned as a successful policy intervention. The number of BCs in Brazil was as high as five times those of the number of branches. The success of the model lies in the synergies between the banks and the BCs and the model did not involve many trade-offs. The banks see it as an opportunity to broaden their client base and reach markets at a lower cost, which were otherwise inaccessible for various inhibiting factors such as distance, illiteracy and social barriers. BCs could help in brand building and expanding inclusiveness. Under the BC model, it was clarified that the BCs were entitled to a fee from the banks and not permitted to levy any charges from customers strictly. All operational and legal risks remained with the banks. In India, concerns about possible adverse incentives to BCs in this model were handled upfront through adoption of appropriate technology protecting consumer interests and exercising sufficient control over BCs through regulatory guidelines. To a query it was incidentally observed that the favourable change in income distribution in Brazil in recent years should be attributed more to public and fiscal policy interventions along with inclusive policies in finance.

Technology and related issues of security, accounting and credit-worthiness

There was a significant debate about the role of technology in particular of mobile baking and how that could be a game changer. It was emphasized that more imaginative interventions are needed as far as technology – particularly the mobile technology is concerned. In the context of China, it was mentioned that mobile companies had the biggest footprint. There were experiments to leverage on this strength and micro payments through mobile phones were already permitted. In the near future, mobile phones could start functioning as mobile banks. One of the problems encountered was non-standardized soft-ware due to various accounting practices creating silos. In this context, the need to have standardized payment, credit and accounting standards based on cash flows – instead of the traditional balance sheet and profit and loss accounts – for the poor and SMEs was stressed. Such standardization could result in effectively transforming mobile phones into effective channels for banking and related services. Such an effort would nevertheless need breaking down of regulatory barriers and better coordination among various regulators.

While switching over to mobile banking the consequent trade-offs were also discussed from security and prudential perspectives. There were obvious issues about retaining the rigor of KYC/AML norms. A larger issue was the nature of regulation – how to regulate a parallel banking system which may, over time, become larger than the formal banking system.

To resolve regulatory conflict, in Ghana mobile companies are not licensed by the central bank. The companies have to partner with banks and to address security related concerns

such as KYC and AML issues and communication related barriers due to illiteracy, e-switch/biometric cards have been introduced.

It was clarified that the Indian approach of going for a bank-led model for mobile banking was informed by two key considerations – security issues and the float. Allowing mobile companies as BCs was intended to optimally leverage the footprint advantage that mobile companies have. A unique experiment of issuing biometric card of identification which can hold information on a variety of financial transactions is also under way.

The Indian policy approach to financial inclusion, it was highlighted, made a conceptual distinction between basic financial services and provision of credit. 'Inclusion' under basic financial services aimed at providing access to payment/remittance services and a simple savings account for safe keeping of money particularly by women. This should be treated as a public good, must be available risk free and at a lower cost. Provision of credit and other financial products such as insurance which are not risk free, should be treated as an add-on to the provision of basic financial services. This strategy was also expected to help building up transaction history for the poor over time, as a means of ascertaining credit worthiness.

An important issue raised in regard to 'credit worthiness' of small clients was that banks need to think innovatively out of the box, beyond credit bureaus and evolve a mechanism based on transparency of transactions – much as e-bay does for its sellers. Transaction history, based on cash flows, could be a strong indicator of credit worthiness. It was observed that in India, by providing incentives for roll over or for higher credit entitlement when timely payments are made, a credit history is built up incidentally for small borrowers.

Cross subsidisation

A question seeking clarification on the issue of cross subsidization was raised in the context of Chair's initial remarks on how private banks can be incentivized to promote inclusive financing. There were also issues such as whom and what will be subsidized and how the policy should be designed. The discussion threw up several interesting points:

(i) In India, where priority sector targets are mandated on both private and public sector banks, though interest rate caps are not prescribed, even private banks hesitate to charge higher interest rates, since there is a moral pressure of harsher public policy intervention;

(ii) Private sector banks may consider lending to poor, despite lower returns, as a way of diversifying risk;

(iii) There are many externalities from the State when it provides certain overheads in technology, market infrastructure, social architecture etc., at public cost;

(iv) In self-help groups, the joint liability principle enables transfer of private information in small groups into useful credit information. Constitution of such groups is orchestrated by the State.

(v) Subsidisation occurs also when pricing is done on marginal cost principle and not on full cost principle.

Session III: Introductory remarks

John Lipsky[1]

In these introductory remarks, I would like to emphasize two considerations regarding macro aspects of financial stability, which is the main theme of this session. First, while the overarching theme of this discussion is financial sector regulation, improved regulation is only one aspect of financial sector reform. Moreover, improving regulation includes strengthening the effectiveness of existing regulations, but also redefining the perimeter of regulation. One of the key conclusions from the 2008-09 crisis was that some systemically important institutions and markets fell outside the perimeter of regulation, and that some of these were a source of significant financial instability. In recognition of this factor, proposed reforms have encompassed bringing off-balance sheet items – specifically, OTC derivatives and the shadow banking system – within the perimeter of regulation. Of course, regulatory reform also encompasses issues of capital adequacy – such as the work on SIFIs in general, and especially global SIFIS. The challenge of reducing pro-cyclicality also falls within the category of regulatory reform.

But there are other aspects of financial sector reform that are as important as regulatory reform, such as the quality and effectiveness of supervision. We in the IMF have concluded that weakness in supervision was every bit as important as flaws in regulation in creating the 2008/2009 market instability. Thus, failure to strengthen the effectiveness of supervision would seriously weaken the effectiveness of the efforts on regulatory reform. Moreover, the "Too Big to Fail" issue reflects the lack of resolution mechanisms for systemic institutions – both those operating within national boundaries, but especially for institutions that operate in multiple jurisdictions – as well as issues regarding capital adequacy. The impact of the absence of an effective resolution mechanism for failing institutions was demonstrated vividly by the Lehman Brothers' case. More recently, the failure of MF Global will leave many of that firm's clients at the mercy of lengthy and costly legal processes. Without a doubt, making significant progress in developing resolution mechanisms for cross-border institutions is going to be the most difficult and complex of all the reform challenges, but that doesn't reduce its importance or the need for serious effort.

Alongside regulatory reform, supervisory reform and the bolstering of resolution mechanisms, the fourth area of importance in financial sector reform is the assessment of the actual implementation of planned reform measures. In fact, this is one area where there has been concrete progress. The formation of the Financial Stability Board in 2009, at the behest of G-20 Leaders, led to the formalization of a peer review process under the auspices of the FSB. This is highly valuable, but has the inevitable limitations of any peer review process. Hence, the existence of a rigorous and effective independent assessment process represents an important impetus for an effective peer review, as well as possessing intrinsic value. The independent assessment in this case is provided through the Financial Sector Assessment Programs (FSAPs) conducted jointly by the IMF and the World Bank. IMF members agreed that all countries with systemically important financial sectors will undertake an FSAP update at least every five years, and all G20 members agreed the same. Of course, there is a very significant overlap between the counties included under each of these categories.

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[1] First Deputy Managing Director, IMF

The second theme of my introductory remarks is to remind that macro aspects form only one component of financial stability. Financial stability goals certainly involve macroeconomic policies – including conventional monetary and fiscal policies, as well as structural policies. At the same time, micro-prudential policies also expert an important influence on financial stability. In this context, I highly recommend the report on financial stability issues in emerging and developing economies prepared jointly by the FSB, World Bank and the IMF for the G-20's Cannes Summit (available on the imf.org website).

This Report highlights five key issues regarding micro prudential policies, viewed in the context of their contribution to financial stability. These include; First, the application of international standards; Second, cross border supervisory co-operation; Third, the definition of the perimeter of regulation in EMEs; Fourth, the treatment of foreign exchange risks; and Fifth, the development of domestic capital markets. The report states that there is no "One-Size-Fits-All" recipe for promoting financial stability. It also point out that there are important structural linkages among all five issues. Nonetheless, these issues – together with financial market development – represent the key elements of any effort to promote financial stability through micro prudential measures.

Looking forward, there are two intellectual challenges that need to be met successfully in the interest of bolstering financial stability. First is to gain more complete and useful understanding of macro-financial linkages. This means tracing in much greater detail the two-way linkages between financial market developments and the macro economy. Examination of the macroeconomic models currently in use reveals the rudimentary way that those interactions are being captured. But it is these models that are being used to gauge – among other things – the potential impact of financial reform measures on macro-economic performance. Thus, progress in this area would be an important contribution to the preservation of financial stability.

The second challenge is to deepen our understanding about the effective use of Macro-Prudential policy. The IMF has been working very actively on this issue. In April, the Fund published an overview paper titled "Macro-Prudential Policy: An Organizing Framework". The September 2011 edition of the Fund's Global Financial Stability Report (GFSR) included a chapter on macro-prudential issues. I highly recommend both of these publications, and both are available the Fund's website (www.imf.org). A report titled "Macro-Prudential Policy Tools and Frameworks: A Report to the G20" was prepared jointly by the BIS, FSB and IMF. and was delivered to G20 members last August. Two other papers of a more technical nature also were published in August by Fund staff, including "Towards Effective Macro-Prudential Frameworks – An Assessment of Stylized Institutional Models" and "Macro-Prudential Policy: What Instruments and How To Use Them? Lessons from Country Experience". These papers also are available on www.imf.org.

But what needs to be done in order to address the issue of using macro-prudential tools to bolster financial stability? The key tasks in this regard include:

1. Identifying and monitoring systemic financial risk. After all, you can only manage that which can be measured.
2. Specifying and calibrating the potential instruments of macro-prudential policy, which by nature are prudential and macroeconomic, not microeconomic and/or regulatory.
3. Creating the specific instruments and specifying their governance. Governance will have to reflect the need for co-ordination of prudential tools used for financial stabilization with traditional macroeconomic policies like monetary and budget policies.

These issues will be explored by Philip Turner in the main presentation in this section of the seminar that follows directly.

Macroprudential policies in EMEs: theory and practice

Philip Turner[1]

Abstract

This paper examines the macroeconomic and microeconomic dimensions of systemic risk. The design of practical macroprudential policies to address such risks is complex. Issues to be tackled include: (a) statistics to accurately measure currency and maturity mismatches (which usually lie at the heart of EME crises) and the degree of leverage; (b) clarification of macroeconomic and financial system dynamics; (c) the selection of policy tools best suited for particular countries; and (d) quantification of the many dimensions of the "cycle". Coordination between macroprudential and monetary policy will raise a number of thorny issues.

JEL classification: E44, E58, F36 and G28

Keywords: Macroprudential policies, externalities, monetary policy, regulation of capital flows

Introduction

My task in this session is to introduce a debate about macro perspectives on financial stability. Everybody knows that the risks affecting the financial system are not simply aggregations of the risks of individual institutions. Bank supervisors must therefore take account of risks affecting the system as a whole. Everybody has heard the word "macroprudential", a term first used in Basel Committee discussions on systemic risk in the late 1970s. But people interpret the "systemic" or system-wide aspects of financial risk in different ways. This note therefore seeks to provide a conceptual overview – and highlights those areas where people disagree. The first section tries to clarify its various meanings of "systemic" and "macroprudential". The second section considers several strategic issues to be addressed when designing practical policies. The third section discusses the link with monetary policy. A few words on policies and governance follow in the final section.[2]

[1] Views expressed are my own, not necessarily those of the BIS. Thanks are due to Clare Batts for helping me prepare this note. Thanks also to participants for the helpful comments received during the conference. Comments by Karl Cordewener, Dietrich Domanski, Richhild Moessner, M S Mohanty and Tim Ng are also acknowledged with thanks.

[2] Galati and Moessner (2011) provide a good review. Moreno (2011) provides a useful analysis of the issues that are most important in an EME context.

1. "Systemic" aspects of risk

There is both a macroeconomic and a microeconomic dimension to the "systemic" aspects of risk.

(a) Macroeconomic

Because they affect all financial institutions, macroeconomic factors can create system-wide risks. Indeed a common symptom of overly expansionary domestic monetary or fiscal policies is that the supply of credit – whether from banks or through capital markets – becomes too easy. Regulators could try to curb the expansion of credit directly. But this would address only the symptom, not the underlying causes. The better response would be to tighten fiscal or monetary policy. How macroprudential policies should be coordinated with monetary policy is discussed in section 3: it suffices here to underline that macroprudential policies should never be seen as a substitute for domestic macroeconomic policies.

"Domestic" is underlined because foreign macroeconomic policies, which are beyond the control of the national authorities in an individual EME, may well require a macroprudential response.[3] For instance, India can do little about the extremely low level of interest rates in global markets, both long and short. The long-term real interest rate in US dollars has been very low for some years and is likely to remain low in the foreseeable future. As the global benchmark rate for risk-free maturity transmission, its influence pervades economic activity worldwide.

With free capital movements, there are at least two reasons why other countries cannot fully insulate themselves from this even with fully flexible exchange rates:

- One is that international business is largely conducted in dollars. Commodities markets are in dollars. Multinational companies operate in dollars. And so on.
- Another is that greater capital market integration makes long-term rates in different currencies move more closely together. If the exchange rate is flexible, short-term rates are under the control of the local central bank and can move independently. But long-term rates tend to converge internationally. Look at the high correlation between dollar yields and the long-term rates in the euro or in sterling, both floating exchange rate currencies.

Now developing countries – where real income per head is growing more rapidly – should, in a closed economy, apply a higher discount rate in assessing investment projects than advanced countries. Because of this, they may need to maintain higher long-term rates in local markets than rates prevailing in global markets. To do this, the domestic authorities may want to restrict non-resident flows into local long-term markets (as India does). When global macroeconomic variables are far away from their long-run equilibrium levels, there may be a particularly good second-best arguments for such restrictions.[4]

A second consideration is the high volatility in the major global financial markets. Capital flows far in excess of the absorptive capacity of (thin) domestic financial markets can lead to wild gyrations in local markets – both when non-resident capital is coming in and when it is going out. This can pose a major systemic threat to EMEs. Rakesh Mohan, who is well-

[3] But the policies of EMEs in aggregate (eg their demand for AAA-rated US dollar paper) do influence long-term interest rates in global markets.

[4] The general theory of the second best is that the presence of widespread distortions means that removing just one distortion (eg a specific restriction on capital movements) does not necessarily enhance overall welfare. This argues against a fully laissez-faire attitude to capital flows: see BIS (2009).

aware of the benefits of international capital flows, has made a lucid case for regarding deliberate capital account management – as opposed to a laissez-faire stance – as an essential element of macroeconomic and financial stability policies in EMEs.[5]

Governor Subbarao has suggested how to make such a policy orientation operational. He drew a distinction between "strategic" and "tactical" capital controls. Strategic controls define a longer-term policy orientation (in India's case, a preference for long-term over short-term flows and for equity over debt flows). This not only gives policymakers the levers they need, but also provides a clear and predictable framework of rules that the private sector needs for the management of risks. By contrast, tactical controls are opportunistic responses to particular surges in inflows or outflows – and they create uncertainty for market participants. He argued that India, faced with large swings in capital flows, could avoid the use of tactical controls because of the automatic buffers that strategic controls provided.

In short, then, policies on international capital flows can be an important dimension of policies to prevent financial instability. The policy issue is then how best to manage such flows in order to get the considerable advantages that international capital mobility offers whilst limiting the risks of certain types of flow.

(b) Microeconomic

The fundamental microeconomic dimension is the pervasiveness of externalities in any complex financial system. The interconnections that lead to externalities have many guises. Network effects, common exposures, leverage and procyclicality are the elements most cited. When there are externalities, market outcomes driven by individual choice tend to be inefficient. And externalities can create dynamic feedback effects between one market or institution and others – sometimes destabilising the system as a whole. Public policy may therefore have an important role.[6]

Banks and capital markets are riddled with opaque and oliogopolistic interconnections. Banks do not trade – with the public or with each other – in atomistic, perfectly competitive markets. In theory, perfectly competitive markets, fed by a constant stream of new entrants, would be resilient to the bankruptcy and exit of a single (small) firm. The banking industry, dominated by very large firms and dependent on public confidence (the failure of one bank can be read as a signal for other imminent failures), does not operate like this.[7]

Nor do capital markets. When investors are highly leveraged, capital markets become unstable: a fall in the price of a leveraged investor's assets may lead to margin calls that can force him – irrespective of underlying value – to sell into a falling market. Many of the over-the-counter (OTC) derivatives markets in which banks trade are dominated by a few large players. The 2008–09 crisis revealed that these markets had created large but opaque capital market links between banks. The failure of just one single major counterparty would bring down other firms and could threaten the whole system ("contagion").

"Procyclicality" refers to the tendency of the financial system to amplify macroeconomic or global financial shocks. Cyclicality is a natural feature of a market economy. Real capital formation is cyclical because it is stimulated when demand outruns existing capacity; market

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[5] The conclusion of Ron McKinnon (1993) is worth recalling: "Only when domestic borrowing and lending take place freely at equilibrium (unrestricted) rates of interest and the domestic rate of inflation is curbed … are the arbitrage conditions right for allowing free international capital mobility".

[6] Korinek (2011) argues that externalities associated with financial crises can also justify prudential capital controls.

[7] A banking industry not dominated by big banks and subject to strong restrictions on its risk-taking might be more stable. Kotlikoff (2010) provides an insightful advocacy of this view.

prices are cyclical as they respond to shortages; accounting conventions that are backward-looking accentuate procyclicality … and so on and so forth. The simple point is that the aim of public policy cannot be to eliminate cyclicality. But it should make sure that regulation and other public policies do not aggravate procyclicality. And it should protect the financial system from cyclicality that is inherent in any market system. (This is discussed further in section 2 below).

The feedback effects that come from externalities are more likely to destabilise the financial system as a whole if all banks respond in the same way to shocks ("herding"). Parts of the regulatory framework can unwittingly encourage such herding. So bank regulators can improve stability by encouraging diversity in banks' assessments of their own risks. This was part of the logic of the internal ratings-based (IRB) approach to Basel II. I recall arguing this point in an ICICI/IIMA conference in Mumbai some years ago. At that time, the focus was on the link between bank regulation and EME sovereign debt crises … now attention is focused on the euro area! The argument made then was that international bank lenders to EME governments should make their own risk assessments, and not rely blindly on rating agencies:

> "the use of internal ratings [ie the IRB of Basel II] has the great potential advantage of allowing for greater diversity in the assessment of credit risk … generating more scope for diversity. Any narrowing of the diversity of opinions could increase herding behaviour. For instance, a downgrade by a major [credit rating] agency could trigger sudden and simultaneous attempts by all banks to cut their exposure. If instead many banks are independently assessing risk, the chances of imposing progressive discipline on a country running into trouble, rather than provoking a sudden discontinuous drying up of foreign inflows, are greatly enhanced".[8]

But the attempt in the IRB approach of Basel II to get major banks to implement such independent risk assessment of sovereign borrowers failed. Almost all European banks, for instance, applied the zero risk weight to their holdings of the bonds of euro area governments. The EU's Capital Adequacy Directive required European banks to treat the debt of all European Union countries equally – and that in effect meant a zero risk weight for both German and Greek bonds. One result was that the European banks built-up large exposures to the weaker sovereigns (Hannoun, 2011). Jaime Caruana (2011) explained this morning how, as the euro area crisis deepened, bank and sovereign risk began to interact in highly destabilising ways (see also Bank for International Settlements (BIS), 2011b).

Nurturing diversity in risk management and encouraging banks to take a realistic view of sovereign risk is essential in the EMEs.[9] However, the difficulties of doing this are great. How can the regulators get the banks to take their own risk management responsibilities seriously, when it seems easier just to follow the herd? This can be especially hard if all the banks are following the same backward-looking models in assessing credit and market risks. Can regulators be sufficiently rigorous with bank holdings of the debt of their own government? Short-sighted indulgence may well be convenient for a time; but it exposes the government to the medium-term risk of having to deal with both weakened banks and a government bond market crisis at the same time.

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[8] Neumann and Turner (2005), page 102.

[9] Diversity can take many forms. The paper presented by M S Sriram to this conference echoed Thorat's (2010) argument that policies of financial inclusion can contribute to financial stability by increasing the diversity of bank's assets and liabilities.

2. Designing practical policies

The design of the practical policies to take account of system-wide risks raises complex operational issues. There is no one-size-fits-all. Country practices are bound to differ because countries have different histories and are at very different stages of development. Even when there is agreement about the general principles, there will be disagreement about the practice. But all supervisors will need to address similar general issues. This section therefore considers some key general questions.

(a) Are statistics on interconnections/common exposures/leverage etc adequate?

Policymakers need good measures of interconnections/common exposure/leverage. But current statistics on these factors are poor. Central banks in the advanced economies learnt this in the crisis. Where are the key data gaps in the EMEs?

One is the lack of comprehensive statistics on currency and maturity mismatches – frequently the major cause of systemic crises in the EMEs. Balance sheet data are still much less comprehensive than data on income or expenditure flows. Nor is it enough to oversee mismatches in individual institutions. Supervisors must monitor key dimensions of aggregate mismatches – both their total size (so they can judge common exposures) and their distribution across firms (concentration of a few banks could bring them down and infect the others). Rising exposures shared more-or-less equally across all players in a single jurisdiction should alert supervisors to common exposure risks – even if each institution considered by itself looks safe. Particular attention needs to be paid to the resilience of derivative markets used for hedging. Remember that individual firms acting in isolation almost always overestimate their ability to hedge or to close out exposures at short notice in a crisis. This misapprehension is all the greater in the thin, comparatively underdeveloped financial markets in the EMEs.[10]

Another consideration is the role of leveraged participants in capital markets. The innovative segments of domestic capital markets in EMEs are often dominated by leveraged foreign investors (hedge funds, proprietary trading desks of banks etc): foreigners use experience gained at home to give them an edge over the locals. But the responses of leveraged investors can become extremely volatile in a crisis. During the 2007–20xx financial crisis, several EMEs were caught by destabilising capital flight that had little or no domestic cause – primarily because leveraged foreign investors fled. In some cases, some large local players were much more highly geared than the regulators had thought. Hence it is important to monitor the leverage of key market participants.

(b) What should be the operational targets/reference variables of policy?

Consider this advice: a good prudential regulator should pay particular attention to limiting aggregate risk exposures which build up during booms and which create problems when conditions turn adverse. Translating such good advice into operational targets is very difficult.

A boom sustained by the strong macroeconomic/financial feedback effects brings with it a number of quite distinct risks:

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[10] For instance, banks and large companies will typically not hedge for long periods or for very large exchange rate changes. Instead, they will often cover themselves for the subsequent three months against a movement of up to, say, 5 percent in the exchange rate. They plan to roll over such hedges as and when needed. They see such flexibility as saving them hedging fees. They will count on the existence of markets to put on new hedges, should the rate move sharply against them. Individual firms may be quite unaware that aggregate exposures mean that other firms will all be trying try to hedge at the same time. Under stress, hedging markets may become dysfunctional.

- As aggregate demand rises above trend, firms and households become more optimistic about the future and want to borrow more. A rise in real estate prices encourages households to buy even more dwelling space, reinforcing an investment boom. Higher prices for houses and other assets give borrowers extra collateral against which to borrow;
- Banks, heartened by a cyclical decline in loan defaults, become more willing to lend. And higher asset prices will have bloated bank balance sheets with unsustainable capital gains;
- When borrowing conditions in markets become unusually favourable, local firms and households find their financing options widen: they can borrow more easily or more cheaply at (low) short-term rates or in foreign currency. Lower price volatility of financial assets during upswings leads to reduced haircuts on wholesale funding contracts, facilitating increased leverage.

When the cycle turns adverse, however, these favourable conditions reverse. Asset prices begin to falter, and investment becomes less attractive. When the interest rate or exchange rate cycle turns, borrowers will find themselves exposed to currency mismatches or maturity mismatches or both. During downswings, haircuts rise and investors are forced to scale back their leverage, implying a sharp contraction of their positions. Market volatility rises abruptly. The decline in asset prices that results has further feedback effects on the balance sheets of banks and other investors.

This story raises several elements that could destabilise the financial system – the macroeconomic cycle (eg path of real GDP, investment booms, inflation); economy-wide risk exposures (eg excessive credit expansion, currency/maturity mismatches); financial market measures (eg asset price volatility); bank balance sheet ratios (eg leverage) and collateral practices in wholesale markets. In principle, each element could become a key warning signal or reference variable or even an operational target. But too many indicators would create excessive noise, and policymakers will have to find ways of narrowing their choices.

(c) How should policy tools be selected?

The choice of target will influence the choice of tools. The EMEs have had much greater experience than advanced countries in the use of such instruments.[11] Reddy (2009) explains several measures that the RBI had taken before the 2007 financial crisis. These include: countercyclical requirements for interest rate exposure; variable risk weights for housing loans; limits on interbank liabilities; and securitisation rules that ensured that any profits on the sale of assets to a Special Purpose Vehicle (SPV) could not be recognised immediately.[12] Several advanced countries would have benefited from having such rules before the crisis.

Deciding between the many instruments that may qualify for macroprudential use will be very hard. Some strategic questions are:

- *Many or few instruments?* The analogy with the welfare economics of taxation suggests that the use of many instruments in a modest way would be less distortionary (and therefore more effective) than heavy reliance on just a few instruments. As a lower tax rate applied over a wider field (eg income, consumption, wealth etc) is less distortionary (and often encounters less resistance) than a high

[11] A recent BIS reported counted 39 such measures in the EMEs, but only eight in the advanced countries (see Table 3, page 10 in BIS (2010)).

[12] Profits had to be spread over the life of the certificates issued by the SPV. See Reddy (2009), pp 142–151.

tax rate narrowly applied, milder regulatory imposition on a large number of financial markets/products can be more efficient and may lead to less evasion. But there are major drawbacks in having too many instruments. One is that a greater number of instruments could make calibration much harder – particularly since we have little or no historical experience of the complexity of the interactions between different instruments. A second drawback is that the imposition of too many macroprudential constraints runs the risk of inadvertent overregulation.

- *How sector specific?* One temptation is to target sectors or markets that are most "overheated". This may not be easy to identify ex post. It also runs the obvious risk of hidden or implicit official credit allocation. So it seems better for any target to be defined broadly (eg total property lending).
- *How bank specific?* It would be difficult to explain to a bank which has already become more prudent because of they boom why a further regulator-inspired tightening is warranted. The banker would say to a regulator who proposed new curbs on property lending, "Yes, I am also concerned about overheated real estate markets, which is why I've already directed loan officers to tighten lending standards. But my competitor has not. He should be curbed more than me". This may mean that some bank-specific elements may have to enter into any macroprudential policy.

The possible range of tools is very wide. Charles Goodhart (2011) has argued that the first macroprudential instrument that a central bank could use is its own balance sheet. A central bank can buy (or sell) "claims on the public sector, claims on the private sector and claims on the rest of the world". Such transactions could be used to signal disapproval of riskier paper generated during booms: historically, this has been an important function of central bank discounting practices. They could also correct dysfunctional markets during slumps. This proposal deserves careful consideration (see also footnote 18 below).

Table 1

Examples of instruments serving macroprudential aims

Rules governing	Measures
Bank loans	Caps on loan-to-value for mortgages
	Caps on the ratio of debt-service-to-household income
	Rules on the reference interest rate used for mortgage lending
	Rules on currency mismatches of borrowers
	Ceilings on credit growth (aggregate or by sector)
Bank balance sheets	Countercyclical capital ratios (possibly including additional capital charges for the speed of any increase in bank lending). Dynamic provisioning
	Adjustment to asset risk weights
	Rules on loan-loss provisioning
	Caps on loan-to-deposit ratios, core funding ratios and other liquidity requirements
	Bank reserves deposited with the central bank
	Limits on interbank exposures (domestic or cross-border)
	Capital surcharges for systemically important institutions
Collateral used in wholesale funding	Prevention of procyclical variation in minimum margins or haircuts (or making such variation countercyclical)

Table 1 summarises other policy tools that are at present in force in some countries or are under consideration. Most of these measures serve microprudential as well as macroprudential objectives. Note that measures that have been used in the past tend to be country-specific, often because basic features of the structure of financial intermediation differ from country to country (BIS, 2010). Differences in the closeness of supervision, the development of capital markets, the presence of non-bank financial institutions and so on will all influence instrument effectiveness. As the different segments of a financial market become more integrated, official action in a single segment can be quickly transmitted to the other segments. More fragmented markets will require more specific measures. What appear to be differences in economic philosophy are often the result of different circumstances.

Given this diversity, it is unlikely that an international consensus will emerge on a few instruments best suited for macroprudential use. The large number of diverse instruments likely to be employed is that macroprudential policies cannot be characterised in a few simple dimensions. The scope for international coordination on specific tools may well prove to be quite limited. The lack of international agreements about instruments should not therefore inhibit national authorities from taking action in their own jurisdiction.

(d) How to respond to the macroeconomic cycle? To the "financial cycle"?

Prudential ratios or standards could be fixed or they could vary with the cycle. Such variation could be based on a predetermined rule. Or it could be decided in a discretionary way.

One important point is that fixed ratios can act as automatic stabilisers. The best known automatic stabiliser in economic policy is the tax system. The higher the marginal tax rate, the more stabilising is the tax system. The corollary for regulators is that they should look for prudential ratios that effectively incorporate higher marginal rates. Examples include: higher capital charges or provisioning requirements on the increase in bank lending and higher marginal reserve requirements. These work more effectively as automatic stabilisers than "flat" ratios (where the average and marginal rates are equal).

Setting prudential ratios that can vary with the cycle could also work. A number of national authorities have made such measures work in the past. Sinha (2011) points out that the Reserve Bank of India has been successfully following countercyclical capital and provisioning policies since 2004. The graph he showed on its effectiveness is really striking. More countries are likely to follow because, for the first time, international agreement on bank capital regulation has explicitly countenanced altering capital ratios with the economic cycle. Basel III incorporates a discretionary countercyclical buffer so that host supervisors can require banks operating in their jurisdiction to accumulate extra capital in upswings.[13] Supervisors could then release the buffer when strains materialise in the downswing.

Making this work will not be easy. First of all, regulation will have to look beyond the real economic cycle (ie GDP). Account must also be taken of the financial cycle. The problem is that the notion of a "financial cycle" is too nebulous. Our knowledge of the macroeconomic/financial linkages is very poor: as John Lipsky aptly put it, our "models are rudimentary to the point of being misleading".

There is no shortage in the supply of statistical variables suggested by economists to proxy the financial cycle – bank credit, asset prices, borrowing conditions in capital markets and so on. But how should these different elements be weighted together? Economists disagree about the relative importance of different factors even with 100% hindsight.

[13] See paragraphs 136 to 150 of Basel Committee (2010) for details.

Is there a way that those who give policy advice can extract in a timely manner the essence of the financial cycle (ie "excesses" of credit growth, "overshooting" of asset prices, "overabundant" liquidity etc) from normal cyclical variation and longer-term trends? Financial innovation and the rise of new industries mean that models based on past behaviour can be misleading. Several participants in this conference reported that the credit/GDP ratio was not a very good variable for EMEs. More generally, the radical transformation of the financial industry makes it particularly hard for policymakers in EMEs to "read" the signals emanating from the industry.

Graph 1

Composite indicator of risk aversion renormalized as a credit spread[1]

Weekly data, in basis points

Note: The vertical line marks the Lehman bankruptcy on 15 September 2008.

[1] Simple average of standardised scores of government bond yield spreads (average of Spanish and Italian over German yields); US corporate high yield spread (Merrill Lynch US High Yield index); implied volatility of US equities (VIX index); implied volatility of US Treasury bonds (Merrill Lynch MOVE index); and implied volatility of G7 exchange rates (JP Morgan GVXF7 index).

Sources: ECB; Bloomberg; national data.

Nevertheless, policymakers must strive to get a handle on the "financial cycle" – both global and local. A big help in doing this comes from the fact that risk-taking indicators tend to move together. One can therefore attempt to extract common "signals" from the very many indicators. Graph 1 shows a measure of sentiment in global markets, combining measures from major bond, equity and forex markets. Only simple measures of spreads and volatility have been taken into account in constructing this indicator, which could easily be replicated to produce a comparable domestic measure in most EMEs. More sophisticated indicators could be constructed: indeed, the crisis has spawned a veritable cottage industry in the production of such indicators. Measures that capture any "fattening" in the tails of probability distributions (eg from the prices of out-of-the-money options) seem promising – because the unexpected is the essence of a crisis.

All measures have shortcomings, and all are vulnerable to the Lucas critique (that markets would react in a preventive way if a "true" leading indicator were ever discovered). No one measure can be regarded as giving definitive answers in all circumstances.[14] But they can help policymakers frame three key questions:

[14] See the discussion in Domanski and Ng (2011) for an overview.

Qu 1: Is global risk appetite becoming dangerous (as it did from early 2005 to mid-2007)? If yes, ask questions.

Qu 2: Is there evidence that comparable measures derived from local financial markets are highly correlated with the global measure? If yes, worry about a disconnect from local conditions.

Qu 3: Is greater risk-taking in local markets associated with increased exposures of local financial firms in terms of aggregate debt, currency mismatches or short-term exposures?

The answers to these questions could help guide the orientation of policy. Statistics can force awkward questions into policy discussions. A quantitative surveillance framework can help the communication of policy. And it can help accountability.[15]

Many would question the ability of regulators to make discretionary prudential ratios work. The official sector is no more able to forecast the business cycle than is the private sector. Because diversity of opinion is more likely to be stabilising than uniformity, there is some presumption against having any single official body judge the cycle. To reiterate an argument made earlier: encouraging diversity in risk assessment can itself be stabilising.

Will it prove possible for the authorities to act quickly enough for measures taken to have countercyclical effects? There is a danger of being inadvertently procyclical given the length of recognition, policy decision and implementation lags of regulatory policies. Under Basel III, the implementation lag could be quite long: banks will have up to 12 months to comply with a countercyclical buffer. Although host supervisors could force their own banks to act more quickly, they cannot shorten this notice period for foreign banks without the agreement of their home supervisor.

The longer it takes to bring a countercyclical surcharge into force, the greater the risk that it would be mistimed. Remember that the record of discretionary fiscal policy is very poor – governments more often than not have destabilised economies with discretionary fiscal action.

Governor Subbarao has warned that regulators must steer a course between type I errors (imposing buffers too early out of excessive caution) and type II errors (waiting until it is too late to avert an implosion).[16] This may well be harder in EMEs than in countries with long-established financial systems. As Governor Subbarao said yesterday, high rates of growth in credit/GDP ratios in developing countries often reflect much-needed development – the increasing share of manufacturing and infrastructure investment increasing the demand for credit. Rapid credit growth often represents desirable financial deepening and not speculative or destabilising excesses. A final difficulty is that falling into a type I error may in practice make it politically difficult for the regulator to impose further constraints when even more needed at subsequent, more dangerous phases of the cycle.

There are also limits to the capacity of the official sector to persuade the public about the cycle. In a deep recession, for instance, a regulator might want to relax prudential ratios on banks. But the general public's worries about the future may discourage banks from following

[15] Goodhart's (2011) recent advice to a parliamentary committee on this was: "I would not be dogmatic about the choice and formulation [early warning] indicators, but I would like to suggest that the FPC (Financial Policy Committee) is required to choose somewhere between two to four such presumptive indicators … The idea is not to constrain the FPC's behaviour, but to put the FPC in a position where they either have to comply with action in circumstances [that suggest increasing financial fragility] or explain to you in public why this is not necessary". As he underlines, "the purpose of comply or explain, is to shift the default choice from inaction to action".

[16] Subbarao (2011a).

such easing. And the investing public may not want to buy the shares of banks whose capital ratios are falling in a recession. The old adage of monetary policy "pushing on a string" might apply with even greater force to regulatory policy easing in a slump.

One compromise in the debate about fixed versus cycle-dependent ratios might be to define quite wide "corridors of stability" within which the macroeconomic or financial reference variable could move. When the reference variable is within that corridor, the ratio would remain fixed. Only when the target goes outside that corridor would a cyclical change in a prudential ratio be considered. Prolonged credit-led booms might thus trigger countercyclical measures; but run-of-the-mill macroeconomic cycles might not.

Judgement could still be required to set aside a rule or to calibrate policy action. And a major exercise in public persuasion would still have to be undertaken.

3. Coordination with monetary policy

There is a danger that a greater emphasis on macroprudential policies could be used to disguise the symptoms of lax monetary policy. Strong demand and heightened inflation risks require monetary policy tightening. The combination of a domestic boom and persistent current account surpluses normally require real exchange rate appreciation, and forex intervention aimed at resisting this underlying adjustment increases inflation risks.[17] Several EMEs have on occasion in recent years taken direct measures to limit bank credit expansion sometimes justifying such measures as "macroprudential". But it was often tighter monetary policy and nominal currency appreciation that was really required.[18]

The more general point is that using macroprudential tools will complicate monetary policy. The use of regulatory ratios or rules that are sensitive to macroeconomic variables will in general influence credit supply conditions, and therefore alter the transmission mechanisms of monetary policy. By curbing financial "excesses" in upswings, successful macroprudential policy may reduce the amplitude of the business cycle. But such policies could also reduce the potency of interest rates in managing aggregate demand. Monetary policy works in part through induced movements in asset prices. Attempting to moderate such effects could weaken monetary policy transmission.[19]

In most circumstances, the desired change in monetary policy and macroprudential policy would be in the same direction. The correct policy would be a mutually reinforcing combination of monetary and macroprudential policies. But sometimes macroeconomic and macroprudential policies will need to move in opposite directions. In the event of a positive productivity shock, for example, unit costs would fall, driving prices down. Monetary policy might therefore need to ease. But macroprudential policy may well have to tighten. The

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[17] This does not say a fully flexible exchange rate is required: a managed float that respects necessary currency flexibility in a medium-term perspective can effectively preserve the essential price-stability focus of monetary policy.

[18] As the BIS (2010) pointed out in June 2010, "macroprudential measures cannot substitute for tightening monetary policy and increasing exchange rate flexibility as means to promote orderly and sustained domestic and external adjustments."

[19] The complications for monetary policy that will come from adopting a macroprudential perspective are probably inescapable. Green (2011) argued that policy tools concerned with financial imbalances "would be entirely familiar to central bankers of earlier decades as part of their monetary policy toolkit … [including] interest rate ceilings, variable reserve requirements, "window guidance", "corsets", monetary aggregate targeting or capital controls. What central bankers of the past would find much odder was the fact that "monetary policy", at least in some countries, became much more narrowly [focused] than in the past … purely on price stability, regardless of the condition of the financial system."

shock may have stimulated speculative borrowing in new, uncertain areas. Or the extrapolation of a temporary jump in productivity might have created unwarranted optimism about the future. Financial risks would therefore increase even when inflation risks have lessened. Macroprudential policy might need to counter such risks.

Complications would deepen if macroprudential settings were to be adjusted in response to cyclical developments. Central banks setting monetary policy would need to know how and when cyclical developments are likely to influence macroprudential policies, which in turn affect economic prospects. In practice, it will be difficult to separate monetary and macroprudential policies in any neat formulaic way (the one-objective-one-instrument mantra) so that great care will be needed to ensure that the implementation of effective macroprudential policies does not undermine monetary policy.

4. Politics and governance

The economics of policies to address systemic risk are very challenging, but the politics are positively daunting. One question is: "Which body should be at the controls of policies to address systemic risk?". Any realistic answer will have to take account of existing institutional arrangements and political realities in the widest sense. But there are three very practical reasons why central banks must play a key role:

- Adjusting regulatory instruments to general macroeconomic or financial market conditions will have effects that are close to monetary policy and may well share several transmission channels.
- Central banks have, by dint of their frequent participation, their fingers on the pulse of financial markets.
- It is the central bank that would have the lender-of-last-resort responsibility in a liquidity crisis. The wider use of the central bank's balance sheet for macroprudential purposes that Goodhart suggests reinforces this argument.

New responsibilities for financial stability will have major implications for the governance of central banks. This complex and important issue was reviewed comprehensively by a Study Group led by Stefan Ingves: see BIS (2011a).

Whichever body is made responsible, it will be essential to give that body operational independence. It must be independent of the political cycle. It must also be shielded from the commercial interests of the financial industry. Effectiveness will require it to take unpopular decisions. There will be no lack of public criticism – particularly when policymakers decide on restrictive policies.

Designing good disclosure principles to ensure adequate accountability will be a challenge. The measurement of systemic risk is inherently uncertain. Because regulators must use in full the confidential supervisory information about individual banks, it may be impossible for them to reveal their "true" measurement. Another problem is that quantifying the impact of preventive measures never before in place is almost impossible … and few will know about potential crises averted. But the resentment of the voter who is denied a loan ("because of the regulators" their bank manager will surely tell him) and of banks about the loss of potential business will on occasion be acute. Some form of frank ex post accounting in which the regulator reveals information no longer commercially sensitive (the US congress and UK Parliament both encouraged this at various stages of the crisis) should be developed.

Conclusion

A one-line sentence conclusion of this paper would be: translating macro perspectives on financial stability into operational policies is going to be extremely hard. Designing a framework for the management of the capital account will be difficult. The economic or financial cycle cannot be abolished. Macroprudential is not an easy substitute for other policies. There is, therefore, good reason for realistically limiting ambitions.

A fuller conclusion would add this: the intellectual case for taking a macro perspective is compelling. What is needed, however, is a dispassionate analysis of the policy options:

- The management of the capital account is important for financial stability in many EMEs, especially at times of global macroeconomic disequilibrium. How to do this whilst maintaining the benefits of international capital mobility is the challenge;
- More needs to be done to quantify externalities that are potentially destabilising – interconnections, common exposures, leverage, the unintended procyclicality of some microprudential regulations and so on;
- Greater diversity of risk management can counter procyclicality … the adoption of IRB in Basel II represented an attempt to do this.
- A process of regular measurement of movements in risk sentiment in international and domestic markets (combined with measures of aggregate exposures of the banking industry) can help to guide the orientation of policy.
- New macroprudential policies must not undermine or dilute the key focus of monetary policy on macroeconomic stability.

Whatever is done in these areas, the starting point will often be one of very imperfect information – both about underlying financial risks and about the potency of corrective measures to be taken. This requires a willingness to adapt as new information or evidence emerges. New policies inevitably involve trial and error. But the lack of decisive prior evidence on how such policies would work in practice is not a reason for not acting when the likely alternative would be worse.

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Summary of the discussion

The discussion centred around the current experiences of advanced countries, in particular euro zone area, given the geographical intensity of stability issues in these economies. But, EMEs also have to address similar concerns especially being an integral part of the architecture for international cooperation. The discussions on macro and micro prudential measures as also macroeconomic measures for stability in the context of advanced economies are observed to be equally important for EMEs and there are valuable lessons to be drawn from the discussions.

Opening remarks by Anne Héritier Lachat

The lead discussant Anne Héritier Lachat, in her opening remarks chose to share the Swiss experience by providing a brief account of some of the recent initiatives taken post crisis in Switzerland. Switzerland has been moving really fast in implementing some of the key micro as well as macro prudential measures post-crisis. She elaborated on the measures that are already in place as also a few measures which are in the pipeline to strengthen prudential regulation of the Swiss banking sector from a systemic perspective. The new macro prudential measures primarily aim at reducing systemic risks and ensuring stability. There is no specific equity angle, but there is a desire to have also shareholders and creditors to bear the cost of a failure, besides tax payers.

Briefly explaining the institutional background, she mentioned that there are two major regulatory authorities. First is the Financial Markets Supervisory Authority (FINMA), playing the role of financial market supervisor and regulator. Second is the Swiss National Bank, a classical central bank which is also enjoined with stability as a mandate. There are two big systemic banks which still represent the size of about four times the GDP (pre crisis, it was more than ten times).

Explaining the present measures in place, she brought out several important features. First is the Too Big to fail regime adopted by Parliament, based on the recommendations of an expert group consisting of members drawn from regulators as also banks. It provides for a capital surcharge of 19% for systemic banks (10% CET 1 plus 9%) for better capital quality. (It was added at a later stage that leverage ratio has also been introduced for the two large banks and for other banks, Basel III norms would become applicable) The resolution regime would be a national regime, though some cross border spill overs might be taken into account. On the governance side, SNB after consultation with FINMA will identify and designate the banks which are of systemic importance. SNB's decision by law can be challenged in judicial court. FINMA will implement all measures, both capital requirement and the resolution regime.

Secondly, a general higher capital requirement has been put in place for all banks under Basel pillar 2, which helps to strengthen the whole regime.

Thirdly, banks are being brought under different categories for the purpose of supervision with varied intensity, based upon their size and risks, to achieve supervisory efficiency.

Finally, the FINMA, SNB and the Ministry of Finance have entered into a MoU, to effectively deal with crisis management; it also provides for regular discussions on macro prudential and macroeconomic aspects and sharing and exchange of information.

There are two measures in the pipeline which will come into force from the first quarter of 2012. First are the new capital rules on mortgages, not LTV requirements, but higher capital for riskier loans. Second, a measure which is still in design stage is a counter cyclical buffer, drawing from Basel III as a model. That will be applicable only to mortgages. The buffer will be activated by the government upon proposal of the SNB after consultation with FINMA. The buffer will be limited up to 2.5% and FINMA will implement the rules.

She made some observations and raised a few related questions before concluding her remarks. First, regulation is only a tool and it is necessary to strengthen supervision. There should be coordination between the regulator or the central bank and the supervisory authority even when these two functions are integrated. Secondly, will central banks lose some of their independence? Third, arrangement for gathering and sharing of information, even if it is supervisory information is very important. Fourth are

the issue and clear establishment of accountability. Finally, efforts should be made to quantify the costs and benefits of regulatory measures from the angles of growth and equity.

Discussion

While macro prudential and monetary policies have to work together, with two separate instruments and targets, the policies get entangled and assume complexity. The central banks being the most independent of political cycles are placed best in implementing prudential measures. Most of the measures proposed are micro prudential and strong exercise of supervision is required to implement them. Here again, it would be desirable to keep the supervisory function vested with the central bank. When decisions relating macro prudential and monetary policy aspects may have to be taken jointly, it is necessary to have a hierarchy of objectives.

On the governance issue, it was urged that the level of cooperation that is seen at the international level to achieve financial stability should be reflected equally at the domestic level. For instance, in Turkey there is yet no consensus about the systemic risk. A Financial Stability Council has been set up in Turkey to achieve and ensure such cooperation among regulators and the government.

The issue relating to assessment of risk on sovereign debt holdings by the banking system was discussed at length. It was clarified that did not mean marking to market of securities in held to maturity portfolio. That would really mean higher capital depending upon assigning a probability of default for sovereign debt, even in the absence of a default. Banks cannot assess risks purely based on current information which may be inadequate. However, the real issue in the current context is how quickly the sovereigns really acquire their risk free status back.

Another question addressed related to the short term impact on credit growth and economic recovery in Eurozone area consequent to implementation of the recent comprehensive package. The package has three pillars, namely, recapitalisation of banks including those in Spain, sorting out of the Greek problem and leveraging on the EFSF. To be effective, all these three pillars should be implemented quickly. Yet another issue was how the macro prudential and counter cyclical buffers will be operational in respect of shadow banking systems and also in respect of complex derivative products. Also, if products such as credit cards by retail chains are left unregulated, that could lead to regulatory arbitrage. While it is true that a part of the shadow banking system falls outside the purview of regulation, it was felt that the special purpose vehicles carried in off-balance sheet form that led to destabilisation of the banking system. Regulation should address this issue.

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