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*Prime Minister's Remarks on releasing a Volume: "History of the RBI"**

The Prime Minister, Dr. Manmohan Singh releasing the Volume IV of "History of the RBI", in New Delhi on August 17, 2013.

It goes without saying that the history of the Reserve Bank is the history of the growth of our country since independence. The Reserve Bank has done the country proud – the role which it has played in shaping the monetary policy, in shaping the credit policy, and, if I remember correctly, in also influencing, particularly, the supply of credit to rural areas.

The Reserve Bank has served our country with great distinction. But I venture to think that the best is yet to come.

Dr. Subbarao has touched upon various facets of policy-making, and I dare say, Dr. Raghuram Rajan will build on the experience of his predecessors to chart out a new course of action in very difficult circumstances that our economy is facing. We can never be satisfied with the status quo. When I became the Governor, I had no great knowledge of what monetary policy is about, and therefore, I asked the late Prof. Chakravarty to head a committee to look at the functioning, the goals, the means and measures of monetary policy, and that report was pretty influential for a period of time. And I would venture to think that the time has come, when we should revisit some of those areas – the possibilities and limitations of monetary policy in a globalised economy, in a fiscally constrained economy – I think that is one subject. But macro-economic policy-

* Remarks by Dr. Manmohan Singh, Hon'ble Prime Minister of India on releasing RBI History Volume IV, New Delhi, August 17, 2013.

making, targets and instruments, I think, is another area, where I feel fresh thinking is called for, and I sincerely hope that the Governors of the future, particularly Dr. Raghuram Rajan, will attempt to revisit some of these difficult areas.

And thank you all, at least among professional people, a degree of national consensus, which we need, if we have to carry out social and economic change in a country as large, as diverse, as complex as India is.

As I said, the Reserve Bank has served our country with great distinction. But as I ventured to think, the best is yet to come.

With these words, I wish Dr. Subbarao the best. He has served the Reserve Bank and our country with great devotion. And I extend a hearty welcome to his successor, Dr. Raghuram Rajan. In him, we have a very distinguished economist of international fame. I sincerely hope that the Reserve Bank of India will see a more glorious period under his Governorship.

*Responsible Innovation and Regulation in the Financial Sector**

Duvvuri Subbarao

Once again, it is my pleasure and privilege to be here at IDRBT for the annual awards for IT excellence in banking. Every time I come here, I am impressed by the passion and energy with which IDRBT pursues its mission of improving banking technology. Over the last five years, under the leadership of Director Sambamurthy, the Institute has made impressive progress in several areas. Apart from training junior and middle level officers, the Institute also engages Directors on the boards of banks on IT strategy so as to get buy-in at the leadership level for IT as a management tool. That, you would expect from an Institute of this type. But IDRBT performs beyond expectations. It goes beyond training in banking technology to evangelising frontier aspects of technology that could bring efficiency gains to banks and safety to bank customers.

IDRBT

2. I want to recognise here some of the many achievement of IDRBT.

- IDRBT has pioneered the development of common standards for various aspects of IT in banking - the latest being standards for smart cards and micro-ATMs which will go a long way in scaling up financial inclusion.
- IDRBT has established a unique CISO Forum which, among other things, is developing as a platform for sharing common concerns among banks.
- IDRBT has established a formidable reputation for the quality of its teaching programmes as evidenced by the placement record of its students.

3. In acknowledgement of this impressive performance along several tracks, I want to place on record the Reserve Bank's appreciation for the achievements of IDRBT and the earnest and enlightened leadership of Shri Sambamurthy.

Innovation and Regulation

4. At IDRBT here today, we are recognising and celebrating financial innovation - innovations that we believe will contribute to making the financial sector more efficient and user friendly, and thereby, contribute to growth and welfare in the real sector. There cannot be a more appropriate platform for me than this one to share some perspectives on financial innovation and financial regulation.

5. From the discovery of fire to the invention of the I-Pad, innovation has been the wellspring of human progress. We all acknowledge instinctively that innovation best prospers in a *laissez faire* regime where innovators can expect to appropriate the benefits of their efforts. Equally, we all also recognise the need for regulation of innovation in order to correct for market failure which could occur for a variety of reasons - externalities, information asymmetries, moral hazard, adverse selection *etc.* For example, we all understand that new drugs should be tested before they are put on the market and that new models of aircrafts and automobiles should be regulated for safety standards. The case for financial regulation rests on the same logic although it is not as well appreciated.

6. Even as the logic for regulation is quite robust, the frequent criticism against it is that inappropriate or injudicious regulation would stifle innovation. The challenge for regulators therefore is to protect public interest while at the same time ensuring that innovation that will potentially add value is not stifled. This is what I would call responsible regulation. The world view today is that it is this failure on the part of the

* Keynote address by Dr. Duvvuri Subbarao, Governor, Reserve Bank of India, at the IDRBT Banking Technology Excellence Awards Function on August 2, 2013 at Hyderabad.

regulators to check innovation and keep it socially responsible that resulted in the excesses that led to the crisis.

7. Against that background, in my address today, I want to focus on the following questions relating to innovation and regulation in the financial sector:

i. In what ways are financial markets different from other markets?

ii. What do these differences imply for responsible innovation and regulation in the financial sector?

iii. Is financial innovation good or bad?

iv. What is the Reserve Bank's approach to responsible financial regulation?

v. Does financial regulation have a role in promoting equity?

In what ways are financial markets different from other markets?

8. My first question: how are financial markets different from other markets? I want to cite four important ways in which financial markets differ from other markets.

9. First, financial markets are different because they are not self correcting. One of the fundamental assumptions of capitalism, drawing intellectual origins from Adam Smith, is that in a competitive market, prices adjust to equate demand with supply. Even if there is disequilibrium, it will quickly and automatically adjust to equilibrium. It is argued that this competitive market dictum does not work in financial markets because financial bubbles can build up to dangerous levels before a price correction kicks in. Indeed one of the lessons of the ongoing global financial crisis is that the financial system can contain pressure for longer than expected; so when an implosion happens, it can be disastrous, even catastrophic.

10. Second, uniquely financial firms are highly leveraged and interconnected. If a non-financial firm fails, only the stakeholders in that firm bear the damage; the externalities are limited. In contrast, financial firms are all interconnected; any pressure in one institution or one market rapidly transmits to the entire financial sector gathering momentum as the contagion spreads. The most vivid demonstration of this is the way a bubble in the US sub-prime housing market snowballed into the biggest financial crisis of our generation.

11. Third, a defining characteristic of financial markets is their procyclicality; financial firms exhibit a strong collective tendency to overexpose themselves to the same type of risk during an upturn, and become overly risk averse during a downturn. This is, of course, the familiar fallacy of composition. A particular business model may be profitable for a given bank; but if all banks follow the same business model, the build up of procyclical risk can make the model collectively disastrous. In other words, a collection of healthy financial institutions does not necessarily make a healthy financial system.

12. Finally, financial markets are different because they are reflexive in the sense that our beliefs about what may happen often influence what does happen. As the *Economist* magazine asked some time ago, is a hurricane more likely to hit because more hurricane insurance has been written. Common sense says no. but in the financial world, that common sense does not hold. The more financial insurance is written, the more likely that the insured event will occur because people who benefit from the contingency can make it happen.

13. I have gone at length on these arguments to emphasise that financial markets are different from other markets in some fundamental ways warranting a different approach to innovation and regulation.

What do these differences imply for responsible innovation and regulation in the financial sector?

14. That takes me to my second question: what do these differences that distinguish the financial sector mean for responsible innovation and regulation? Let me try and address that.

15. One of the fundamental assumptions of economics is that human beings are rational. This concept of a 'rational human being' provides the intellectual foundation for the libertarian philosophy of political economy which believes that it is unnecessary, even improper, to protect people against their choices. Rational people should be free, and they should be responsible for the choices they make. The State should not interfere with the individual's right to choose unless those choices have a spillover impact and harm others.

16. The libertarian political philosophy has, of course, been challenged in both academic and public policy domains. The essence of the criticism is that the concept of a rational human being is a myth. A rational human being, 'Econ' in text book terminology is, by definition, calculating, unemotional, selfish and fully informed. On the other hand, people are 'Humans'; their decisions and actions are driven by emotions, biases, judgements, and they are handicapped by both lack of full information and inability or disinclination to process even available information into their decisions. The State, as a welfare maximiser, has to step in to nudge people towards making responsible choices.

17. It is these lessons from behavioural economics that provide the basis for consumer protection as an objective of financial regulation. As we discussed earlier, financial markets are different in several important ways. Financial products are complex and often opaque. Savers and investors are handicapped by information asymmetries; they make choices based on inadequate information and are driven by irrational emotions. Also, bubbles in financial markets are difficult to see in real time. When bubbles burst, savers and investors not only lose out because of their saving and investment going sour but also because, as tax payers, they have to bear the huge costs of financial instability.

18. The world learnt these lessons the hard way. The global financial crisis has taken a devastating toll by way of lost growth and foregone welfare. Among the important responses to the crises has been renewed focus on consumer protection which will be pursued through both prescriptive regulations as well as an obligatory code of conduct for financial institutions. This, in a broad sense, should lay the foundations and framework for responsible financial innovation and regulation.

Is financial innovation good or bad?

19. Let me move on to the third question: is financial innovation good or bad?

20. This is admittedly a clichéd question and the boiler plate answer is that: 'All innovation is good. It is not innovation *per se*, but how that innovation is used that makes it good or bad'. This is true everywhere, including in the financial sector. Innovations can be misapplied or carried to excesses for a variety of reasons - greed, wrong beliefs or sheer inability to anticipate consequences.

21. Let me illustrate this with an example from the financial sector. Use of quantitative techniques in finance has been a game changing innovation. It contributed enormously to the growth of the financial sector. The Black-Scholes options pricing model, for example, was more than a piece of geeky mathematics; it was transformational. It ended the anti-intellectualism of American finance, demonstrated that a more scientific approach to speculation is possible and converted financial markets from bull rings to quantitative power houses.

22. But there were obviously limitations to the applicability of quantitative techniques. They all involved some simplification of the real world and they were all based on some assumptions. When the abstraction of the model does not capture the essential aspects of the real world or when the assumptions do not hold, the quantitative model fails. The big failure in using quantitative techniques was not so much that the techniques *per se* were bad innovations, but that we had misused them by forgetting to ask: " Does my

model represent the real world? Do the assumptions underlying the model still hold?"

23. So, my simple answer to the question, 'is financial innovation good or bad?' is that it is good only as long as it adds value to economic growth and societal welfare.

What is the Reserve Bank's approach to responsible financial regulation?

24. The Reserve Bank is the regulator for banks, non-bank finance companies (NBFCs) and large segments of the financial markets. Our approach to regulation has been to preserve financial stability and promote consumer protection.

25. It is the obligation to balance these objectives that has cast a responsibility on the Reserve Bank to take a measured but constructive approach to financial innovation. It is possible, for example, to tighten regulation so much that financial stability and consumer protection are tightly secured, but that will entail a heavy cost in terms of growth. It will also stifle innovation that could promote economic activity. At the other extreme, it is also possible to be nonchalant and adopt a completely *laissez faire* approach to innovation, but that will lead to excesses, systemic pressures and an eventual implosion of the financial system. In my view, what responsible regulation entails is to draw the right balance between these objectives on a dynamic basis, and to do so with an open mind free of any ideological dogma.

26. I now want to illustrate how the Reserve Bank has applied this approach to responsible regulation in practice in several areas.

RBI's Responsible Regulation - Proactive Macroprudential Policy

27. One of the primary causes of the crisis, as we now well know, was the excess in the US sub-prime housing market. If I were to give a stylised description of the 'excess', it was that banks lent irresponsibly for housing to borrowers whose repayment capacity depended entirely on the value of the house increasing on a perpetual basis. Inevitably, there was a bubble which burst when house prices slumped characterising a classic Minsky moment - euphoria leading to panic and then to collapse.

28. Here in India, the Reserve Bank, under the leadership of my predecessor Dr. Y. V. Reddy, behaved responsibly. It took measures to prevent such excesses in the Indian real estate and housing sectors by proactively instituting countercyclical measures - by raising risk weights and provisioning norms for bank lending to the real estate sector.

RBI's Responsible Regulation - Basel III

29. The Reserve Bank has taken a responsible approach to the implementation of Basel III. People have questioned the adoption of Basel III in India on two arguments. First, that Basel III is only required for advanced economy banks which have resorted to excesses, and not for Indian banks which have remained within prudent limits. The second argument is that Basel III standards will raise the cost of credit in India at a time when the credit intensity of our economic growth is going to increase.

30. My response to these arguments is that it would have been irresponsible on the part of the Reserve Bank to not implement Basel III. As a country rapidly integrating with the world, we cannot have a regulatory regime that deviates from the global model. After all, going forward, Indian banks will increase their foreign operations and foreign banks will come here to operate in India. This integration will be in India's long term economic interest. That interest can be hurt if our regulatory regime does not conform to the global standards. To the argument that implementation of Basel III will hurt growth, my response is only to cite research by BIS economists which shows that even if Basel III imposes some costs in the short-term, it will secure our medium term growth prospects.

RBI's Responsible Regulation - New Bank Licences

31. An important characteristic of responsible regulation is not to be dogmatic but to be pragmatic,

open minded and willing to change regulations to suit changing circumstances, provided larger public interest so demanded. Let me illustrate this.

32. A few months ago, the Reserve Bank released guidelines on licensing of new banks in the private sector. In contrast to previous rounds of bank licensing, in this round, we have decided to make corporates eligible for bank licences. We did so after extensive debate, consultation and deliberation.

33. The main arguments against admitting corporates into banking were the following. First, banks are entrusted with large public deposits; corporates would misuse this large and cheap money for private gain by connected lending to their own units or to customers and suppliers. Second, the ownership structure of large corporates will open opportunities for regulatory arbitrage in case the promoter of the bank at the apex level is an unregulated entity. That could potentially lead to gaps in risk assessment and heighten the risk of contagion from the corporate to the bank and from there to the wider financial system. The third argument against corporates has been that banking in the hands of corporates would lead to concentration of economic power and political influence. Fourth, people asked why we need to take unnecessary risk by opening banking to corporates since there are enough potentially strong applicants outside of the corporate sector.

34. Indeed the criticism has been much more varied and nuanced than the way I have put it. My idea was just to give you the broad picture. At several stages over the last three years, we have responded to this criticism. Let me briefly summarise that.

35. The main reason we have allowed corporates is to leverage on their proven entrepreneurial talent and management expertise. Indian corporates have been innovative in penetrating into the hinterland, and the expectation is that the same spirit of enterprise will lead to innovation of new business models for financial inclusion. Large corporates will also bring vast pools of capital that will go into strengthening financial intermediation and making our banking sector more competitive. Moreover, corporates have been operating in other regulated sectors such as telecom, airports, power *etc.* They have also been allowed into other segments of regulated financial activities such as mutual funds, asset management, insurance *etc.*

36. In short, over time, the balance of arguments for and against corporates in the banking sector has changed. It is in response to this changed situation that the Reserve Bank took a pragmatic view and determined that allowing corporates into the banking sector would be net positive.

37. I want to acknowledge though that the arguments of the critics were non-trivial and we have been sensitive to that. That is the reason we have built several safeguards into the licensing regime by prescribing demanding criteria for the corporate structure, fit and proper criteria, corporate governance norms, exposure norms *etc.* There are requirements for dilution of the promoter group's shareholding over time. There is also the in-built safeguard that corporates have large business interests at stake, and will be loathe to compromise their business reputation by mishandling the banking segment of the business. Finally, the Banking Regulation Act has since been amended to vest powers with the Reserve Bank to take action against the bank management should the Reserve Bank determine that the management of the bank has been detrimental to public interest or to the interest of depositors.

38. Again, I have gone at length on this issue of new bank licences to illustrate the Reserve Bank's approach to responsible regulation.

RBI's Responsible Regulation - Financial Markets

39. The Reserve Bank's approach to regulation of financial markets is informed by the same sense of responsibility. In regulating financial markets, we have followed three broad principles. First, the menu of financial products available to hedge emergent risks should be widened. Second, the introduction of new

products should follow a graduated process dictated by the acceptance of the product by market participants. Lastly, the robustness of the market infrastructure for trading, settlement and reporting of existing as well as new financial products should be improved.

40. Let me illustrate this by our approach to the regulation of currency markets. We first introduced OTC derivatives (currency forwards) in order to meet the hedging needs of the real sector by requiring that participants have an underlying exposure. At the same time, we imposed limits on positions to prevent excessive risk taking.

41. After the currency forwards market had stabilised, we focused on the development of the currency futures market to deepen the market. Being exchange traded, the futures market was meant to enhance the efficiency of price discovery and also to provide access to retail customers. We started with USD-INR futures and extended that gradually to other currency pairs with the rupee - the euro, pound and yen.

42. In recent weeks, RBI and SEBI have together imposed some restrictions on the futures market by way of raising the margins and limiting the positions that market participants can take. Also, proprietary trading by banks was prohibited. As we explained in the relevant circular, these measures were instituted to curb undue speculation that was resulting in the volatility of the exchange rate. As indicated in our quarterly policy review earlier this week, we will roll back these measures only after we determine that stability has been restored to the foreign exchange market. In the Reserve Bank's view, undue volatility of the exchange rate is harmful for growth and stability and such volatility should be curbed.

RBI's Responsible Regulation - Benchmark Rates

43. Let me give you another illustration of how we implement responsible financial regulation. You are all aware of the LIBOR rate fixing scandal that surfaced last year. The charge against some London banks was that they were reporting wrong data on the money market interest rate in order to cover up their weakening position and deteriorating creditworthiness and to protect their balance sheets. The aftermath of the scandal led to a vigorous debate internationally on what went wrong, how it might be fixed and what role, if any, might central banks and regulators have in ensuring the data reported by banks is accurate and that the process of estimation of the benchmark rate is robust.

44. A parallel in our system is the foreign exchange reference rate that the Reserve Bank puts out every day. Can we have problem similar to LIBOR here in India? The counterpart of LIBOR in India is the less used MIBOR which is set by FIMMDA-NSE. Although, this rate is set through polling, the transparent system of execution and dissemination of more than 90 per cent of trades through electronic order matching system acts as an important safeguard.

45. The Reserve Bank, on its part, compiles and publishes every day the reference exchange rates following a robust statistical method. Earlier on, we used to set the rate by averaging the mean of the bid/offer rates polled from a few select banks as at 12 noon on every working day. A few months ago, we changed the method. Now we poll a few banks from an expanded list at a randomly chosen five minute window between 11.45 am and 12.15 pm and then put out the reference rate. We periodically review the procedure for selecting the banks and the methodology of polling so as to ensure that the reference rate remains a true reflection of market activity.

46. Recently, we constituted a committee under the chairmanship of Vijaya Bhaskar, one of our Executive Directors, to comprehensively study the process of computation and dissemination of major financial benchmarks in India with a view to assessing the integrity of the process and the governance standards in the institution responsible for the benchmark. After the Committee gives its report, we will take further action as may be necessary.

Does financial regulation have a role in promoting equity?

47. Having explained the Reserve Bank's approach to responsible regulation, let me now turn to the final question on my list: does regulation have a role in promoting equity?

48. 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.

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

50. 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 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.

51. 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, 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. 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 licensing 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.

52. By far our most high profile development campaign of the Reserve Bank 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.

53. The extent of financial exclusion is staggering. Out of the 600,000 habitations in India, less than 100,000 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.

54. 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 marginalisation and poverty.

55. 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.

56. Even as much of the development mandate of the Reserve Bank is driven by moral suasion, we have not shied away, where necessary, from using our regulatory authority to drive development objectives. Even though purists might question this, in the Reserve Bank, we believe this is 'responsible financial regulation'.

Conclusion

57. Let me now conclude by summarising what I've said so far. I started with explaining the logic for regulation in general and then explaining how the financial sector is unique, requiring a different and more careful balance between regulating for stability and safety and encouraging innovation. I then spoke about good and bad financial innovations; and how good innovations are those which add value to the real sectors of the economy. After that, I explained the Reserve Bank's approach to responsible regulation and illustrated this with examples from several activities of the Reserve Bank. Finally, I posed a question - "does regulation have a role in achieving equity?", explained the Reserve Bank's approach to that question even as I may have raised some new questions in the process.

58. Last year, the Reserve Bank was awarded the Dufrenoy Prize for Responsible Innovation by the Observatory for Responsible Innovation in Paris. The Dufrénoy Prize was instituted jointly by the Observatory for Responsible Financial Innovation and Mines Paris Tech, a well known education and research institution set up in Paris in 1783 to recognise remarkable and outstanding initiatives in the area of responsible innovation in finance.

59. The Dufrenoy Prize was awarded to the Reserve Bank for its calibrated approach to the introduction and regulation of financial products. Let me quote from the citation:

"The responsible character of the Reserve Bank of India's commitment in the financial services industry lies in an original and innovative regulatory approach of financial products. One of the Bank's priorities has been to calibrate the introduction of specific financial innovations in order to assess their behaviour before larger scale diffusion, a pioneering approach at a time when the idea of considering markets as real scale testing sites for financial innovation with the necessity of implementing specific protocols is not yet prevalent in the financial area. The RBI's calibrated approach introduces elements ...a series of precautions, and pre-marketing and post-marketing surveillance that can stand as exceptional benchmarks for other countries."

60. The award of the Dufrenoy Prize pleased us immensely. But it also reminded us of our responsibility - of ensuring that we continue to encourage innovation in the financial sector without compromising financial stability and consumer protection. In the Reserve Bank, we are aware that we are not yet the 'best practice' in this regard, but will spare no effort to get there.

61. Regulation and innovation must go hand in hand. Regulation is the responsibility of the Reserve Bank. Innovation should be the driving force of IDRBT and all the banks present here. Together, we can make our financial sector resilient and make it an aid to the growth of our economy and welfare of our people.

62. Once again, hearty congratulations to all the award winners today and compliments to IDRBT for its efforts to recognise excellence in innovation by banks.

*Banking Structure in India – Looking Ahead by Looking Back**

Duvvuri Subbarao

1. For the fifth year on a trot, you have given me the privilege of inaugurating this prestigious and influential FICCI-IBA Annual Banking Conference. In my fifth year as Governor of RBI, I have the Governor's annual schedule firmly ingrained in my mind. I have come to expect, even look forward to, this event in September every year. I am aware that the organisers have advanced the schedule by a month to extend to me the honour of inaugurating this conference before I demit office next month. I am deeply touched.

Banking Structure

2. What should be the focus of my remarks today? At earlier conferences, I focussed on narrow themes within the banking domain. Should I pick another narrow theme for this year's conference as well? I deliberated on it quite a bit. Since I will be laying down office as Governor of the Reserve Bank in about 4 weeks' time, I determined that it may be most appropriate if I loosened the constraint and addressed a broader topic. And the topic I have chosen is to look ahead to the appropriate banking structure for India.

3. When we issued the guidelines for licencing of new banks in the private sector in February this year, the Reserve Bank said that it will come out with a Discussion Paper on the Banking Structure in India. That paper is in the final stages and will be released shortly. The issues that I will address today will inevitably overlap with some of the issues that will be covered in the Discussion Paper but there need be no presumption that the coverage and nuancing of the issues will be similar.

Indian Financial Sector - The Big Picture

4. In order to look ahead to issues on the way forward, it may be instructive to look at a snap shot of the Indian financial system as it is today and review the evolution of the banking system over the last 20 years of economic reforms. Let me do that quickly and briefly so as to set the context for the issues that I will address.

Table - I: Indian Financial System - Share by Asset Size - 2012

Segment	Market Share of Financial Assets (Percentage)
Banks	63
Insurance Companies	19
Non-banking Financial Institutions	8
Mutual Funds	6
Provident and Pension Funds	4
Total	100

- Banks dominate the Indian financial system.

Table II: Indian Banking System - Share by Asset Size

Institution	Market Share of Total Banking Assets (2012) (Percentage)
Scheduled Commercial Banks *of which:*	92.4
Public Sector Banks	*67.2*
Private Sector Banks	*18.7*
Foreign Banks	*6.5*
Regional Rural Banks	2.7
Rural and Urban Co-operative Banks	3.4
Local Area Banks	1.5
Total	100.0

- The banking system is dominated by commercial banks.

Table - III: Share in the Banking Space

Type of Banks	Number of Banks	Number of Branches	Percentage Share of Number of Branches	Market Share of Assets (Percentage)
Public Sector	26	67,466	83.0	72.8
Private Sector	20	13,452	16.6	20.2
Foreign Banks	41	323	0.4	7.0
Total	87	81,241	100.0	100.0

- Public sector banks (PSBs) have more branch presence relative to their share of assets.

* Speaking notes of Dr. Duvvuri Subbarao, Governor, Reserve Bank of India, at the FICCI-IBA Annual Banking Conference in Mumbai on August 13, 2013.

What do the above data tell us about the big picture?

- Within the banking system, PSBs continue to dominate with 73 per cent of market share of assets and 83 per cent of branches.
- Rural and urban co-operatives banks have a relatively small share in the banking system. However, given their geographic and demographic outreach, they play a key role in providing access to financial services to low and middle income households in both rural and urban areas.
- Similarly, Regional Rural Banks (RRBs) play a key role in promoting financial inclusion. The Government is pursuing branch expansion and capital infusion plans for the RRBs.

Table IV: Expansion of Banking Since Nationalisation

Year	1969	1991	2007	2012
No. of Commercial Banks (incl. RRBs and LABs)	73	272	182	173
No. of Bank Offices	8,262	60,570	74,563	1,01,261
of which Rural and semi- urban bank offices	5,172	46,550	47,179	62,061
Population per office	64,000	14,000	15,000	13,000
Per capita Deposit of Scheduled Commercial Banks (SCBs)	₹88	₹2,368	₹23,382	₹51,106
Per capita Credit of SCBs	₹68	₹1,434	₹17,541	₹39,909

- Since nationalisation of 14 major commercial banks in 1969, followed by nationalisation of another 6 banks in 1980, Indian banking system has expanded rapidly.
- The number of bank offices increased from about 8,000 in 1969 to over 1,00,000 by 2012.
- The average population per branch office has sharply declined from 64,000 in 1969 to 13,000 today.
- Both per capita deposit and per capita credit have expanded about 600 times. Even accounting for inflation, this is significant expansion.

Major Banking Sector Reforms since 1991

The economic reforms initiated in 1991 also embraced the banking system. Following are the major reforms aimed at improving efficiency, productivity and profitability of banks.

- New banks licenced in private sector to inject competition in the system. 10 in 1993 and 2 more in 2003. Another lot of new banks will be licenced in the next few months.
- FDI+FII up to 74 per cent allowed in private sector banks.
- Listing of PSBs on stock exchanges and allowing them to access capital markets for augmenting their equity, subject to maintaining Government shareholding at a minimum of 51 per cent. Private shareholders represented on the Board of PSBs.
- Progressive reduction in statutory pre-emption (SLR and CRR) to improve the resource base of banks so as to expand credit available to private sector. SLR currently at 23 per cent (38.5 per cent in 1991) and CRR at 4 per cent (15 per cent in 1991).
- Adoption of international best practices in banking regulation. Introduction of prudential norms on capital adequacy, IRAC (income recognition, asset classification, provisioning), exposure norms *etc.*
- Phased liberalisation of branch licensing. Banks can now open branches in Tier 2 to Tier 6 centres without prior approval from the Reserve Bank.
- Deregulation of a complex structure of deposit and lending interest rates to strengthen competitive impluses, improve allocative efficiency and strengthen the transmission of monetary policy.
- Base rate (floor rate for lending) introduced (July 2010). Prescription of an interest rate floor on savings deposit rate withdrawn (October 2011).
- Functional autonomy to PSBs.
- Use of information technology to improve the efficiency and productivity, enhance the payment and settlement systems and deepen financial inclusion.

- Strengthening of Know Your Customer (KYC) and Anti-money Laundering (AML) norms; making banking less prone to financial abuse.
- Improvements in the risk management culture of banks.

Post-crisis Regulatory Reforms Around the World

- The financial crisis exposed the risk posed by the Global Systemically Important Financial Institutions (G-SIFIs) as these were 'too big to fail'.
- Post-crisis, US, UK, European Union took initiatives (Paul A Volcker in US, Sir John Vickers Independent Commission on Banking in UK, Erkki Liikanen in the European Union) to recommend as structural reforms in the banking sector to build safeguards against instability.
- The Volcker Rule and the Dodd-Frank Act Wall Street Reform and Consumer Protection Act have brought significant changes to the US financial system.
- The Volcker Rule separates investment banking, private equity and proprietary trading (hedge fund) sections of financial institutions from their consumer lending arms. Banks are not allowed to simultaneously enter into an advisory and creditor role with clients, such as with private equity firms. The Volcker Rule aims to minimise conflicts of interest between banks and their clients through separating the different types of business practices financial institutions engage in.
- The Independent Commission on Banking (Vickers Report) in UK has *inter alia* recommended ring fencing of UK banks, such that the ring fenced banks would be permitted to extend only retail and commercial banking services to limited clients including individuals and small and medium-sized organisations (SMEs) in UK.
- The Liikanen Report for the EU concluded that risky financial activities need to be separated from deposit-taking banks within the banking group, with the objective of making banking groups (mainly deposit-taking and providing financial services to the non-financial sectors in the economy) safer and less connected to trading activities.

Issue No. 1: Public vs Private Ownership of Banks

- Abstracting from ideology, from a pragmatic perspective, both public and private banks have respective advantages and disadvantages. Private ownership brings competition, professionalism and operational efficiency. Public ownership makes it easier to pursue social objectives such as mass banking, financial inclusion *etc.*
- Private banks have comparatively greater freedom in terms of recruitment, salary and compensation. On the other hand, PSBs are perceived to offer more job security, and consequently, employee turnover is lower.
- PSBs dominate the banking sector in India and will continue to be dominant in the foreseeable future. However, these banks require substantial capital to support growth.
- The critical question is whether the Government, given its limited fiscal space, can meet the enhanced capital needs of public sector banks under the Basel III capital regulations.
- The Reserve Bank has made an estimate of the additional capital requirements of domestic banks for full Basel III implementation till March 2018. These estimates are based on two broad assumptions: (i) increase in the risk weighted assets of 20 per cent p.a.; (ii) internal accrual of the order of 1 per cent of risk weighted assets.
- The estimates suggest that the Indian banks will require an additional capital (on top of internal accruals) to the tune of ₹4.95 trillion; of this, non-equity capital will be of the order of over ₹3.30 trillion, while equity capital will be of the order of ₹1.65 trillion.

- Specific to public sector banks, the estimates suggest that public sector banks would require an additional capital to the tune of ₹4.15 trillion; of which equity capital will be of the order of ₹1.43 trillion, while non-equity capital will be of the order of ₹2.72 trillion. The Government's contribution to the equity capital of PSBs would be of the order of ₹900 billion at the existing level of shareholding of the Government. The Government's contribution will come down to approximately ₹660 billion if its shareholding comes down to 51 per cent.

Table V: Additional[1] Common Equity Requirements of Indian Banks under Basel III

(Amount in ₹ billion)

	Public Sector Banks	Private Sector Banks	Total
Additional Equity Capital Requirements under Basel III	1430	220	1650
Additional Non-equity Capital Requirements under Basel III	2720	580	3300
Of Additional Equity Capital Requirements under Basel III for Public Sector Banks			
Total	4150	800	4950
Government Share (at the present level of shareholding pattern)	900	-	-
Government Share (if shareholding is brought down to 51 per cent)	660	-	-

- Finally, how should the Government enforce its rights and obligations as the owner of PSBs? Through the Board or through other means of interaction?
- Over the last five years, the Government has infused ₹477 billion in the PSBs. An additional amount of ₹140 billion is proposed to be invested during the current year.
- Currently, government shareholding in public sector banks ranges from 55 per cent to 82 per cent. There is sufficient headroom available to the Government for dilution of its stake in a number of public sector banks.
- Given its fiscal constraints, should the Government dilute its shareholding in PSBs to 51 per cent or should the Government go further and acquiesce in reducing its shareholding to below 51 per cent, but build in some safeguards for retaining requisite management control?
- Possible options other than the budgetary support available to the Government:
  - Issuance of shares with differential voting rights or non-voting shares.
  - Reduction in the Government shareholding and insertion of protective clause to protect Government's control over public sector banks.
  - Formation of Holding Companies for PSBs.
- Need for a debate on the ideal capital structure of PSBs such that they can best serve the demands of inclusive growth of the economy.

Issue No. 2: Consolidation of Banks

- Consolidation assumed significance after the introduction of financial sector reforms starting early nineties.
- Gained momentum after the Narasimham Committee - I (1991) put forward the broad pattern of the banking sector [3 or 4 large banks, 8 to 10 national banks, local banks and rural banks].
- Reiterated by the S. H. Khan Committee (1997), Narasimham Committee - II (1998), Raghuram Rajan Committee (2009), Committee on Financial Sector Assessment (CFSA) (2009) and Committee on Fuller Capital Account Convertibility (2006).
- All Committees viewed that restructuring of the banking system should be market-driven based on viability and profitability considerations and brought about through a process of Mergers & Amalgamations.

[1] Over and above internal accruals

- Since the first round of nationalisation of banks in 1969, there have been a total of 41 mergers and amalgamations. Of these, 17 happened before the onset of reforms in 1991 and 24 after that.
- The nature of M&As has been as follows:

	Number of cases
Public sector bank with public sector bank	3
Private bank with public sector bank	24
Private bank with private bank	14
Total	41

Arguments in support of consolidation

- Higher capital base after consolidation will facilitate increased lending activity and faster GDP growth.
- Boost infrastructure financing from the perspective of enhanced exposure limits for single and group borrowers.
- Meet the banking service demands of Indian corporates, both at home and globally.
- Cost benefits for banks due to economies of scale and economies of scope such as centralised back office processing, elimination of branch overlap and duplication of administrative infrastructure, better manpower planning, optimum funds management, consolidation of operations, savings in IT and other purchases.
- Consolidation will afford focused supervision.
- Larger size means wider and richer experience in financial inclusion. Possible to bring larger collective experience to identify successful models.
- International acceptance and recognition.
- Better risk management.

Arguments against consolidation

- Lead to complexity and Too-Big-To-Fail (TBTF) or Too-Connected-To-Fail (TCTF) moral hazards with adverse impact on financial stability.
- Regulatory issues: Significant big banks could resort to monopolistic practices that may result in unequal competition and distortive and even predatory behaviour in the market. Such practices could also blunt the monetary transmission and market mechanism for efficient allocation of resources.
- Could pose problems such as technology migration issues, customer attrition, implementation costs, HR issues (*viz.,* seniority, salary, transfers, promotion, parity in perks *etc.*) and litigation, will not be able to provide personalised services provided by small banks.

Criteria for consolidation/merger

- Presently, significant skewness in the size of banks. The second largest bank in the system is almost one-third the size of the biggest bank. This creates a monopolistic situation. The task is to ensure that there are at least 4-5 banks of comparable size at all times to ensure that consolidated banks do not acquire monopolistic market power, adopt predatory behaviour and force smaller banks into unviable models.
- Organic merger or inorganic merger?

Issue No. 3: Large and Small Banks

An issue related to the debate on consolidation in banking sector is the merits and demerits of large and small banks.

In support of large banks

- Large banks can exploit economies of scale and scope leading to economic efficiency.
- Large banks will have the capacity, resilience and innovative zeal to pursue financial inclusion. They will bring diverse experience to bear on local initiatives.
- Large banks can potentially become significant global players and thereby give a global reach to Indian corporates.

- Large banks with huge capital base can better meet the huge funding requirements of the infrastructure sectors.

Against large banks

- Large banks can become too-big-to-fail, leading to moral hazard problems.
- Proliferation of non-core activities, either in the books of the bank or through off-balance sheet vehicles such as investment banking, securitisation, derivatives trading, *etc.* could pose significant systemic risk because of their complexity and opacity.
- Large banks can use power derived from their information monopoly to suppress competing institutions and markets.
- Large banks may dilute the benefits of competition.

In support of small banks

- Small banks have a comparative advantage in the supply of credit to small business units, small farmers and other unorganised sector entities, thereby furthering the cause of financial inclusion.
- Small local banks are more nimble and flexible. They can effectively cater to unbanked areas and meet localised needs. Can be more efficient in financial inclusion.
- Small banks with limited area of operation would require less infrastructure, staff and hence the operational expenses would be low.
- Failure of a small bank will not have any systemic impact and resolution would be easier.

Against small banks

- Small banks are potentially vulnerable to sector concentration risk. For instance, community banks in the US suffered losses due to their excessive reliance on lending to commercial real estate.
- Small banks are vulnerable to geographic concentration risk from the local economy and hence require higher level of CRAR.
- Small banks are not big enough to finance big investments, including infrastructure.
- Small banks are prone to local influence capture.
- A large number of small banks put pressure on the supervisory resources of the central bank.

Our Experience with LABs/UCBs/RRBs

- Out of six LABs licensed by RBI, 2 were closed down, *inter alia*, due to mismanagement and only 4 are functioning. The overall performance of functioning LABs is less than satisfactory as they have become high cost structures.
- The LAB model has inherent weaknesses owing to its small size and concentration risk resulting in unviable and uncompetitive cost structures, adverse selection, constraints in attracting and retaining professional staff/management due to locational disadvantage.
- UCBs suffer from mismanagement, growing NPAs, state intervention, politicisation and poor resource base. There have been 111 mergers and amalgamations among the UCBs with the number of UCBs placed at 1,618 as at end March 2012.
- Experience with RRBs is similar. Over the years, the number of RRBs has come down from 196 to 62.

Issues with encouraging large banks in India

- What is our definition of a large bank? By large bank, do we mean a bank with large asset size or a bank with global foot print? Some of the Chinese banks fit well into the first definition. They are large in terms of their assets, but they are not global in the sense that they have no global presence. Some of the American or European banks may not be large in terms of assets, but they have presence in many jurisdictions.
- What type of largeness should Indian banks attempt? Large banks like the Chinese banks or large banks with global presence? Note that it will

take several years for our banks to achieve the status of a large global bank. Our biggest bank is ranked at about 60 in the global league of large banks. It may take years for our banks to become global players by way of organic growth. However, we should aspire to have a few Indian multinational banks in the near future by selective acquisition.

Issues with small banks in India

- Merely encouraging small banks without addressing the disadvantages of being small?
- Small banks are prone to fail frequently, and we have to develop the political and financial resilience to accept failures of small banks.
- There is a need for a faster and more effective framework for resolution and settlement of deposit insurance claims in the event of failure of a bank.
- When small banks become successful, they naturally want to expand and grow. Should we allow a smooth transition from small to big? But if we do that, aren't we defeating the very rationale for such banks *viz.,* that they will be nimble and flexible and meet local demands?

Issue No. 4: Licensing Policy

- The Reserve Bank issues bank licences under section 22 of the Banking Regulation Act, 1949. The licence enables the bank to do banking and other financial services activities listed in the Banking Regulation Act.
- India follows a universal bank licensing regime.

Licensing policy for domestic private sector banks

- Pursuant to the recommendations of Narasimham Committee I in 1991, guidelines on new banks were released in 1993 with a minimum capital requirement of ₹1 billion. 10 new private sector banks were licensed.
- Pursuant to Narasimham Committee II (April 1998) on Banking Sector Reforms, a new set of guidelines were issued in 2001 with a capital requirement of ₹3 billion. 2 new private sector banks were licensed.
- In February 2013, fresh guidelines for licensing of new banks were issued, *inter alia* permitting business/industrial houses to promote banks with a capital requirement of ₹5 billion.

Licensing Policy for Foreign Banks

- At present, foreign banks operate in India as branches of the parent bank. Currently, permission for opening of branches by foreign banks in India is guided by India's commitment to WTO to allow 12 new branches in a year.

Development Financial Institutions

- Development Financial Institutions (DFIs) do not require a banking licence.
- Post-Independence, DFIs were established mainly to meet the demand for long-term finance by the industrial sector.
- They had the benefit of low-cost funds through Long Term Operation (LTO) funds from the Reserve Bank at concessional rates, funds from multilateral and bilateral agencies duly guaranteed by the Government. They were also allowed to issue bonds, which qualified for SLR status. For deployment of funds, they faced little competition as the banking system concentrated largely on working capital finance and almost totally yielded the term finance space to DFIs.
- Post-financial sector reforms in the 1990s, the privileged access to low-cost funds was withdrawn forcing DFIs to raise resources at market-related rates. On the other hand, they had to face competition in the term finance space from banks offering lower rates. The change in operating environment, combined with high accumulation of non-performing assets, due to a combination of factors put financial stress on DFIs. Today, DFIs are very marginal players in the financial sector.

- Pursuant to the recommendations of the Khan Working Group on Harmonising the Role and Operations of DFIs and banks, a Discussion Paper was prepared outlining the issues.
- A broad policy framework was outlined in the Mid-Term Review of Monetary and Credit Policy of 1999-2000 of the Reserve Bank indicating that the desired path was towards universal banking. DFIs were given the option to transform into a bank. The operational guidelines for enabling a DFI to convert to a universal bank were issued in 2001.
- Is it necessary now to review our commitment to universal banking? Should we go in for differentiated licensing?

Differentiated Licensing

- In October 2007, the Reserve Bank prepared a Discussion Paper on Differentiated Bank Licensing which said that the case for differentiated licensing will be reviewed after a certain degree of success in financial inclusion is achieved and the Reserve Bank is satisfied with the quality and robustness of the risk management systems of the entire banking sector.
- Time to reevaluate this issue of Differentiated Licensing?

Arguments in support of Differentiated Licensing

- Specialised entities have expertise in risk assessment and structuring of infrastructure finance.
- Core competency could be better harnessed leading to enhanced productivity in terms of reduced intermediation cost, better price discovery and improved allocative efficiency.
- With differentiated licences, we can get around issues of conflict of interest that arise when a bank performs multiple functions.
- Customised application of supervisory resources according to the banking type could result in optimisation of scarce resources.

Argument against Differentiated Licensing

- Given the extent of financial exclusion in India, is it advisable to create a regime where some banks are freed of the obligation of financial inclusion?
- A universal bank will be able to cross subsidise across sectors to optimise utilisation of resources and ensure better profitability of banks.
- Will specialised banks be prone to concentration risk because of narrower business models?

The critical issue on the way forward

- Differentiated licensing for various banking activities (retail, wholesale, trading in securities, mortgage lending, infrastructure financing, micro lending, *etc.*) with differentiated regulatory requirements depending upon the risks involved?
- If we accept Differentiated Licensing in principle, a special category of banks that will come up for consideration, is Investment Banks. Let me now discuss licensing of pure Investment Banks.

Issue No. 5: Investment Banking

- Post sub-prime crisis, the US investment banking sector collapsed due to high leverage and severe maturity mismatches.
- Soon after, leading investment banks such as Morgan Stanley and Goldman Sachs converted themselves into bank holding companies.

Investment Banking in India: Current Regulatory Framework

- The term investment bank is not legally defined in India, and no entities are registered as such with SEBI.
- "Investment Banking" is commonly used to define entities that are into asset management, capital raising, trading in securities, portfolio management, merchant banking, underwriting, broking and those offering business and financial advisory services.

- Pure investment entities which do not have presence in the lending or banking business are regulated primarily by the capital market regulator (SEBI).
- Banks are subject to regulatory restrictions on their investments.

Why and How of Investment Banks

- Pure investment banks have a comparative advantage in corporate structuring and raising capital from the market. As Indian corporate go global, do we need pure investment banks in India to serve their sophisticated financial needs and advisory services?
- Will exclusive investment banks militate against development goals - priority sector lending, financial inclusion?
- Is Investment Banking under the proposed Non-Operative Financial Holding Company (NOFHC) a possible option?
- Need for more extensive debate on the pros and cons of exclusive investment banks in India.

Issue No. 6: Financial Sector Legislative Reforms Commission (FSLRC)

- FSLRC was constituted by the Government "with a view to rewriting and cleaning up the financial sector laws to bring them in tune with the current requirements". FSLRC submitted its Report to the Government in March 2013.
- The Commission proposes shifting from rule based to principle based regulation. The logic is that the principles will be enshrined in the law and the law need not change to reflect changes over time and changes in technology.
- As per FSLRC, the new financial regulatory architecture will comprise:
  - Unified Financial Authority (UFA)
  - The Reserve Bank of India
  - Financial Sector Appellate Tribunal
  - Resolution Corporation
  - Financial Redressal Agency
  - Financial Sector Development Council
  - Public Debt Management Agency
- Today the Reserve Bank has the following regulatory and supervisory responsibilities:
  - Regulator of banks & non-banks *i.e.*, all deposit taking and credit institutions
  - Regulator of Payment Systems
  - Regulator of Markets (*viz.*, money, forex & g-sec)
  - Major responsibility for financial stability, macro-prudential regulations & supervision of financial conglomerates
  - Deposit Insurance and Credit Guarantee (through its subsidiary)
  - Customer Grievance Redressal relating to banks
- FSLRC recommends that the Reserve Bank should eventually (within 5-10 years) focus on monetary policy and traditional central banking activity only, and shed all other regulatory and supervisory functions.
- In the interim, FSLRC recommends that
  - The Reserve Bank will be the regulator for banking and payment systems.
  - The Unified Financial Authority will be the regulator for all financial services other than banking and payment systems.
  - The Reserve Bank will share responsibility for financial stability with FSDC and other regulators.
- Further, the Reserve Bank to be free of responsibilities relating to Public Debt Management, Customer Grievance Redressal relating to banks, and deposit insurance.

Why the Reserve Bank should regulate both banks and non-banks?

- One of the major causes of the 2008 financial crisis was that credit intermediation activities were conducted by non-banks (the so called shadow banks) which were primarily outside the regulatory purview. This raised serious concerns of regulatory arbitrage, requirements for similar regulation of entities performing similar activities and issues of commonality of risks and synergies of unified regulation for such entities.
- Strong inter-linkages between banks and NBFCs. Unified regulation by the same regulator essential for financial stability.
- For Monetary Policy to be effective, credit creation (*i.e.* by banks and credit institutions like NBFCs) should be regulated by the central bank.
- Post-crisis, the trend has been to entrust more, not less, regulation to central banks.

Issue No. 7: Non-Operative Financial Holding Companies (NOFHC)

- There are three types of banking models prevalent around the world.
- Europe has adopted Universal Banking model. In the US, the predominant model is Bank Holding Company (BHC) or Financial Holding Company (FHC). Most other jurisdictions follow the Bank-Subsidiary model.
- India adopted Bank-Subsidiary model till the early 90s, and then moved on to the Universal Banking model.
- The Reserve Bank had constituted a Working Group, under former Deputy Governor Shyamala Gopinath, in June 2010 to study the different holding company structures internationally and to indicate a roadmap for adoption of the holding company structure in India.
- The Working Group felt that a holding company structure would better enable oversight of financial groups from a systemic perspective.
- The Working Group had also recommended that there should be a separate statute for regulation of financial holding companies.
- New banks in the private sector would be set up under a Non-Operative Financial Holding Company (NOFHC).
- The objective of NOFHC is that the holding company will ring fence the regulated financial services entities of the promoter group, including the bank, from other activities of the group *i.e.*, commercial, industrial and financial activities not regulated by financial sector regulators. The objective is also that the bank should be ring-fenced from other regulated financial activities of the Group.
- NOFHC will be registered as a non-banking financial company (NBFC), but regulated like a bank.
- For the PSBs, a High Level Committee set up by the Government has recommended formation of a non-operating financial holding company (HoldCo) under a special Act of Parliament to act as an investment company for the Government; to hold a major portion of the Government's shareholdings in all PSBs; to raise long-term debt from domestic and international markets to infuse equity into PSBs.
- Need for debate on whether a holding company structure is suited to the Indian banking and financial system.

Issue No. 8: Subsidiarisation of Foreign Banks

- At present, foreign banks operate in India as branches of the parent banks.
- Post crisis lessons support domestic incorporation of foreign banks *i.e.* subsidiarisation
- Main advantages of local incorporation are:
  - Ring fenced capital within the host country
  - Easier to define laws of which jurisdiction apply
  - Better corporate governance, local board of directors
  - Effective control in a banking crisis and enables host country authorities to act more independently as against branch operations
  - Regulatory comfort
- Potential down side risk could be domination of the domestic financial system by Wholly Owned Subsidiaries (WOS) of foreign banks.
- There were certain taxation and other issues which needed to be resolved in consultation with Govt. of India. The Income Tax Act has since been amended to exempt foreign bank from payment of capital gains tax on subsidiarisation. The Banking Laws (Amendment) Bill, 2012 amended the Indian Stamp Act, 1899 whereby conversion of branch/es of a foreign bank into WOS as per the scheme or guidelines of the Reserve Bank shall not be liable to duty under the Indian Stamp Act, 1899 or any other law for the time being in force.
- Apart from taxation issues, there are a few other important issues in conversion of foreign bank branches into wholly owned subsidiaries, mainly of a legal nature, like transfer of rights and liabilities, finality of transfer, *etc.* which need to be addressed. These issues are under examination of the Reserve Bank. After resolution of all these issues comprehensive guidelines on subsidiarisation of foreign banks in India will be issued.

Conclusion

- I have raised some issues relevant in the context of thinking through a banking structure for India that best promotes our aspiration for fast and inclusive growth.
- I am conscious I raised issues without necessarily giving the Reserve Bank's views. That is deliberate. The Reserve Bank needs the benefit of larger and informed debate on these issues.
- I trust you will engage on these issues when the Reserve Bank's Discussion Paper comes out in a few days.
- My best wishes for the success of this Conference.
- Thank you once again for inviting me.

Annex

Indicators of Impact of Financial Sector Reforms

	1990-91 (pre-reform)	2007-08 (post-reform, preceding global crisis)	Current position (2011-12)
Gross Domestic Saving Rate (per cent of GDP)	22.9	36.8	30.8
Gross Domestic Investment Rate (per cent of GDP)	26.0	38.1	35.0
Bank Credit/GDP (per cent)	20.4	47.4	50.60
Broad Money/GDP (per cent)	46.7	82.9	83.21
Spread (return on funds-cost of funds) (per cent)		2.9	3.62
Net Interest Income to Total Assets (per cent)	1.95	3.0	2.9
Return on Assets (per cent)		1.13	1.08
BSE Market Capitalisation (per cent of GDP)	16	103	70.2
Primary Market Resource Mobilisation (₹ billion)	43.1	636.4	3087.5

RBI History – Looking Back and Looking Ahead *

Duvvuri Subbarao

On behalf of the Reserve Bank, I have great pleasure in welcoming everyone to this function for the release of Volume IV of the Reserve Bank of India (RBI) history by the Hon'ble Prime Minister Dr. Manmohan Singh.

2. Volume IV of the RBI history covers the period from 1981 to 1997 which subsumes the period when the Prime Minister was the Governor of the Reserve Bank during 1982 to 1985, and the subsequent period when he was the Finance Minister from 1991 to 1996. Today's history release function is therefore historic in its own way.

RBI since 1935

3. Established in 1935, the Reserve Bank of India is one of the oldest central banks in the developing world. The history of the Reserve Bank reflects in many ways the economic history of India. The Bank's journey over the last nearly eight decades has been marked by a host of historic developments both at home and abroad. Internationally, there were the aftermath of the Great Depression of the 1930s; the Second World War and the consequent challenges of war financing; the establishment of the Bretton Woods system in 1944; the unravelling of the gold standard and the oil price shocks of the 1970s; the Asian Crisis of the mid-1990s; and most recently the global financial turmoil and the ongoing eurozone sovereign debt crisis.

4. There were varied historic developments on the home front too - starting with the launching of the five-year plans and the challenges stemming from one of history's most ambitious and gigantic experiments in economic development; the after-effects of the two wars in the 1960s; the devaluation of the rupee in 1966; bank nationalisation in 1969; the balance of the payments crisis of the early 1990s and the follow on path-breaking economic reforms that moved India into a new economic era. The Reserve Bank is proud of the role it has played in shaping these developments, or responding to them as the case may be, and always doing so with sensitivity and integrity.

RBI History - Previous Volumes

5. It is a matter of pride and satisfaction for all of us in the Reserve Bank that it is one of a very handful of central banks which document their institutional history. We have so far published three volumes of history covering the period since the inception of the Bank up to 1981. Volume I, straddling the period from 1935 to 1951, highlights the early efforts to establish a central bank in India, particularly the concrete proposal made by John Maynard Keynes in 1913 to set up a 'State Bank' in India by merging the three Presidency Banks to undertake some of the functions of a central bank. Volume II narrates the Reserve Bank's role in the process of development planning from 1951 to 1967. The highlight of the third volume of history, covering the period from 1967 to 1981, is its depiction of the Reserve Bank's efforts to deepen banking into India's hinterland.

RBI History - Volume IV

6. This brings us to the present Volume IV which covers the period from 1981 to 1997. This straddles the leadership of six Governors, starting with the last phase of Governor I. G. Patel.

1. Dr. I. G. Patel	:	01.12.1977 to 15.09.1982
2. Dr. Manmohan Singh	:	16.09.1982 to 14.01.1985
3. Shri Amitabha Ghosh	:	15.01.1985 to 04.02.1985
4. Shri R. N. Malhotra	:	04.02.1985 to 22.12.1990
5. Shri S. Venkitaramanan	:	22.12.1990 to 21.12.1992
6. Dr. C. Rangarajan	:	22.12.1992 to 21.11.1997

7. Apart from the Prime Minister, I am happy to acknowledge the presence here of two other former

* Welcome remarks by Dr. Duvvuri Subbarao, Governor, Reserve Bank of India at the release of Reserve Bank of India's History Volume IV by Prime Minister Dr. Manmohan Singh in New Delhi on August 17, 2013.

Governors from that period - Shri Amitabha Ghosh and Dr. Rangarajan. Shri Venkitaramnan is unable to be here today, but sends his best wishes for this function. As this is a 'history moment', our thoughts also go back to late Dr. I. G. Patel and late Shri R. N. Malhotra, both of whom served the Reserve Bank with great dignity and distinction.

8. The period covered by this fourth volume of RBI history was by far one of the most challenging times for our economy. The history takes us through the difficult times when the Government and the Reserve Bank had to contend with unprecedented strains on the external payments situation. In response to the balance of payments crisis, the Government embarked on a wide ranging programme of economic reforms that defined a paradigm shift in the economic management of the country. The Reserve Bank was a partner in this exciting process, generating ideas, processing proposals and implementing reform initiatives. Chapters 10 to 12 of this Volume provide a vivid account of this momentous phase in our economic history.

Does History Repeat Itself?

9. Does history repeat itself? This is a clichéd question but nevertheless an instructive one. In their painstakingly researched book, *This Time is Different: Eight Centuries of Financial Folly,* Kenneth Rogoff and Carmen Reinhart argue that every time a crisis has occurred, experts have been asked why they did not see it coming. Every time, experts have replied that past experience was no guide because the latest crisis is a result of new circumstances. In other words, their standard excuse has been, 'this time is different'. Yet this 'this time is different' argument does not hold. Reinhart and Rogoff put forward impressive evidence showing that over eight hundred years, all financial crises can be traced to the same fundamental causes as if we learnt nothing from one crisis to another.

10. The surmise therefore is that, at least in matters of economics and finance, history repeats itself, not because it is an inherent trait of history, but because we don't learn from history and let the repeat occur. I believe this surmise holds notwithstanding the spreadsheet error in the Reinhart-Rogoff research.

11. Has RBI history repeated itself? That is a judgement call. But some issues do keep repeating in RBI history. I will give just one illustration

RBI and Gold

12. Take the issue of gold. RBI history documents that about 35 years ago, the Reserve Bank got into a controversy over its auction of gold. Again, in 1991, there was a heated, if also emotional, debate in the country when the Reserve Bank pledged its gold reserves to tide over the balance of payments stress. It will be interesting to conjecture on how history will judge the purchase of 200 MT of gold by the Reserve Bank from the IMF in 2010, and its more recent policies to restrain imports of gold.

Looking Ahead

13. When former Chinese Premiere Zhou En Lai was asked what he thought of the French Revolution, he said it was too early to take a view. Defying Chinese wisdom of experience is not for the faint hearted. Nevertheless, I am tempted to look ahead to how history might judge the Reserve Bank on some of the current debates. Please allow me the indulgence of defining some such issues.

Growth-inflation Balance

14. The first, and possibly the most important debate, is about balancing between growth and inflation in the policy context. This is a balance that both governments and central banks struggle with. In my view, this debate has been clouded by some oversimplifications. One such oversimplification is to say that governments are for growth and central banks are for price stability. Another oversimplification is to assert that there is a tension between growth and inflation, and that one necessarily has to play the trade-off between growth and inflation in policy making.

15. The Reserve Bank's monetary policy aims at three objectives - price stability, growth and financial stability.

To contend that the Reserve Bank is obsessed with inflation, oblivious to growth concerns, I think, is both inaccurate and unfair. The Reserve Bank is committed to inflation control, *not because* it does not care for growth, *but because* it does care for growth. There is any amount of evidence to show that an environment of low and stable inflation is a necessary precondition for sustainable growth. How history will evaluate the Reserve Bank on its balanced commitment to growth and inflation is an interesting conjecture.

Fiscal Dominance of Monetary Policy

16. Another big debate today, not just in India but around many countries in the world, is on fiscal dominance of monetary policy. This issue is playing out in a big way in Europe today, but it is not new; nor is it unique to Europe.

Here in India, structural reforms piloted by Dr. Manmohan Singh as Finance Minister, Dr. Rangarajan and Dr. Y. V. Reddy in the Reserve Bank and Shri Montek Singh Ahluwalia as Finance Secretary have helped establish the autonomy of monetary policy in India, free of fiscal policy compulsions. Experience over the last five years has shown that despite that autonomy, the degrees of freedom available for monetary policy management can be constrained by the Government's fiscal stance. What will be history's verdict on how we, as an economy, managed this tension between fiscal and monetary policies?

Managing Policy in a Globalising World

17. I am often asked about the challenges for the Reserve Bank of India on the way forward. Looking ahead, one of the big challenges for the Reserve Bank will be to learn to manage both economic and regulatory policies in a globalising world. Dr. Jalan, as the Governor, showed extraordinary competence and leadership in insulating India from the impact of the Asian crisis in the mid-1990s. Dr. Reddy had the courage of conviction to remove the metaphoric punch bowl before the party got wild.

18. Yet the global financial crisis was so virulent that it affected virtually every country in the world. Did the Reserve Bank learn from the sagacity of Dr. Jalan and the wisdom of Dr. Reddy to manage the current crisis? Governor-designate Rajan, who will take over from me early next month, is here in the audience. The challenge for you, Governor Rajan, will be how you will use your formidable intellect, scholarship and global experience to shape the Reserve Bank as a knowledge institution that will set standards for how an emerging economy central bank should manage macroeconomic policy in a globalising world. I am aware this is history in the future, but history that will nevertheless be historic.

Keep Your Ear to the Ground

19. When I was appointed Governor of the Reserve Bank in 2008, I went to call on the Prime Minister before I took charge. A man of few words as we all know, he told me one thing that stuck in my mind: "Subbarao, you are moving from long experience in the IAS into the Reserve Bank. In the Reserve Bank, one runs the risk of losing touch with the real world. With your mind space fully taken up by issues like interest rates, liquidity traps and monetary policy transmission, it is easy to forget that monetary policy is also about reducing hunger and malnutrition, putting children in school, creating jobs, building roads and bridges and increasing the productivity of our farms and firms. Keep your ear to the ground."

20. In the five years that I have been at the Reserve Bank, I had followed this wise counsel to the best of my ability. I believe that the Reserve Bank is more conscious today than before that the policies it makes and implements have a meaning if, and only if, they make a positive difference to the real world. Admittedly, the Reserve Bank is still on a steep learning curve in this regard. How will the Reserve Bank traverse this learning curve? That will determine not only the history of the Reserve Bank in the years ahead but also, in some ways, the history of India.

Thanks

21. Let me now conclude. The preparation of this volume of history was guided by an Advisory Committee chaired by Dr. Bimal Jalan. The Members of the Committee were Dr. Subir Gokarn and Dr. Rakesh Mohan, both former Deputy Governors, Dr. A Vasudevan, former Executive Director, Dr, Amitava Bose of IIM, Kolkata and Prof. Dilip Nachane of IGIDR, Mumbai. The staff members and consultants in the History Cell in the Reserve Bank, under the guidance of Executive Director Deepak Mohanty, produced this volume with exemplary diligence, intelligence and commitment. I want to place on record my deep appreciation for the work of the Advisory Committee, the staff and consultants. They are going to be more influential than they realise.

22. Finally, Prime Minister, Sir, thank you very much indeed for agreeing to release this volume of history today. It means a lot to all of us in the Reserve Bank.

23. May I now request Dr. Jalan who provided enormous intellectual leadership for steering the writing of this volume of history to share his thoughts with us?

*Five Years of Leading the Reserve Bank – Looking Ahead by Looking Back**

Duvvuri Subbarao

First of all, my sincere thanks to the Nani Palkhivala Memorial Trust, particularly Shri Y. H. Malegam, the widely respected Chairman of the Trust, for extending me the honour of delivering the Palkhivala Memorial Lecture for this year. I know many eminent thought leaders had delivered this memorial lecture in the past, and I attach a lot of value to adding my name to that very select list.

Nani Palkhivala

2. I did not have the privilege of meeting or interacting with late Shri Palkhivala. He was already a preeminent public intellectual in the country by the time I had entered the IAS in the early 1970s. But I count myself among the millions of educated Indians who were deeply impressed by Shri Palkhivala's commitment to protecting India's democratic institutions, and the intellectual vigour with which he did so. In a career spanning over six decades, he distinguished himself as a brilliant lawyer, a perceptive political scientist, an intelligent communicator and an erudite diplomat, leaving behind a legacy that continues to influence our public discourse in several areas.

Topic of My Lecture

3. I deliberated quite a bit on an appropriate topic for a lecture to honour the memory of such an eminent public intellectual. I was also conscious of the fact that this will be my last public lecture as the Governor of the Reserve Bank of India. Quite understandably, given the Palkhivala context, my thoughts started centering around the role and responsibility of a central bank in a democratic structure. Central banks make macroeconomic policy that influences the everyday life of people; yet they are managed by unelected officials appointed by the government. Such an arrangement is deliberate, based on the logic that an apolitical central bank, operating autonomously within a statutorily prescribed mandate and with a longer time perspective, is an effective counterpoise to a democratically elected government which typically operates with a political mandate within the time horizon of an electoral cycle.

4. An autonomous and apolitical central bank is a delicate arrangement too, and will work only if the government respects the autonomy of the central bank, and the central bank itself stays within its mandate, delivers on that mandate and renders accountability for the outcomes of its policies and actions.

5. Putting the three elements of today's lecture context together – Shri Palkhivala's exemplary commitment to preserve and promote values and institutions of democracy in India; the Reserve Bank's role in the democratic edifice of India; and the completion of my term as the Governor of the Reserve Bank – I determined that the best way I can pay tribute to Shri Palkhivala is to focus on a topic that threads together these three elements. That explains my topic for today: 'Five Years of Leading the Reserve Bank: Looking Ahead by Looking Back'.

"May you live in interesting times!"

6. The Chinese have an adage: "May you live in interesting times." I can hardly complain on that count. I had come into the Reserve Bank five years ago as the 'Great Recession' was setting in, and I am finishing now as the 'Great Exit' is taking shape, with not a week of respite from the crisis over the five years.

7. From a central banking perspective, history will mark the last five years for two distinct developments. The first is the extraordinary show of policy force with which central banks responded to the global financial crisis. This has generated a vigorous debate on the short-term and long term implications of unconventional monetary policies as also on the responsibility of central banks for the cross border spillover impact of their policies. The second historical marker will be the manner in which, reflecting the lessons of the crisis, the mandate, autonomy and accountability of central

* Tenth Nani A. Palkhivala Memorial Lecture delivered by Dr. Duvvuri Subbarao, Governor, Reserve Bank of India in Mumbai on August 29, 2013.

banks are being redefined in several countries around the world. Notwithstanding all the tensions and anxieties of policy management during an admittedly challenging period, I consider myself privileged to have led one of the finest central banks in the world during such an intellectually vigorous period.

8. Against that context, I want to divide my lecture today on "Five Years of Leading the Reserve Bank: Looking Ahead by Looking Back" into two segments. In the first segment, I want to look back over the last five years and give my assessment of the macroeconomic developments during this period and the Reserve Bank's response. In the second segment, I will address the major challenges for the Reserve Bank on the way forward.

I. Macroeconomic Developments Over the Last Five Years and RBI's Response

9. For analytical purposes, macroeconomic developments over the last five years can be divided into three distinct phases: (i) The global financial crisis and RBI's response; (ii) Exit from the crisis and RBI's struggle with growth-inflation dynamics; and (iii) The external sector strains which have accentuated over the last few months and RBI's efforts to restore stability in the currency market.

First Phase (2008-09) – Crisis Management

10. Given all the water that has flown under the bridge since then, the Lehman crisis of 2008 seems an eternity away. Yet, that was the reality that I faced within less than two weeks of taking over as Governor. My intent here is not to rehash the events of those days, but try and put that crisis – and therefore the policy response – in perspective.

11. In order to appreciate that perspective, just throw your mind back to those heady days of 2008. Recall that India was on the verge of being christened the next miracle economy. Growth was surging along at 9 per cent. Fiscal deficit was on the mend. The rupee was appreciating and asset prices were rising. There were inflation pressures but the general perception was that inflation was a problem of success, not of failure. Most importantly, we thought we had 'decoupled' – that even if advanced economies went into a down turn, emerging market economies will not be affected because of their improved macroeconomic management, robust external reserves and sound banking sectors.

12. The crisis dented, if not fully discredited, the decoupling hypothesis. It affected virtually every country in the world, including India. So, why did India get hit? The reason was that by 2008, India was more integrated into the global economy than we recognised. India's two way trade (merchandise exports plus imports), as a proportion to GDP, more than doubled over the past decade: from about 20 per cent in 1998-99, the year of the Asian crisis, to over 40 per cent in 2008-09, the year of the global crisis.

13. If our trade integration was deep, our financial integration was even deeper. A measure of financial integration is the ratio of total external transactions (gross current account flows plus gross capital account flows) to GDP. This ratio had more than doubled from 44 per cent in 1998-99 to 112 per cent in 2008-09, evidencing the depth of India's financial integration.

14. What this meant was that as the global financial and economic conditions went into a turmoil, we were affected through trade, finance and confidence channels. The Reserve Bank responded to the crisis with alacrity, with policies aimed at keeping our financial markets functioning, providing adequate rupee liquidity, and maintaining the flow of credit to the productive sectors of the economy.

Lessons in Crisis Management

15. As someone said, this crisis was too valuable to waste. In the event, we learnt several lessons in crisis management. I will only list the important ones. First, we learnt that in a global environment of such uncertainty and unpredictability, policy action has to be swift, certain and reassuring. Also, during crisis times, it helps enormously if governments and central banks act, and are seen to be acting, in concert. Second, we learnt that action is important, but communication is even more important. When the economic environment is uncertain, market players and economic agents look up to governments and central banks for both reassurance and clarity. Indeed, communication

was a critical tool all central banks, including India, adopted in those heady autumn days of 2008.

16. The third lesson we learnt is that even in a multi-nation crisis, governments and central banks have to adapt their response to domestic conditions. There is typically pressure on every country to copy the crisis response of other countries, especially of advanced economies (AEs). For example, AEs were forced to resort to quantitative easing (QE) to loosen monetary conditions, raise inflation expectations and lower real interest rates. Was there any need for emerging market (EM) central banks to do so? I believe there wasn't because they had sufficient conventional ammunition left. Instead, what we had to show was that we were fully prepared to use it.

17. While on the subject of crisis, I also want to share with you a dilemma. Crisis management is a percentage game. We have to do what we think has the best chance of reversing the momentum. At the same time, we have to weigh the short-term benefits against the longer term consequences, including moral hazards. In 2008, massive infusion of liquidity was seen as the best bet. Indeed, in uncharted waters, erring on the side of caution meant providing the system with more liquidity than considered adequate. This strategy was effective in the short-term, but with hindsight, we know that excess liquidity may have reinforced inflation pressures. In the thick of the crisis, the judgement call we had to make was about balancing the benefits from preventing a crisis against the costs of potential inflation down the line. Remember we were acting in real time. Analysts who are criticising us are doing so with the benefit of hindsight.

Second Phase (2010-11) – Exit from the Crisis

18. India recovered from the crisis sooner than even other emerging economies, but inflation too caught up with us sooner than elsewhere. Inflation, as measured by the wholesale price index (WPI), which actually went into negative territory for a brief period in mid-2009, started rising in late 2009, and had remained around 9-10 per cent for all of 2010 and much of 2011, reflecting both supply and demand pressures. Supply pressures stemmed from elevated domestic food prices and rising global prices of oil and other commodities. Demand pressures stemmed from rising incomes and sudden release of pent up demand as recovery began. The supply shocks and demand pressures combined to trigger a wider inflationary process. We were caught in the quintessential central banking dilemma of balancing growth and inflation.

19. In response to the inflation pressures, the Reserve Bank reversed its crisis driven accommodative monetary policy as early as October 2009 and started tightening. We have been criticised for our anti-inflationary stance, ironically from two opposite directions. From one side, there were critics who argued that we were too soft on inflation, that we were late in recognising the inflation pressures, and that even after recognising such pressures, our 'baby step' tightening was a timid and hesitant response. Had the Reserve Bank acted quickly and more decisively, inflation could have been brought under control much sooner. From the other side of the spectrum, we were criticised for being too hawkish, mainly on the argument that there was no need for the Reserve Bank to respond to inflation driven largely by food and supply shocks, and that we only ended up stifling growth without easing inflation pressures.

20. Let me respond to this criticism from both ends of the spectrum.

21. To those who say that we were behind the curve, my simple response is to recall the context of the years 2010 and 2011. Much of the world was still in a crisis mode, the eurozone crisis was in full bloom and there was a lot of uncertainty globally. And as we learnt from the experience of the 2008 Lehman episode, we remained vulnerable to adverse external developments. Our 'baby steps' were therefore a delicate balancing act between preserving growth on the one hand and restraining inflation on the other.

22. With the benefit of hindsight, of course, I must admit in all honesty that the economy would have been better served if our monetary tightening had started sooner and had been faster and stronger. Why do I say that? I say that because we now know that we had a classic V-shaped recovery from the crisis, that growth

had not dipped in the Lehman crisis year as low as had been feared, and that growth in the subsequent two years was stronger than earlier thought. But remember, all this is hindsight whereas we were making policy in real time, operating within the universe of knowledge at that time. Just as an aside, this episode highlights the importance of faster and more reliable economic data for effective monetary policy calibration.

23. Let me now respond to the doves who argue that the Reserve Bank was too hawkish in its anti-inflationary stance.

24. First, I do not agree with the argument that the Reserve Bank failed to control inflation but only ended up stifling growth. WPI inflation has come down from double digits to around 5 per cent; core inflation has declined to around 2 per cent. Yes, growth has moderated, but to attribute all of that moderation to tight monetary policy would be inaccurate, unfair, and importantly, misleading as a policy lesson. India's economic activity slowed owing to a host of supply side constraints and governance issues, clearly beyond the purview of the Reserve Bank. If the Reserve Bank's repo rate was the only factor inhibiting growth, growth should have responded to our rate cuts of 125 bps between April 2012 and May 2013, CRR cut of 200 bps and open market operations (OMOs) of ₹1.5 trillion last year.

25. Admittedly, some growth slowdown is attributable to monetary tightening. Note that the objective of monetary tightening is to compress aggregate demand, and so some sacrifice of growth is programmed into monetary tightening. But this sacrifice is only in the short-term; there is no sacrifice in the medium term. Indeed, low and steady inflation is a necessary precondition for sustained growth. Any growth sacrifice in the short term would be more than offset by sustained medium term growth. I want to reiterate once again that the Reserve Bank had run a tight monetary policy *not because it does not* care for growth, *but because it does* care for growth.

26. Critics of our monetary tightening must also note that our degrees of freedom were curtailed by the loose fiscal stance of the government during 2009-12. Had the fiscal consolidation been faster, it is possible that monetary policy calibration could have been less tight.

27. And now let me respond to the criticism that monetary policy is an ineffective tool against supply shocks. This is an ageless and timeless issue. I am not the first Governor to have to respond to this, and I know I won't be the last. My response should come as no surprise. In a $1500 per-capita economy – where food is a large fraction of the expenditure basket – food inflation quickly spills into wage inflation, and therefore into core inflation. Indeed, this transmission was institutionalised in the rural areas where MGNREGA wages are formally indexed to inflation. Besides, when food is such a dominant share of the expenditure basket, sustained food inflation is bound to ignite inflationary expectations.

28. As it turned out, both these phenomena did play out – wages and inflation expectations began to rise. More generally, this was all against a context of consumption-led growth, large fiscal deficits, and increased implementation bottlenecks. If ever there was a potent cocktail for core inflation to rise this was it. And it did – rising from under 3 per cent at the start of 2010 to almost 8 per cent by the end of the next year. It is against this backdrop that our anti-inflationary stance in 2010 and 2011 needs to be evaluated.

Third Phase (2012-13) – Pressures in the External Sector

29. Remember, I began my speech with the old Chinese saying – "May you live in interesting times." So, as inflation began to moderate yielding space for monetary easing to support growth, we got caught up with external sector strains over the last two years and a sharp depreciation of the rupee over the last three months. There has been dismay about the ferocity of depreciation; there has also been a growing tendency to attribute all of this to the 'tapering' of its ultra easy monetary policy by the US Fed.

30. Such a diagnosis, I believe, is misleading. Admittedly, the speed and timing of the rupee depreciation have been due to the markets factoring in 'tapering' by the US Fed, but we will go astray both in the diagnosis and remedy, if we do not acknowledge

that the root cause of the problem is domestic structural factors.

31. What are these structural factors? At its root, the problem is that we have been running a current account deficit (CAD) well above the sustainable level for three years in a row, and possibly for a fourth year this year. We were able to finance the CAD because of the easy liquidity in the global system. Had we used the breathing time that this gave us to address the structural factors and brought the CAD down to its sustainable level, we would have been able to withstand the 'taper'. In the event, we did not. We therefore made ourselves vulnerable to sudden stop and exit of capital flows driven by global sentiment; the eventual cost of adjustment too went up sharply.

32. But what drives the CAD so high? Basic economics tells us that the CAD rises when aggregate demand exceeds aggregate supply. There is an argument that this logic is not applicable to us in the current juncture given the sharp slow down in growth. But we need to recognise that the CAD can increase substantially even in a low growth environment if supply constraints impact both growth and external trade as has been the case with us.

33. The only lasting solution to our external sector problem is to reduce the CAD to its sustainable level and to finance the reduced CAD through stable, and to the extent possible, non-debt flows. Reducing the CAD requires structural solutions – RBI has very little policy space or instruments to deliver the needed structural solution. They fall within the ambit of the government. Structural adjustment will also take time. In the interim, we need to stabilise the market volatility, a task that falls within the domain of the Reserve Bank.

34. It is the avowed policy of the Reserve Bank not to target a level of exchange rate and we have stayed true to that policy. Our efforts over the last few years, particularly the last three months, have been to smoothen volatility as the exchange rate adjusts to its market determined level so as to make the near-term cost of adjustment less onerous for firms, households and banks.

35. There has been criticism that the Reserve Bank's policy measures have been confusing and betray a lack of resolve to curb exchange rate volatility. Let me first of all reiterate that our commitment to curbing volatility in the exchange rate is total and unequivocal. I admit that we could have communicated the rationale of our measures more effectively.

36. But our actions were consistent. Our capital account measures were aimed at encouraging inflows and discouraging outflows. Also, we tightened liquidity at the short end to raise the cost of short-term money so as to curb volatility. At the same time, we wanted to inhibit the transmission of the interest rate signal from the short end to the long end as that would hurt flow of credit to the productive sector of the economy. So, we instituted an Indian version of "operation twist".

37. I must reiterate here that it is not the policy of the Reserve Bank to resort to capital controls or reverse the direction of capital account liberalisation. Notably, the measures that we took did not restrict inflows or outflows by non-residents.

II. Challenges for the Reserve Bank on the Way Forward

38. Now let me turn to the second part of my lecture. Several times over the last five years. I have often been asked about the challenges for the Reserve Bank on the way forward. As I finish my term as Governor of this great institution, this is a question that has been playing repeatedly in my mind. I am deeply conscious that this is not a seminar, so I will highlight, but only briefly, four challenges that the Reserve Bank will need to address in order to remain a premiere policy institution.

Managing Policy in a Globalising World

39. The first challenge on my list is for the Reserve Bank to learn to manage both economic and regulatory policies in a globalising world. The global financial crisis, the eurozone sovereign debt crisis as well as the currency market volatility over the last few months have emphatically demonstrated how external developments influence our domestic macroeconomic situation in complex, uncertain and even capricious ways. In making our policies, we have to factor in

external developments, particularly the spillover impact of the policies of advanced economies on our macroeconomy. This will become even more important as India's integration with the global economy increases. Surely, globalisation is a double edged sword. It comes with costs and benefits. The Reserve Bank needs to sharpen the analytical and intellectual rigour to make policies that exploit the advantages of globalisation and mitigate its risks.

40. Over the last five years, as an institution, we have learnt quite a lot about managing policy in a globalising world. Yet the learning curve ahead is steep. My wish is that the Reserve Bank should take the lead in setting standards for how an emerging market central bank manages policies in a globalising world. In other words, we should become the best practice that other central banks emulate.

Knowledge Institution

41. The second on my list of challenges is that the Reserve Bank must position itself as a knowledge institution. The crisis has shown that knowledge matters. Those central banks which are at the frontiers of domain knowledge and are pushing the envelope in terms of policies and actions will be better equipped to deal with the complexities of macroeconomic management in an increasingly dynamic and interconnected world.

42 There is obviously no template or manual for becoming a knowledge institution nor is there a comprehensive list of attributes. Becoming a knowledge institution is a continuous process of learning from the best practices in the world, oftentimes reinventing them to suit our home context, pushing the envelope, asking questions, being open minded, acting with professionalism and integrity and encouraging an institutional culture that cuts through hierarchies. The Reserve Bank will also need to review its HR policies so as to build a talent endowment that can meet the challenges on the way forward.

Keep Your Ear Close to the Ground

43. When I was appointed Governor of the Reserve Bank in 2008, I went to call on the Prime Minister before I took charge. A man of few words as we all know, he told me one thing that stuck in my mind: "Subbarao, you are moving from long experience in the IAS into the Reserve Bank. In the Reserve Bank, one runs the risk of losing touch with the real world. With your mind space fully taken up by issues like interest rates, liquidity traps and monetary policy transmission, it is easy to forget that monetary policy is also about reducing hunger and malnutrition, putting children in school, creating jobs, building roads and bridges and increasing the productivity of our farms and firms. Keep your ear close to the ground."

44. In the five years that I have been at the Reserve Bank, I have followed this wise counsel to the best of my ability. We have introduced a number of initiatives. The outreach programme of village visits by top executives of the Reserve Bank, village immersion programme for our younger officers, town hall shows and meetings with focus groups, conferences with frontline managers, conventions of business correspondents, to mention some of the important ones.

45. As a result of all these initiatives, the Reserve Bank is more conscious today than before that the policies it makes have a meaning if, and only if, they make a positive difference to the real world. For example, one of the core concerns of the Reserve Bank's anti-inflationary stance is that inflation hurts, but hurts the poor much more than the better off. But the poor are not an organised, articulate lobby. As a public policy institution, the Reserve Bank has the responsibility to make that extra effort to listen to the silent 'voice of the poor'.

46. Outreach is not a discrete task; it is a continuous process. As I said earlier, the policies of the Reserve Bank impact the everyday lives of people. The Reserve Bank will remain a useful and relevant institution only if it is able to understand the hopes and aspirations of ordinary people and factor them into its policy calculus.

Autonomy and Accountability

47. The crisis over the last five years has reopened some fundamental questions about central banks – their mandates, the limits to their autonomy and the

mechanisms through which they render accountability. These questions are playing out in India too. Several committees have suggested that the mandate of the Reserve Bank should be narrowed on the argument that its currently broad mandate is diluting its focus on price stability – the core concern of monetary policy. The Financial Sector Legislative Reforms Commission (FSLRC) which submitted its report to the Government in March this year has argued that the mandate of the Reserve Bank should be restricted to monetary policy and regulation of banks and the payment system.

48. In the context of the mandate of central banks, one needs to keep in mind that the global financial crisis was a powerful rebuke to central banks for neglecting financial stability in the pursuit of price stability. In the immediate aftermath of the crisis, which saw the US Fed and other central banks provide liquidity in spades and use unconventional tools, a consensus had emerged that financial stability needed to be explicit in the objectives of monetary policy. Then the euro zone debt crisis forced the European Central Bank to bend and stretch its mandate to bail out sovereigns, in essence implying that a central bank committed to financial stability could not ignore sovereign debt sustainability. Put differently, the fundamentalist view of a central bank with a single-minded objective (price stability), and a single instrument (short-term interest rate) is being reassessed across the world.

49. The jury is still out, but a consensus is building around the view that central banks now need to balance price stability, financial stability and sovereign debt sustainability. How this is to be achieved is the big question.

50. Clearly there are no easy answers. But there are certain tenets that must inform the thinking over this issue. First, the fundamental responsibility of central banks for price stability should not be compromised. Second, central banks should have a lead, but not exclusive, responsibility for financial stability. Third, the boundaries of central bank responsibility for sovereign debt sustainability should be clearly defined. Fourth, in the matter of ensuring financial stability, the government must normally leave the responsibility to the regulators, assuming an activist role only in times of crisis.

51. The crisis has made a strong case for a more expanded role for central banks. Do we ignore all that, and fall back on the old understanding of what a central bank should or should not do to change the RBI's remit and scope of influence? That could turn out to be sub-optimal, even risky.

52. Related to all this is the question about the limits to the autonomy of the Reserve Bank and where and to what extent it should defer to the executive. Finally, there are also questions about the accountability of the Reserve Bank for the outcomes of its policies.

53. As Governor of the Reserve Bank, I not only welcomed the debate on these issues, but even encouraged it, in the firm belief that such a debate is in the larger public interest. At various times and in various contexts, I have responded to the issues in the debate. This is not the time and platform for extensive engagement on these issues. Here, I only want to give my broad view.

54. Admittedly, the Reserve Bank has a mandate that is wider than that of most central banks. This is an arrangement that has served the economy well. There are synergies in the various components of the Reserve Bank's mandate and we should not forefeit those synergies. Surely, our institutional structures must adapt to the changing socioeconomic context, but any such change must be brought about only after extensive debate and discussion.

55. Notably, in a full length feature on the Reserve Bank in 2012, *The Economist* had said that the RBI is a role model for the kind of full service central bank that is back in fashion worldwide. There is something to that.

56. It is also important that the mandate of the Reserve Bank is written into the statute, so that it is protected from the political dynamics of changing governments.

57. In the opening part of my lecture today, I explained the rationale for an autonomous central bank. Like in

most other developing economies, the Reserve Bank was not born autonomous; it gained its autonomy over time as a result of the lessons of international experience and the maturity of our political executive who saw the benefits of preserving the autonomy of the Reserve Bank. On its part, the Reserve Bank earned this autonomy by staying committed to the pursuit of larger public interest.

58. Accountability is the flipside of autonomy. The Reserve Bank of India Act does not prescribe any formal mechanism for accountability. Over the years, however, certain good practices have evolved. Let me briefly illustrate. We explain the rationale of our policies, and where possible indicate expected outcomes. The Governor holds a regular media conference after every quarterly policy review which is an open house for questions, not just related to monetary policy, but the entire domain of activities of the Reserve Bank.

59. The Reserve Bank also services the Finance Minister in answering parliament questions relating to its domain. Most importantly, the Governor appears before the Parliament's Standing Committee on Finance whenever summoned, which happens on the average three to four times a year.

60. It has often struck me that for a public policy institution with such a powerful mandate, these mechanisms for accountability are both inadequate and unstructured. Perhaps, we should institute an arrangement whereby the Governor goes before the Parliament Standing Committee on Finance twice a year to present a report on the Reserve Bank's policies and outcomes and answers questions from the members of the Committee. In my view, this will not only secure the accountability structure but also protect the Reserve Bank from any potential assaults on its autonomy.

61. I have dwelt a bit longer on this last challenge of autonomy and accountability if only because we have not debated this in the larger public domain as much as we should have. And to the Reserve Bank staff, I want to say that they must be as zealous about rendering accountability as they are about guarding its autonomy.

Thank God, the Reserve Bank Exists

62. A final thought on this issue of autonomy and accountability. There has been a lot of media coverage on policy differences between the government and the Reserve Bank. Gerard Schroeder, the former German Chancellor, once said, "I am often frustrated by the Bundesbank. But thank God, it exists." I do hope Finance Minister Chidambaram will one day say, "I am often frustrated by the Reserve Bank, so frustrated that I want to go for a walk, even if I have to walk alone. But thank God, the Reserve Bank exists."

Conclusion

63. Let me now conclude. Over the course of this lecture, I have looked back to the last five years and indicated how that period divided into three different phases of complex policy challenges. I made an assessment of the Reserve Bank's policy response and addressed some of the criticism of that policy response at a broad level. Then, I looked ahead to four challenges that the Reserve Bank must address in order to remain a responsible, relevant and intellectually agile policy institution.

64. It has been an enormous privilege for me to serve the Reserve Bank of India over the last five years. There were taxing times, testing times, anxious times. But at all times, I moved on with the confidence that there is a great institution behind me that will keep me in the right direction. I have been deeply impressed by the professionalism, intellectual agility and commitment of the staff and officers of the Reserve Bank. This is an institution that has served the country with dignity and distinction and will continue to set exacting standards for professional integrity and work ethic.

Dharma

65. Nani Palkhivala said, "*Dharma* lives in the hearts of public men; when it dies, no constitution, no law, no amendment can save it." If I can extend that thought a little, a nation prospers only if its public institutions are guided by *dharma*. The Reserve Bank of India tops the list of India's public institutions that are guided by *Dharma* and *Dharma* alone.

*Statistics in RBI's Policy Making – Conceptual and Empirical Issues**

Duvvuri Subbarao

We have gathered here today to celebrate the seventh Statistics Day Conference of the Reserve Bank. The Reserve Bank instituted the Statistics Day Conference to honour the memory of Prof. P. C. Mahalanobis, who has had an enduring influence on planning and policy making in India. This annual conference has developed into an important forum for the Reserve Bank's Research Departments to meet with researchers and engage on a specific theme of statistical analysis. The theme for this year's conference is: 'Challenges to Policy Making and Evolving Role of Statistical Analysis'.

2. I am happy to acknowledge the participation in today's conference of several renowned statisticians: Prof. Bimal Roy, Director, Indian Statistical Institute; Prof. Richard Smith, University of Cambridge; Prof. B. L. S. Prakasa Rao, C. R. Rao Institute, Hyderabad and Prof. Subhashis Ghoshal, North Carolina State University. It is my pleasure to extend a warm welcome to each one of you.

3. Over the last five years that I have served in the Reserve Bank, we have confronted a host of conceptual issues in statistical analysis in the course of policy making. As I am preparing to leave the Reserve Bank, I thought the best way I can add value to this conference is to present some of these conceptual issues, and the dilemmas that we have faced in resolving them. In particular, I will address five issues.

Inflation Measure for Monetary Policy in India: WPI or CPI?

4. An important – and in some countries the predominant – objective of monetary policy is price stability, which is measured in terms of inflation. There are, however, several measures of inflation which are prevalent, for example, inflation indices based on consumer prices and wholesale prices. Determining the appropriate inflation measure to be used for the purpose of calibrating monetary policy is, therefore, critical. Central banks typically tend to articulate the price stability objective in terms of a consumer price index (CPI) as CPI is considered to be a better indicator of the cost of living and hence is seen to be better reflecting the welfare objective of monetary policy.

5. As far as inflation measures go, the problem in India is not of deficit, but of excess. Ours is a tale of many indices. They include the wholesale price index (WPI); three legacy measures of CPI inflation, *viz.*, CPI (Industrial Workers), CPI (Agricultural Labour) and CPI (Rural Labour); and the new CPIs, *viz.*, CPI(Urban), CPI(Rural) and CPI-combined.

6. What should be the preferred measure for calibrating monetary policy in the Indian context? The traditional practice in the Reserve Bank has been to use WPI as the headline measure of inflation. The primary reason for this is that the legacy CPIs were not representative enough for the entire population. Further, in India, WPI has been more extensively researched by way of its empirical relationship with other relevant variables such as output, monetary aggregates and interest rates therefore, presents richer analytical insights. I must add though that even as we use WPI as the headline measure of inflation, we also study the trends in CPI inflation and the findings of household inflation expectation surveys for calibrating our monetary policy.

7. Several analysts have argued that the use of WPI inflation by the Reserve Bank is flawed on the ground

* Inaugural address by Dr. Duvvuri Subbarao, Governor, Reserve Bank of India at the 7th Statistics Day Conference of the Reserve Bank of India, Mumbai on August 30, 2013.

that in India, the WPI proxies producers' prices rather than consumer prices. Moreover, it is contended that WPI does not adequately capture the movement in the prices of services, which constitute close to 2/3rd of our economic activity.

8. The inflation dynamics that WPI and CPI project are quite different. This results in considerable divergence between the CPI and WPI, at least in the short term. For example, WPI based inflation was significantly higher than inflation based on the CPIs during 2003-05. Subsequently, till June 2008, inflation based on CPIs was much higher than that of WPI. The gap between WPI and CPI narrowed thereafter but has widened again in the recent period. While WPI is currently below 6 per cent, CPI is near double digits. In the long run, however, the Reserve Bank's in-house research suggests that the gap between WPI and CPI tends to narrow.

9. To some extent, the divergence between WPI and CPI can be attributed to statistical differences stemming from coverage, classification of items and the relative weights of their constituents. However, there could be other reasons for this as well. For example, higher transaction costs, taxes, *etc.* are reflected in the CPI but not in the WPI. Regardless of the reasons, the large magnitude of the short-term divergence between the two indices poses a major challenge for assessing inflation dynamics in the short-term.

10. An increase in wholesale prices, if sustained, results in an eventual increase in retail prices and/or a squeeze in trade margins. When demand is strong, a greater burden of the increased prices will be shifted to the consumer. Conversely, when demand is weak, traders will have to absorb the burden through lower margins. Even as this logic is clear, we do not yet have a full understanding of the process by which wholesale price changes are transmitted to retail prices or of the magnitude of the associated pass-through and lags.

11. Going forward, is there a case for shifting to CPI for the conduct of monetary policy in India? There are several issues which will need to be considered in this context. First, the new CPI inflation series has only 19 data points which is not sufficiently long for statistically robust analysis. Second, in the new CPI, food prices comprise nearly 50 per cent of the index, making the movement of CPI relatively more sensitive to food price changes. This implies that the influence of supply-side factors could dominate the trends in CPI. Also, house rents comprise about 10 per cent weight in the new CPI. With house rents being largely imputed, there could be concerns about the efficacy of their measurement. These issues are not unique to us. Several central banks emphasise monitoring CPI inflation excluding housing, food and energy, but in our case similar exclusion would leave the CPI bereft of substantial coverage and information content.

12. Before moving to use of new CPI, we will also need to satisfy ourselves on several other fronts. Does the new CPI ensure sufficient national representativeness in terms of coverage and current consumption baskets? Does it adequately cover prices of services? Is the number of price quotations being obtained for computation of the index sufficiently large?

13. Finally, if and when we move to the CPI for calibrating monetary policy, will we make a clean break and abandon the WPI altogether? I believe not. As I said at this conference last year, analytically it would be useful to develop a series of producer price index (PPI) that would help us to gauge how price momentum builds up in the economy.

Potential Output, Threshold Inflation and Taylor Rule

14. The second conceptual challenge I want to address relates to the measurement of two important macroeconomic variables in the context of monetary policy: potential output and threshold inflation. Understanding the divergence of actual output and inflation from potential output and threshold inflation respectively is critical for the formulation of monetary policy. Reliable estimates of these variables are

necessary for formulating the central bank reaction function in the form of Taylor type rules for setting interest rates.

15. Conceptually, the potential output of an economy is defined as the maximum sustainable level of output that is consistent with stable inflation. If the demand for goods and services exceeds supply at a given level of prices, prices will rise and vice versa. But, what level of demand is consistent with stable prices? It is this unobserved number which determines how the pulse of the overall economy is assessed. Any estimation error could result in inappropriate monetary policy action with potentially significant consequences for the economy.

16. In practice, potential output cannot be observed directly, but has to be estimated using statistical techniques. Estimates of potential output are susceptible to errors for several reasons. First, real GDP data is subject to frequent revisions. Second, there is considerable uncertainty about the level of productivity growth at any point in time. Third, there is what economists call the Knightian uncertainty with respect to the choice of the appropriate modelling approach to measuring potential output (Mishkin, 2007). Fourth, in India, we have an additional constraint by way of lack of comprehensive and consistent data on employment. Finally, potential output is time varying. For example, it is widely recognised that the global financial crisis has resulted in a loss of potential output in several economies, although by varying magnitudes. Whether such loss is permanent or temporary remains a matter of debate.

17. In practice, the probability of error in the estimation of potential output is sought to be minimised by juxtaposing estimated potential output with other available real time information. For example, to assess if there is slack or excess capacity in the economy, at the Reserve Bank, we estimate output gaps based on various models with a wide range of indicators, including the findings of forward looking surveys of macroeconomic changes. In its Annual Report for 2009-10, the Reserve Bank had reported that the potential output growth of the Indian economy may have dropped from 8.5 per cent pre-crisis to 8.0 per cent, post-crisis. Our latest assessment suggests that potential output growth may have further declined to around 7.0 per cent.

18. Let me now turn to the challenges in estimating the second important variable for monetary policy *i.e.*, the threshold level of inflation. The threshold level of inflation is defined as the rate of inflation beyond which inflation itself becomes a drag on growth. Estimating threshold inflation is no less daunting than estimating potential output. Like potential output, threshold inflation is also unobserved and is time-varying. Its estimates are, therefore, model dependent with the associated potential for errors.

19. In the mid-1980s, the Chakravarty Committee (1985) had suggested a tolerable level of inflation of 4.0 per cent per annum for India to facilitate changes in relative prices necessary to attract resources to growth sectors. The Reserve Bank's current assessment suggests that the threshold level of WPI headline inflation for India is in the range of 4.4 – 5.7 per cent, implying a mid-point rate of 5.0 per cent.

20. Estimates of output and inflation gaps are critical inputs for central banks for using the Taylor rule for calibrating the interest rate policy. The Taylor rule is an interest rate feedback rule which aids in determining the short-term interest rate to achieve the twin objectives of stabilising the economy and achieving price stability. The rule recommends that the short-term interest rate should be changed according to the deviation of inflation from its threshold or predetermined target and of output from its potential level. Essentially, given the real interest rate of the economy, the combination of inflation and output gaps should determine the appropriate policy rate that

would return the economy to its potential level without causing excessive inflation.

21. Implementation of Taylor type rules essentially requires an a priori assessment of three indicators: output gap, inflation target and the equilibrium real interest rate. Once we understand and measure the level of potential output and threshold level of inflation, it becomes feasible to investigate a Taylor-type rule. Of course, countries have modified the Taylor rule and extended it in a variety of ways for adapting to their specific country contexts. I have attempted to outline today some of the challenges associated with these estimations.

22. The Reserve Bank explicitly targets the overnight interest rate as the operational objective using the policy repo rate as the instrument. The relevant questions for us in this context are: How should the policy interest rate be determined? Should interest rate calibration follow a rule or should it be left to the central bank's discretion?

Neutral Interest Rate

23. The third issue I want to address is the concept of neutral interest rate, which is also closely linked to the Taylor Rule. Theoretically, the neutral interest rate is generally understood as a real variable, and it is common practice to add the inflation objective – the implicit or explicit target inflation rate – to determine the neutral nominal policy rate. Neutral real interest rate has the simplest interpretation in terms of a rate that is neither expansionary nor contractionary. When Wicksell first conceptualised it in 1936[1], it was coined as the *natural* rate of interest. According to Wicksell, if the money or market determined rate fell below the *natural* rate, then demand would increase leading to higher prices. Conversely, if the money or market rate is higher than the *natural* rate, then demand will decline and prices could fall.

24. As I said earlier, the Reserve Bank's estimates suggest that in recent years, India's potential growth has declined. The domestic savings rate has also moderated. What then is the relevant neutral real rate that should be used for the conduct of monetary policy, and also for assessing the stance of monetary policy? Can statistical analysis provide any answer to this?

25. The challenge in answering these questions is that the neutral rate is invisible, and no single empirical estimate can be unconditional and free of errors. Blinder (1998)[2] had noted in this context that "*... the neutral real rate of interest is difficult to estimate and impossible to know with precision. It is therefore most usefully thought of as a concept rather than as a number, as a way of thinking about monetary policy rather than as the basis for a mechanical rule*".

26. The task statisticians confront is how to make this invisible concept less invisible? The practical answer would obviously be to determine with a reasonable degree of statistical robustness the potential growth and threshold inflation. The assessment of both is obviously empirical and country specific. And consistent with that, researchers generally refer to an interest rate path implied by the Taylor Rule and compare that with the actual policy rate. If the actual policy rate is lower than the implied path, then the monetary policy stance is viewed as accommodative.

27. Using similar analysis, the recent BIS Annual Report (June 2013) highlights that nominal policy rates in EMEs have remained below the Taylor rule implied path on a sustained basis since 2003, almost for a full decade now. Accommodative monetary policies in both advanced and emerging economies have played a role in accentuating global vulnerabilities.

28. The 2013 Article IV Report of the IMF for India adopts a similar approach to suggest that the repo rate (as on September 14, 2012) was less than the rate

[1] Wicksell, Knut, "Interest and Prices", London: Macmillan, 1936, translation of 1898 edition by R.F. Kahn.

[2] A S Blinder (1998), " Central Banking in Theory and Practice", MIT Press.

implied by the Taylor rule, and therefore, that the Reserve Bank's monetary policy stance has been accommodative. Contrast this with the criticism in several quarters in the past that monetary policy was tight.

29. Despite the known limitations of statistical methodologies in providing a reliable reference neutral policy rate that can inform policy formulation, it is important to have reasonable estimates to reduce the risk of a completely discretionary monetary policy. Acknowledging the logic of this argument, we have, in recent times emphasised internal research on assessment of monetary policy stance based on alternate monetary policy rules.

30. What is the challenge for statisticians here? If the potential growth of India has declined, should the neutral real interest rate also correspondingly decline? Given the negative spillovers from globalisation for almost five years now and domestic supply constraints, should India's neutral real interest rate be lower than that during the pre-crisis high growth period?

Equilibrium Exchange Rate – Why No Single Statistical Measure has a Consensus Reference value?

31. Let me now turn to the fourth issue on my list which relates to exchange rates. I do so with some trepidation since my staff in the Reserve Bank often caution me against speaking on the subject of exchange rate. Notably, it is not common practice for central banks to speak much on exchange rate. It is easy to understand though why, even in this age of forward guidance and transparent communication of monetary policy, central bankers, in both advanced and emerging economies, are so reticent on the subject of exchange rate.

32. So far as my remarks today are concerned, let me say upfront that they relate to the statistical challenge of estimating an equilibrium value of the rupee from an empirical perspective. It will not be useful to interpret them in the context of currency market developments over the last few months and Reserve Bank's response to those pressures.

33. Can improved statistical methods and better data help us in improving our understanding of the concept of fair value, if not the equilibrium value of the rupee? This is a wide and involved topic. So, I will restrict myself to a few major issues.

34. In a market determined exchange rate regime, any level of exchange rate at any point of time is an equilibrium value, reflecting the interactions of demand and supply. A market equilibrium exchange rate, however, is different from a fundamental equilibrium exchange rate (FEER), as the latter can tell how misaligned the market exchange rate may be at any point of time.

35. John Williamson, who pioneered the concept of FEER, emphasised that the equilibrium rate is the rate which is consistent with internal balance – meaning full employment or full potential growth with low and stable inflation – and external balance – meaning a sustainable external balance position. The FEER approach, however, ignores cyclical and speculative factors in determining the exchange rate path in the short-run. Therefore some analysts view FEER only as a medium-term concept. This being a normative approach, some also see it as the Desired Equilibrium Exchange Rate (DEER) – internal and external balance being the obvious desires or objectives of policy.

36. There is another approach to estimating equilibrium exchange rate – known as the Behavioural Equilibrium Exchange Rate (BEER), which tries to explain the behaviour of the exchange rate by accounting for sources of cyclical and temporary movements, while focusing on current fundamentals, unlike the sustainable external balance and internal balance focus of the FEER.

37. Given these conceptual building blocks of an equilibrium exchange rate, the IMF's Consultative Group on Exchange Rates (CGER) uses three alternative

methodologies to estimate fair values of exchange rates: (i) the Macroeconomic Balance (MB) approach, (ii) the Equilibrium Real Exchange Rate (ERER) approach, and (iii) the External Sustainability (ES) approach.

38. The macroeconomic balance (MB) approach first estimates the difference between the projected current account balance (CAD) position over the medium term at prevailing exchange rates, and the CAD norm which is believed to be sustainable. Then, the exchange rate adjustment that could eliminate this difference over the medium-term is estimated. The reduced-form equilibrium real exchange rate (*ERER*) approach estimates directly an *equilibrium* real exchange rate for each country as a function of medium-term fundamentals such as the net foreign asset (NFA) position of the country, relative productivity differential between the tradable and non-tradable sectors, and the terms of trade. The external sustainability (*ES*) approach aims at calculating the difference between the actual CAD position and the balance that could stabilise the NFA position of the country at some benchmark level.

39. What if these three alternative estimates throw up different results? Take, for example, the IMF's different estimates for India. According to the Article IV Report released in February 2013, the macroeconomic balance approach suggested India's real exchange rate to be undervalued by 3.5 to 4.5 per cent, the ERER approach suggests the rupee is overvalued by around 12 per cent, and the external sustainability approach pointed to the real exchange rate remaining broadly in line with its medium-term economic value. This varying range of estimates leaves scope for judgment, undermining the faith on statistical models.

40. The IMF's position on this has been that "*...it should be recognised that such assessments are unavoidably subject to large margins of uncertainty. These relate to a number of factors, such as the potential instability of the underlying macroeconomic links, differences in these links across countries, significant measurement problems for some variables, as well as the imperfect "fit" of the models. Some of these problems may be more severe for emerging market economies, where structural change is more likely to play an important role and where limitations in terms of data availability and length of sample are more acute.*"[3]

41. Moving the concept of FEER from theory to practice, therefore, is not so easy. As per the assessment of one US Department of the Treasury paper "*... It is difficult for any model to describe adequately all features of modern economies that are relevant to determining exchange rate movements, especially of economies fully integrated into the international economic and financial system. Some economists argue that misalignment cannot be measured at all because empirical techniques are unable to capture the continuous evolution of structural economic relationships that drive exchange rates.*" [4]

42. How do we deal with this lack of unanimity and precision? One solution is a simpler concept that is easy to understand and also relevant. The purchasing power parity theory (PPP) clearly stands out as the most conventional but still relevant approach to assess equilibrium exchange rates. PPP is based on the principle of a "law of one price", which suggests that in the absence of frictions such as transaction costs, taxes, and transportation costs, the same commodity must sell for the same price, when expressed in a common currency.

43. The more commonly used version of PPP is called "relative purchasing power parity," which emphasises the relationship between changes in the price level or inflation and changes in exchange rates. A country having relatively higher inflation over successive years should experience currency depreciation, but for

[3] Methodology for CGER Exchange Rate Assessments, November 8, 2006, Page no. 4, Para No. 8.

[4] Equilibrium Exchange Rate Models and Misalignments, Department of the Treasury, Occasional Paper No. 7, March 2007.

market frictions. Empirically, however, relative PPP may not hold in the short-run, because of capital flows, and asymmetric adjustment of goods and asset markets to both monetary and real shocks, leading to either overshooting or undershooting of exchange rates. REER, which is an indicator of the extent of deviation of the exchange rate from PPP at any point of time, therefore, should have a medium-term perspective.

44. The construction of a relevant REER index for a country is not easy because of the diverse range of possibilities, each having its own merits and demerits. Three important considerations in this regard are: (i) choice of a proper price indicator, (ii) selection of a base year that could represent a condition of both internal and external balance so that deviations from that base could be interpreted as the degree of misalignment, and (iii) use of relevant weighting procedures.

45. On the choice of the price indicator, practices range from use of CPI to PPI, unit labour costs, and prices of exports and imports or tradables. On the choice of base, it is difficult to pick a particular point of time when both external and internal balance may be perfectly attained. More importantly, even if one such point can be identified from the past, because of structural changes taking place in the economy, that base may become irrelevant over time. An alternative solution to this could be using an average of the REER as the proxy for the long-term trend, assuming that on an average a country achieves both internal and external balance over the medium-run. Another important adjustment that is often ignored is the role of changing and divergent productivity across tradables and non-tradables, *a la* the Balassa Samuelson effect.

46. My intention in presenting the above debate is to underscore the point that no single statistical measure of equilibrium exchange rate can be an acceptable reference point for all purposes. The estimation of REER is sensitive to the methodology. The challenge for statisticians would to design one or more constructs which provide the "best" possible measures of equilibrium exchange rates.

Financial Stability and Stress Indicators

47. Let me finally turn to financial stability and stress indicators. The challenge of preserving and bolstering financial stability has come centre stage post crisis. We now know that price stability and macroeconomic stability do not necessarily guarantee financial stability and that financial stability needs to be pursued as a policy objective in its own right. This post crisis thinking has presented statisticians with a new set of challenges – that of developing additional matrices to monitor financial stability. Indeed, the crisis has highlighted the importance of developing relevant statistics that are timely, internally consistent, and comparable across countries.

48. By far the biggest challenge both for policy makers and statisticians is that there is as yet no universally acceptable definition of financial stability. Financial stability is also multi-dimensional, encompassing as it does, economies, markets, the financial sector institutions and financial market infrastructure, and hence is more difficult to measure.

49. Several techniques are employed to assess financial stability and a host of quantitative measures are in the process of being developed for assessing systemic risks and for potentially predicting systemic events. The development of these models/techniques is in a nascent stage and each of them has its merits and demerits. Some of the commonly used quantitative methods for financial stability assessment include early warning systems, macro-stress testing, and financial stability indices.

50. Early warning systems are constructed from potential leading indicators to predict the probability of a financial crisis. Macro stress testing models/ techniques attempt to estimate the resilience of the financial system to adverse macroeconomic scenarios. Aggregate financial stability indices represent another

class of quantitative methods which aim at measuring the stability of a financial system at any given point in time. Absence of specific benchmarks however, limits the use of such indices for predicting stress conditions/ crisis more effectively.

51. As I mentioned earlier, financial stability is multi-dimensional and it can be impacted through different channels. Signs of instability or vulnerability could thus manifest in different variables or indicators. There are thus challenges in first identifying a set of indicators which need to be monitored for financial stability and then identifying the level at which each indicator reflects stress conditions. The task becomes challenging given the interdependence and the complex interactions of different elements of the financial system among themselves and with the real economy. Further complications arise from the time and cross-sectional dimensions of interactions. There are also limitations relating to availability of data – the kind of data needed to assess risks to financial stability and the timeliness and frequency of such data. There are, in fact, several initiatives underway internationally to improve the availability of data for systemic risk assessment.

52. Considerable progress has been made, over the past two decades, by researchers from central banks and elsewhere to capture conditions of financial stability through various indicators of financial system vulnerabilities. Indeed, many central banks, through their financial stability reports (FSRs), attempt to assess the risks to financial stability by focusing on a small number of key indicators. Broadly, the challenges involved in development of stress indicators are: (i) identification of suitable variables, (ii) developing composite indicators, (iii) testing the ability for detecting vulnerabilities at an early stage, and finally (iv) benchmarking.

53. In India, we started publishing Financial Stability Reports in March 2010 and have issued seven reports so far. The reports present the several quantitative techniques that we are using within the Reserve Bank to assess risks to financial stability. They include stability maps, which show quantitative shift in risk perception between two periods, and macro-stress testing to assess the resilience of the financial system to adverse macroeconomic conditions. These indicators/ models are being continuously reviewed and upgraded within the Reserve Bank.

54. In a nutshell, considerable research effort should be devoted to development of indicators for financial stability analysis, which in conjunction with sound judgment must be employed for comprehensive assessment of the risks to the stability of the economy and the financial system.

Conclusion

55. Let me now conclude. I have raised the following five conceptual issues:

i. Inflation measure for monetary policy in India: WPI or CPI?

ii. Potential output, threshold inflation and Taylor Rule for monetary policy reaction function

iii. Neutral interest rate and assessment of monetary policy stance

iv. Equilibrium exchange rate – Why no single statistical measure is acceptable as a consensus reference value?

v. Financial stability and stress indicators – way forward

56. Through these issues I have tried to highlight the formidable challenges confronting statisticians in a world which is becoming increasingly integrated and complex. Simultaneously, the demands on statisticians are increasing as policy makers are looking towards them for robust and reliable technical analysis to guide policy making. I hope you will reflect on some of these issues during the deliberations over the day. I wish the conference all success.

*Productivity Trends in Indian Banking in the Post Reform Period – Experience, Issues and Future Challenges**

K. C. Chakrabarty

Shri K. R. Kamath, Chairman, IBA and CMD, Punjab National Bank; Shri H. S. U. Kamath, CMD, Vijaya Bank; Smt. V. R. Iyer, CMD, Bank of India; Shri R. K. Dubey, CMD, Canara Bank; Shri M. Narendra, CMD, Indian Overseas Bank; Shri D. Sarkar, CMD Union Bank of India; other senior colleagues from the banking industry; delegates to the conference; members of the print and electronic media; ladies and gentlemen. It is, indeed, a great pleasure and privilege for me to address this august gathering today and I thank FICCI and the IBA for this opportunity. The conference, which is in its twelfth edition, has succeeded in bringing together the best minds in the banking industry and has grown into a platform which deliberates contemporary issues facing Indian banking. I am very glad to note the theme chosen for this year's event, "Consistency, Quality and Resilience: The Next Frontier for Productivity and Excellence". I strongly believe that productivity and efficiency in banking services would be the bulwark for all round economic development in India. Considering the challenges currently confronting the economy, there is little doubt that the time for the next big productivity push in Indian banking is now. I therefore, congratulate FICCI and IBA for their choice of theme for the conference and do hope that ideas emanating from the conference deliberations bear fruition in the coming days.

2. I am happy to note that BCG has brought out a study report on the theme of the conference, which, based on extensive field survey, has recommended several measures for attaining productivity excellence in Indian banking. I congratulate BCG for their effort and do hope that the banking industry gives serious thought to the study recommendations and takes them forward in right earnest.

3. During my address today, I would be highlighting the trends in productivity in Indian banking over the last two decades, including trends across bank groups. However, the thrust of my address would be on the fact that improvements in productivity and efficiency of banks has not had the desired beneficial impact on all segments of our economy and hence, there is a need for the entire paradigm of banking productivity and efficiency to be reoriented to be in alignment with our national priorities.

Productivity and Efficiency

4. Investopedia defines productivity as an economic measure of output per unit of input. The concept of productivity is more easily applied to industrial settings while it is more difficult to define and measure in the context of services sector, including the banking industry. We often have to rely upon proxies to gauge productivity of banks and there is no single measure that has been universally accepted as representing banking productivity.

5. It is common to see the terms 'productivity' and 'efficiency' being used interchangeably in literature. However, productivity is more a measure of performance of labour, which is one of the factors of production. Efficiency, on the other hand, is a much broader term which represents the performance of all factors of production. In case of banks, while productivity measures the performance of their staff, efficiency represents the combined performance of staff, capital and management. However, let me add that there are strong inter-linkages between the performance of the three factors of production: high productivity of staff will result in efficient utilisation of capital, while an efficient management function would result in superior performance by labour and capital. It would, therefore,

* Special address by Dr. K. C. Chakrabarty, Deputy Governor, Reserve Bank of India at the FIBAC 2013 organized by FICCI and IBA at Mumbai on August 13, 2013.

be safe to conclude that when all the key inputs are optimally deployed, the outcome will be an 'efficient' bank. Having said that, let me state upfront that I would also be using the terms 'productivity' and 'efficiency' concurrently in my address today.

Productivity and Efficiency of Banks

6. Banks form the core of a nation's financial system, performing the vital function of financial intermediation through liquidity, maturity and risk transformation. Finance is the lifeline of any commercial activity and banks act as a link between the savers and the borrowers. The productivity and efficiency of banks, thus, critically impacts the productivity and efficiency of all economic activity and is a matter of concern for policy makers and economy watchers. There are two aspects to banking efficiency which I would like to highlight:

(i) **Allocational Efficiency**: Allocational efficiency focuses on ensuring that the precious financial resources are allotted to the most productive activities as per development needs of society. It seeks to ensure that the broad national priorities are furthered through the process of resource allocation and that the interests of the most vulnerable sections are protected.

(ii) **Operational Efficiency**: Operational Efficiency means banks seek to provide financial services in a safe, secure, speedy and cost effective manner. The goal should be to ensure that the transformation function generates least friction in terms of time and cost overlays.

7. The concepts of allocational and operational efficiencies have considerable inter-linkages and the challenge for banks is to ensure optimal performance on both fronts. However, as I would argue later in my address, the Indian banking system has not succeeded in balancing these two parameters, with the result that progress on one has been at the cost of the other.

8. Those who would recollect my address at FIBAC 2012 may remember that I had sought to deliberate on the concept of allocational efficiency through the Revised Priority Sector Guidelines, which had been issued a few months earlier. The theme for this year's event permits me to take my thoughts forward by focusing on the other element, *viz.*, operational efficiency and on the interplay between the two.

Importance of Productivity in Banking

9. As I mentioned earlier, banks perform the important function of financial intermediation and the efficiency of their operations has an important bearing on overall economic health of the country. Greater efficiency in banking operations ensures that the cost of financial intermediation is minimised. At a time when the global and Indian economy are facing challenges on multiple fronts, efficient financial intermediation would provide impetus to the process of economic recovery by channelising funds to the most productive sectors at the lowest cost.

10. Improvement in productivity and efficiency, and the resultant decline in cost of providing financial services will help in furthering financial inclusion (FI). More importantly, it will help in converting the improved access to financial services into improved usage. This improved usage will make the FI activities commercially viable both for the banks and for the BCs and encourage them to scale up their FI initiatives, thereby helping in quickly bringing the remaining unbanked villages into the fold of the formal financial system. Hence, banking productivity and efficiency has a direct impact on improving financial access and financial usage.

11. The recent decline in economic growth has presented significant challenges to banks through rising impairment of assets, pressure on margins and volatility in non-interest income. In this demanding business environment, improved operational efficiency will help banks in standing up to the challenges and enable them to maintain their health and profitability. I strongly believe that every time the financial system has been faced with a crisis, a resolute push towards

Table 1: Operating Expenses Ratios

(per cent)

All Banks	1992	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013
Operating Exp to Avg. Assets	2.60	2.82	3.00	3.01	2.88	2.84	2.35	2.32	2.12	1.87	1.86	1.75
Operating Exp to Avg. Business	2.09	2.27	2.51	2.51	2.39	2.34	1.93	1.85	1.59	1.39	1.36	1.26
Cost Income Ratio	55.58	72.46	63.41	61.00	64.30	63.38	48.36	49.56	50.13	44.68	45.23	45.02

improved productivity and efficiency has invariably aided it in seeing through the troubled times.

12. As banks form the core of the country's financial system, the health and profitability of banks will help in ensuring stability and resilience of the entire financial system. Thus, from a systemic stability perspective also, improved productivity and efficiency of the banking system is a definite positive.

Productivity Trends in Indian Banking

13. The Indian banking industry has, over the years, taken significant strides in its quest for greater productivity. Analysis of data (based on various parameters) indicates that Indian banks, particularly the public sector banks, have shown significant progress on the productivity and efficiency front. The efficiency of banks has been analysed based on cost based parameters and profitability linked parameters.

Cost based Parameters

14. As can be seen from the Table 1, all three ratios have seen a significant improvement during this period, indicating improved efficiency of the banking system. For instance, the ratio of operating expenses to average assets has seen a decline from 2.6 per cent to 1.75 per cent during 1992-2013. A bank-group wise analysis indicates that Public Sector Banks (PSBs) have seen much greater progress as compared to new private banks and foreign banks (Tables in Annex). The Cost Income ratio across bank groups also indicates similar pattern, with the ratio seeing a significant decline over the period 1995-2013. The main drivers of this decline were the PSBs, which saw a perceptible decline in this ratio while new private banks and foreign banks, in fact, saw a rise in this ratio over the period under review.

15. An analysis of the CAGR of various expense parameters indicates that operating expenses grew at a CAGR of 14.65 per cent between 1992 and 2013, whereas staff expenses grew at a CAGR of 13.63 per cent during this period. PSBs had the lowest CAGR for operating expenses, staff expenses and other operating expenses (Table in Annex).

16. As indicated in Table 2, banking productivity in terms of staff costs has seen a considerable improvement during 1992-2013. Interestingly, there has been a significant convergence of these ratios across various bank groups (Tables in Annex). While the ratios have increased over this period in case of foreign banks and new private banks, the ratios have seen a considerable decline in case of PSBs.

Table 2: Staff Expenses and Other Operating Expenses Ratios

(per cent)

All Banks	1992	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013
Staff Exp to Average Assets	1.75	1.88	1.98	2.04	1.91	1.93	1.46	1.36	1.16	1.00	1.10	0.98
Staff Exp to Average Business	1.40	1.52	1.66	1.70	1.58	1.59	1.20	1.09	0.86	0.75	0.80	0.70
Staff Expenses per employee (in ₹ 000s)	65	74	98	134	173	268	280	342	408	511	727	799
Other Operating Exp to Average Assets	0.85	0.94	1.02	0.97	0.98	0.91	0.89	0.95	0.97	0.87	0.76	0.77
Other Operating Exp to Average Business	0.68	0.76	0.85	0.81	0.81	0.75	0.73	0.76	0.72	0.65	0.56	0.56

Profitability/turnover based Parameters

17. The NIMs of banks saw a decline from 3.3 per cent in 1992 to 2.79 per cent in 2013. Importantly, the NIMs of Nationalised banks were considerably lower than that of other bank groups and stood at 2.39 per cent in 2013, while foreign banks and new private banks had NIMs of 3.89 per cent and 3.32 per cent respectively (Tables in Annex). The higher NIMs indicated greater intermediation spread charged by banks and could be viewed as a cost. Banks need to develop the capability to viably carry out their operations with lower NIMs as this would be essential in providing low cost services to the excluded groups.

18. It is evident that improved productivity and efficiency has positively impacted the profitability levels of the banking system. However, as I would be alluding to later, the same has been due to structural changes in banks' balance sheet. The higher profitability parameters also indicate that the benefits of improved efficiency have not been passed on to the customers and have, instead, been retained by banks for higher profits and provisioning.

19. Thus, the key observations from the analysis of productivity trends in Indian banking are:

- On both cost and profitability based parameters, the productivity and efficiency of banks has seen a definite improvement over the last two decades.
- At a bank group level, PSBs have performed better than new private banks and foreign banks on various benchmarks.
- However, the progress has not been constant and continuous over this period. There have been phases of rapid and slow growths.

Four Phases of Productivity Growth

20. In order to better understand the productivity trends in the banking system, the post reform time line in India may be divided into distinct phases based on various internal and external developments which impacted the banking sector.

- **Phase 1 (Pre-1995)**: This phase represents the period immediately after the economic reforms. Besides the challenges posed by the changes in business environment due to the reforms, banks also had to adjust to changes in regulatory norms.
- **Phase 2 (1995-2001)**: This was a period of stabilisation post reforms and was characterised by developments like computerisation, formulation of strategies for technology implementation, challenges of NPAs and banks approaching markets for capital.
- **Phase 3 (2001-2007)**: This was the growth phase when the impact of reforms was fully felt. This period was characterised by technology upgradation by banks, benefit of global liquidity and a period of growth. This was also the phase of build-up of risks due to the irrational exuberance exhibited by market players.
- **Phase 4 (2007-2013)**: This last phase is dominated by the global financial crisis and post crisis pains. The risks building up in the previous phase crystallised during this period. The period is also characterised by reforms fatigue, lack of banking penetration, absence of internal reforms and ineffective structure, systems and people.

21. In view of the considerable inter-year variations in various productivity indicators, analysis of the same

Table 3: Selected Ratios

(per cent)

Year	1992	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013
Net Interest Margin	3.30	2.65	3.26	3.40	3.03	3.06	2.91	3.08	2.86	2.62	2.91	2.79
Gross Income to Avg. Assets	4.68	3.89	4.72	4.93	4.48	4.48	4.86	4.67	4.24	4.19	4.12	3.89
Operating Profit to Average Assets	2.08	1.07	1.73	1.92	1.60	1.64	2.51	2.36	2.11	2.32	2.26	2.14
Net Profit to Average Assets	0.37	1.14	0.47	0.70	0.53	0.54	1.05	0.97	1.00	1.10	1.06	1.02

has been done over the above four phases in order to identify trends. For this purpose, averages of various parameters over the relevant period have been considered.

Table 4

	Pre 1995	1995-2001	2001-2007	2007-2013
Operating Expenses Ratios (per cent)				
Avg. Operating Expenses to Avg. Total Assets	2.8	2.9	2.3	1.8
Avg. Operating Expenses to Avg. Business	2.3	2.4	1.8	1.3
Avg. Operating Expenses to Avg. Net Income	64.6	62.0	50.8	45.6
Staff Expenses Ratios (per cent)				
Avg. Staff Expenses to Avg. Total Assets	1.9	1.9	1.4	1.0
Avg. Staff Expenses to Avg. Business	1.5	1.6	1.1	0.7
Avg. Staff Expenses to Avg. Net Income	42.7	41.8	30.3	25.3
Avg. Staff Expenses to Avg. No. of Employees (₹ 000)	79.8	161.3	321.9	612.3
Other Operating Expenses Ratios (per cent)				
Avg. Other Operating Expenses to Avg. Total Assets	1.0	0.9	0.9	0.8
Avg. Other Operating Expenses to Avg. Business	0.8	0.8	0.7	0.6
Avg. Other Operating Expenses to Avg. Net Income	21.9	20.2	20.5	20.2

The key observations that emerge from the analysis of expenses across the four phases are:

- There is definite evidence of productivity and efficiency gains in Indian banking. This productivity gain has led to strengthening of balance sheets of banks.
- The gap between PSBs and other bank groups on various productivity parameters has considerably narrowed. Though there were initial concerns that PSBs will lose out to competition from the new private banks and foreign banks, it is commendable that PSBs have responded well to the challenge and have succeeded in raising their efficiency levels. In case of new private banks, expense ratios remain high as they are in an expansionary phase.
- The pace of productivity gains has varied with the greatest progress being seen in Phase 3 (2001-2007), while lower gains were witnessed in the initial two phases. It is observed that the productivity gains started tapering off in the fourth phase.
- Within operating expenses, it is observed that staff expenses have improved faster than other operating expenses. Currently, other operating expenses of PSBs continue to remain considerably lower than new private banks and foreign banks. This is largely due to the fact that they have not paid adequate attention to the physical infrastructure and the ambience at branches. However, this ratio is also expected to converge in the future.
- Interestingly, in phase 4, PSBs have emerged as the highest per employee staff expenses among Indian bank groups. This clearly indicates that they have lost the staff cost advantage of the past. However, they have saved on aggregate staff expenses by curtailing staff deployment with the use of technology.

Global Comparison

22. While we have made some progress on the productivity front, it is important to benchmark the Indian banking system against global productivity standards in order to get a better understanding of where we stand.

While there has been a tangible improvement in our relative productivity levels on various parameters such as operating expenses ratio, we still lag behind several of our peers from Asia and the developed world. For instance, in case of ratio of operating cost to Assets, China (0.80 per cent), Malaysia (1.27 per cent) and Korea (1.05 per cent) have much lower ratios as compared to the Indian position of 1.65 per cent. Considering the fact that we are pursuing the mission of extending access to affordable banking services to the unbanked poor, we need to target a level which is at par, if not better than many of these countries.

Table 5: Global Comparison

(per cent)

Ratios	Year	India	China	Indonesia	Malaysia	Korea	UK	Canada
Ratio of Oper Exp. To Total Assets	2003	2.24	1.63	3.39	2.07	3.74	1.34	3.23
	2006	2.13	1.43	3.97	1.91	2.07	1.39	2.57
	2009	1.71	0.92	2.85	1.27	1.20	0.86	2.09
	2012	1.65	0.80	3.29	1.27	1.05	1.03	1.74
Net Interest Margin	2003	2.77	2.33	4.90	2.67	2.84	0.86	2.36
	2006	2.81	2.30	5.90	2.15	2.72	1.06	1.76
	2009	2.39	2.27	5.60	3.11	2.17	0.94	1.82
	2012	2.70	2.75	5.30	2.38	2.40	1.02	1.85
Ratio of Net Profit to Total Assets	2003	1.00	0.49	1.66	1.10	0.02	0.37	0.75
	2006	0.88	0.62	1.56	0.99	0.98	0.53	0.95
	2009	1.01	0.86	2.60	1.20	0.60	0.06	0.57
	2012	0.98	1.28	2.60	1.60	0.70	0.09	0.86

23. Our net interest margin at 2.70 per cent is also higher than that observed in many other countries. While this would have helped in improved profitability of our banks, the higher margins indicate an extent of inefficiency, which is being passed on to the ultimate customers. On the ratio of net profit to assets, Indian banks are better than many other jurisdictions. Considering the fact that our operating expenses ratio are higher than many countries, the ratio suggests that our banks have been passing on the cost of their operational inefficiencies to their customers and are, thus, able to record greater profits at the cost of their customers.

What has happened to Allocational Efficiency?

24. As was observed from the analysis presented previously, the Indian banking system has seen a perceptible improvement in its efficiency levels over the last two decades. However, the question that I would like to pose here today is that has the improved operational efficiency resulted in attainment of desired outcomes for all sections of our population? I would argue that the improved operational efficiency has not facilitated greater allocational efficiency, but has, instead, been at the cost of allocational efficiency. Let me present some data to buttress my argument:

The proportion of rural branches to total branches of SCBs has seen a sharp decline from 57.16 per cent in 1994 to 37.18 per cent in 2013. In fact, the number of rural branches of SCBs saw a continuous decline between 1994 – 2006. This indicated a complete neglect of the requirements of rural areas by banks during this period. It was only after a determined regulatory push towards financial inclusion that the number of rural branches saw a perceptible rise post 2009. The failure of banks to improve their allocational efficiency is evident from the fact that resources, in terms of

Table 6: Population Group-wise Number of Branches of SCBs

Year	Rural	Semi-urban	Urban	Metropolitan	Total	Rural Branches as per cent to Total Branches	No. of Banked Centres
1994	35329	11890	8745	5839	61803	57.16	35380
2000	32734	14407	10052	8219	65412	50.04	34830
2006	30119	15790	12159	11799	69867	43.11	34029
2010	32488	20869	16692	15451	85500	38.00	34673
2013	39073	28180	19695	18130	105078	37.18	38927

Table 7: Population Group-wise break-up of Deposit and Credit of SCBs

(Amt. in ₹ bn; no. of accts. in 000s)

Credit	Rural		Semi-urban		Urban		Metropolitan		Total	
	No. of Accounts	Amount Outstanding	No. of Accounts	Amount Outstanding	No. of Accounts	Amount Outstanding	No. of Accounts	Amount Outstanding	No. of Accounts	Amount Outstanding
1994	32310	308.63	16114	264.86	7349	361.75	3878	823.67	59651	1758.91
2000	25080	594.26	14865	647.90	7795	795.90	6631	2562.74	54371	4600.81
2006	29054	1994.23	21475	1747.94	12919	2763.65	21988	8632.59	85435	15138.42
2010	37074	3851.50	27047	3678.59	16242	5936.15	38285	19985.45	118648	33451.69
2012	41115	3805.18	31047	4598.61	17443	7815.12	41275	31813.76	130881	48032.67
Deposit										
1994	121299	493.31	108502	630.35	93032	742.49	74046	1373.61	396879	3239.77
2000	125852	1205.39	114109	1619.72	89831	1889.63	83023	3499.45	412815	8214.20
2006	139570	2260.61	121664	3022.13	106172	4308.13	117692	11320.87	485098	20911.74
2010	224155	4203.38	189457	6140.47	152323	9449.92	168934	25816.52	734869	45610.29
2012	283072	5731.86	239951	8425.45	180626	12725.92	199551	33899.21	903200	60782.43

banking presence, was not allotted to the most underbanked segments *i.e.,* the rural areas. This was despite the fact that improving operational efficiency and access to technology over this period had enhanced the capability of banks to better serve rural habitations. Yet it appears that banks chose to ignore the need for allocational efficiency.

The above data indicates that the number of credit accounts in rural areas increased at a CAGR of 1.4 per cent between 1994-2012, while the number of credit accounts in Metro areas recorded a CAGR of 13.86 per cent. The proportion of credit flowing to rural areas also declined from 18 per cent to 8 per cent, while the proportion of deposits being sourced from rural areas declined from 15.2 per cent to 9.4 per cent during this period. Both the above metrics highlight the declining focus of banks on rural business and greater emphasis on business in metro areas.

Table 8: Sectoral Deployment of Bank Credit

(₹ billion)

Year	Agri + SSI	Agri+SSI to total (per cent)	Medium + Large Industries	Med+Large Ind to Total (per cent)	Total Non Food Credit
1994	438.25	30.03	578.65	39.65	1459.50
2000	971.95	25.91	1473.19	39.27	3751.27
2006	2651.84	18.88	4592.32	32.69	14048.40
2010	6225.34	20.48	11050.51	36.35	30400.07
2013	8742.62	17.95	19458.31	39.96	48695.63

The proportion of bank credit going to agriculture and SSI sectors has seen a steady decline from 30.03 per cent in 1994 to 17.95 per cent in 2013. This was despite the fact that these sectors have been receiving special attention from policy makers for some time now. As compared to this, the proportion of credit to medium and large industries has marginally increased from its levels in 1994, despite their contribution to GDP declining significantly over the years. This again highlights inadequate allocational efficiency among banks and their preference for catering to the needs of larger borrowers instead of smaller ones.

Another measure of inadequate allocational efficiency among banks is the concentration of deposit/credit indicated by the proportion held by top 10/100 cities as compared to total deposit/credit. Based on this measure, there has not been any improvement in concentration of credit, which has remained largely unchanged over this period at around 60 per cent, while concentration of deposits saw a considerable deterioration from 39 per cent to 49 per cent. The

Table 9: Concentration of Deposit and Credit in top 10 cities

As per cent of total	2000		2006		2010		2012	
	Top 10	Top 100	Top 10	Top 100	Top 10	Top 100	Top 10	Top 100
Deposits	39.42	59.00	47.97	66.95	50.39	69.40	49.31	69.11
Credit	58.31	74.72	60.51	76.47	61.46	78.00	60.29	78.26

concentration indicated by the proportion of credit/deposit to top 100 cities has also been steadily increasing over this period. This clearly indicates that smaller towns/cities and rural areas were being deprived of credit/deposit services by banks, adversely impacting economic growth opportunities available to them.

The occupation-wise analysis of deposits indicates that the percentage of deposit accounts held by individuals declined from 96 per cent to 86 per cent between 1997 and 2012. During this period, the proportionate amount of deposits held by individuals saw a steep decline from 77 per cent to 51 per cent. The declining share of individuals in deposits, both in terms of number and amount reinforces the fact that banks have been losing their focus on smaller customers and are increasingly moving towards servicing bigger clients.

Over the period 1994-2012, the number of very small credit accounts (limit upto ₹ 25,000) saw a decline from around 55 million to 44 million despite the total number of credit accounts increasing by 119.4 per cent over this period. The outstanding credit in these accounts as a proportion of total credit also declined from 18.3 per cent to a mere 1.6 per cent. Similarly, proportion of amount outstanding in small loans upto ₹ 0.2 million to total loans also declined from 30.5 per cent to 9.5 per cent during this period. The decline in smaller loan accounts, which often cater to the needs of the poor and marginalised sections of the society, again highlights the fact that banks have largely focused on catering to the needs of the bigger borrowers, which is against the principles of allocational efficiency. Predictably, the proportion of amount outstanding in high value loans (limit > ₹1000mn) increased from 10 per cent to 31 per cent during this period.

25. A similar analysis in case of term deposit accounts reveals that the proportion of accounts with deposit less than ₹ 0.1 mn declined from 93.6 per cent to 73.7 per cent between 2002-2012. Importantly, the proportion of amount involved in such deposit accounts saw a sizeable decline from 46.8 per cent to 10.9 per cent during this decade. Based on the above trends in credit and deposit accounts, it is fair to conclude that banking in India has been increasingly oriented towards wholesale business. It appears to be losing its focus on retail and small value business. Here, I would like to remind our bankers that one of the lessons from the

Table 10: Occupation-wise distribution of Deposits

(Accts. in mn. and amt. in ₹ bn.)

Year	Individuals		Others		Total		Individual as per cent of total	
	No. of accounts	Amount	No. of accounts	Amount	No. of accounts	Amount	No. of accounts	Amount
1997	380.93	3875.84	15.65	1129.73	396.58	5005.56	96.05	77.43
2000	396.32	6173.70	16.50	2040.50	412.82	8214.20	96.00	75.16
2006	453.24	12313.10	31.86	8598.64	485.10	20911.74	93.43	58.88
2010	640.55	23560.36	94.32	22049.93	734.87	45610.29	87.10	51.60
2012	773.25	30782.60	129.95	29999.84	903.20	60782.43	85.61	50.64

Table 11: Outstanding Credit of SCBs according to size of credit

(Amt. osg in ₹ bn.; no. of accts in 000s)

Year	Credit range in ₹ mn.	upto 0.025	0.025 - 0.2	0.2 - 1.0	1.0 - 10.0	10.0 - 100.0	100.0 - 1000	> 1000	Total
1994	No. of accounts	55810 (93.6)	3283	423	113	20	1.18	0.046	59651
	Amt. Osg.	322 (18.3)	215	151	291	422	179	178	1759
2000	No. of accounts	39276 (72.2)	13580	1229	236	44	5	0.21	54370
	Amt. Osg.	364 (7.9)	663	431	592	1061	949	539	4600
2006	No. of accounts	38419 (45.0)	38703	7183	1018	93	17	2	85435
	Amt. Osg.	452 (3.0)	2033	2438	1971	2219	3475	2555	15138
2010	No. of accounts	45179 (38)	57452	13620	2172	179	39	5	118647
	Amt. Osg.	436 (1.3)	3171	4196	3992	4270	8889	8497	33452
2012	No. of accounts	44047 (33.7)	65064	18505	2960	238	58	9	130881
	Amt. Osg.	762 (1.6)	3804	5652	5567	5448	11760	15038	48033

* figures in parenthesis indicates percentage to total

global financial crisis was that small value and retail business proved to be a source of stability and that banks focusing heavily on wholesale business were the most severely impacted in the crisis.

What has Not Happened?

26. From the above data on various parameters, it is apparent that improving efficiencies in the Indian banking system have not had the desired beneficial impact on all segments of the population. This clearly implies that allocational efficiency has not kept pace with operational efficiency and, in fact, I may say that operational efficiency has been achieved at the cost of allocational efficiency. The gains from improving operational efficiency have not reached the customers, particularly the small customers or the poor and marginalised groups. In terms of geographical spread, these gains have not reached the rural areas and have largely remained restricted to the metropolitan areas and larger cities. It is regrettable to note that despite the improvements made in operational efficiency, the problems of disparities in Indian banking and low penetration continue unabated.

27. While it was expected that greater competition and adoption of new technology would result in all round efficiency improvement in the banking system, it is again apparent that whatever limited competition that the banks have been exposed to and the technological progress has not resulted in bringing down the costs of providing banking services. I would like to pose the question that is a financial system with high operational efficiency but low allocational efficiency sustainable in the long run?

Why has it not happened?

28. There are several reasons that can be attributed to this trend of declining allocational efficiency against improving operational efficiency. Let me list a few:

- The basic reason for the declining allocational efficiency is the lack of banking penetration in the country. This has resulted in the denial of basic banking services such as provision of savings and credit facilities to large segments of our population.
- As was seen from the data analysis also, banks seem to be increasingly focusing on wholesale business and have reduced their emphasis on individuals and segments such as agriculture and small industries. This trend has adversely impacted allocational efficiency as the same demands that the needs of the smaller customers be prioritised while allocating banking resources.
- While new technology has been adopted by banks in India, including migration to CBS, the beneficial impact of technological progress on the productivity of banks is still low when compared with global standards. This can largely be attributed to the fact that banks have not succeeded in leveraging technology to create products, business models

and delivery channels that maximise productivity and efficiency.

- Most importantly, technological progress has not been accompanied by internal reforms in banks. Banks have not attempted to carry out comprehensive Business Process and Structure Reengineering to ensure that internal processes are realigned by leveraging technology with the goal of weeding out redundant processes and simplifying/automating others.

What have we done?

29. Ensuring greater levels of allocational efficiency in the economy has been one of the important priorities for policy makers and regulators. In fact, it is difficult to envisage the long term sustenance of a social or financial system where large scale disparities and inequalities exist. Hence, allocational efficiency, focusing on the needs and expectations of the excluded groups, has been receiving the attention of the Government and the Reserve Bank. I would like to highlight some of the steps taken to ensure greater allocational efficiency in banking operations:

(i) Prescription of priority sector norms requiring banks to lend a certain part of their credit to sectors of the economy which, in the absence of these norms, would not receive adequate credit. With the revision in the priority sector norms in 2012, the same have been rationalised and larger foreign banks have also been mandated to be at par with Indian banks on priority sector lending, in a phased manner.

(ii) Pricing norms for the priority sector business have been freed and banks are permitted to fix interest rates on their own. This will help banks to carry out FI initiatives in a viable and self sustaining manner, which will facilitate its scaling up. We, however, do expect that the pricing would be non-discriminatory and would not be exploitative.

(iii) There has been a policy shift with emphasis being on greater branch expansion in rural areas. This is in recognition of the trend of declining rural branches and the importance of brick and mortar structures in improving allocational efficiency through FI. Accordingly, domestic SCBs have been mandated to allocate at least 25 per cent of the total number of branches to be opened during a year in unbanked rural centres, with the incentive of frontloading over the Financial Inclusion Plan (FIP) period.

(iv) Banks have been permitted to adopt Business Correspondents (BC) based delivery models to effectively cover the last mile. A host of institutions have been permitted to become BCs.

(v) A bank-led structured and planned push towards improving access and usage of the formal financial system by the unbanked masses has been made by leveraging on technology. Some of the FI initiatives taken in India include:

- Banks have been advised to prepare Board approved FIPs. First phase of FIP for the period 2010-2013 has been completed. Banks are now preparing the second phase of FIPs for the period 2013-2016.
- To address the issue of uneven spread of Bank branches, domestic SCBs have been given the freedom to open branches in centres with population of less than 100,000 subject to reporting to the Reserve Bank.
- A high level Financial Inclusion Advisory Committee (FIAC) has been set up to provide strategic direction to FI initiatives across various stakeholders.
- In order to ensure operational efficiency and close monitoring of BC operations, banks have been advised to open intermediate brick and mortar structures to provide support to about 8-10 BC units at a reasonable distance of 3-4 kilometers.
- An integrated approach has been adopted for achieving FI through financial literacy. Various measures have been taken for the spread of financial literacy. A National Strategy for

Financial Education has been finalised. Curriculum setting bodies are being involved for disseminating financial literacy in schools.

What Should Happen?

30. The way forward for banks on the path towards greater productivity and efficiency has to be two pronged. On the one hand, banks need to focus on further improvement in operational efficiency so that they are at par with their global peers. Concomitantly, banks also need to concentrate on improving allocational efficiency so that the benefits of improved operational efficiency are enjoyed by all. The key challenge will be to ensure that the two goals are synergised and allotted equal priority.

31. There are several other measures that Indian banks need to initiate in order to establish the balance between allocational efficiency and operational efficiency:

- Banks need to initiate internal reforms in order to ensure that their systems and processes are in a position to leverage technology to maximise productivity and efficiency gains. For this purpose, banks need to look at large scale Business Process and Structure Reengineering.
- Transaction costs need to be reduced by fully leveraging technology. This would include creation of new cost effective products, business models and delivery channels.
- Banks need to implement robust information systems and IT architecture and should harness the power of the IT systems for business development. Besides, a strong IT system will also aid in adoption of better risk management practices.
- Productivity improvement should benefit people at the bottom of the pyramid through improved access to financial services and lower cost of financial access. Every individual should have the opportunity to improve his/her financial position by leveraging access to the financial system. Banks have to facilitate this.
- Banks have to reverse the tendency of focusing on wholesale business and should ensure that agriculture, retail and SME business receive adequate attention. This is important not just for improving financial access for the smaller and marginalised groups, but also as a source of stability for banks.
- Banks should strive to improve their pricing ability, both for liability and asset products, with the objective of ensuring that the pricing framework is transparent, non-discriminatory and non-exploitative. The basic principle of pricing should be that the poor and the vulnerable should not be subsidising the provision of banking services to the rich. Besides, an effective pricing framework can assist in building up balance sheet strength by encouraging good business and shedding bad business. However, for all this, banks need to develop the ability to identify risks and to build them into their pricing frameworks.
- In order to improve productivity and efficiency, banks need to be given more flexibility in operational matters, particularly in manpower practices. In fact, I strongly believe that HR practices at banks, particularly PSBs, need to undergo significant change in areas such as manpower planning, job description, performance appraisal, promotion and placement policies, performance based compensation practices, *etc.* Attaining greater productivity and efficiency requires not just the right technology, systems and processes, but also the manpower with the right skills and attitude, demonstrating the necessary flexibility and adaptability to be able to keep pace with the changing times. Greater emphasis has also to be laid on productivity in terms of per branch and per employee performance.
- Lastly, but most importantly, there is an urgent need for improved governance and greater accountability across all levels of management and administration. The change in corporate culture and the move towards true productivity and

efficiency needs to be led by managements in their respective organisations. The pace and direction of these changes will be determined by the passion demonstrated by the management in pursuing this change.

Banks have a Great Opportunity

32. The theme of the conference alludes to the paradigms of the Next Frontier of Productivity Excellence. To me, there are three major ingredients that contribute to productivity excellence, *viz.*, Technology, Processes and People. I believe that significant opportunities lie ahead for our banks to leverage on these three components to attain true banking productivity and efficiency *i.e.,* both operational and allocational. On the technology front, our banks have already implemented certain basic technology and are all on CBS. They are, of late, also making efforts to incorporate new technology mediums in their delivery channels. On the technology front, banks have the opportunity to perfect their technology based delivery models so as to significantly reduce costs and improve penetration of banking services.

33. On the Processes front, as I had mentioned earlier, the opportunity for banks is to carry out large scale Business Processes and Structure Reengineering in order to reap the full benefits of technology. Here, I would emphasise the need for changing Transactional Processes, Business Delivery Models and use of Customer Relationship Management (CRM) tools to bolster efforts towards productivity and efficiency.

34. On the People front, the opportunity lies in the form of large scale retirement of bank employees that is to happen in this decade. The consequent change in manpower profile provides a unique opportunity for banks to Right-size and Right-skill their organisations in line with the demands of fostering greater productivity and efficiency.

Conclusion

35. The Indian banking system has seen important productivity improvements over the last two decades with the PSBs, in particular, bridging the gap with new private banks and foreign banks. However, the pace of progress has declined, largely due to lack of desired impetus. We continue to lag behind several other countries on various productivity parameters. Our banks have to strive towards closing this gap.

36. Banks' gains in operational efficiency have, however, come at the cost of their allocational efficiency. The improved operational efficiency has been a result of technological progress and structural changes in balance sheet towards more wholesale business. The operational efficiency gains, though profitable for the banks, have not had the desired beneficial impact on the society as a whole, particularly the rural areas, individuals and small businesses. I would say that the vulnerability of the banking system has increased on account of the imbalances arising from growth in operational efficiency without commensurate rise in allocational efficiency. Let me add that both the Reserve Bank of India and Government of India have already initiated several corrective measures to reverse this trend by actively promoting the programme of financial inclusion. The correction process needs to be expedited further with greater zeal and vigor.

37. Banks have to ensure that they attain greater allocational efficiency by extending access to financial services to the unbanked masses and providing the excluded poor the opportunity to leverage the financial system to improve their economic condition. True productivity of the banking system can be judged not just by the positive impact on banks' own financials but by the impact it has on the lives of ordinary citizens. I hope the Indian banking system rises up to the challenge of attaining productivity and efficiency in its true sense and thereby contributes to the economic growth and prosperity of the nation.

38. I once again thank FICCI and IBA for inviting me to FIBAC 2013 and providing me the opportunity to share my thoughts on this important subject. I observe that several of the issues raised by me here also find resonance in the report presented by BCG today and that they will be deliberated over the two days of the conference.

I wish the conference all success. Thank you.

Annex*

Table 1: Bank group-wise trends in Ratio of Operating Expenses to Average Total Assets

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992	2.60	2.61	2.97		2.26
1993	2.82	2.79	3.01		3.01
1994	2.80	2.81	2.80		2.74
1995	3.00	3.04	2.71	0.64	2.90
1996	3.16	3.20	2.81	2.15	3.11
1997	3.01	3.02	2.71	2.56	3.25
1998	2.85	2.87	2.53	2.22	3.19
1999	2.88	2.88	2.41	2.13	3.64
2000	2.68	2.70	2.32	1.80	3.25
2001	2.84	2.92	2.07	2.00	3.37
2002	2.38	2.42	2.18	1.55	3.17
2003	2.35	2.37	2.16	2.04	2.85
2004	2.37	2.35	2.14	2.29	2.97
2005	2.32	2.28	2.05	2.24	3.05
2006	2.30	2.18	2.18	2.50	3.32
2007	2.12	1.94	1.91	2.45	3.27
2008	1.99	1.71	1.82	2.56	3.24
2009	1.87	1.64	1.85	2.32	3.04
2010	1.78	1.61	1.88	2.16	2.52
2011	1.86	1.70	1.94	2.23	2.69
2012	1.77	1.59	1.91	2.24	2.50
2013	1.75	1.57	1.89	2.30	2.35

Table 2: Bank group-wise trends in Ratio of Operating Expenses to Average Business

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992	2.09	2.07	2.26	-	2.14
1993	2.27	2.23	2.29	-	2.93
1994	2.31	2.30	2.13	-	2.57
1995	2.51	2.54	2.08	1.03	2.56
1996	2.66	2.69	2.16	2.26	2.76
1997	2.51	2.53	2.06	2.04	2.87
1998	2.35	2.36	1.92	1.75	2.83
1999	2.39	2.37	1.86	1.76	3.46
2000	2.22	2.22	1.80	1.53	3.20
2001	2.34	2.37	1.59	1.69	3.32
2002	1.97	1.94	1.66	1.52	3.15
2003	1.93	1.88	1.63	2.01	2.77
2004	1.92	1.86	1.60	2.07	2.87
2005	1.85	1.78	1.51	1.93	2.93
2006	1.78	1.65	1.55	2.04	3.14
2007	1.59	1.40	1.33	1.96	3.17
2008	1.48	1.21	1.27	2.06	3.29
2009	1.39	1.15	1.30	1.88	3.36
2010	1.31	1.12	1.32	1.76	2.87
2011	1.36	1.18	1.34	1.82	3.01
2012	1.28	1.09	1.31	1.82	2.86
2013	1.26	1.07	1.30	1.88	2.68

* Based on balance sheet figures, Average Assets is computed as mid-point of two year end figures of total assets. Average Business is the mid point of sum of deposits and advances for two year ends.
PSB – Public Sector Banks

Table 3: Bank group-wise trends in Ratio of Operating Expenses to Net Income

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992	55.58	58.72	59.05		30.91
1993	72.46	74.38	66.75		59.15
1994	68.10	73.08	57.33		41.22
1995	63.41	67.57	52.09	40.27	40.64
1996	63.29	66.66	54.62	39.57	45.79
1997	61.00	64.31	56.25	39.88	45.72
1998	58.87	62.72	54.31	37.91	43.14
1999	64.30	65.94	64.78	49.73	57.08
2000	59.86	63.23	54.43	40.72	48.45
2001	63.38	67.01	53.17	50.26	50.04
2002	53.05	54.93	43.42	47.81	49.13
2003	48.36	49.30	42.74	46.39	46.57
2004	45.25	45.05	42.62	50.14	42.93
2005	49.56	48.87	53.80	52.70	49.11
2006	52.12	52.11	57.78	54.37	46.79
2007	50.13	50.35	49.55	53.63	44.60
2008	48.04	48.12	47.30	52.14	42.43
2009	44.68	45.45	45.08	47.91	37.96
2010	44.98	46.23	49.26	42.72	40.51
2011	45.23	45.35	48.45	45.02	43.52
2012	44.19	43.67	48.56	46.04	42.29
2013	45.02	45.51	47.78	44.89	40.88

Table 4: Bank group-wise trends in Ratio of Staff Expenses to Average Total Assets

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992	1.75	1.81	2.11		0.75
1993	1.88	1.97	2.11		0.75
1994	1.82	1.90	1.87		0.87
1995	1.98	2.10	1.79	0.09	0.95
1996	2.20	2.36	1.84	0.41	1.09
1997	2.04	2.19	1.65	0.47	1.14
1998	1.92	2.10	1.51	0.43	1.02
1999	1.91	2.09	1.48	0.41	1.09
2000	1.79	1.97	1.50	0.38	1.08
2001	1.93	2.18	1.30	0.38	1.07
2002	1.54	1.75	1.35	0.36	1.05
2003	1.46	1.68	1.32	0.46	0.91
2004	1.43	1.63	1.26	0.53	0.95
2005	1.36	1.55	1.15	0.55	0.94
2006	1.30	1.45	1.25	0.65	1.14
2007	1.16	1.25	1.09	0.71	1.30
2008	1.03	1.05	1.02	0.80	1.31
2009	1.00	1.02	1.04	0.82	1.21
2010	0.98	1.00	1.09	0.80	1.07
2011	1.10	1.13	1.18	0.90	1.16
2012	1.01	1.01	1.10	0.92	1.06
2013	0.98	0.99	1.07	0.90	1.00

Table 5: Bank group-wise trends in Ratio of Staff Expenses to Average Business

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992	1.40	1.44	1.61		0.71
1993	1.52	1.57	1.61		0.73
1994	1.50	1.56	1.42		0.82
1995	1.66	1.76	1.37	0.14	0.84
1996	1.85	1.98	1.41	0.43	0.97
1997	1.70	1.83	1.26	0.38	1.01
1998	1.58	1.73	1.15	0.34	0.91
1999	1.58	1.72	1.14	0.34	1.03
2000	1.49	1.62	1.16	0.32	1.07
2001	1.59	1.77	1.00	0.32	1.06
2002	1.27	1.40	1.03	0.35	1.04
2003	1.20	1.33	1.00	0.45	0.89
2004	1.16	1.29	0.94	0.48	0.92
2005	1.09	1.21	0.84	0.47	0.90
2006	1.00	1.09	0.89	0.53	1.08
2007	0.86	0.90	0.76	0.57	1.26
2008	0.76	0.75	0.71	0.64	1.33
2009	0.75	0.72	0.74	0.66	1.33
2010	0.72	0.70	0.77	0.65	1.21
2011	0.80	0.78	0.82	0.73	1.29
2012	0.73	0.69	0.76	0.75	1.21
2013	0.70	0.67	0.73	0.73	1.13

Table 6: Bank group-wise trends in Ratio of Staff Expenses per Employee

(in ₹ 000s)

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992	65.45	64.62	59.74		142.36
1993	74.32	73.52	65.94		158.91
1994	80.38	78.82	72.83		210.86
1995	98.05	96.27	91.41	34.81	249.38
1996	127.11	124.79	112.54	114.66	335.22
1997	134.14	130.46	120.02	141.71	420.68
1998	145.64	141.69	133.02	185.52	422.24
1999	173.05	168.24	153.89	216.03	514.49
2000	193.64	187.30	181.20	234.44	620.61
2001	268.30	267.71	181.65	200.96	718.69
2002	259.29	251.65	211.81	289.92	866.20
2003	279.60	271.44	240.32	346.09	763.03
2004	307.97	298.43	267.11	363.28	823.04
2005	341.62	334.55	280.05	363.45	784.07
2006	382.67	369.26	340.28	391.59	924.00
2007	408.38	382.90	347.94	432.79	1125.66
2008	439.81	402.37	369.39	453.09	1419.27
2009	510.90	472.01	431.94	505.54	1635.94
2010	583.60	559.45	488.90	526.51	1685.09
2011	727.42	731.39	612.09	546.07	1928.32
2012	746.43	747.78	600.16	594.46	2090.13
2013	799.45	805.08	656.69	627.06	2410.31

Table 7: Bank group-wise trends in CAGR of per employee staff expenses

(in per cent)

	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992-2002	14.76	14.56	13.49	35.37	19.79
2002-2013	10.78	11.15	10.83	7.26	9.75
1992-2013	12.66	12.76	12.09	17.42	14.42

Table 8: Bank group-wise trends in Ratio of Other Operating Expenses to Average Total Assets

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992	0.85	0.80	0.86		1.51
1993	0.94	0.82	0.90		2.26
1994	0.98	0.91	0.93		1.87
1995	1.02	0.94	0.92	0.55	1.95
1996	0.96	0.85	0.98	1.74	2.02
1997	0.97	0.83	1.06	2.09	2.11
1998	0.93	0.77	1.02	1.79	2.17
1999	0.98	0.79	0.93	1.72	2.55
2000	0.88	0.73	0.82	1.42	2.16
2001	0.91	0.73	0.77	1.62	2.30
2002	0.84	0.67	0.83	1.19	2.12
2003	0.89	0.69	0.84	1.59	1.94
2004	0.94	0.72	0.88	1.75	2.02
2005	0.95	0.73	0.91	1.69	2.11
2006	1.00	0.74	0.93	1.85	2.18
2007	0.97	0.69	0.82	1.74	1.97
2008	0.96	0.66	0.81	1.76	1.93
2009	0.87	0.62	0.80	1.50	1.83
2010	0.79	0.61	0.79	1.36	1.45
2011	0.76	0.58	0.76	1.33	1.53
2012	0.76	0.58	0.81	1.32	1.44
2013	0.77	0.58	0.82	1.40	1.35

Table 9: Bank group-wise trends in Ratio of Other Operating Expenses to Average Business

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992	0.68	0.63	0.66		1.43
1993	0.76	0.66	0.68		2.20
1994	0.81	0.74	0.71		1.75
1995	0.85	0.79	0.71	0.88	1.72
1996	0.81	0.71	0.75	1.82	1.79
1997	0.81	0.69	0.81	1.66	1.86
1998	0.77	0.64	0.77	1.41	1.93
1999	0.81	0.65	0.72	1.42	2.43
2000	0.73	0.60	0.64	1.20	2.13
2001	0.75	0.60	0.59	1.36	2.27
2002	0.69	0.54	0.63	1.17	2.11
2003	0.73	0.55	0.63	1.56	1.89
2004	0.76	0.57	0.66	1.58	1.95
2005	0.76	0.57	0.67	1.46	2.02
2006	0.77	0.56	0.66	1.51	2.06
2007	0.72	0.50	0.57	1.39	1.91
2008	0.71	0.47	0.56	1.42	1.96
2009	0.65	0.44	0.57	1.21	2.03
2010	0.59	0.42	0.56	1.11	1.65
2011	0.56	0.40	0.53	1.08	1.72
2012	0.55	0.40	0.56	1.07	1.65
2013	0.56	0.39	0.57	1.14	1.54

Table 10: Bank group-wise trends in Ratio of Gross Income to Average Total Assets

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992	4.68	4.44	5.04		7.30
1993	3.89	3.75	4.51		5.08
1994	4.11	3.84	4.88		6.64
1995	4.72	4.49	5.21	1.60	7.14
1996	4.99	4.81	5.15	5.44	6.80
1997	4.93	4.69	4.83	6.43	7.11
1998	4.84	4.57	4.66	5.85	7.38
1999	4.48	4.37	3.73	4.28	6.37
2000	4.47	4.28	4.27	4.42	6.70
2001	4.48	4.35	3.90	3.98	6.73
2002	4.49	4.40	5.03	3.25	6.46
2003	4.86	4.80	5.05	4.40	6.11
2004	5.24	5.21	5.03	4.56	6.92
2005	4.67	4.67	3.82	4.25	6.20
2006	4.42	4.18	3.77	4.60	7.09
2007	4.24	3.86	3.86	4.58	7.33
2008	4.13	3.55	3.85	4.91	7.64
2009	4.19	3.60	4.09	4.83	8.01
2010	3.95	3.48	3.82	5.06	6.22
2011	4.12	3.76	4.00	4.96	6.19
2012	4.01	3.65	3.94	4.87	5.91
2013	3.89	3.44	3.96	5.12	5.75

Table 11: Bank group-wise trends in Ratio of Operating Profit to Average Total Assets

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992	2.08	1.83	2.06		5.04
1993	1.07	0.96	1.50		2.08
1994	1.31	1.03	2.08		3.91
1995	1.73	1.46	2.49	0.96	4.24
1996	1.83	1.60	2.34	3.28	3.68
1997	1.92	1.68	2.11	3.86	3.86
1998	1.99	1.70	2.13	3.63	4.20
1999	1.60	1.49	1.31	2.15	2.73
2000	1.79	1.57	1.95	2.62	3.45
2001	1.64	1.44	1.83	1.98	3.36
2002	2.11	1.98	2.84	1.70	3.28
2003	2.51	2.43	2.89	2.36	3.26
2004	2.87	2.86	2.89	2.27	3.95
2005	2.36	2.39	1.76	2.01	3.16
2006	2.12	2.00	1.59	2.10	3.77
2007	2.11	1.91	1.95	2.12	4.06
2008	2.15	1.84	2.03	2.35	4.40
2009	2.32	1.96	2.25	2.52	4.97
2010	2.17	1.87	1.94	2.90	3.70
2011	2.26	2.05	2.06	2.73	3.49
2012	2.24	2.05	2.03	2.63	3.41
2013	2.14	1.88	2.07	2.82	3.40

Table 12: Bank group-wise trends in Ratio of Net Profit to Average Total Assets

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992	0.37	0.27	0.57		1.56
1993	-1.14	-1.06	0.38		-3.01
1994	-0.89	-1.22	0.65		1.78
1995	0.47	0.27	1.34	0.68	1.96
1996	0.17	-0.08	1.07	2.23	1.74
1997	0.70	0.59	0.98	2.31	1.29
1998	0.88	0.83	0.87	1.97	1.04
1999	0.53	0.46	0.52	1.24	0.98
2000	0.72	0.62	0.89	1.20	1.30
2001	0.54	0.45	0.64	0.92	1.10
2002	0.82	0.76	1.14	0.62	1.40
2003	1.05	1.01	1.26	0.92	1.59
2004	1.20	1.20	1.31	0.92	1.62
2005	0.97	0.95	0.34	1.15	1.37
2006	0.96	0.87	0.61	1.15	1.74
2007	1.00	0.90	0.72	1.06	1.94
2008	1.10	0.97	1.11	1.13	2.07
2009	1.10	1.01	1.13	1.10	1.86
2010	1.01	0.96	0.92	1.29	1.08
2011	1.06	0.92	1.07	1.48	1.65
2012	1.05	0.87	1.15	1.57	1.74
2013	1.02	0.78	1.21	1.69	1.92

Table 13: Bank group-wise trends in CAGR

(per cent)

	Operating Exp	Staff Exp.	Other Oper. Exp.	NII	Operating Profit
All Banks	14.65	13.63	16.30	15.90	16.99
PSBs	12.96	12.43	14.00	14.49	15.86
Old Pvt. Bks	14.83	13.58	17.09	15.64	17.35
New Pvt. Bks	44.00	52.46	41.27	42.57	42.49
Foreign Bks	16.64	18.03	15.82	16.40	14.25

Table 14*: Bank group-wise trends in Ratio of Average Operating Expenses to Average Total Assets

(per cent)

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992-1995	2.82	2.83	2.84		2.75
1995-2001	2.88	2.92	2.43	1.98	3.29
2001-2007	2.33	2.28	2.09	2.28	3.16
2007-2013	1.84	1.65	1.89	2.30	2.71

* Average computed for the respective time period for various parameters.

Table 15: Bank group-wise trends in Ratio of Average Operating Expenses to Average Business

(per cent)

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992-1995	2.31	2.30	2.17		2.56
1995-2001	2.39	2.41	1.87	1.69	3.07
2001-2007	1.84	1.76	1.53	1.95	3.06
2007-2013	1.35	1.15	1.31	1.87	2.99

Table 16: Bank group-wise trends in Ratio of Average Operating Expenses to Average Net Income

(per cent)

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992-1995	64.59	68.24	57.51		41.90
1995-2001	61.96	65.27	55.70	44.60	48.03
2001-2007	50.85	51.44	48.91	51.96	46.55
2007-2013	45.56	45.85	48.00	46.58	41.49

Table 17: Bank group-wise trends in Ratio of Average Staff Expenses to Average Total Assets

(per cent)

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992-1995	1.87	1.95	1.94		0.84
1995-2001	1.94	2.13	1.53	0.39	1.07
2001-2007	1.39	1.57	1.23	0.58	1.08
2007-2013	1.02	1.05	1.09	0.85	1.13

Table 18: Bank group-wise trends in Ratio of Average Staff Expenses to Average Business

(per cent)

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992-1995	1.53	1.59	1.48		0.78
1995-2001	1.61	1.76	1.17	0.33	1.00
2001-2007	1.10	1.21	0.90	0.50	1.05
2007-2013	0.75	0.73	0.76	0.69	1.24

Table 19: Bank group-wise trends in Ratio of Average Staff Expenses to Average Net Income

(per cent)

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992-1995	42.74	47.17	39.13		12.82
1995-2001	41.77	47.63	34.95	8.70	15.63
2001-2007	30.34	35.40	28.74	13.27	15.95
2007-2013	25.35	29.09	27.66	17.29	17.25

Table 20: Bank group-wise trends in Ratio of Average Staff Expenses to Average No. of Employees

(per cent)

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992-1995	79.79	78.52	72.67		191.07
1995-2001	161.28	157.49	139.83	188.29	469.15
2001-2007	321.90	310.04	265.12	376.54	889.77
2007-2013	612.27	591.13	513.01	543.72	1743.59

Table 21: Bank group-wise trends in Ratio of Average Other Operating Expenses to Average Total Assets

(per cent)

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992-1995	0.95	0.87	0.91		1.91
1995-2001	0.94	0.79	0.91	1.60	2.22
2001-2007	0.94	0.71	0.86	1.70	2.08
2007-2013	0.82	0.60	0.80	1.45	1.59

Table 22: Bank group-wise trends in Ratio of Average Other Operating Expenses to Average Business

(per cent)

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992-1995	0.78	0.71	0.69		1.78
1995-2001	0.78	0.65	0.70	1.36	2.07
2001-2007	0.74	0.55	0.63	1.45	2.01
2007-2013	0.60	0.42	0.56	1.17	1.75

Table 23: Bank group-wise trends in Ratio of Average Other Operating Expenses to Average Net Income

(per cent)

Year	All Banks	PSBs	Old Pvt. Sector Banks	New Pvt. Sector Banks	Foreign Banks
1992-1995	21.86	21.07	18.38		29.08
1995-2001	20.19	17.65	20.75	35.90	32.40
2001-2007	20.51	16.04	20.17	38.69	30.60
2007-2013	20.21	16.76	20.34	29.29	24.24

*Infrastructure Financing By Banks In India: Myths and Realities**

K. C. Chakrabarty

Mr. B. Sreeram, Managing Director, State Bank of Bikaner & Jaipur; Mr. M. Bhagavantha Rao, MD, State Bank of Hyderabad; my fellow panelists, Mr. V. G. Kannan, MD, SBI Capital Markets Limited; Mr. Partha Bhattacharya, Ex-CMD, Coal India Limited; Mr. Seshagiri Rao, Joint Managing Director, JSW Steel Limited and CFO of JSW Group, Ms. Zarin Daruwala, President, ICICI Bank Ltd.; delegates to the Conclave; ladies and gentlemen. It is, indeed, a great pleasure to be here amidst you in this historic city of Agra to deliberate on an issue that touches the daily lives of all of us present here – Infrastructure. I am grateful to SBI Capital Markets Limited (SBI Caps) and especially to Mrs. Arundhati Bhattacharya, ex-MD, SBI Caps, *in absentia*, for inviting me to this Conclave. In my address today, I intend to respond to some of the issues raised by my fellow panelists by putting across the Reserve Bank's views and, in the process, also try to dispel a few myths surrounding the subject of infrastructure financing.

Background

2. Large infrastructure investment by all sectors- public, private and foreign- during the last decade, has catapulted India to the league of one of the fastest growing economies in the world. Yet, over the past year or two, infrastructure sector has reached a critical point of entanglement. To stimulate growth, there is an urgent need to step up infrastructure investment as well as to improve the productivity and quality of infrastructure spending, remove procedural bottlenecks and improve governance. The projected investment requirements for infrastructure are placed at US$ 1 trillion in the 12th plan and the funding gap is estimated to be above ₹5,000 billion. While the financing needs are huge in the coming years, given the limited fiscal space available, raising such resources would be a formidable challenge. The Approach Paper for the 12th Plan envisages that about half of the investment requirements of infrastructure would have to be met through funding from the private sector. For this purpose, the share of private sector in infrastructure investment will have to rise substantially from about 37 per cent in the 11th Plan to about 48 per cent in the 12th Plan. The private sector's interest in the infrastructure sector has, however, been badly hit because of the delays due to certain policy formulations and implementation aspects relating to land acquisition, rehabilitation, environment *etc.* At present, more than 50 per cent of projects are stuck at various stages of implementation due to variety of regulatory hurdles and sector specific bottlenecks leading to significant time and cost overruns.

Role of Infrastructure in Inclusive Development

3. Before we turn to examining the role of Infrastructure; let us first look at what is meant by infrastructure. Investopedia defines infrastructure as the basic physical and organisational structures needed for the operation of a society or enterprise, or the services and facilities necessary for an economy to function. Thus, infrastructure can be understood as the support structures that facilitate production of goods and services, distribution of finished products to markets, as also the basic social services such as schools and hospitals. In a sense, infrastructure is a catalytic agent for the economy. The structures which can be counted among infrastructure are roads, bridges, power, water supply, sewers, electrical grids, telecommunications, ports and so forth.

4. Post the advent of the global crisis, we live in uncertain times. The growth rate of the Indian economy is diminishing by the quarter and a recovery

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continues to elude. But amidst this scenario of persistent gloom, high inflation, political uncertainties, *etc.*, if one looks for a catalyst that can revive the economy, put the domestic growth engine back on track and ensure an inclusive growth, the most potent option available is investment in creation of better all round infrastructure. Provision of better infrastructural facilities such as irrigation, electrification, roads, drinking water, sanitation, housing, community IT service, *etc.* to the rural centres would enable mainstreaming of a vast majority of the rural population and helping them to positively contribute to domestic growth through their entrepreneurial or farm based activities.

5. The fast paced urbanisation during the recent years of heady economic growth has also necessitated the availability of new infrastructural facilities as well as upgrading the quality of existing infrastructure. Infrastructure development in new townships is also a priority so as to redistribute the influx of growing population. All these developments have opened up numerous employment opportunities and hence, potential accretion to domestic growth.

Stalled Progress

6. Let me, however, admit that there has been no lack of appreciation of this fact from any quarter- be it the highest echelons of political hierarchy, the bureaucratic setup, the economic and planning think tank, the academia, the financial wizards – some of whom are present in this gathering here. There has been no dearth of policy pronouncements and reengineering of processes aimed at improvement in the investment climate for infrastructural projects. However, there seems to be little headway insofar as achievement on ground is concerned. Let me highlight some disconcerting facts:

- Out of 576 SEZs that have received formal approval, only 172 are operational.
- Against a target of awarding road projects aggregating 50,621 kms during 2008-13, only 10,690 kms have been awarded. Many of the projects awarded have yet to see commencement of work due to problems in achieving financial closure, delays in land acquisition and obtaining environmental clearances.
- Out of 16 Ultra Mega Power Projects planned, contracts for only 4 were awarded. Out of this only one has become operational and another is nearing completion and that too much beyond the scheduled dates. Even the one project that has commenced operations is running much below capacity. Lack of clarity on coal import, forest clearances and land acquisition delays are creating impediments.
- Under the New Exploration and Licensing Policy for exploration of crude oil and natural gas, of the 251 blocks allotted, 110 have reported discoveries but only 6 are actually operational.

7. Having set the backdrop, let me begin by responding to an issue which has been made out to be a very crucial challenge insofar as financing of infrastructure projects go.

Has bank finance been a constraining factor for infrastructure development?

8. Has flow of bank credit been a constraining factor for infrastructure development in the country? Let me acknowledge that this issue has not come up for debate for the first time today. It is pertinent to note that outside of budgetary support, that accounts for about 45 per cent of the total infrastructure spending, commercial banks are the second largest source of finance for infrastructure (about 24 per cent). Historically, contrary to popular perception, it is the commercial, more particularly, the public sector banks that have supported the infrastructure requirements of a growing Indian economy. It is worth highlighting that outstanding bank credit to the infrastructure sector, which stood at ₹72.43 billion in 1999-2000, has increased steadily to ₹7,860.45 bn in 2012-13, a compounded annual growth rate (CAGR) of 43.41 per

cent over the last thirteen years against an overall CAGR of bank finance to all industries at 20.38 per cent during the same period (Table 1). The share of bank finance to infrastructure in gross bank credit has increased from 1.63 per cent in 2001 to 13.37 per cent in 2013. Between March 2008 and 2013 alone, banks' exposure to infrastructure has grown by more than 3 times. This apart, credit has also flown into infrastructure sector *via* NBFCs, Mutual Funds and capital markets, the source of bulk of which is bank finance. It may not, therefore, be correct to argue that lack of finance from banks has constrained the development of the infrastructure sector.

9. In fact, recognising the importance of infrastructural development in the country, the Reserve Bank has provided certain concessions/ relaxations in lending to infrastructure sector, such as, enhancement in single/group borrower limits, permission to issue guarantees favoring other lending institutions in respect of infrastructure projects, asset classification benefits under restructuring guidelines and permission to extend finance for funding promoter's equity, subject to certain conditions. In order to encourage lending by banks to the infrastructure sector, banks are permitted to finance SPVs registered under the Companies Act, set up for financing infrastructure projects, after ensuring that these loans/ investments are not used for financing the budget of State Governments[1]. The Reserve Bank, in a recent circular (March 18, 2013), has allowed the debts due to the lenders in case of Public-Private Partnership (PPP) projects to be considered as secured to the extent assured by the project authority in terms of the Concession Agreement, subject to certain conditions.

Impaired Assets in Infrastructure Sector

10. The evidence, thus, clearly suggests that banks have been substantially financing infrastructure projects in the country notwithstanding the inadequate commercialisation of projects due to regulatory, political and legal constraints and total absence or insufficiency of user charges in many sectors. Of course, this has not been without a fair share of pain for them. The NPAs and the restructured assets in this segment have increased quite substantially of late. The Gross NPAs and restructured standard advances for the infrastructure sector, together as a percentage of total advances to the sector, has increased considerably from ₹121.90 bn (4.66 per cent) as at the end of March 2009 to ₹1,369.70 bn (17.43 per cent) as at the end of March 2013. There is enough evidence to suggest that a substantial portion of the rise in impaired assets in the sector is attributable to non-adherence to the basic appraisal standards by the banks.

11. In spite of higher percentage of impaired assets in the infrastructure sector, we need not be terribly despondent. Though there may be some haircut on the portfolio for the banking sector, one can draw comfort from the fact that at least some assets have been created. The need of the hour for the Central Government, State Governments and the project developers is to ensure that the minor impediments that ail the operationalisation of these assets are immediately removed so that they can be put to productive use and start generating revenues. Meanwhile, the banks must draw appropriate lessons from the past failures and be very discerning with the credit appraisal of the projects that come up for their consideration.

12. In sum, any criticism of the banks for not meeting the financing requirements of the infrastructure sector has to be viewed in the backdrop of lack of availability of bankable and commercially viable projects.

Separate Asset Classification Norm for Infrastructure Projects

13. While there have been some requests for a separate asset classification regimen for infrastructure projects, I do not see any merit in these arguments.

[*] Further, the promoters' shares in the SPV of an infrastructure project pledged to the lending bank are permitted to be excluded from the banks' capital market exposure.

The evidence suggests that the higher NPA in the sector is not an industry wide issue, it is rather bank specific. For the umpteenth time, I reiterate that the reason for NPA is non-performing administration. In the case of infrastructure, this could also be on account of non-performance beyond that of the bank management – that of policy makers, bureaucracy *etc.* But what is really puzzling is why this affects the Public sector banks the most. The answer lies squarely in the poor project appraisal techniques, lack of accountability, post–disbursal supervision, *etc.* In our assessment, the project appraisal and the decision making in public sector banks has been more impressionistic rather than being information based. How else does one defend the eagerness of some banks to fund power distribution companies with negative net worth!

14. Any infrastructure project typically has five phases:

- Research and Development
- Planning
- Production
- Servicing, distribution and dissemination
- Maintenance of structure/facilities created

It is fair to expect, therefore, that any infrastructure project proposal would have detailed analysis of all the above stages including research, planning and implementation strategy. While appraising the infrastructure projects, it is imperative to consider as to what extent have these objectives been achieved; otherwise, problems in developing/managing infrastructure facilities would be unavoidable in a country like India where various bottlenecks crop up due to supply side factors.

Recent Revisions in the restructuring guidelines

15. There has been a lot of commentary on whether the tightening of the provision requirements upon restructuring of advances at this point in the economic cycle is prudent. While I would not *per se* comment on the specifics, I would like to clarify that the Reserve Bank has never stated that restructuring is wrong. All of us, the society, must realise that despite all precautions, there could be failures. We must learn to accept failure. We, in the Reserve Bank, have maintained that restructuring is a perfectly legitimate business instrument, but this has to be approached with a bit of caution. When people talk about higher provision requirements that would kick in, I would only like to say that provision is not a loss. We require banks to maintain provision for standard assets as well, so why should there be any discomfort in maintaining slightly higher provision on restructured accounts. It can always be written back when the account turns around. The question that I would like to pose is that why should banks only restructure advances that are about to turn non-performing? Instead, they could also restructure advances that are already NPA if they feel that additional bit of support and resources can bring the defaulted company back on rails.

16. Another point that I would like to make in the context of restructuring is regarding the initial pricing of loans for infrastructure projects. Very often, we observe that the banks are willing to significantly pare down the interest rate charged on the loan post restructuring. Basic economic sense suggests that the pricing should mirror the risk in the loan. Therefore, let us assume that if a project was initially funded by a bank at 16 per cent, what makes it willing to restructure the loan and agree for a much lower interest rate when the very fact of restructuring indicates greater credit risk in the account. This reflects that if the bank considers the project viable even at a reduced rate of interest, the initial pricing of loan was arbitrary and not risk-based.

Asset-Liability Mismatch as a constraint for long-term bank finance to infrastructure

17. A related issue that has been highlighted is the inherent constraint that the banks face in funding infrastructure projects – risk of asset-liability mismatches. We all recognise that the long term nature

of infrastructure financing, mostly beyond the normal loan tenor of commercial banks, is bound to lead to asset-liability mismatches. Having conceded that, I would argue that asset-liability mismatch has not, in any way, been a constraint in financing of infrastructure projects thus far and the stress in the infrastructure portfolio in banks has been on account of other factors. Let me put across some points. Banks are in the business of maturity and risk transformation. Almost all banks rely exclusively on retail deposits to fund their advances portfolio. The individual retail deposits may not have an average tenor of more than one year, whereas most of the big advances of the banks are long tenor, in the range of 8-10 years. While on an individual basis, the retail deposit may be considered volatile, on a portfolio level, these deposits are stable, which enables banks' maturity transformation action. Hence, my point is that if, as going concerns, banks can rely on retail deposit to fund projects for 8-10 years, they might as well do so for 13-15 years.

18. As a part of management of their asset-liability mismatches and the interest rate risks, the banks can develop long-tenor fixed rate products to reduce their deposit base and also develop interbank interest rate swap market for hedging their interest rate risks. It would be in the fitness of things, if the public sector banks, which hold substantial rupee resources, inculcate appropriate treasury skills and introduce such products in the market. We cannot expect the foreign banks or few of the private sector banks that have little rupee resources to develop this market.

Issues in Take Out Financing

19. Recognising the constraints in incremental financing by banks to the infrastructure sector, the banks have been permitted to enter into take out financing arrangement. To augment debt resources for financing infrastructure, Infrastructure Debt Funds (IDFs) have been launched to refinance projects after completion of the construction work and stabilisation of the operations. By refinancing bank loans of existing projects, the IDFs are expected to take over a significant volume of the existing bank debt and this will release an equivalent volume of fresh lending for infrastructure projects. Three IDFs – one NBFC by ICICI Bank Ltd. and two mutual funds by IL&FS and IIFCL have been launched in 2013, of which the first one has already started refinancing operations.

20. But a common refrain that I get to hear across various fora is that take out financing model is not working successfully. With all due respect to the proponents of this measure, I have a fundamental issue with the take out financing model. As we discussed earlier, being long-gestation projects, the financiers of infrastructure projects need to pay a lot of attention to the project at the nascent stage. Having assumed the risk till the project comes on stream and starts generating stable revenues, I don't understand why a bank would be willing to trade a good credit risk for the risk of funding another greenfield project!

21. I would rather wish that the entities such as IDFs/ IIFCL *etc.*, which are set up to provide take out financing, in view of their expertise in assessing, appraising and financing infrastructure projects, should assume the initial credit risk in such projects and then sell the same to the banks.

External Commercial Borrowing (ECB) Norms for Infrastructure Funding

22. Under the extant ECB guidelines, there are several concessions given to the infrastructure sector related to credit enhancements, import of capital goods, availment of trade credit, *etc.* the Reserve Bank has recently taken several measures to boost infrastructure financing, especially for the projects in roads and power sector, such as relaxing the ECB norms and treating debt due to lenders in PPP projects as secured finance. The definition of infrastructure under the extant ECB guidelines is currently being further expanded to bring it in line with the Government of India's harmonised list. This would expand the list to include some of the urban infrastructure items: (a) urban public transport and (b) water and sanitation, which will include (i) water supply pipelines, (ii) solid

waste management, (iii) water treatment plants, (iv) sewage projects (sewage collection, treatment and disposal system), and (v) storm water drainage system.

23. While I do appreciate the recent measures by the Government of India and the Reserve Bank, I wish to sound a note of caution here due to couple of reasons. First and foremost, as finance professionals, we must realise that in efficient markets, cost of borrowing in any currency, when adjusted for exchange rate differential, should be the same. Therefore, if one finds an arbitrage opportunity, it can only be for a short-term. Adjusted for hedge cost, the external borrowing cannot be cheaper. Only way a firm can potentially benefit from borrowing in overseas markets is by gambling on the exchange rate and retaining an unhedged forex exposure. It is, therefore, important to conduct a cost-benefit analysis in running an unhedged/partially hedged exposure before accessing external finance. Secondly, infrastructure in general and, urban infrastructure in particular, do not generate matching foreign exchange earnings and, hence, there is a need to exercise abundant caution while the country is experiencing high CAD.

Acquisition of equity by banks in infrastructure projects

24. Some of my fellow panellists have also made requests for allowing the lenders to take a higher share of equity in the defaulting companies. In this context, it is pertinent to highlight that the Banking Regulation Act places a limit on maximum equity stake that a bank can hold in any company and the requirement is not without good reason. Banks are supposed to do banking business and not run companies. The depositors forego the lure of higher returns in the equity markets and place their deposits in banks for safety of their capital and, therefore, it is logical that the depositors' funds should not get channelised into equity through indirect means.

25. Let me now turn to some other aspects of infrastructure development in India and the recent initiatives taken by the Government to facilitate the success of infra projects.

Public Private Partnership

26. The Public-Private Partnership has been actively pursued in India to meet the gaps in the provision of basic infrastructure services. According to a World Bank Report on Private Participation in Infrastructure (PPI), India has been the top recipient of PPI activity since 2006 and has implemented 43 new projects, which attracted total investment of US$ 20.7 billion in 2011. By end December 2012, there were over 900 PPP projects in the infrastructure sector with total project cost (TPC) of ₹5,430.45 bn as compared to over 600 projects with TPC of ₹3,330.83 bn on March 31, 2010 at different stages of implementation, *i.e.,* bidding, construction, and operational.

27. Global experience indicates that PPPs work well when they combine the efficiency and risk assessment of the private sector with the public purpose of the government sector. However, they work poorly when they rely on the efficiency and risk assessment of the government sector and the public purpose of the private sector. The development finance model has to be characterised by good planning, strong commitment of the parties, effective monitoring, regulation and enforcement by the government.

28. The Government has tried to address some major impediments like lack of transparency and accountability in procurement in order to ensure that PPP projects are procured and implemented by observing principles of transparency, competitive bid process, affordability, and value for money. But, the impact of these efforts on the ground level implementation is yet to show.

29. While there has been a lot of debate around the lack of a vibrant corporate debt market and constraints faced by the banking sector in financing infrastructure requirements, it needs to be highlighted that there has been an over reliance on debt. The infrastructure companies are highly leveraged and the flow of equity in the infrastructure project funding has been very minimal. In my view, the 'Public-Private partnership'

has, in effect, remained a 'Public only' venture. Lack of equity investment in the project means that the promoter- developer has little 'skin in the game' and the motivation for the success of the venture is that much limited.

Pricing of Infrastructure Services

30. A major underlying factor in the success of such partnerships is the pricing aspect. The issue of pricing is crucial in view of the political sensitivity, while also simultaneously ensuring the viability of the project. Managing the transition from state-subsidised services to market based pricing is crucial as the prices cannot be raised suddenly and indiscriminately, but the realisations have to be remunerative and based on commercial considerations. Further, as the infrastructure projects are long duration projects, it is important to have an inbuilt mechanism in the services/pricing contract for a hike in pass-through of price hikes to the end users on account of increase in input prices. I would like to highlight a disquieting practice that has come to characterise the usage of infrastructure services. Very often we find that VIPs and influential people are allowed to enjoy these facilities free of charge. This not only creates a moral hazard, but simultaneously also leads to leakage and distortion of the whole pricing structure. If we allow such a situation to prolong, whereby even those who can afford to pay the usage charges do not do so, this would eventually degenerate into a situation where the society in general would be reluctant to pay for the use of better infrastructural facilities/services. We must realise that creation of world class infrastructure and its sustainable maintenance cannot be achieved if everyone, at least those who can afford to pay, do not do so. Subsidisation of services, if any, has to be restricted solely to the most vulnerable people in the society and that too, in a transparent manner. It is high time the society collectively opposed and abolished such feudalistic practices.

Conclusion

31. It is a well known fact that most infrastructure projects are stalled not because of financing issues, but other administrative and regulatory hurdles. More than half of the bank credit to infrastructure goes to the power sector. Notwithstanding some deceleration in recent years, bank credit to power sector has been growing at a rate higher than overall bank credit to infrastructure. Power projects today are stalled not because of lack of credit but because of lack of supply of fuel and uncertainties with regard to coal pricing and power tariffs, towards which Government has recently taken some measures. After power, banks have the most exposure to roads, where projects are stuck because of delays in land acquisition, environment and forest clearances. The sector which has seen the maximum dip in bank credit within infrastructure is telecom, particularly since January 2012 when 2G licenses were cancelled. Thus, credit moderation to infrastructure sector is a consequence of sector-specific issues/bottlenecks. Let me remind that banks are public entities and carry out their operations using depositors' money. It is, therefore, reasonable to expect banks to look for viability of projects and the safety of their money before committing to funding new projects.

32. Let me conclude by saying that for India to return to the higher growth trajectory, infrastructure problems need to be sorted out with utmost priority. There is a need to make infrastructure projects commercially viable, improve the market sentiment through continuance of reforms and effective governance on the part of the Government with regard to implementation of projects. Let us, however, not wait for others to take action, but we ourselves begin to contribute our might in the right earnest. All the stakeholders in this area have to diligently work towards improving their productivity and efficiency. As regards financing, I would like to say that there is no dearth of finance for infrastructure development

and, especially, for commercially viable projects. However, concomitantly, it is important that banks in general and public sector banks in particular, shift to an information based project appraisal system so as to ensure that the precious funds are not stuck in unproductive projects. Some other issues like creating a mechanism for recovery of the cost through appropriate pricing regime, simplification of project clearance by a centralised authority, *etc.* need to be worked upon on a priority basis.

33. Given the long term nature of infrastructure financing, which is beyond the normal 5-8 year loan tenors of commercial banks, and the decreasing scope for incremental financing by banks, there may be a case for relaxing norms for pension/insurance/ provident funds so that they can fill in some of the gap in debt financing. But nothing will work if the general sentiment with regard to progress of infrastructure projects remains bleak. Until and unless economic activity revives and various roadblocks to infra-projects get cleared, sentiment is likely to remain subdued for the sector, making its financing, whether from banks or non-banks, equally difficult. It is in this context that the role of SBI Caps, which acts as an intermediary between the project developers and the finance, is very critical. As the country's leading project advisor in the infrastructure sector, SBI Caps has to adhere to the highest standards in project appraisal and thus, help in recreating a positive atmosphere for investment in the country's infrastructure sector. I hope that the ideas and suggestions generated in this Conclave through active participation of various stakeholders including the Government, Planning Commission, International Financiers like ADB and IFC, Corporate sector and the banks, would go a long way in addressing the roadblocks that the sector faces. I firmly believe that once these barriers are removed, the pall of gloom that envelopes the sector would be lifted and investment in the sector will start flowing back.

I once again thank SBI Caps for giving me this opportunity to share my thoughts with the delegates.

Thank You!

Table 1: Growth in Bank Credit to Infrastructure Sector

(₹ Billion)

Industry	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Infrastructure	72.43	113.49	241.33	313.33	513.14	727	1128.3	1429.9	2053.3	2618	3816.12	5371.08	6164.4	7860.45
of which														
Power	32.89	52.46	166.97	220.53	337.45	429.64	601.34	732.98	950.75	1033.62	1590.12	2328.83	2903.61	4038.22
Tele - communications	19.92	36.44	39.72	41.09	84.08	129.56	184.55	196.19	382.82	471.06	613.12	996.62	989.05	976.43
Roads and Ports	19.62	24.59	34.64	51.71	91.61	167.8	196.95	250.47	344.76	470.6	735.69	925.69	1143.83	1313.12
Other Infrastructure	-	-	-	-	-	-	145.46	250.24	375.01	642.72	877.19	1119.98	1127.91	1532.68
Total Credit to Industries	**2001.3**	**2188.39**	**2295.2**	**2955.62**	**3130.65**	**4231.4**	**5504.4**	**6973.4**	**8583.4**	**10544**	**13114.5**	**16208.5**	**19659.8**	**22301.8**
Share of Infrastructure as a per cent of total credit to industry	3.62	5.19	10.51	10.60	16.39	17.18	20.50	20.50	23.92	24.83	29.10	33.14	31.36	35.25
Total Credit	**4434.7**	**5256.83**	**6457.4**	**7392.33**	**8641.43**	**11508**	**15168**	**19812**	**24769**	**29999**	**34967.2**	**42992.5**	**50748.3**	**58796.7**
Share of Infrastructure as a per cent of total bank credit	1.63	2.16	3.74	4.24	5.94	6.32	7.44	7.22	8.29	8.73	10.91	12.49	12.15	13.37

Compounded Annual Growth Rate (in per cent)

Industry		2000-2004	2004-2008	2008-2013	2000-2013
Infrastructure		63.15	41.43	30.80	43.41
of which	Power	78.97	29.56	33.54	44.78
	Tele-communications	43.33	46.07	20.59	34.90
	Roads and Ports	47.00	39.28	30.66	38.18
	Other Infrastructure	-	-	32.52	39.99
Total		11.84	28.68	21.04	20.38

Table 2: Asset Quality of Infrastructure Loans by Scheduled Commercial Banks

(₹ Billion)

		All Banks				
		Mar-09	Mar-10	Mar-11	Mar-12	Mar-13
Infrastructure	Total Loans Outstanding (Gross)	2618	3816.12	5371.08	6164.40	7860.45
	Total NPAs (Gross)	16.02	22.84	39.10	63.25	114.09
Of which	Restructured Standard Advances	105.88	170.23	156.77	690.09	1255.61
Power	Total Loans Outstanding (Gross)	1033.62	1590.12	2328.83	2903.61	4038.22
	Total NPAs (Gross)	8.02	2.08	11.10	17.33	23.06
	Restructured Standard Advances	38.89	94.39	84.28	368.88	760.27
Telecom	Total Loans Outstanding (Gross)	471.06	613.12	996.62	989.05	976.43
	Total NPAs (Gross)	0.98	0.96	2.01	19.47	31.56
	Restructured Standard Advances	7.33	7.06	10.94	113.79	121.14

Table 3: Asset Quality of Infrastructure Loans by Scheduled Commercial Banks

(Ratio in per cent)

		All Banks				
		Mar-09	Mar-10	Mar-11	Mar-12	Mar-13
Infrastructure	Gross NPA Ratio	0.61	0.60	0.73	1.03	1.45
Of which	(GNPAs + Rest Std Adv)/Gross Advances	4.66	5.06	3.65	12.22	17.43
Power	Gross NPA Ratio	0.78	0.13	0.48	0.60	0.57
	(GNPAs + Rest Std Adv)/Gross Advances	4.54	6.07	4.10	13.30	19.40
Telecom	Gross NPA Ratio	0.21	0.16	0.20	1.97	3.23
	(GNPAs + Rest Std Adv)/Gross Advances	1.76	1.31	1.30	13.47	15.64

*Interest Rates and Economic Activity**

Deepak Mohanty

I thank Ms. Preeta Misra, Director & Member Secretary, Association of Financial Professionals of India (AFPI) for this opportunity to interact with distinguished professionals of corporate India. In the recent period, there has been an animated debate on the role of interest rates in influencing real economic activities. In particular, the discussion has been on how a change in policy interest rate impacts the lending rates, and thereby industrial performance and overall economic activity. In this context, the last decade through 2012-13 has been eventful with rapid changes in the monetary policy stance responding to the evolving growth-inflation dynamics. This is a period in which we recorded one of our highest output growth rates as also one of the lowest. Inflation showed significant variation. We also experienced the global financial crisis, the adverse effects of which are still lingering.

As you know, Indian economy is currently passing through a very challenging phase: growth has slowed; though wholesale price inflation has come down consumer price inflation remains close to double digits, and financial market volatility has increased. A major factor in the recent growth slowdown is a significant deceleration in private corporate investment. Since you are the key professionals taking investment decisions, I thought it will be relevant to discuss how monetary policy decisions, through interest rate changes, affect investment decisions and thus economic activity. Another motivation for this subject is that colleagues in the Reserve Bank have done substantial research in this area and a paper entitled "Real Interest Rate Impact on Investment and Growth: What the Empirical Evidence for India Suggests?" was placed in the public domain.[1] I will urge you to look at that paper so that it generates further research and discussion.

Against this background, my presentation will be as follows: I will briefly review the stance of monetary policy and economic outcome during the last decade through 2012-13; discuss monetary transmission with a focus on the interest rate channel; and examine the impact of interest rate changes on economic activity both at the macro and micro levels.

Changes in monetary stance

In the last 10-year period from 2003-04 to 2012-13, monetary policy response can be broadly categorised into four phases based on growth-inflation outcome and the rapidly changing monetary policy response:

- Phase I of 5 years of 2003-08 of high growth but rising inflation concern towards the later part of the period when repo rate was raised from 6 per cent to 9 per cent and the cash reserve ratio (CRR) was raised from 4.5 per cent to 9 per cent.
- Phase II of 2 years of 2008-10 following the global financial crisis when the repo rate was reduced from 9 per cent to 5.25 per cent and CRR was reduced from 9 per cent to 5.75 per cent.
- Phase III of 2 years of 2010-12 of monetary tightening responding to rising inflation when policy rate was raised from 5.25 per cent to 8.5 per cent but CRR was reduced to 5.5 per cent.
- Phase IV of over a year of monetary easing in 2012-13 and 2013-14 so far with the repo rate reduced to 7.25 per cent and CRR lowered to 4.0 per cent; though since mid-July 2013, the Reserve Bank has tightened the monetary and liquidity conditions without changing the policy repo rate and CRR to address exchange market volatility.

* Speech by Shri Deepak Mohanty, Executive Director, Reserve Bank of India, delivered to the Association of Financial Professionals of India (AFPI), Pune, August 23, 2013. The assistance provided by Shri Sitikantha Pattanaik and Dr. Abhiman Das in preparation of the speech is acknowledged.

[1] http://rbidocs.rbi.org.in/rdocs/publications/PDFs/IDGSR08082013.pdf (on August 8, 2013).

Monetary policy stance in any particular phase is generally conditioned by the growth-inflation balance, the outlook for growth-inflation in a forward looking context and an assessment of macroeconomic risks. Essentially, monetary policy aims at attaining high growth in a non-inflationary manner. But at times high growth in excess of potential growth could trigger inflation putting the sustainability of the very growth path to risks. Hence, monetary policy tends to do a careful balancing act so that it is not too accommodative of growth in excess of its potential and at the same time not too stimulative of inflation. However, there could be periods of rising inflation and falling growth below its potential. This could arise from several sources such as the lagged impact of policy stimulus from earlier phases and adverse supply shocks, both domestic and external, which persist.

Table 1: Post-crisis as growth recovered inflation picked up

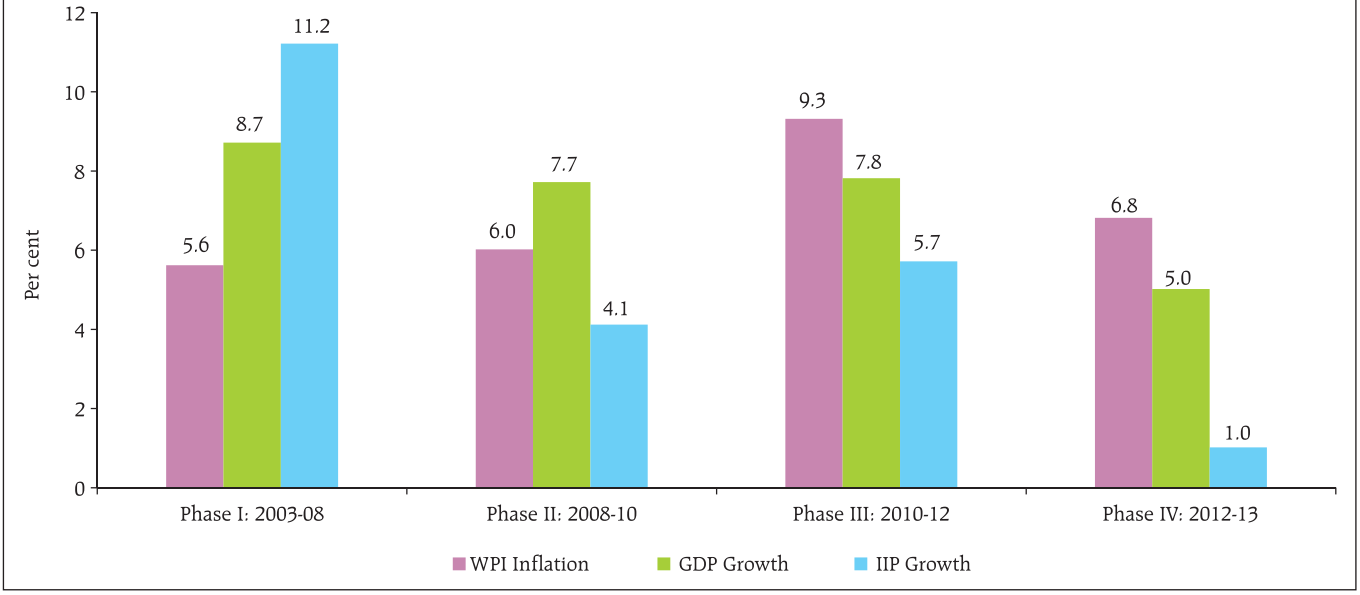
(y-o-y growth in per cent)

	2003-08	2008-10	2010-12	2012-13	2013-14 Q1
GDP Growth					
• Average of Annual Growth	8.7	7.7	7.8	5.0	..
• Quarterly Range					
• Max	11.3	11.2	10.1	5.4	..
• Min	5.3	3.5	5.1	4.7	..
WPI Inflation					
• Monthly Average	5.5	6.0	9.3	7.4	4.7
• Monthly Range					
• Max	8.5	11.1	10.9	8.1	4.9
• Min	3.2	-0.4	7.2	5.7	4.6
Policy Repo Rate (per cent)					
• Period Range					
• High	9.00*	9.00*	8.50	8.50	7.50
• Low	6.00	4.75	5.00	7.50	7.25

..: Not Available
*:In July 2008 - prior to the spill over of global crisis to India.

The challenge of rebalancing growth and inflation is evident from the four phases of growth-inflation presented in Table 1 and Chart 1. In the first phase, high growth coincided with low inflation. However, towards the latter part of the period as inflationary pressures rose it warranted monetary tightening. In the second phase, reflecting the impact of global financial crisis, growth decelerated and weak commodity prices globally and relatively stable exchange rate contained inflation. That created the space for monetary easing. In the third phase, India recovered ahead of the global economy, and actual growth in 2010-11 at 9.3 per cent exceeded significantly the post-crisis estimated

Chart 1: Recent fall in output growth is accompanied by deceleration in industrial growth



potential growth of 7.5-8.0 per cent. With a sharp recovery in growth, inflation too caught up rapidly, partly complicated by a rebound in global commodity prices. The anti-inflationary thrust of monetary policy became unavoidable to contain inflation and anchor inflationary expectations.

In the fourth phase, softening of inflation created space for monetary easing. However, growth is yet to pick up reflecting both weak global demand, domestic supply constraints and slowdown in corporate investment. In this context, the role of monetary policy has also come to the fore: the question being to what extent monetary policy has played a role in the growth slowdown? Let me try to address this issue.

Monetary policy transmission

While there is considerable attention even to small changes in policy interest rate, the question is: does this really matter? The response to this question lies in an assessment of how the change in the policy rate affects market rates, particularly the cost of credit, and ultimately impacts the investment and consumption decisions of economic entities. Apart from market rates, expectations about future outcomes play an important role. There could also be transmission lags. Moreover, the magnitude of change in market interest rates may be different, ranging from money market rates to lending rates.

While policy rate changes do matter, it is not that straight forward as to how they impact lending rates in the transmission chain. In this context, how policy rate changes, impact bank deposit rates become important as banks rely on cost plus pricing of their loan products. Apart from cost of deposits, banks also load a risk premium which may change in different phases of the business cycle, and therefore, the lags could be longer. Hence, how fast the banks are able to change these parameters would largely determine the changes in their lending rates. Thus, nominal lending rate determination in the market is a complex process, and how changes in lending rates impact overall growth is even more uncertain. This is the reason why monetary policy transmission is often dubbed as a "black box".[2] Hence, explaining monetary transmission is a constant challenge for every central bank.

Let me now turn to the issue of transmission of monetary policy in India. In the last few years, there have been several empirical studies, examining the interest rate channel of monetary transmission. The general conclusion from these studies is that increases in policy rate have a statistically significant negative impact on output and moderating impact on inflation. However, the negative effect of a policy rate increase is first felt on output before the moderating impact on inflation. The lags in policy rate changes on output are 2-3 quarters and on inflation 3-4 quarters. The total impact on policy change could, however, linger for 8-10 quarters[3].

A notable feature of monetary policy transmission in India is the asymmetry one observes during different phases of a monetary policy cycle. Usually, during a phase of rising policy rate, banks may be quick in raising their lending rates while in a phase of falling policy rate, banks may be slow in reducing their lending rates as cost of deposits does not adjust commensurately given the fixed nature of deposit contracts. This pattern reflects that loans, being mostly at variable rates, can be re-priced at a quicker pace than the fixed rate bank deposits.

The asymmetric transmission also needs to be seen in relation to overall liquidity conditions. For example, in a tight liquidity condition, even if the policy rate is reduced banks may not be in a position

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[2] Bernanke, Ben and Alan Blinder (1995), "Inside the Black Box: The Credit Channel of Monetary Transmission", *Journal of Economic Perspectives*, 9, 27 – 48.

[3] Please see, Mohanty, Deepak (2012), 'Evidence of Interest Rate Channel of Monetary Policy Transmission in India', *RBI Working Paper Series WPS (DEPR) : 6/2012*, May and Michael Debabrata Patra and Muneesh Kapur (2010), "A Monetary Policy Model Without Money for India", *IMF Working Paper*WP/10/183.

to reduce deposit rates and hence lending rates with the apprehension of losing deposits. There could be other considerations for not lowering deposit rates if rates of return in competing products such as small savings and mutual funds are more attractive. Another consideration in a falling interest rate scenario could be that banks might want to protect their profit margin through a more sluggish adjustment of their lending rates.

Notwithstanding various complexities, the interest rate channel of monetary transmission has been evident over the monetary policy cycles in the recent years. The policy interest rate changes did impact the market interest rate in the same direction, though at varying intensity. The magnitude of changes in lending rates, however, more closely followed the changes in deposit rates (Table 2).

Table 2: Transmission to the money market rates was much faster than to lending rates

Items	Variation (percentage points)			
	Tightening Phase	Easing Phase	Tightening Phase	Easing Phase
	Phase I	Phase II	Phase III	Phase IV*
Policy Rate (Repo Rate)	3.00	-4.25	3.75	-1.25
Cash Reserve Ratio	1.75	-0.75	-1.00@	-0.75
Call Rate	5.58	-7.19	5.66	-1.93
CBLO Rate	2.71	-4.57	5.29	-1.34
Market Repo Rate	3.37	-5.08	5.37	-1.52
3-Month CP Rate	8.19	-7.85	5.51	-3.11
3-Month CD Rate	2.02	-7.54	5.58	-2.95
5-Year Corporate Debt Yield	4.95	-3.49	0.86	-0.92
10-Year Corporate Debt Yield	6.70	-6.25	3.16	-1.11
5-Year G-Sec Yield	1.23	-0.36	0.92	-0.94
10- Year G-Sec Yield	0.72	0.07	0.44	-1.02
Modal Deposit Rate	2.38	-2.38	2.42	-0.16
Modal BPLR/Base Rate #	3.00	-2.00	2.75	-0.50

: Base Rate since July 1, 2010.
Phase I : Oct 26, 2005 to Oct 19, 2008
Phase II : Oct 20, 2008 to Mar 18, 2010
Phase III : Mar 19, 2010 to Apr 16, 2012
Phase IV : Apr 17, 2012 to Jun 30, 2013
@ : CRR was cut to create the desirable liquidity conditions ahead of the repo rate cuts in Phase-IV.
* : Post July 15, 2013 period is not included when market interest rates responded to monetary measures aimed at addressing exchange rate volatility.

Nominal or real interest rate?

Another aspect of monetary transmission is whether it is the nominal interest rate or the real interest rate that can influence growth and investment. In the literature, the stance of monetary policy is judged as loose or tight depending on the level of real policy rate. Most economists believe that it is the real interest rate that could influence real economic activity.[4] However, as individuals and corporates we take economic decisions looking at the nominal rates as these are the rates that we can observe. Is it that these are two distinct concepts? I do not think so. Notwithstanding apparent differences, is it not that at the back of our mind there is inflation metric while planning an investment project, howsoever different it may be for different entities? Is it not a fact that a negative real interest rate favours debtors whereas a positive interest rate favours creditors?

The link between the real interest rate and nominal interest rate is provided by the famous Fisher equation which postulates that the nominal interest rate is the sum total of a real interest rate and expected inflation.[5] One implication of this is that the nominal interest rates should move in tandem with inflation. In the real world, nominal interest rates may not change one for one with the inflation rate but the direction more often is similar. Countries with higher inflation tend to have higher nominal interest rates than countries with lower inflation. Accordingly, the nominal interest rates in advanced countries tend to be lower than in emerging market and developing countries.

While the notion of a real interest rate poses conceptual difficulties, the compilation of a real lending rate is even more difficult. It involves two steps: first to compute an effective nominal lending

[4] Taylor, P. Mark (1999). "Real interest rates and macroeconomic activity", *Oxford Review of Economic Policy*, 15, 2, 95-113.

[5] $i = r + \pi$; where 'i' is nominal interest rate, 'r' is real interest rate and 'π' is the inflation rate. Fisher, Irving (1930), *The Theory of Interest*, (New York: Macmillan).

Chart 2: While nominal effective lending rates remained sticky, real rates declined because of increase in inflation

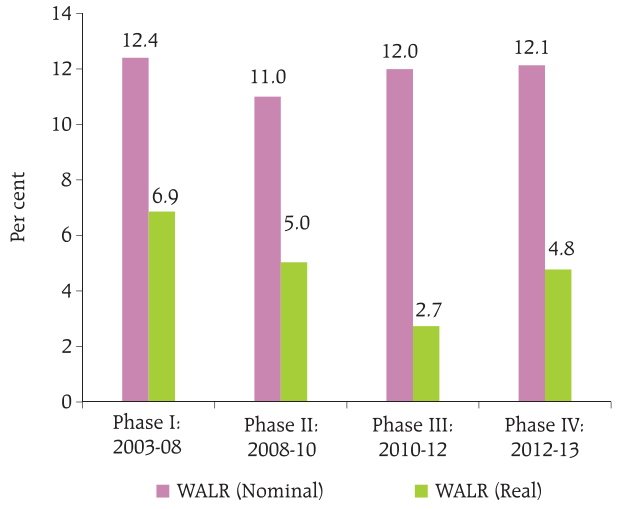


Chart 3: Decline in corporate sales growth accentuated interest rate burden

rate, and second to deflate it with an appropriate inflation metric. In our context, while the base rates of banks generally provide the floor to their lending rates actual borrower specific lending rates are different. Estimates of weighted average lending rate (WALR) of banks both in nominal and real terms are presented in Chart 2. The real rates are obtained by deflating the nominal rates by the annual average wholesale price inflation.

During the period of the high growth phase of 2003-08, WALR of all scheduled commercial banks stood at 12.4 per cent, which dropped to 11.0 per cent during the crisis period of 2008-10. Subsequently, it went up and has remained around 12 per cent thereafter (Chart 3). WALR in real terms declined sharply from 6.9 per cent in the high growth phase of 2003-08 to 5.0 per cent in the crises period of 2008-10. It fell further to 2.7 per cent during 2010-12 period and then went up to 4.8 per cent in the subsequent period. Despite stickiness in the nominal interest rate, the reduction in the real rate was higher as inflation on an average turned out to be higher. However, in 2012-13 as inflation showed a significant moderation the real lending rate has risen.

Why did the investment growth slacken despite moderation in real lending rates? In this context, let me now turn to micro-level corporate finance data of a fairly large diversified sample.[6] The analysis shows that interest cost as a ratio of sales went up from 2.6 per cent in the high growth phase of 2003-08 to over 3 per cent during the crisis period of 2008-10. However, during this period the average sales growth declined from about 21 per cent per annum to 15.7 per cent. Following subsequent recovery to 19.5 per cent per annum, it has plummeted to 9.5 per cent in 2012-13. Consequently interest cost to sales ratio rose to 3.8 per cent. It will thus seem that deceleration in sales growth has accentuated the interest burden on the corporates at the micro level.

The Reserve Bank study I cited earlier suggests that for 100 basis point increase in real interest rate, investment rate may decline by 50 basis points and real GDP growth may moderate by 20 basis points. As indeed the real interest rate has moderated in the post-crisis period, it should not have had a large

[6] Various RBI studies on quarterly corporate performance based on over 2500 listed companies in manufacturing and services.

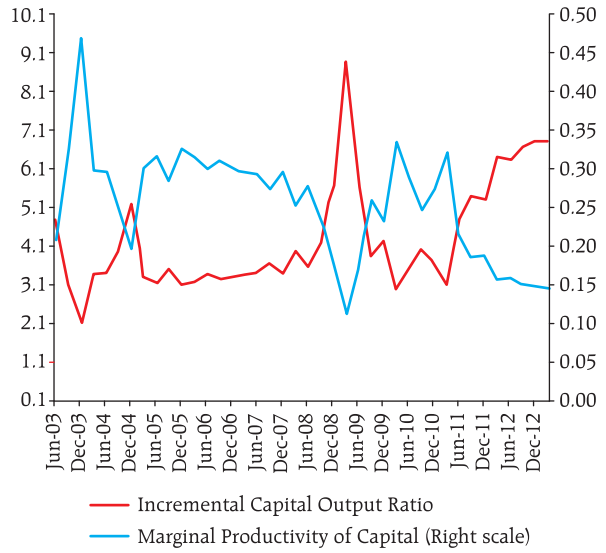
negative impact on investment, but for significant deterioration in the prospects of return on investment driven by non-monetary factors.

Decline in Marginal Efficiency of Capital

In this context, let me turn to the investment decision at the firm level. This is an area in where you are better informed than me. At the firm level, investment decisions may be driven by a comparison of the internal rate of return (IRR) with the hurdle rate.[7] As long as interest rate is lower than IRR, additional investment may continue. While IRR is seen in nominal terms, marginal efficiency of capital (MEC) which is measured in real terms plays an important role. In a phase of sustained slowdown in economic growth, non-monetary factors may lower MEC faster than the extent to which interest rate may decline. As a result, despite a lower interest rate, investment may not pick up. The fall in IRR could be driven by adverse shocks to cash flows and deterioration in macroeconomic conditions.

At the macroeconomic level supply bottlenecks and sluggish demand can depress MEC, which can more than offset the beneficial impact of a lower lending rate on investment and growth. The incremental capital output ratio (ICOR) has been rising in India in the last four years since 2008-09. The implicit marginal productivity of capital (MPC), which is the inverse of ICOR, accordingly has been declining (Chart 4).

Chart 4: Marginal productivity of capital has declined significantly in recent period



Conclusion

Let me conclude. The Reserve Bank has been traversing a growth-inflation knife edge in recent years. The sluggish growth conditions in the last two years and the dampened investment activities warranted a shift in the stance of monetary policy. The extent of monetary policy easing, however, has been circumscribed by the persisting risks to inflation and the external balance position. Price stability and exchange rate stability are necessary preconditions to sustainable high growth. Furthermore, when non-monetary factors are impeding a robust revival in growth, lower real or nominal interest rates may not be just enough to stimulate growth.

[7] The IRR is that rate of discount which would equate discounted present value of expected return over the life time of a project to the cost of the project, thereby making the NPV (net present value) of the project equal to zero.

*Statistics and the Reserve Bank of India**

Deepak Mohanty

Governor Dr. Subbarao, Prof. Bimal Roy, Prof. Richard Smith, Prof. B. L. S. Prakasa Rao, Prof. Subhashis Ghoshal, Deputy Governor Dr. Patel, Deputy Governors, colleague Executive Directors, Shri A. B. Chakraborty, distinguished guests from the financial sector and academia, members of the press, colleagues from the Department of Statistics and Information Management and friends. I extend a warm welcome to all of you to this 7th Statistics Day Conference.

Since 2007, we in the Reserve Bank have been celebrating Statistics Day in the honour of Prof. P. C. Mahalanobis. Professor Mahalanobis was not only an outstanding statistician, but a great visionary. He is regarded as the father of the Indian statistical system. While we honour the sterling contribution of Prof. Mahalnobis, this event has turned out to be an important occasion for focusing on further development of statistics in the Reserve Bank.

Prof. Mahalanobis was the founder director of the Indian Statistical Institute (ISI). We are happy that two ISI Directors – Prof. Bimal Roy and Prof. B. L. S. Prakasa Rao – are here with us today. Prof. Mahalanobis studied and spent his early years in Cambridge. We are delighted that Prof. Smith, a leading econometrician from Cambridge is with us today. We also have with us Prof. Ghoshal from North Carolina University who represents the new generation of statisticians. I once again welcome our guest speakers.

The year 2013 has added significance for statistics as it has been declared as the International Year of Statistics. Primary objectives of this worldwide event, supported by several organisations, are to increase public awareness of the power and impact of statistics on all aspects of society, to nurture statistics as a profession, especially among young people, and to promote creativity and development in the sciences of probability and statistics.

In the Reserve Bank, we treat statistics as a public good. It is necessary not only to aid our decision making but also for empowerment of citizens. Our statistics department is playing an important role by making available macro-financial statistics in the public domain, conducting forward looking surveys and generating forecasts of macroeconomic variables for supporting monetary policy making. The department is also providing statistical support to other functions of the Bank.

In the wake of the recent financial crisis, there is renewed focus on availability of information and statistical gaps globally. The department is actively engaged with other international bodies such as the IMF, G20, BIS and FSB in strengthening our financial statistics and adopting international best practice.

Notwithstanding various achievements, there are challenges. I take this opportunity to focus on three of those:

- How to make the best use of granular data from banks?
- How to enhance the scope and coverage of corporate finance statistics?
- How to further develop asset price statistics?

First, the requirement of disaggregated granular banking data on a more frequent basis for policy and research has increased. For example, we have been compiling account level data on deposit, credit and interest rates on an annual basis through Basic Statistical Returns (BSRs). These data are an important source for understanding monetary transmission. Hence, there is a need to obtain these data on a higher frequency, at least on a quarterly basis, electronically from the banks' source systems. Moreover, data on similar items obtained through various statistical returns show significant differences. Hence, there is

* Remarks by Shri Deepak Mohanty, Executive Director, Reserve Bank of India at the Statistics Day Conference, Mumbai, August 30, 2013.

need to harmonise data definition across various returns submitted to different departments of the Bank. This will require a close coordination between statisticians and regulatory departments to identify, harmonise and mitigate data gaps.

On the part of the banks, implementation of core banking solution has created the potential for banks to provide granular data electronically, both for statistical and supervisory purposes, directly from their source systems. It is important for reporting entities to adopt straight through processing without manual intervention so as to maintain data integrity. This will also help rationalisation of various returns thereby reducing the reporting burden on banks. Of course, as granularity increases data size becomes large. I am happy to note that today we have two special talks on *big data* which will have practical relevance for our data analysis.

Second, the Reserve Bank is compiling data on corporate finance such as production, sales and profitability. These data are also used to generate corporate saving and investment at the national level. From a financial stability perspective, the corporate balance sheet data are important for assessing risk parameters such as leverage and unhedged foreign currency borrowings. Corporate performance data is also important to understand the micro foundation of pricing power and hence inflation dynamics. There is, therefore, a need to expand our sample size and the coverage of financial details. We should also establish links with Ministry of Corporate Affairs (MCA) database to improve our coverage of corporate statistics.

Third, asset prices, particularly house prices are assuming greater importance in monetary transmission. While development of housing finance in advanced countries has a long history, the expansion of housing finance by the formal financial sector in India is of relatively recent origin. Keeping in view the demand-supply gap, our favourable demography, increasing urbanisation and growth prospects, the demand for housing finance will continue to grow. At the same time risks also arise to household and bank balance sheets with fluctuation in prices and changes in the business cycle. Hence, there is a need for developing a data base on housing finance.

Availability of statistics on housing finance has been limited. We have two publicly available house price indices (HPIs): (i) NHB-Residex compiled on survey based information for 20 cities, and (ii) RBI-HPI based on registration prices information for 9 cities. However, to assess the impact of house prices on the broader economy such information as loan to value (LTV) ratio, equated monthly instalment (EMI) to income ratio, price to income ratio, borrowers' characteristics and other important attributes of the property dealings becomes important. Recently the department has launched a new statistical survey to capture such information based on housing loan transaction as available with banks and housing finance companies (HFCs). I hope this survey can be placed in public domain quickly after it is examined by our technical advisory committee on surveys.

On this occasion of the Statistics Day, I congratulate colleagues from the statistics department for the good work they are doing. I once again extend a hearty welcome to all our speakers and all our invitees, and look forward to the intellectual fare ahead.

Thank you.

ARTICLES

*Corporate Investment: Growth in 2012-13 and Prospects for 2013-14**

The article captures capital expenditure (investment in fixed assets) intentions of the companies in private and joint business sector in order to assess broadly the short-term changes in business sentiment. The analysis is based on envisaged cost of projects for which funds are raised from banks/FIs or through External Commercial Borrowings (ECB) or domestic equity issues. In all, 969 companies were found to have made investment plans during 2012-13 at an aggregate cost of ₹2,634 billion as compared with investment plans of ₹2,509 billion by 1,127 companies in 2011-12. Of these, the number of projects assisted by banks/FIs came down to 425 (aggregate cost ₹1,963 billion) in 2012-13 from 668 projects (aggregate cost ₹2,120 billion) in 2011-12. However, 32 such projects were cancelled/modified during the current year and the cost of projects still under implementation has been revised to ₹1,916 billion.

The investment plan in 2012-13 was led by high value projects (projects with cost more than ₹50 billion & above) envisaged in power, metal & metal products and telecom industries. Further, the time phasing details of the investment intentions of these companies indicate investments to the tune of ₹2,919 billion in 2012-13, which is lower by 20.8 per cent than the revised estimate for 2011-12. Further, based on the plans up to 2012-13, the capital expenditure already planned in 2013-14 aggregated to ₹1,620 billion. Thus, for matching the level of aggregate capex of 2012-13 in 2013-14, a minimum capital expenditure of around ₹1,299 billion would need to come from new investment intentions of the private corporate sector in 2013-14, which going by the assessment on date, appears to be non-achievable.

1. Introduction

A capital expenditure (or capex) is incurred when a business entity either buys fixed assets or adds value to an existing fixed asset with a useful life that extends beyond an accounting year. Capital expenditure, be it for modernisation and expansion of productive capacity of an existing business or for the development of a new business, is vital for further growth and to remain competitive in a business environment. At the macro level, a nation's economic growth is strongly correlated with rate of investment, especially in emerging economies. In India, the private corporate sector together with the household sector are the major source of investment. Thus, information on capital investment intentions of the companies in private and joint business sector help us to assess the likely short-term changes in business sentiment and provides some idea about likely investment scenario. Indian economy has been witnessing a long and strong investment cycle over last few years, which seems to have reversed in 2011-12 and has further weakened in 2012-13.

This article captures investment (*i.e.*, capital expenditure) intentions of the companies in private and joint business sector based on financing details of such investment. Further, the phasing details indicated by the companies while raising funds were analysed to capture the capital expenditure that would have been made during 2012-13. Capital expenditure envisaged from pipeline projects are also estimated for 2013-14. Finally, the article dwells on the prospects of attaining the level of capital expenditure for 2012-13, in 2013-14, based on the emerging scenario.

The article is organised in five sections. Section 2 presents the methodology, scope, coverage and the limitations. Section 3 outlines nature of new projects planned by the corporates in 2012-13. It covers all projects where funds have been raised through banks/FIs/capital markets/ECBs. However, analysis at disaggregated levels according to size-class, industrial sector, location/State and purpose has been made only for those projects that are covered by institutional assistance. Section 4 estimates capital expenditure of corporate sector likely to have been incurred during 2012-13. Based on the current economic scenario, an outlook for corporate investment during 2013-14 is presented in section 5.

* Prepared in the Corporate Studies Division of the Department of Statistics and Information Management. The previous study titled 'Corporate Investment: Growth in 2011-12 and Prospects for 2012-13' was published in the September 2012 issue of the Reserve Bank of India Bulletin.

2. The Approach – Methodology, Coverage and Limitations

In the National Accounts Statistics, investment by the private corporate sector is estimated primarily following the expenditure approach, *i.e.,* from the expenditure on construction and machinery and equipment during a year together with change in stocks and net acquisition of variables. However, these estimates are available with a considerable time lag. As an alternative, banks/FIs, which constitute the conventional source of raising funds for large-sized capital expenditure, can provide some idea about the investment plans of such corporates.

The methodology followed originates from what was proposed by Dr. C. Rangarajan in his article titled "Forecasting Capital Expenditure in the Corporate Sector" published in the December 13, 1970 issue of the 'Economic and Political Weekly'. As suggested therein, the envisaged phasing details of total project cost as mentioned in the project proposals by companies should indicate the likely level of capital expenditure (capex) in the years of their implementation. Though banks/FIs constitute the conventional source of raising funds for large-sized capital expenditure, companies are also increasingly raising funds through several other avenues such as domestic capital markets, ECBs/foreign currency convertible bonds (FCCBs), private placement of bonds/debentures and American Depository Receipts (ADRs)/Global Depository Receipts (GDRs). Thus, the coverage has been enhanced subsequently with incorporation of capex raised through domestic capital market and ECBs/FCCBs.

The study is based on comprehensive data obtained from 39 banks/FIs[1], which are usually active in project finance. This data is based on the project reports prepared by them before sanctioning financial assistance to companies. The data collected includes various details such as total envisaged capital expenditure, its phasing details together with information on industry, purpose and location of project. Projects with envisaged cost of ₹100 million & above are required to be reported by banks/FIs.

Capital spending envisaged by the companies that raised ECBs (including FCCBs) to finance their capital outlays was obtained from Form 83 submitted to the Reserve Bank by these companies while raising funds through ECBs. The details captured include purpose of the loan and the drawal schedule, which was considered as indicative of time phasing of utilisation of the funds raised through ECBs. Only those companies that indicated their primary purpose of raising ECBs as capital expenditure were included in the study. Similarly, the information on envisaged capital spending and corresponding phasing details, as indicated in prospectus of the companies issuing equity capital in domestic capital market and available with SEBI was gathered to capture investment plans of such companies. Care was taken to include a project only once if the project is financed through various sources.

However, the investment intentions of companies raising funds *exclusively* through private placements of debenture/bonds or through ADRs/GDRs could not be captured due to inadequacy of information on the end-use and the spending pattern over the years[2]. It is also presumed that no large project is entirely financed through internal accruals alone.

The validity of the assessment on corporate investment in the various years of implementation heavily rests upon the assumption that companies would adhere to the expenditure patterns outlined in the initial proposals. Thus, estimates of corporate investment presented in this article are *ex ante* and differ in scope and methodology from the *ex post* estimates of corporate fixed investment available in National Accounts Statistics (NAS)[3]. It is also observed

[1] All public sector and major private sector and foreign banks, Infrastructure Development Finance Company (IDFC), Industrial Finance Corporation of India (IFCI), Life Insurance Corporation (LIC), Power Finance Corporation (PFC), Infrastructure Leasing & Financial Services Limited (ILFSL) and Export-Import Bank of India.

[2] As per the available information, non-financial companies in private corporate sector raised funds amounting to ₹546 billion in 2012-13 (₹240 billion in 2011-12) through private placement. However, neither the proportion nor the implementation schedule of these funds allocated for capital expenditure purposes are available. Similarly, the details of end-use and expenditure pattern over years of implementation are not available for the companies (excluding banks and financial institutions) that raised funds through ADRs/GDRs to the tune of ₹10.35 billion in 2012-13 (₹27 billion in 2011-12).

[3] See also the technical note attached to "Growth of Corporate Investment: An attempt at projection for 1999-2000' published in the Monsoon 1999 issue of the Reserve Bank of India Occasional Papers for details.

that some of the projects reported by banks/FIs in one year are cancelled/modified subsequently and this poses a problem in comparability.

3. Projects Planned during 2012-13

The present study captures investment intentions of corporates covering 425 projects with an aggregate project cost of ₹1,963 billion, each with project cost of ₹100 million and above, for which assistance was sanctioned by banks/FIs in 2012-13. In addition, the study covers proposed investment of 519 companies contracting ECBs/FCCBs in 2012-13 aggregating ₹660 billion and proposed investment of ₹11 billion intended by 25 companies by issuing domestic equity during 2012-13. All together, the new investment intentions of 969 companies covered in 2012-13 aggregated to ₹2,634 billion as against the investment intentions of 1,127 companies at an aggregate cost of ₹2,509 billion captured in 2011-12.

3.1. Cost of Projects receiving Institutional Assistance was marginally higher

As against 425 projects having an outlay of ₹1,963 billion, for which institutional assistance was sanctioned by banks/FIs during 2012-13, 668 projects with aggregate cost of ₹2,120 billion were sanctioned during 2011-12 (Table 1). However, 32 such projects were cancelled during the current year, as such the cost of projects sanctioned during 2011-12 has been revised to ₹1,916 billion.

The phasing details of fresh sanctions in 2012-13 showed that about 29.9 per cent of the total proposed spending (₹587 billion) was planned to be incurred in the same year and another 26.5 per cent (₹519 billion) was to be spent in 2013-14. An amount of ₹472 billion is proposed to be spent during 2014-18. It may be noted that around 19.6 per cent of total project cost envisaged by these projects was already spent in previous years (*i.e.*, 2010-11 and 2011-12). The spending pattern has broadly remained similar over the years.

3.1.1 Industrial Pattern of Projects – Power and Metal & Metal Products had dominant share

Industry level analysis revealed that power, telecom, metal & metal products, textile, cement, construction and hotel & restaurants industries dominate investment proposals of the private corporate sector. These industries together shared 59.3 per cent to 85.3 per cent (lowest at 59.3 per cent in 2006-07 and highest at 85.3 per cent in 2012-13) of total cost of envisaged projects in various years (Annex 1).

In 2012-13, power sector accounted for 40.3 per cent of the total envisaged cost of projects while share of metal & metal products industry jumped from 16.3 per cent in 2011-12 to 27.9 per cent in 2012-13. Among other industries, share of telecom, cement and construction industries also rose in 2012-13 whereas those of textiles, chemicals & pesticide, hotel & restaurants, transport equipment and transport services witnessed decline when compared with previous year. Most of the high cost projects (₹50 billion & above) were in metal & metal products, power and telecom industries in 2012-13 (Chart 1).

Table 1 : Spending Pattern of Projects Sanctioned in 2011-12 and 2012-13

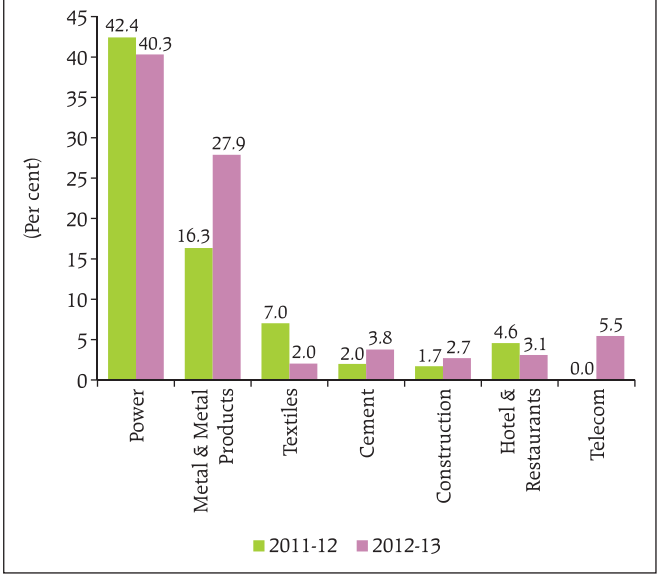
(₹ billion)

Envisaged Capital expenditure in the Year →	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Total
	1	2	3	4	5	6	7	8	9	10
Projects Sanctioned in 2011-12	Number of Projects : 636									
	57 (3.0)	230 (12.0)	669 (34.9)	554 (28.9)	282 (14.7)	95 (4.9)	29 (1.5)	- -	- -	1,916 (100.0)
Projects Sanctioned in 2012-13	Number of Projects : 425									
	- -	1 -	384 (19.6)	587 (29.9)	519 (26.5)	277 (14.1)	111 (5.6)	64 (3.3)	20 (1.0)	1,963 (100.0)

- : Nil/Negligible.

Note: Figures in the brackets denote percentage share in the total.

Chart 1: Share of Major Industries in Aggregate Cost of Institutionally Assisted Projects



3.1.2 Size-wise Pattern of Projects – Share of high-value projects increased

Institutionally assisted projects were generally of high value (projects with envisaged cost ₹10 billion & above). Their share ranged between 45.4 per cent in 2005-06 and 78.3 per cent in 2009-10. In 2012-13, share of projects with envisaged cost ₹50 billion & above increased to 44.8 per cent from 33.4 per cent in 2011-12. Over the years, share of mid-sized projects (with envisaged costs between ₹5 billion and ₹10 billion) which were sanctioned institutional assistance declined (Annex 2).

3.1.3 State-wise Pattern of Projects – Reflecting industry preference

Spatial distribution of projects tends to vary considerably from year to year reflecting industrial preference. Location of projects for a particular industry depends on many factors such as availability of raw material and skilled labour, adequacy of infrastructure, market size, growth prospects, *etc.* Furthermore, sanction of high value projects also changes the spatial pattern.

It is observed that, most of the investment proposals are undertaken in Maharashtra, Gujarat, Andhra Pradesh, Tamil Nadu and Karnataka, which are considered as industrially advanced. Share of Odisha has increased over the years due to its mineral resources. While Gujarat attracted investment proposals mainly in the industries like infrastructure, petroleum products, metal & metal products and textiles, project investments in Maharashtra has been across almost all industries with larger share coming from infrastructure (mainly power & telecom), transport services, textile and construction. States like Odisha (topped the list in 2009-10 & 2012-13), Chhattisgarh (occupied top position in 2010-11) and Madhya Pradesh became favoured destination for the industries like power and metal & metal products. Telecom Industry projects are usually well spread across a number of states resulting in higher share of multiple states (Annex 2 & 3).

Odisha, Maharashtra and Punjab together accounted for 48.4 per cent of the envisaged cost of projects for which institutional assistance was sanctioned in 2012-13. Odisha and Punjab attracted high value projects in power and metal & metal products, while projects in power and electrical equipments & electronics industries are to be based in Maharashtra. However, the share of Maharashtra in total envisaged cost of projects decreased in 2012-13 as compared to the previous year, along with Karnataka, Gujarat and Tamil Nadu (Chart 2).

Chart 2: Share of Major States in Aggregate Cost of Institutionally Assisted Projects

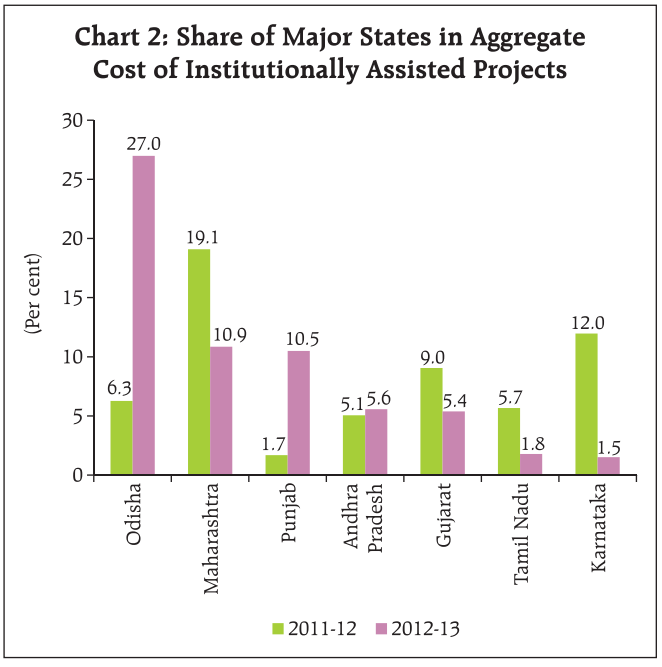


Table 2: Phasing of Capital Expenditure of Institutionally Assisted Projects by Banks/FIs

(₹ billion)

Year of sanction ↓	Project Cost in the Year of Sanction	Project Cost due to Revision/ Cancellation@	Envisaged Capital expenditure in the Year ®									
			2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Beyond 2013-14
	1	2	3	4	5	6	7	8	9	10	11	12
Upto 2004- 05			405	154	54	12	1					
2005-06	1,342	1,313 (2.2)	413	439	237	85	23	18				
2006-07	2,834	2,754 (2.8)	149	946	942	496	148	31	20			
2007-08	2,844	2,297 (19.2)	5	113	593	723	411	326	78	47		
2008-09	4,228	3,111 (26.4)		1	263	1,013	829	529	346	84	46	
2009-10	5,560	4,095 (26.3)			2	436	1,324	1,161	747	314	77	34
2010-11	4,603	3,752 (18.5)				3	286	1,071	1,046	788	464	94
2011-12	2,120	1,916 (9.6)					57	230	669	554	282	124
2012-13	1,963	-						1	384	587	519	472
Grand Total #			**972**	**1,653**	**2,091**	**2,768**	**3,079**	**3,367**	**3,290**	**2,374**	**1,388**	**724**
Percentage change				**70.1**	**26.5**	**32.4**	**11.2**	**9.4**	**-2.3**	**-27.8**	*	

#:The estimate are *ex ante*, incorporating only envisaged investment, they are different from those actually realised/utilised.
*: Per cent change for 2013-14 is not worked out as capex from proposals that are likely to be sanctioned in 2013-14 are not available.
@: Figures in bracket are percentage of cancellation of projects proposed.

3.1.4 New projects had major share in institutional assistance

The purpose-wise pattern of projects revealed that 84.1 per cent of the aggregate investment intentions in 2012-13 were for new projects, which were much higher than 70.6 per cent in the previous year. Another 14.6 per cent was proposed for expansion/modernisation of existing business (Annex 4).

3.2 Project funding through ECBs (including FCCBs) gained importance

In addition to projects to be financed by banks/ FIs, projects of 519 private sector companies were funded through ECBs/FCCBs in 2012-13. These companies mobilised funds amounting to ₹660 billion to be spent on their projects. The corresponding figure for 2011-12 was ₹379 billion mobilised by 438 companies (Table 3). Lower overseas rates might have prompted the corporates to take higher recourse to ECBs/FCCBs route in 2012-13.

3.3 Contribution of IPOs/FPOs/Right Issues in project finance remained low

During 2012-13, 26 non-government companies raised ₹12 billion through public/rights issues to fund their capital projects. Out of these 26 companies, 25 companies, which did not approach banks/FIs or contracted ECBs for part financing, raised ₹11 billion for the purpose of capex as compared with ₹10 billion raised by 21 companies in 2011-12 (Table 4).

4. Envisaged Capital Expenditure during 2012-13

4.1 Envisaged capital expenditure on projects financed by banks/FIs decreased

From the time phasing details, that reflect the investment likely to be made over the implementation period of the projects, the total envisaged capital expenditure in a year is estimated. In other words, the likely investment of private corporate sector in a given year may be broadly gauged by suitably aggregating envisaged capital expenditure intended by companies on projects that were sanctioned assistance in various years up to that year.

To the extent possible, information on revisions/ cancellations of the projects sanctioned in earlier period was incorporated to update the database. In case, where a company approached more than one institution for project funding, care was taken to include it only once. The data consolidated on these lines, are presented in

Table 3: Phasing of Capital Expenditure of Projects Funded Through ECBs/FCCBs*

Loans contracted in	No of Companies	Total loan contracted	Envisaged drawal schedule of capital expenditure (₹ billion)									
			2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Beyond 2013-14
	1	2	3	4	5	6	7	8	9	10	11	12
Upto 2004-05	556	298	47	16	10							
2005-06	365	285	173	93	9	10	2					
2006-07	480	513		350	95	44	7					
2007-08	302	331			259	143	9					
2008-09	272	312				220	121	1				
2009-10	255	324					148	143	22	2		
2010-11	302	316						174	109	27	5	
2011-12	438	379							252	128	19	1
2012-13	519	660								378	203	76
Total	**3,489**	**3,418**	**220**	**459**	**373**	**417**	**288**	**318**	**383**	**535**	**227**	**77**

*: Projects which did not receive assistance from banks/FIs.

Table 2. When horizontally read, it shows the capital expenditure that was expected to take place in various years on the projects sanctioned in a particular year. Vertically read, it gives the capital expenditure that would be incurred in a year on projects, for which institutional assistance was sanctioned either in that year or in the previous years.

It is observed from Table 2 that capital expenditure of ₹1,787 billion would have been made during 2012-13 on the projects for which institutional assistance was sanctioned prior to 2012-13. The fresh projects sanctioned during 2012-13 envisaged capital expenditure of ₹587 billion in 2012-13. Thus, the total capital expenditure that would have been incurred during 2012-13 on projects which were financed by banks/FIs amounted to ₹2,374 billion (grand total under column 10) reflecting a decline of 27.8 per cent as compared with the last year.

4.2 Envisaged capital expenditure on projects funded through ECBs (including FCCBs) increased

Based on available information from drawal schedules of ECBs, it is estimated that during 2012-13 companies would have incurred capital expenditure of ₹535 billion (total under column 10 in Table 3), Compared to 2011-12, a growth of 39.7 per cent has been observed in 2012-13.

Table 4: Phasing of Capital Expenditure of Projects Funded Through Equity Issues*

Equity issued during	No of Companies	Capex Envisaged	Implementation Schedule (₹ billion)							
			2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Beyond 2013-14
	1	2	3	4	5	6	7	8	9	10
2006-07	101	151	57	37	2					
2007-08	57	54	29	14	3					
2008-09	21	9	2	6	1					
2009-10	19	17		1	8	7	1			
2010-11	30	21			1	12	6	2		
2011-12	21	10				2	5	3		
2012-13	25	11						5	5	1
Total	**274**	**274**	**88**	**58**	**15**	**21**	**12**	**10**	**5**	**1**

*: Projects which did not receive assistance from banks/FIs/ECBs/FCCBs.

4.3 Envisaged capital expenditure on projects funded through IPOs/FPOs/Right Issues remained flat

Based on data of companies that raised funds through IPOs/FPOs/Right Issues to part finance their capital projects, it is estimated that a further amount of ₹10 billion would have been spent on capital expenditure in 2012-13 (total under column 8 of Table 4). Capex through this route is not receiving favour in recent years.

4.4. Envisaged capital expenditure in aggregate declined

Aggregating the figures in para 4.1 to 4.3 above, it is estimated that during 2012-13 capital expenditure of ₹2,919 billion would have been incurred by the companies covered in this study. Of this, ₹970 billion was envisaged by 969 new projects added in the database in 2012-13 itself. Compared with 2011-12, this showed a decline of 20.8 per cent. It was the second consecutive year when envisaged capital expenditure declined.

5. Outlook on Investment for 2013-14 remains subdued

GDP growth at constant prices at 5.0 per cent in 2012-13 moderated from 6.2 per cent in 2011-12. Further, the growth rates progressively declined over the four quarters of the year. Index of Industrial production also showed decelerated growth in 2012-13. It was prominent for manufacturing, particularly the capital goods sector. As regards the financial performance of the non-financial private corporate sector, the sales growth decelerated for six successive quarters and reached the lowest since Q2:2009-10. The continued moderation in corporate investment intentions in 2012-13 may be attributed to the above developments.

Demand conditions continue to be a major factor driving investment intentions. The Reserve Bank of India, in its First Quarter Review of 2013-14 of Monetary Policy Statement placed the baseline projection of real GDP growth at 5.5 per cent in 2013-14, which does not indicate much improvement in the demand conditions. Performance of the capital goods sector, which acts as a barometer for investment climate, has also remained poor. WPI inflation for 2013-14 is also expected to be range bound around 5.0 per cent and this may inhibit significant reduction in interest costs faced by the corporates. While the Government has initiated some steps in the recent past to improve investment climate, results are yet to be visible. Thus, the investment outlook for 2013-14 remains subdued.

According to CMIE, investment proposals to create new capacities, which declined sharply in 2012-13, have further tapered off in the first quarter of 2013-14. Additionally, projects involving large amounts are getting stalled due to policy bottlenecks.

However, in a CEOs' Survey conducted by the Confederation of Indian Industry (CII) amongst 75 National Council members, 44 per cent of the respondents envisaged an increase in their domestic investment during the current fiscal and another 37 per cent of the respondents did not see a decline in their investment level in the current year.

As per the methodology indicated in this article, envisaged capital expenditure in 2013-14 would be the summation of pipeline investment intentions of the projects, which were taken up prior to 2013-14 and the new capital spending proposals expected to come up in the year 2013-14. The capital expenditure already planned to be spent in 2013-14 aggregated to ₹1,620 billion (financed by banks/FIs: ₹1,388 billion, ECBs/FCCBs: ₹227 billion and domestic equity issuance: ₹5 billion) (Tables 2, 3 & 4). Even if companies adhere to their investment plan, to match the capex envisaged in 2012-13 (*i.e.,* ₹2,919 billion), the minimum capital expenditure of around ₹1,299 billion needs to come from the new investment intentions by the private corporate sector in 2013-14. Going by the assessment on date, capital expenditure of the above order does not appear to be feasible. Thus, the envisaged investment by the private corporate sector in 2013-14 is expected to be lower than that in the previous year. The problem has been compounded by large projects in sectors like power and telecom getting stalled over last few years, which may lower the capital expenditure in pipeline. Removing the policy bottlenecks may re-ignite the investment scenario.

Annex 1: Industry-wise Distribution of Institutionally Assisted Projects: 2003-04 to 2012-13

Industry	2003-04		2004-05		2005-06		2006-07		2007-08		2008-09		2009-10		2010-11		2011-12		2012-13	
	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share
Infrastructure	53	53.6	76	33.3	109	33.9	123	36.5	124	39.4	97	45.1	100	48.9	120	53.7	107	47.4	88	49.2
i) Power	31	7.5	60	13.2	66	26.9	62	18.3	60	29.4	54	27.9	75	30.7	104	46.2	82	42.4	75	40.3
ii) Telecom	4	41.9	4	16.9	5	2.0	9	6.5	7	1.6	6	10.9	6	16.4	2	5.7	1	-	2	5.5
iii) Ports & Airports	3	2.0	4	1.7	3	1.8	7	3.9	6	0.9	4	2.8	2	0.3	1	0.7	1	1.3	2	2.5
iv) Storage& Water Management	11	2.1	8	1.6	13	1.0	5	4.6	4	2.1	2	-	2	0.9	1	-	12	0.5	-	-
v) SEZ, Industrial, Biotech and IT Park	-	-	-	-	13	1.4	37	3.1	47	5.4	28	3.2	15	0.6	12	1.1	11	3.2	9	1.0
vi) Roads & Bridges	4	0.2	-	-	9	0.8	3	0.1	-	-	3	0.1	-	-	-	-	-	-	-	-
Food Products	32	0.8	47	1.9	31	0.9	38	0.9	41	0.7	50	1.0	41	0.5	39	0.7	41	1.5	37	1.0
Sugar	8	0.6	14	0.8	20	2.2	33	3.2	16	1.3	21	1.2	21	0.8	21	0.8	12	1.1	5	0.4
Textiles	103	5.4	126	7.9	158	10.8	255	9.2	116	4.5	45	1.2	77	2.2	77	2.9	94	7.0	32	2.0
Petroleum Products	-	-	-	-	2	0.8	10	14.3	5	7.5	4	0.1	2	1.3	3	2.6	3	1.2	-	-
Chemicals& Pesticides	23	1.6	16	1.9	26	2.3	35	1.5	25	1.0	27	1.7	28	0.8	27	1.3	17	3.5	19	1.1
Glass & Pottery	14	0.5	10	1.2	10	0.8	9	0.3	9	0.4	6	0.3	9	0.2	6	0.4	10	1.3	3	-
Cement	10	2.4	14	3.9	13	1.5	26	3.7	24	5.9	28	6.0	29	2.8	14	2.4	9	2.0	11	3.8
Metal & Metal Products	104	18.2	141	29.1	126	16.6	130	14.5	122	15.6	97	17.7	134	18.1	113	21.1	73	16.3	51	27.9
Electrical Equipment	12	1.3	12	1.1	17	0.6	22	0.4	26	0.9	17	1.3	16	0.2	24	2.0	12	0.3	10	1.8
Transport Equipment & Parts	15	1.4	25	1.4	13	0.8	29	1.9	38	3.5	30	3.0	25	1.3	28	0.8	26	2.6	17	0.9
Construction	8	0.6	8	0.3	33	3.6	33	3.2	38	3.9	30	10.8	20	11.5	18	3.3	22	1.7	20	2.7
Hotel & Restaurants	21	2.1	20	2.4	37	3.4	74	4.0	51	3.9	57	2.8	56	2.6	63	3.5	51	4.6	32	3.1
Transport Services	13	1.0	22	2.7	21	12.9	17	0.6	17	1.4	14	1.0	22	1.4	14	0.6	19	2.7	17	1.7
Hospitals	11	1.0	13	0.9	14	0.8	21	0.5	27	1.3	16	0.5	23	0.9	22	0.6	9	0.3	17	1.4
Entertainment	14	1.3	10	0.9	9	1.4	20	0.3	10	0.5	19	1.2	12	1.1	5	0.8	9	1.3	7	0.2
Others*	146	8.1	166	10.3	173	6.7	170	5.1	179	8.3	150	5.3	114	5.5	103	2.5	122	5.0	59	2.7
Total	**587**	**100.0**	**720**	**100.0**	**812**	**100.0**	**1045**	**100.0**	**868**	**100.0**	**708**	**100.0**	**729**	**100.0**	**697**	**100.0**	**636**	**100.0**	**425**	**100.0**
Total Cost of Projects (₹ in Billion)	**685**		**939**		**1,313**		**2,754**		**2,297**		**3,111**		**4,095**		**3,752**		**1,916**		**1,963**	

*: Comprise industries each with a share of less than 1 per cent in total cost of projects. - : Nil/Negligible.

Annex 2: Size-wise Distribution of Projects and their Envisaged Cost during 2003-04 to 2012-13

Period		Less than ₹1 billion	₹1 billion to ₹5 billion	₹5 billion to ₹10 billion	₹10 billion to ₹50 billion	₹50 billion & above	TOTAL
2003-04	No of Projects	516	55	7	6	3	**587**
	Per cent Share	18.2	16.9	6.5	13.5	44.8	**100.0 (685)***
2004-05	No of Projects	573	113	17	15	2	**720**
	Per cent Share	18.3	23.8	11.4	33.4	13.0	**100.0 (939)**
2005-06	No of Projects	596	167	23	24	2	**812**
	Per cent Share	13.0	29.9	11.7	32.2	13.2	**100.0 (1,313)**
2006-07	No of Projects	714	245	37	41	8	**1,045**
	Per cent Share	9.5	19.4	9.1	31.4	30.6	**100.0 (2,754)**
2007-08	No of Projects	558	228	35	43	4	**868**
	Per cent Share	9.3	22.5	10.7	38.3	19.3	**100.0 (2,297)**
2008-09	No of Projects	420	194	35	48	11	**708**
	Per cent Share	5.1	14.1	7.5	29.7	43.7	**100.0 (3,111)**
2009-10	No of Projects	439	189	40	39	22	**729**
	Per cent Share	3.8	11.0	6.8	20.8	57.5	**100.0 (4,095)**
2010-11	No of Projects	412	172	42	51	20	**697**
	Per cent Share	4.4	10.2	8.6	29.3	47.5	**100.0 (3,752)**
2011-12	No of Projects	420	145	36	26	9	**636**
	Per cent Share	8.3	17.0	13.7	27.6	33.4	**100.0 (1,916)**
2012-13	No of Projects	245	125	22	26	7	**425**
	Per cent Share	4.7	14.7	8.0	27.9	44.8	**100.0 (1,963)**

*: Figures in brackets are total cost of Projects in ₹ billion.

Annex 3: State-wise Distribution of Institutionally Assisted Projects: 2003-04 to 2012-13

	2003-04		2004-05		2005-06		2006-07		2007-08		2008-09		2009-10		2010-11		2011-12		2012-13	
State	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share	Number of Projects	Per cent Share
Odisha	19	2.2	30	9.9	20	3.4	23	5.4	21	13.1	15	9.0	25	13.9	25	7.4	15	6.3	12	27.0
Maharashtra	69	9.9	102	10.4	121	18.9	140	8.7	141	9.7	110	18.1	117	10.0	71	7.4	86	19.1	70	10.9
Punjab	30	1.4	32	2.8	27	1.6	48	2.1	29	0.7	23	0.7	23	0.4	38	1.1	37	1.7	12	10.5
Andhra Pradesh	53	5.3	38	3.5	76	8.6	103	8.7	87	7.8	74	7.6	73	7.1	65	11.4	52	5.1	36	5.6
Gujarat	73	9.1	81	11.7	95	18.7	84	26.3	95	26.4	75	18.4	69	3.2	65	9.6	75	9.0	58	5.4
Rajasthan	47	3.3	26	1.7	27	1.9	38	3.6	22	1.2	22	0.6	23	2.9	28	0.8	49	4.9	41	5.1
Madhya Pradesh	9	2.6	19	0.8	12	1.9	23	1.8	18	0.6	20	7.2	23	4.2	21	5.2	16	5.6	14	4.4
Uttar Pradesh	39	3.7	23	1.4	50	7.9	60	3.6	41	4.2	32	3.1	27	0.4	32	4.6	42	7.8	27	4.4
Chhattisgarh	15	8.3	40	9.2	19	3.9	13	0.9	10	4.7	16	2.3	23	6.0	31	12.1	11	2.4	9	4.0
Arunachal Pradesh	-	-	-	-	-	-	-	-	-	-	1	0.1	3	3.3	1	0.2	1	0.5	2	3.9
Tamil Nadu	67	4.0	110	10.6	124	9.3	156	6.9	94	5.1	63	2.3	66	5.5	93	6.1	58	5.7	23	1.8
Karnataka	35	2.3	50	7.1	51	3.5	91	7.2	62	4.1	44	2.4	42	1.4	40	7.2	39	12.0	20	1.5
Haryana	17	0.4	21	1.5	29	1.4	42	1.4	28	1.2	24	1.1	29	2.6	35	0.8	45	1.4	19	1.2
Jharkhand	4	0.3	9	0.3	8	0.3	13	2.6	15	2.9	9	1.7	11	2.7	9	3.5	12	1.3	8	1.2
West Bengal	29	1.5	40	2.5	27	1.9	37	1.2	41	2.6	43	3.0	33	2.6	29	3.3	19	4.9	13	0.9
Uttarakhand	-	-	10	0.6	24	2.3	31	2.0	27	0.7	19	0.8	23	0.7	10	0.1	7	1.4	5	0.6
Delhi	19	4.6	12	1.6	24	1.6	19	2.3	19	1.4	13	0.7	10	1.3	9	0.7	9	1.3	4	0.5
Bihar	1	0.1	1	-	4	-	2	-	3	0.1	-	-	1	-	3	0.1	3	4.0	7	0.1
Multiple#	14	39.1	33	20.1	29	4.4	46	9.2	61	10.3	55	19.0	45	29.0	48	16.2	34	4.5	16	8.3
Others@	47	1.8	43	4.2	45	8.6	76	6.0	54	3.2	50	1.9	63	2.8	44	2.2	26	1.5	29	2.7
Total	**587**	**100.0**	**720**	**100.0**	**812**	**100.0**	**1045**	**100.0**	**868**	**100.0**	**708**	**100.0**	**729**	**100.0**	**697**	**100.0**	**636**	**100.0**	**425**	**100.0**
Total Cost of Projects (₹ in Billion)	**685**		**939**		**1,313**		**2,754**		**2,297**		**3,111**		**4,095**		**3,752**		**1,916**		**1,963**	

#: Comprise projects over several States.
@: Comprise States/Union Territories, each with share less than one per cent in aggregate cost of projects. - : Nil/Negligible.

Annex 4: Purpose-wise Distribution of Institutionally Assisted Projects during 2003-04 to 2012-13

Period		New	Expansion & Modernisation	Diversification	Others	Total*
2003-04	No of Projects	318	228	4	37	**587**
	Per cent Share	62.7	34.5	0.1	2.6	**100.0 (685)**
2004-05	No of Projects	343	330	7	40	**720**
	Per cent Share	42.1	55.3	0.7	1.9	**100.0 (939)**
2005-06	No of Projects	393	379	6	34	**812**
	Per cent Share	58.4	37.7	0.5	3.4	**100.0 (1,313)**
2006-07	No of Projects	560	413	31	41	**1,045**
	Per cent Share	65.8	28.1	2.3	3.8	**100.0 (2,754)**
2007-08	No of Projects	478	358	7	25	**868**
	Per cent Share	63.7	35.2	0.3	0.8	**100.0 (2,297)**
2008-09	No of Projects	445	240	13	10	**708**
	Per cent Share	68.0	31.0	1.0	-	**100.0 (3,111)**
2009-10	No of Projects	464	235	11	19	**729**
	Per cent Share	65.6	23.3	1.3	9.9	**100.0 (4,095)**
2010-11	No of Projects	454	224	6	13	**697**
	Per cent Share	67.0	31.0	2.0	-	**100.0 (3,752)**
2011-12	No of Projects	449	172	5	10	**636**
	Per cent Share	70.6	23.1	0.1	6.3	**100.0 (1,916)**
2012-13	No of Projects	312	109	-	4	**425**
	Per cent Share	84.1	14.6	-	1.3	**100.0 (1,963)**

*: Figures in brackets are total cost of Projects in ₹ billion.
- : Nil/Negligible.

*Developments in India's Balance of Payments during Fourth Quarter (January-March) of 2012-13**

The data on India's Balance of Payments (BoP) are published by the Reserve Bank on a quarterly basis with a lag of one quarter. This article presents the analysis of major developments in India's BoP (i) during the fourth quarter (January-March) of 2012-13 and (ii) during 2012-13.

1. Balance of Payments during January-March (Q4) of 2012-13

Highlights

- India's current account deficit (CAD) moderated sharply to 3.6 per cent of GDP in Q4 of 2012-13 from a historically high level of 6.5 per cent of GDP in Q3 of 2012-13 as trade deficit narrowed.
- Merchandise exports (BoP basis) increased by 5.9 per cent in Q4 of 2012-13 as compared with 2.6 per cent in Q4 of 2011-12. In contrast, imports declined marginally by 1.0 per cent as against a growth of 22.6 per cent in Q4 of 2011-12, owing mainly to a decline in non-oil non-gold imports, partly reflecting a decline in domestic activity.
- As a result, trade deficit narrowed down to US$ 45.6 billion in Q4 of 2012-13 from US$ 51.6 billion in Q4 of 2011-12.
- Net invisibles, however, recorded a decline of 7.7 per cent in Q4 of 2012-13 as compared to a growth of 27.5 per cent in Q4 of 2011-12 on account of a decline in net services, transfers and income receipts.
- Net capital inflows under financial account moderated in Q4 of 2012-13 largely due to slowdown in net portfolio investment and net repayment of loans by banks and corporates. However, net capital inflows were more than adequate to finance CAD, resulting in accretion of US$ 2.7 billion to the foreign exchange reserves.

The quarter ending March 2013 witnessed some signs of recovery as India's merchandise exports increased and imports moderated, leading to narrowing down of trade deficit. There was, however, a decline in net invisible receipts owing to repayments which partly countered the positive impact of the narrowing trade deficit on CAD. The increase in capital flows, in the form of Foreign Direct Investment (FDI), External Commercial Borrowings (ECBs) and trade credit, however, could fully finance the CAD leading to an accretion of foreign exchange reserve (Table 1).

Table 1 : Major Items of India's Balance of Payments

(US$ Billion)

	Fourth Quarter Jan-Mar		Apr-Mar	
	2012-13 (P)	2011-12 (PR)	2012-13 (P)	2011-12 (PR)
1. Goods Exports	84.8	80.0	306.6	309.8
2. Goods Imports	130.4	131.7	502.2	499.5
3. Trade Balance(1-2)	**-45.6**	**-51.6**	**-195.7**	**-189.7**
4. Services Exports	37.8	37.7	145.7	140.9
5. Services Imports	20.9	20.0	80.8	76.9
6. Net Services (4-5)	**17.0**	**17.7**	**64.9**	**64.0**
7. Goods & Services Balances (3+6)	**-28.7**	**-34.0**	**-130.7**	**-125.7**
8. Primary Income, Net (Compensation of employees and Investment Income)	-5.2	-4.6	-21.5	-16.0
9. Secondary Income, Net (Private Transfers)	15.8	16.9	64.4	63.5
10. Net Income (8+9)	**10.6**	**12.3**	**42.9**	**47.5**
11. Current Account Balance (7+10)	**-18.1**	**-21.7**	**-87.8**	**-78.2**
12. Capital and Financial Account Balance, Net (Excl. change in reserves)	20.5	16.5	89.0	67.8
13. Change in Reserves (-) increase/(+)decrease	-2.7	5.7	-3.8	12.8
14. Errors & Omissions (-) (11+12+13)	0.3	-0.6	2.7	-2.4

P: Preliminary; PR: Partially Revised.

* Prepared in the Division of International Trade and Finance, Department of Economic and Policy Research, Reserve Bank of India. Time series data on BoP are available on the RBI site at www.dbie.rbi.org.in. In addition, the disaggregated quarterly data on invisibles are being released separately on the RBI site.

Goods Trade

- On BoP basis, India's merchandise exports increased by 5.9 per cent to US$ 84.8 billion in Q4 of 2012-13 as compared to a growth of 2.6 per cent (US$ 80.0 billion) in Q4 of 2011-12.
- Pick up in exports could be attributed to better performance of products like tea, leather and manufactures, plastic and linoleum products, machinery and equipments, cotton yarn fabrics and carpets.
- Destination wise, exports to European Union, OPEC countries, particularly, Iran and Kuwait, recorded a sharp increase while export demand from North America, particularly, US and countries like China and Singapore remained subdued.
- Sluggish domestic economic activity and a decline in oil and gold imports caused moderation in import demand by 1.0 per cent to US$ 130.4 billion in Q4 of 2012-13 as against a growth of 22.6 per cent in Q4 of 2011-12 at US$ 131.7 billion.
- Gold imports witnessed a moderation in Q4 of 2012-13 as average international gold price declined by 3.6 per cent to US$ 1,631 per troy ounce, from US$ 1,691 per troy ounce in Q4 of 2011-12. With the strengthening of US dollar, the role of gold as a safe haven asset seems to have weakened. Apart from that, the possibility of gold sale by some indebted euro area economies also appears to be the cause for fall in gold prices.
- There was a slowdown in POL imports as well, partially facilitated by softening of oil prices, caused by subdued global demand from advanced economies and China. During the quarter, average price of Indian oil basket was lower by 6.6 per cent over the corresponding quarter of previous year.

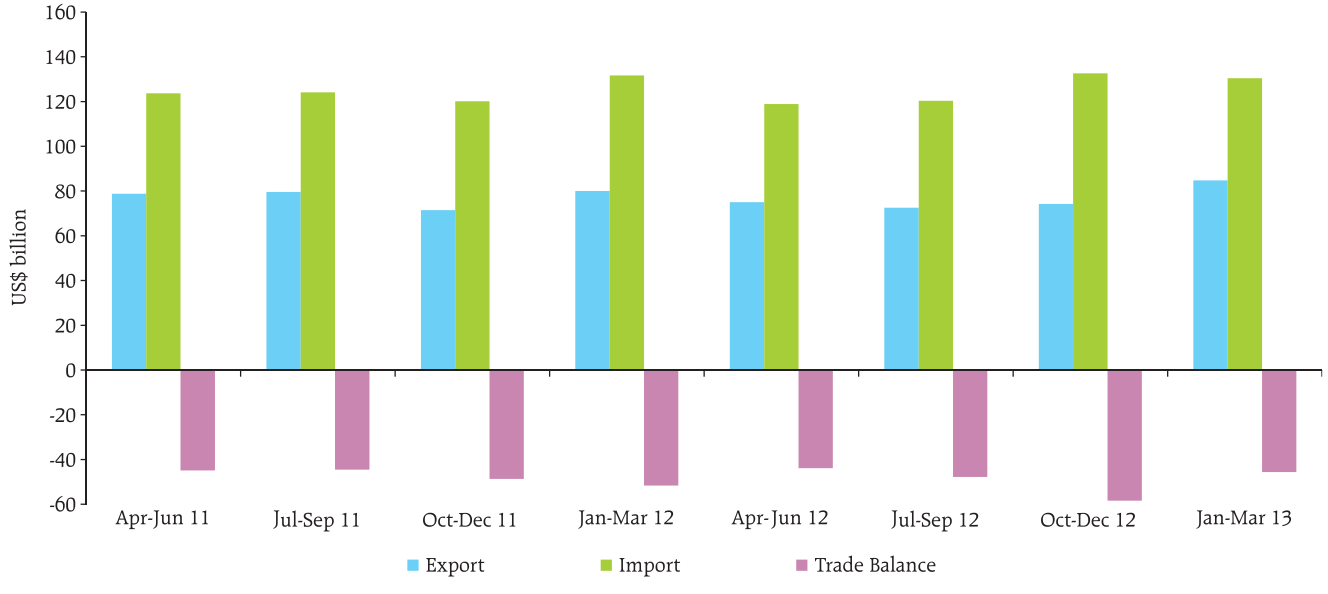
Trade Deficit

- Rise in export growth coupled with a marginal decline in imports narrowed down the trade deficit to US$ 45.6 billion in Q4 of 2012-13 (about 9.0 per cent of GDP) from US$ 51.6 billion (10.5 per cent of GDP) in Q4 of 2011-12 (Chart 1).

Services

During the quarter, net services receipts recorded a decline of 3.9 per cent at US$ 17.0 billion over the corresponding quarter of 2011-12. The decline was mainly on account of slowdown in services exports

Chart 1: Quarterly Movements in Trade Balance



coupled with a rise in the growth of services imports on a year-on-year basis.

- Services exports increased by 0.4 per cent to US$ 37.8 billion in Q4 of 2012-13 as compared to an increase of 6.8 per cent during the same quarter in the preceding year. Moderation in exports was mainly led by a decline in other business services like research and development, professional and management consulting, technical and trade related services.
- Imports of services grew at a faster rate of 4.2 per cent at US$ 20.9 billion in Q4 of 2012-13 as against a decline of 4.1 per cent in Q4 of 2011-12 on account of higher payments towards construction, telecommunication and other business services.

Income

There was a larger outflow on account of primary income amounting to US$ 5.2 billion in Q4 of 2012-13 as compared to an outflow of US$ 4.6 billion in Q4 of 2011-12 led by a decline in net investment income receipts. Net secondary income receipts also remained subdued due to a slowdown in personal remittances (Table 2).

- During Q4 of 2012-13, payments on account of investment income, comprising mainly the interest payments on the ECBs, NRI deposits and profits & reinvested earnings of FDI companies in India, grew by 12.1 per cent in Q4 of 2012-13 (decline of 4.8 per cent in Q4 of 2011-12) while investment income receipts, largely representing earning on foreign currency assets, recorded a decline of 4.5 per cent (decline of 16.6 per cent in Q4 of 2011-12). As a result, there was a net outflow of US$ 5.3 billion in Q4 of 2012-13 as compared to an outflow of US$ 4.5 billion in Q4 of 2011-12.
- Secondary income witnessed a moderation in net inflows to US$ 15.8 billion in Q4 of 2012-13 from US$ 16.9 billion in the corresponding period of 2011-12, reflecting a fall in net remittances from overseas Indians.

Table 2: Disaggregated Items of Current Account (Net)

(US$ Billion)

	Jan-Mar		Apr-Mar	
	2012-13 (P)	2011-12 (PR)	2012-13 (P)	2011-12 (PR)
1. Goods	**-45.6**	**-51.6**	**-195.7**	**-189.7**
2. Services	**17.0**	**17.7**	**64.9**	**64.0**
2.a Transport	1.1	0.4	2.5	1.8
2.b Travel	2.8	2.2	6.2	4.7
2.c Construction	-0.2	-0.1	-0.2	-0.2
2.d Insurance and pension services	0.3	0.3	0.8	1.1
2.e Financial Services	-0.1	-0.4	0.3	-2.0
2.f Charges for the use of intellectual property	-1.1	-0.9	-3.9	-2.9
2.g Telecommunications, computer and information services	17.3	16.7	64.3	60.7
2.h Personal, cultural and recreational services	0.1	0.0	0.3	0.1
2.i Government goods & services	-0.2	-0.2	-0.2	-0.3
2.j Other Business services	-0.9	-0.2	-1.9	-0.9
2.k Others *n.i.e.*	-2.1	-0.2	-3.0	1.9
3. Primary Income	**-5.2**	**-4.6**	**-21.5**	**-16.0**
3.a Compensation of Employees	0.2	0.0	0.9	0.5
3.b Investment Income	-5.3	-4.5	-22.6	-16.7
4. Secondary Income	**15.8**	**16.9**	**64.4**	**63.5**
4.a Personal Transfers	15.3	16.4	62.0	61.5
4.b. Other Transfers	0.5	0.4	2.3	2.0
5. Current Account (1+2+3+4)	**-18.1**	**-21.7**	**-87.8**	**-78.2**

P: Preliminary; PR: Partially Revised.

Current Account

Reduction in the trade deficit resulted in a significant narrowing down of CAD from US$ 31.9 billion in Q3 of 2012-13 to US$ 18.1 billion in Q4 of 2012-13 (US$ 21.7 billion in Q4 of 2011-12). As a percentage of GDP, CAD moderated sharply to 3.6 per cent of GDP in Q4 of 2012-13 from 6.5 per cent in Q3 of 2012-13 (4.4 per cent of GDP in Q4 of 2011-12) (Chart 2).

Capital and Financial Account

The capital account, which includes, *inter alia*, 'net acquisition of non-produced non-financial assets' and 'other capital receipts including migrant transfers' showed a negligible inflows on a net basis in Q4 of 2012-13. Net inflows under financial account, moderated in Q4 of 2012-13, mainly on account of a decline in net portfolio investment, non-resident deposits and net repayment of loans by banks (Table 3). Moderation in net portfolio investment mainly reflected the risk aversion strategy of foreign investors wary of India's high CAD and a subdued economic outlook. In contrast, however, FDI quadrupled in Q4 of 2012-13 over Q4 of 2011-12 owing to the recent policy measures undertaken by the Government.

- While net direct investment rose to US$ 5.7 billion in Q4 of 2012-13 from US$ 1.4 billion in Q4 of 2011-12, net portfolio investment moderated to US$ 11.3 billion in Q4 of 2012-13 from US$ 13.9 billion in the corresponding quarter of the previous year. Moderation was more prominent in debt component of portfolio flows.
- Net repayment on account of external loans availed by banks rose sharply to US$ 6.3 billion in Q4 of 2012-13 from US$ 2.6 billion in Q4 of 2011-12.
- 'Net external loans availed by non-Government and non-banking sectors', *i.e.*, net ECBs, nearly doubled to US$ 4.1 billion in Q4 of 2012-13 compared to US$ 2.3 billion in Q4 of 2011-12.
- The growing prominence of trade credit in financing imports was reflected in the increase in net inflows under 'trade credit & advances' amounting to US$ 4.5 billion in Q4 of 2012-13 as compared with US$ 0.2 billion in Q4 of 2011-12.
- Inflows under currency and deposits of commercial banks, *i.e.*, NRI deposits, decelerated to US$ 2.8 billion in Q4 of 2012-13 from the previous year's level of US$ 4.7 billion.

Chart 2: Movement in Current Account Balance

- Despite a moderation in net inflows under financial account, the inflows were sufficient to finance the CAD leading to an accretion of foreign exchange reserves by US$ 2.7 billion in Q4 as against a drawdown of US$ 5.7 billion in the corresponding quarter of 2011-12.

Balance of Payments during 2012-13

Highlights

- During 2012-13, CAD stood at US$ 87.8 billion (4.8 per cent of GDP) as against US$ 78.2 billion (4.2 per cent of GDP) during 2011-12.
- The net inflows under financial account during 2012-13 rose to US$ 85.4 billion from US$ 80.7 billion during the preceding year mainly on account of higher inflows under FII, non-resident deposits and short-term credit and advances.
- The increase in capital inflows led to an accretion to foreign exchange reserves by US$ 3.8 billion during 2012-13.

Notwithstanding an improved performance in Q4 of 2012-13, trade deficit in 2012-13 remained at an elevated level of US$ 195.7 billion on account of a decline in merchandise exports and marginal rise in imports. This coupled with decline in net invisible earnings due to higher outgo of investment income payments and only a modest rise in net services receipts led to widening of CAD. Nevertheless, higher inflows under financial account enabled full financing of CAD and led to an accretion to the foreign exchange reserves of US$ 3.8 billion.

Table 3: Disaggregated Items of Financial Account (Net)

(US$ Billion)

	Jan-Mar 2012-13 (P)	Jan-Mar 2011-12 (PR)	2012-13 (P)	2011-12 (PR)
1. Direct Investment (net)	**5.7**	**1.4**	**19.8**	**22.1**
1.a Direct Investment to India	7.2	4.2	27.0	33.0
1.b Direct Investment by India	-1.4	-2.9	-7.1	-10.9
2. Portfolio Investment	**11.3**	**13.9**	**26.7**	**16.6**
2.a Portfolio Investment in India	11.5	14.1	27.6	16.8
2.b Portfolio Investment by India	-0.2	-0.2	-0.9	-0.2
3. Other investment	**4.2**	**1.4**	**45.2**	**29.2**
3.a Other equity (ADRs/GDRs)	0.0	0.0	0.2	0.6
3.b Currency and deposits	2.8	4.6	15.3	12.1
Deposit-taking corporations, except the central bank (NRI Deposits)	2.8	4.7	14.8	11.9
3.c Loans*	-1.6	0.0	10.7	16.8
3.c.i Loans to India	-1.6	0.0	11.1	15.7
Deposit-taking corporations, except the central bank	-6.3	-2.6	1.3	4.1
General government (External Assistance)	0.6	0.3	1.3	2.5
Other sectors (External Commercial Borrowings)	4.1	2.3	8.6	9.1
3.c.ii Loans by India	0.0	0.0	-0.4	1.0
General government (External Assistance)	-0.1	0.0	-0.3	-0.2
Other sectors (ECBs)	0.1	0.0	-0.1	1.2
3.d Trade credit and advances	4.5	0.2	21.7	6.7
3.e Other accounts receivable/payable-other	-1.5	-3.3	-2.7	-6.9
4. Financial Derivatives	**-0.9**	**0.0**	**-2.3**	**0.0**
5. Reserve assets	**-2.7**	**5.7**	**-3.8**	**12.8**
Financial Account (1+2+3+4+5)	**17.6**	**22.4**	**85.4**	**80.7**

P: Preliminary; PR: Partially Revised.
*: Includes External Assistance, ECBs and Banking Capital.
Note: Due to rounding off totals may not tally.

Goods Trade

- In 2012-13, merchandise exports (on a BoP basis) recorded a decline of 1.1 per cent to US$ 306.6 billion compared to a growth of 20.9 per cent at US$ 309.8 billion in 2011-12.
- Merchandise imports, however, recorded a moderate increase of 0.5 per cent in 2012-13 at US$ 502.2 billion as compared with 30.3 per cent in 2011-12 amounting to US$ 499.5 billion, partly attributed to weakening domestic demand coupled with subdued demand for export related imports.
- At a disaggregated level, export performance remained subdued across all commodity groups which either decelerated or entered into a negative growth trajectory in 2012-13. The decline in exports was most significant in sectors like ores and minerals, manufactured goods like engineering goods, textile and textile products and labour intensive sectors like gems and jewellery and handicrafts.
- Moderation in imports was reflected across all sectors. The decline was, however, significant in sectors like petroleum, petroleum products and related material, fertilisers, iron and steel, capital goods, export related items like pearls, precious and semi precious stones, gold & silver and coal, coke and briquettes.
- During 2012-13, POL and gold imports continued to constitute nearly 45 per cent of total merchandise imports during the year. Despite a significant moderation in POL import growth from 46.2 per cent in 2011-12 to 9.3 per cent in 2012-13, oil imports remained at an elevated level of US$ 169.4 billion in 2012-13 as against US$ 155.0 billion in 2011-12. Imports of gold, however, declined to US$ 53.8 billion in 2012-13 from US$ 56.5 billion a year ago.

Trade Deficit

- Trade deficit for 2012-13 widened to US$ 195.7 billion from US$ 189.7 billion in 2011-12 owing to sharper contraction in exports relative to imports. As a proportion of GDP, trade deficit rose marginally to 10.6 per cent in 2012-13 from 10.1 per cent in 2011-12.

Services

During 2012-13, net services receipts grew at a modest rate of 1.4 per cent amounting to US$ 64.9 billion as against a growth rate of 45.3 per cent at US$ 64.0 billion in 2011-12. The subdued performance of the service sector could be attributed to moderation in services export growth coupled with a rise in services payments.

- Moderation in the growth of services receipts was mainly on account of decline in earnings under transport, travel, insurance and pension services and financial services.
- Increase in services payments, on the other hand, was led by an increase in payments on account of construction services, telecommunication and information services and other business services like research and development services, technical and trade related services.

Income

Primary Income

Primary income, comprising mainly of investment income, compensation of employees and other primary receipts, witnessed a net outflow of US$ 21.5 billion during 2012-13 as compared with a net outflow of US$16.0 billion in the previous year mainly on account of larger outflow under investment income.

- While investment income receipts declined by 12.1 per cent to US$ 6.2 billion in 2012-13 from US$ 7.1 billion in the preceding year, reflecting lower interest/discount earnings on foreign exchange reserves, investment income payments rose by 21.2 per cent to US$ 28.8 billion in 2012-13 from US$ 23.7 billion in 2011-12.
- Rise in investment income payments during this period was largely reflective of sizeable increase

Table 4: Inflows and Outflows from NRI Deposits and Local Withdrawals

(US $ Billion)

Year	Inflows	Outflows	Local Withdrawals
1	2	3	4
2010-11 (PR)	49.3	46.0	26.2
2011-12 (PR)	64.3	52.4	32.5
2012-13 (P)	65.3	50.5	32.0

P: Preliminary; PR: Partially Revised.

Table 5: Details of Private Transfers to India

(US$ Billion)

Year	Total Private Transfers	*Of which:*			
		Inward remittances for family maintenance		Local withdrawals/ redemptions from NRI Deposits	
		Amount	Per-centage Share in Total	Amount	Per-centage Share in Total
1	2	3	4	5	6
2010-11 (PR)	55.6	27.4	49.3	26.2	47.1
2011-12 (PR)	66.1	31.3	47.4	32.5	49.2
2012-13 (P)	67.6	33.0	48.8	32.0	47.3

P: Preliminary; PR: Partially Revised.

in interest payments on growing foreign debt including NRI deposits, ECBs and short-term trade credit.

Secondary Income

- Net secondary income receipts, primarily comprising private transfers, increased by 1.4 per cent to US$ 64.4 billion during 2012-13 as compared with a growth of 19.5 per cent in 2011-12.
- NRI deposits, when withdrawn domestically, form part of private transfers as they become unilateral transfers and do not have any *quid pro quo.* During 2012-13, the share of local withdrawals in total outflows from NRI deposits was 63.4 per cent compared with a share of 62.0 per cent in the previous year (Table 4).
- As a proportion of total private transfers, inward remittances for family maintenance increased to 48.8 per cent in 2012-13 from 47.4 per cent in 2011-12. The share of local withdrawals from NRI deposits, however, declined to 47.3 per cent in 2012-13 from its previous year level of 49.2 per cent in 2011-12 (Table 5).

Current Account Balance

- Burgeoning trade deficit, decline in net invisible earnings due to sharp increase in investment income payments and only a modest rise in net services receipts led to widening of CAD to US$ 87.8 billion in 2012-13 as against a CAD of US$ 78.2 billion in the previous year. As a proportion of GDP, CAD rose to 4.8 per cent in 2012-13 as compared with 4.2 per cent in 2011-12.

Capital and Financial Account

- There was a rise in net outflow under capital account of the amount US$ 0.3 billion in 2012-13 owing to increase in capital transfers.
- Notwithstanding decline in FDI flows to India, net inflows under financial account rose to US$ 85.4 billion in 2012-13 from US$ 80.7 billion a year ago primarily on account of increase in portfolio investment, non-resident deposits and short term credit and advances.
- Net FDI to India declined by 18.2 per cent from US$ 33.0 billion in 2011-12 to US$ 27.0 billion in 2012-13. The moderation in FDI to India was recorded under both equity and debt flows.
- Sector-wise FDI data reveal the fact that the decline in FDI inflows to India was mainly evident in manufacturing sector, communication services, construction and computer services (Table 6). Country-wise investment routed through

Table 6: Sector-wise FDI: Inflows and Outflows

(US$ Billion)

Gross FDI inflows to India#			Gross FDI outflows from India*		
Industry	**2011-12**	**2012-13**	**Industry**	**2011-12**	**2012-13**
1	2	3	4	5	6
Manufacturing	9.3	6.5	Manufacturing	3.3	3.3
Restaurants and Hotels	0.9	3.1	Financial, Insurance, Real Estate and Business Services	3.3	2.7
Financial Services	2.6	2.8	Transport, Storage and Communication Services	1.9	1.7
Electricity and others	1.4	1.7	Agriculture , Hunting, Forestry and Fishing	0.5	1.1
Construction	2.6	1.3	Wholesale, Retail Trade, Restaurants and Hotels	1.2	0.7
Business Services	1.6	0.6	Construction	0.5	0.6
Computer Services	0.7	0.2	Community, Social and Personal Services	0.4	0.3
Communication Services	1.5	0.1	Electricity, Gas and Water	0.05	0.1
Others	2.9	2	Miscellaneous	0	0.1
Total	**23.5**	**18.3**	**Total**	**11.2**	**10.6**

#: Includes equity FDI through SIA/FIPB and RBI routes only and hence are not comparable with data in other tables.
*: Includes equity (except that of individuals and banks), loans and guarantees invoked, and hence are not comparable with data in other tables.

Mauritius continued to be the largest source of investment, followed by Netherlands and Singapore (Table 7).

- Net FDI by India in 2012-13 was lower as compared to 2011-12 mainly on account of a marginal decline in fresh FDI by India and an increase in disinvestment/repatriation.
- Gross FDI outflows from India was recorded primarily in sectors like manufacturing, financial, insurance, real estate and business services, transport, storage and communication services, agriculture, hunting, forestry and fishing and wholesale, retail trade, restaurants and hotels (Table 6).
- Singapore constituted the largest recipient, followed by Mauritius and US in terms of gross outflows from India, while gross FDI inflows to India was mainly routed through Mauritius, followed by Netherlands, Singapore and Japan. (Table 7).

Table 7: Country-wise FDI: Inflows and Outflows

(US$ Billion)

Gross FDI inflows to India#			Gross FDI outflows from India*		
Country	**2011-12**	**2012-13**	**Country**	**2011-12**	**2012-13**
1	3	4	5	7	8
Mauritius	8.1	8.1	Singapore	2.2	1.8
Netherlands	1.3	1.7	Mauritius	2.6	1.7
Singapore	3.3	1.6	USA	1	1.4
Japan	2.1	1.3	Netherlands	1.3	0.9
UK	2.8	1	UAE	0.4	0.6
USA	1	0.5	UK	0.4	0.5
Cyprus	1.6	0.4	British Virgin Islands	0.6	0.5
UAE	0.3	0.2	Switzerland	0.2	0.5
South Korea	0.2	0.2	Australia	0.3	0.2
Others	2.8	3.3	Others	2.2	2.5
Total	**23.5**	**18.3**	**Total**	**11.2**	**10.6**

: Includes equity FDI through SIA/FIPB and RBI routes only and hence are not comparable with data in other tables.
* : Includes equity (except that of individuals and banks), loans and guarantees invoked, and hence are not comparable with data in other tables.

- During 2012-13, the outward FDI financed through equity rose by 12.9 per cent as against the loan component which declined by 23.3 per cent during the year. Accordingly, the share of equity in total outward FDI increased to 58.3 per cent in 2012-13 from 49.0 per cent in 2011-12 (Table 8).
- On a net basis, portfolio investment increased by 61.1 per cent to US$ 26.7 billion in 2012-13 from US$ 16.6 billion in 2011-12.
- Net inflows under currency and deposits by banking sector (NRI deposits) recorded a rise of 24.5 per cent to US$ 14.8 billion in 2012-13 from US$ 11.9 billion in 2011-12 which may be attributed to weakening of rupee and deregulation of interest rate on NRI deposits.
- Net loans availed by non-Government and non-banking sectors (net ECBs) were lower at US$ 8.6 billion in 2012-13 compared with US$ 9.1 billion a year ago on account of lower fresh disbursal as well as large repayment of ECBs. Net inflows under short term credit increased sharply to US$ 21.7 billion in 2012-13 from US$ 6.7 billion in 2011-12 reflecting growing dependence on trade credits and advances for financing imports.
- 'Other receivables/payables' that include "leads and lags in exports", "net funds held abroad", "advances received pending issue of shares under FDI" and "other capital not included elsewhere" recorded a net outflow of US$ 2.7 billion in 2012-13 compared with an outflow of US$ 6.9 billion in the previous year (Table 9).

Table 8: India's Outward FDI

(US$ Billion)

Period	Equity*	Loan	Guarantees Invoked	Total
2012-13	6.3 (58.3)	4.4 (40.9)	0.1 (-0.3)	**10.8**
2011-12	5.5 (49.0)	5.7 (51.0)	0 (0.0)	**11.2**

*: The equity data do not include equity of individuals and banks.
Note: Figures in brackets relate to percentage share in total outward FDI for the period.

Table 9: Details of 'Other Receivables/ Payables' (Net)

(US$ Billion)

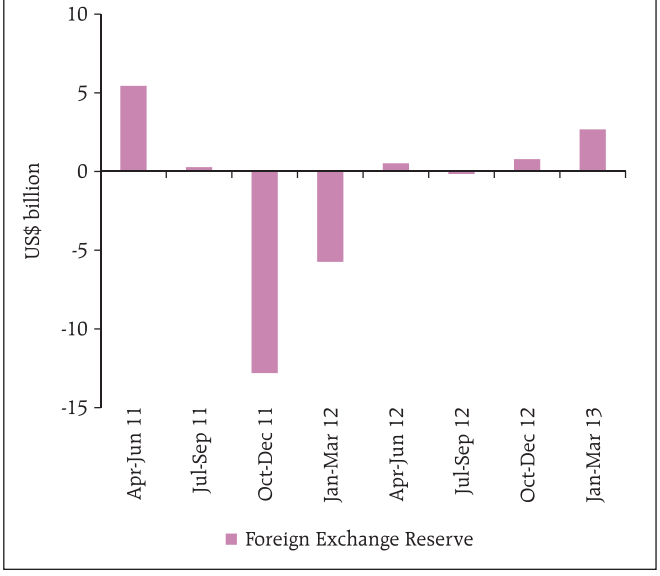
Item	2010-11 (PR)	2011-12 (PR)	2012-13 (P)
1	2	3	4
Lead and Lags in Exports	-8.8	-10.4	-10.8
Net Funds Held Abroad	-5.5	-2.8	-8.6
Advances Received Pending Issue of Shares under FDI	6.9	2.7	9.2
Other capital not included elsewhere#	-5.3	3.6	7.5
Total (1 to 5)	**-12.7**	**-6.9**	**-2.7**

#: Inclusive of derivatives and hedging, migrant transfers, SDR allocation, rupee debt service and other capital transfers.
P: Preliminary; PR: Partially Revised.

Reserve Variation

- Net capital inflows were sufficient to finance the CAD and there was an accretion to foreign exchange reserves to the extent of US$ 3.8 billion

Chart 3: Variation In India's Foreign Exchange Reserves (BoP Basis)



in 2012-13 as against a drawdown of reserves of an amount of US$ 12.8 billion in the previous year. At the end of March 2013, foreign exchange reserves stood at US$ 292.0 billion.

Difference between DGCI&S data and Balance of Payments data

- The data on imports based on DGCI&S (customs statistics) and the BoP (banking channel data) are given in Table 10. The difference between two sets of data are likely to get reduced when both the data sets are revised later.

Table 10: DGCI&S and the BoP Import Data

(US$ Billion)

Item	April-March		
	2010-11	2011-12	2012-13
1. BoP Imports	383.5	499.5	502.2
2. DGCI&S Imports	369.8	488.7	491.5
3. Difference (1-2)	13.7	10.8	10.7

*India's External Debt at end-March 2013**

As per the standard practice, India's external debt statistics for the quarters ending March and June are released by the Reserve Bank of India and those for the quarters ending September and December by the Ministry of Finance, Government of India. The external debt data are released with a lag of one quarter. The external debt data in the standard format as at end-March 2013 in Rupee and US dollar and revised data for the earlier quarters are available in RBI Press Release on India's External Debt as at end-March 2013 dated June 27, 2013. The article provides a detailed review of external debt along with the policy measures undertaken during the year.

The high current account deficit (CAD) witnessed during 2012-13 and its financing increasingly through debt flows particularly by trade credit resulted in significant rise in India's external debt during 2012-13. As a result, the major indicators for assessing India's external sector vulnerability deteriorated over the year.

Highlights

- India's external debt, as at end-March 2013, was placed at US$ 390 billion (21.2 per cent of GDP) recording an increase of US$ 44.6 billion (12.9 per cent) over the end-March 2012 level on account of significant increase in short-term trade credit, external commercial borrowings (ECBs) and rupee denominated Non-resident Indian deposits.
- Excluding the valuation change (gain) due to the movement of US dollar (appreciation) against major international currencies and Indian rupee, the external debt as at end-March 2013 would have increased by US$ 55.8 billion over end-March 2012.
- In terms of major components, the share of ECBs continued to be the highest at 31.0 per cent of total external debt, followed by short term debt (24.8 per cent) and NRI deposits (18.2 per cent).
- The short-term debt increased by US$ 18.5 billion or 23.7 per cent during 2012-13 over the previous year level. There has been a distinct rise in share of trade related credits in short-term debt to around 90 per cent at end-March 2013 from around 83 per cent in the previous year. The share of short term FII investments in total short term investment, however, declined to 5.6 per cent at end-March 2013 from 12.0 per cent a year ago.
- The share of short-term debt in total debt, by original maturity, was 24.8 per cent. Based on residual maturity, short-term debt accounted for 44.2 per cent of the total external debt as at end-March 2013. Of this, the share of NRI deposits was 28.4 per cent.
- The ratio of short-term debt (residual maturity) to foreign exchange reserves at 59.0 per cent at end-March 2013 was higher compared to 50.1 per cent as at end-March 2012.
- The debt service ratio declined marginally to 5.9 per cent during 2012-13 as compared with 6.0 per cent during 2011-12.
- India's foreign exchange reserves provided a cover of 74.9 per cent to the external debt stock at the end of March 2013 as compared with 85.2 per cent at end-March 2012.
- The US dollar denominated debt accounted for 57.2 per cent of the total external debt stock as at end-March 2013, followed by that in Indian rupee (24.0 per cent) and SDR (7.5 per cent).

1. India's External Debt as at end-March 2013

i. India's external debt, as at end-March 2013, was placed at US$ 390 billion (21.2 per cent of GDP) recording an increase of US$ 44.6 billion (12.9 per cent) over end-March 2012 (Table 1 & Chart 1).

ii. The increase in external debt during 2012-13 was on account of short-term trade credits, commercial borrowings, and rupee denominated NRI deposits. Large recourse to borrowings reflects increasing financing needs led by all time high current account deficit recorded during the year and

* Prepared in the Division of International Trade & Finance, Department of Economic and Policy Research.

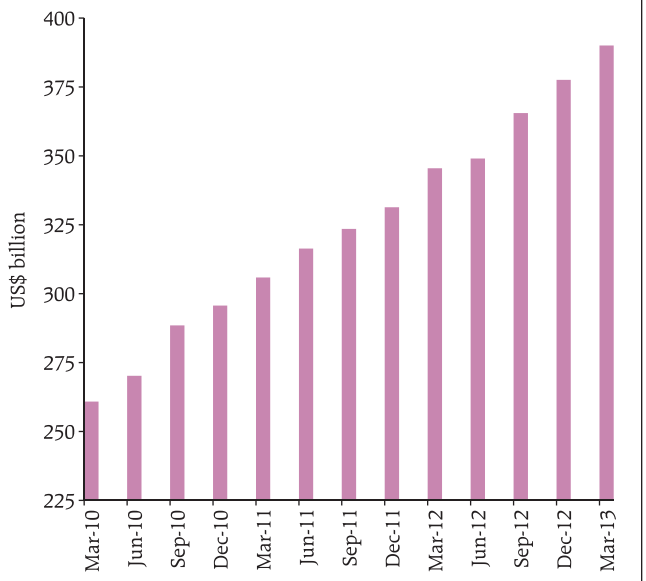
Table 1: External Debt Outstanding

(US$ Billion)

	Total External Debt	Variation			
		Over corresponding Quarter of Previous year		Over Previous Quarter	
		Amount	Per cent	Amount	Per cent
1	2	3	4	5	6
Mar-11	305.9	44.9	17.2	10.2	3.5
Jun-11	316.2	46.0	17.0	10.3	3.4
Sep-11	323.3	34.8	12.1	7.1	2.2
Dec-11	331.2	35.6	12.0	7.9	2.4
Mar-12	345.5	39.6	13.0	14.3	4.3
Jun-12	349.1	32.9	10.4	3.6	1.0
Sep-12	365.6	42.3	13.1	16.5	4.7
Dec-12	377.6	46.4	14.0	12.0	3.3
Mar-13	390.0	44.6	12.9	12.4	3.3

Source: Ministry of Finance, Government of India and Reserve Bank of India.

Chart 1: India's Total External Debt



continued uncertainty in global financial markets. The share of ECBs (US$ 120.9 billion) continued to be the highest at 31.0 per cent of total external debt, followed by short-term debt (24.8 per cent) and NRI deposits (18.2 per cent) (Table 2).

Table 2: External Debt by Component

(US$ Million)

Item	End- March							
	1991	2007	2008	2009PR	2010 PR	2011 PR	2012 PR	2013 P
1	2	3	4	5	6	7	8	9
1. Multilateral	20,900 (24.9)	35,337 (20.5)	39,490 (17.6)	39,538 (17.6)	42,857 (16.4)	48,475 (15.8)	50453 (14.6)	51,642 (13.2)
2. Bilateral	14,168 (16.9)	16,065 (9.3)	19,708 (8.8)	20,610 (9.2)	22,593 (8.7)	25,712 (8.4)	26,888 (7.8)	25,065 (6.4)
3. IMF	2,623 (3.1)	1,029 (0.6)	1,120 (0.5)	1,018 (0.5)	6,041 (2.3)	6,308 (2.1)	6,163 (1.8)	5,964 (1.5)
4. Trade Credit	4,301 (5.1)	7,165 (4.2)	10,328 (4.6)	14,481 (6.5)	16,841 (6.5)	18,614 (6.1)	19,067 (5.5)	17,705 (4.5)
5. ECBs	10,209 (12.2)	41,443 (24.0)	62,334 (27.8)	62,461 (27.8)	70,726 (27.1)	88,479 (28.9)	104,786 (30.3)	120,893 (31.0)
6. NRI Deposits	10,209 (12.2)	41,240 (23.9)	43,672 (19.5)	41,554 (18.5)	47,890 (18.4)	51,682 (16.9)	58,608 (16.9)	70,823 (18.2)
7. Rupee Debt	12,847 (15.3)	1,951 (1.1)	2,017 (0.9)	1,523 (0.7)	1,658 (0.6)	1,601 (0.5)	1354 (0.4)	1,258 (0.3)
8. Long-term Debt (1to 7)	**75,257** (89.8)	**144,230** (83.7)	**178,669** (79.6)	**181,185** (80.7)	**208,606** (79.9)	**240,871** (78.8)	**267,319** (77.4)	**293,350** (75.2)
9. Short-term Debt	**8,544** (10.2)	**28,130** (16.3)	**45,738** (20.4)	**43,313** (19.3)	**52,329** (20.0)	**64,990** (21.2)	**78,179** (22.6)	**96,697** (24.8)
Total (8+9)	**83,801 (100)**	**172,360 (100)**	**224,407 (100)**	**224,498 (100)**	**260,935 (100)**	**305,861 (100)**	**345,498 (100)**	**390,048 (100)**

P: Provisional. PR: Partially Revised.
IMF: International Monetary Fund; ECBs: External Commercial Borrowings; NRI: Non-Resident Indian
Note: Figures in parentheses are percentage to total external debt.
Source: Ministry of Finance, Government of India and Reserve Bank of India.

2. Valuation Change

i. The valuation change (gain) during 2012-13 amounted to US$ 11.3 billion reflecting the appreciation of US dollar against Indian rupee and other major currencies. Thus, excluding the valuation gain, the stock of external debt as at end-March 2013 would have increased by US$ 55.8 billion.

3. Components of External Debt

i. Almost all the major components of the external debt recorded a rise during the year except bilateral loans, borrowings from IMF, export credits and rupee debt (Table 3).

ii. ECB approvals and gross disbursements during 2012-13 were lower at US$ 32.0 billion and US$ 25.5 billion as compared to US$ 35.3 billion and US$ 28.9 billion, respectively in the preceding year. Hence, on a net basis, rise in ECBs was marginally lower than that in the preceding year. Accordingly, during 2012-13, ECBs rose by US$ 16.1 billion as compared with US$ 16.3 billion in 2011-12 (Table 3 and Table 4).[1]

iii. Trade credit components of external debt (both long-term and short-term) showed an increase of US$ 20.3 billion as at end-March 2013 over end-March 2012 as compared with an increase of US$ 7.1 billion during a year ago reflecting higher level of imports financed through trade credits during 2012-13 as against a year ago.

iv. NRI deposits increased by US$ 12.2 billion to US$ 70.8 billion as at end-March 2013 over the level as at end-March 2012. The increase was primarily on account of increase in rupee denominated NRI deposits reflecting the impact of deregulation of interest rates on NRO and NRE deposits in December 2011.

v. The short-term debt increased by US$ 18.5 billion to US$ 96.7 billion as at end-March 2013 from US$ 78.2 billion as at end-March 2012 mainly on account of rise in short-term trade credit.

Table 3: External Debt - Outstanding and Variation

(US$ Million)

Memo Items	Outstanding at the end-of March			Absolute variation		Percentage variation	
	2011 R	2012 PR	2013 P	Mar-11 to Mar-12	Mar-12 to Mar-13	Mar-11 to Mar-12	Mar-12 to Mar-13
1	2	3	4	5	6	7	8
1. Multilateral	48,475	50,453	51,642	1,978	1,189	4.1	2.4
2. Bilateral	25,712	26,888	25,065	1,176	-1,823	4.6	-6.8
3. IMF	6,308	6,163	5,964	-145	-199	-2.3	-3.2
4. Export Credit	18,614	19,067	17,705	453	-1,362	2.4	-7.1
5. ECBs	88,479	104,786	120,893	16,307	16,107	18.4	15.4
6. NRI Deposits	51,682	58,608	70,823	6,926	12,215	13.4	20.8
7. Rupee Debt	1,601	1,354	1,258	-247	-96	-15.4	-7.1
8. Short term Debt	64,990	78,179	96,697	13,189	18,518	20.3	23.7
Of which							
S T Trade Credit	58,463	65,130	86,787	6,667	21,657	11.4	33.3
Total Debt	**305,861**	**345,498**	**390,048**	**39,637**	**44,550**	**13.0**	**12.9**
Memo Items							
A. Long-Term Debt	240,871	267,319	293,351	26,448	26,032	11.0	9.7
B. Short-Term Debt	64,990	78,179	96,697	13,189	18,518	20.3	23.7

P: Provisional. PR: Partially Revised. R: Revised
Source: Ministry of Finance, Government of India and Reserve Bank of India.

[1] ECBs in external debt include commercial bank loans, securitised borrowings and FII investments in debt funds (public and private) and hence may not be comparable with net ECBs flows reported under Balance of Payments.

Table 4: External Commercial Borrowings

(US$ Million)

End March	Approvals #	Gross Disbursement*	Amortisation*	Interest*	Total Servicing	ECB Debt Outstanding
1	2	3	4	5	6=(4+5)	7
1990-91	1,903	4,252	2,004	1,410	3,414	10,209
1995-96	6,286	4,252	2,977	1,380	4,357	13,873
2000-01	2,837	9,621	5,313	1,695	7,008	24,408
2001-02	2,653	2,684	4,272	1,456	5,728	23,320
2002-03	4,235	3,505	5,206	1,167	6,373	22,472
2003-04	6,671	5,225	8,153	2,119	10,272	22,007
2004-05	11,490	9,084	3,658	959	4,617	26,405
2005-06	17,175	14,343	11,584	3,015	14,599	26,452
2006-07	25,353	20,257	3,814	2,517	6,331	41,443
2007-08	28,900	28,700	6,060	3,652	9,712	62,334
2008-09	15,702	13,226	6,578	3,965	10,543	62,461
2009-10	20,636	14,029	11,498	3,244	14,742	70,726
2010-11R	25,218	22,283	10,451	3,508	13,959	88,479
2011-12PR	35,354	28,922	19,782	5,416	25,198	104,786
2012-13P	32,022	25,497	16,915	6310	23,225	120,893

PR : Partially Revised; P: Provisional; R : Revised

* : Based on Balanace of Payments data.

: Based on date of agreement of the loan which may differ from the date of granting the loan registration number by the RBI. Ceiling on ECB approvals is fixed on the basis of the latter, which may either be after or before the date of agreement of the loan. Hence, there may be some difference between the amount shown under approvals in the table and the amount of ceiling fixed for a particular year.

Note: Disbursements during 2000-01 include IMDs (US$ 5.5 billion). Debt service payments during 2003-04 and 2005-06 include redemption of RIBs and IMDs, respectively.

4. Currency Composition of India's External Debt

i. The US dollar denominated debt continued to be the largest components of India's external debt with a share of 57.2 per cent as at end-March 2013, followed by that in Indian rupee (24.0 per cent), SDR (7.5 per cent), Japanese Yen (6.3 per cent) and Euro (3.5 per cent) (Table 5).

5. Instrument-wise Classification of External Debt

i. The instrument-wise classification of India's external debt across the borrower category indicates that loans accounted for 45.2 per cent of total debt outstanding as at end-March 2013 as compared with 49.0 per cent as at end-March 2012 (Table 6).

ii. On the other hand, there has been a rise in the share of 'bonds & notes' and 'currency & deposits' in India's total external debt at end-March 2013 compared to that in the preceding year.

Table 5: Currency Composition of India's External Debt

(Percentage share in total external debt)

Currency	End-March						
	2007	2008	2009	2010	2011 R	2012 PR	2013 P
1	2	3	4	5	6	7	8
US Dollar	51.1	55.3	54.1	53.2	53.6	55.0	57.2
Indian rupee	18.5	16.2	15.4	18.7	19.5	21.4	24.0
Japanese Yen	11.4	12.0	14.3	11.5	11.3	9.1	6.3
SDR	12.4	10.6	9.8	10.7	9.7	8.7	7.5
Euro	3.9	3.5	4.1	3.6	3.7	3.7	3.5
Pound Sterling	2.4	2.2	1.9	1.8	1.7	0.9	0.7
Others	0.3	0.2	0.4	0.5	0.5	0.5	0.8
Total	100	100	100	100	100	100	100

Note: Currency composition as at end-March 2008 to end-March 2013 incorporates the original currency composition of short-term debt; in the previous years, the entire short-term debt was taken to be denominated in US dollars.

Source: Ministry of Finance, Government of India and Reserve Bank of India.

Table 6: Instrument-wise classification of External Debt Outstanding

(US$ Million)

Borrower	End-March 2012	End-March 2013
1	2	3
A. Government (1+2+3)	**81,895**	**81,654**
1. Short-Term	6,106	3,787
(i) Money Market Instruments	6,106	3,787
2. Long-term {(i)+(ii)+(iii)}	69,626	71,903
(i) Bonds and Notes	5,261	9,647
(ii) Loans	62,801	60,843
(iii) Trade Credit	1,564	1,414
3. Other debt liabilities	6,163	5,964
(i) IMF	6,163	5,964
B. Monetary Authority	**170**	**181**
1. Short-term	170	181
(i) Currency and Deposits	170	181
C. Non-Government (1+2)	**263,433**	**308,213**
1. Short-Term {(i)+(ii)}	71,902	92,730
(i) Money Market Instruments	6,772	5,943
(ii) Trade Credit	65,130	86,787
2. Long-term{(i)+(ii)+(iii)+(iv)}	191,531	215,483
(i) Bonds and Notes	25,773	28,313
(ii) Loans	106,517	115,587
(iii) Currency and Deposits	58,608	70,823
(iv) Trade Credits	633	760
Total External Debt (A+B+C)	**345,498**	**390,048**

Source: Ministry of Finance, Government of India and Reserve Bank of India.

6. Short-term Debt

i. The short-term debt (on original maturity basis) primarily comprises trade credit, FII investment in T-bills and other instruments and borrowings of commercial banks. Trade credit continued to be the predominant component of short-term debt and witnessed a significant increase during 2012-13 as compared to the preceding year. On the other hand, there has been a decline in outstanding FII investment in T-bills to the tune of US$ 3.9 billion during the year.

ii. The share of external liabilities of commercial banks in short-term debt declined marginally from 4.4 per cent at end-March 2012 to 4.3 per cent at end-March 2013. Similarly, the share of FII investment in T-bills and other instruments declined significantly from 12.0 per cent at end-March 2012 to 5.6 per cent at end-March 2013 mainly on account of net sales by FIIs during 2012-13. Concomitantly, the share of trade credit increased to 89.8 per cent of total short-term debt as at end-March 2013 from 83.3 per cent in the preceding year (Table 7).

7. External Debt by Residual Maturity

i. Based on residual maturity, the short-term debt accounted for 44.2 per cent of total external debt as at end-March 2013. The share of NRI deposits under short-term debt (residual maturity) was the highest at 28.4 per cent. The ratio of short-term debt by residual maturity to foreign exchange reserves worked out to 59.0 per cent at end-March 2013 (Table 8).

8. Government and Non-Government External Debt

i. Although the level of Government (Sovereign) debt as at end-March 2013 was almost the same at end-March 2012, its share in the total external debt at 20.9 per cent at end-March 2013 was lower than that of 23.7 per cent as at end-March 2012. Concomitantly, the share of non-Government

Table 7: Short-Term Debt by Original Maturity

(US$ Million)

Components	End-March							
	1991	2007	2008	2009	2010	2011	2012	2013
1	2	3	4	5	6	7	8	9
A. Short-Term Debt	**8,544**	**28,130**	**45,738**	**43,313**	**52,329**	**64,990**	**78,179**	**96,697**
a) NRI Deposits (up to 1 year maturity) @	3,577	0	0	0	0	0	0	0
b) FC (B&O) Deposits (up to 1 year maturity)	167	0	0	0	0	0	0	0
c) Trade Related Credits #	4,800	25,979	41,901	39,915	47,473	58,463	65,130	86,787
(i) Above 6 months and up to 1 year	2,267	11,971	22,884	23,346	28,003	35,347	39,182	59,021
(ii) Up to 6 months	2,533	14,008	19,017	16,569	19,470	23,116	25,948	27,766
d) FII Investments in Government Treasury Bills & other instruments	0	397	651	2,065	3,357	5,424	9,395	5,455
e) Investment in Treasury Bills by foreign central banks and International Institutions *etc.*	..	164	155	105	103	50	64	82
f) External Debt Liabilities of:	..	1,590	3,031	1,228	1,396	1,053	3,590	4,373
(i) Central Bank	..	501	1,115	764	695	155	170	181
(ii) Commercial Bank		1,089	1,916	464	701	898	3,420	4,192
B. Imports (during the year)*	**27,915**	**190,670**	**257,629**	**308,520**	**300,644**	**383,481**	**499,533**	**502,237**
C. Trade Credit to Imports (per cent)	**17.2**	**13.6**	**16.3**	**12.9**	**15.8**	**15.2**	**13.0**	**17.3**

@ : Short-term deposits of less than one-year maturity under FCNR(A) were withdrawn with effect from May 15, 1993, such deposits under FCNR(B) and NR(E)RA were withdrawn effective October 1999 and April 2003, respectively.

: Data on Short-term Trade Credit of less than six months in respect of suppliers' credit and FII investment in debt papers are included since end-March 2005.

* : On balance of payments basis.

Table 8: Residual Maturity of External Debt Outstanding as at End-March 2013

(US$ Million)

Components	Short-term up to one year	Long-term			Total
		1 to 2 years	2 to 3 years	More than 3 years	
1	2	3	4	5	6 = 2 to 5
1. Sovereign Debt (long-term) $	5,603	5,810	6,011	60,444	77,868
2. ECBs (including trade credit) #	21,038	19,660	23,621	80,341	144,660
3. NRI deposits {(i)+(ii)+(iii)}	49,005	7,257	4,543	10,018	70,823
(i) FCNR(B)	11,816	1,580	1,124	668	15,188
(ii) NR(E)RA	29,575	4,638	3,031	8,680	45,924
(iii) NRO	7,613	1,039	388	670	9,710
4. Short-term Debt* (Original maturity)	96,697				96,697
Total (1 to 4)	**172,343**	**32,727**	**34,175**	**150,803**	**390,048**
Memo Items					
Short-term debt (Residual maturity as per cent of total external debt)	**44.2**				
Short-term debt (Residual maturity as per cent of Reserves)	**59.0**				

$: Inclusive of FII Investments in Government Securities.

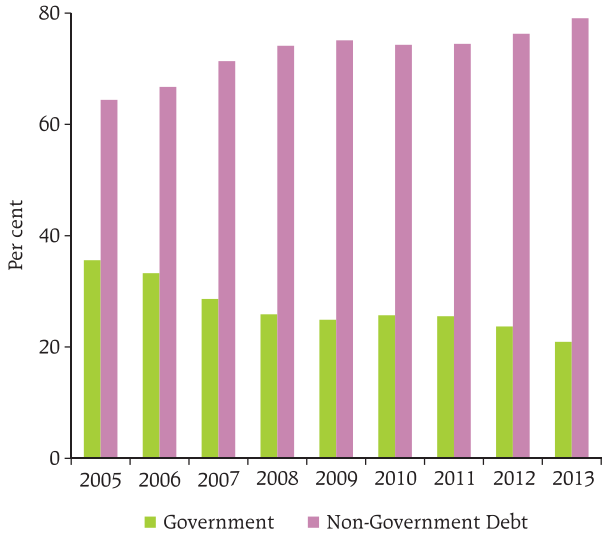
* : Also includes FII investment in sovereign debt and commercial paper.

\# : ECBs are inclusive of trade credit, FII investment in corporate debt instruments and a portion of non-Government multilateral and bilateral borrowing and therefore may not tally with the ECB provided in other Tables under original maturity.

Note : Residual Maturity of NRI Deposits is estimated on the basis of returns submitted by authorised dealer.

Source : Ministry of Finance, Government of India and Reserve Bank of India.

Chart 2 : Share of Government and Non-Government External Debt



debt in total external debt increased to 79.1 per cent as at end-March 2013 from 76.3 per cent at end- March 2012 (Table 9 and Chart 2).

9. Debt Service Payments

i. India's debt service payments amounted to US$ 31.3 billion during 2012-13 as compared to US$ 31.5 billion during 2011-12 (Table 10).

ii. Lower repayments towards ECBs coupled with increase in current receipts led to a marginal decline in the debt service ratio to 5.9 per cent during 2012-13 from 6.0 per cent in 2011-12. The

Table 9: Government and Non-Government External Debt

(US$ Million)

Components	End-March						
	2007	2008	2009	2010	2011	2012PR	2013 PR
1	2	3	4	5	6	7	8
A. Sovereign Debt (I+II)	**49,360**	**58,070**	**55,870**	**67,067**	**78,072**	**81,895**	**81,654**
(As a percentage of GDP)	*5.0*	*4.7*	*5.1*	*4.7*	*4.5*	4.7	4.4
I. External Debt on Government Account under External Assistance	46,155	52,538	51,816	55,235	62,295	63,374	61,336
II. Other Government External Debt @	3,205	5,529	4,054	11,832	15,777	18,521	20,319
B. Non-Government Debt #	**123,000**	**166,337**	**168,628**	**193868**	**227,789**	**263,603**	**308,394**
(As a percentage of GDP)	*12.5*	*13.3*	*15.2*	*13.6*	*13.0*	15.0	16.7
C. Total External Debt (A+B)	**172,360**	**224,407**	**224,498**	**260,935**	**305,861**	**345,498**	**390,048**
(As a percentage of GDP)	*17.5*	*18.0*	*20.3*	*18.3*	*17.5*	19.7	21.2

@ : Other Government external debt includes defence debt, investment in Treasury Bills/Government Securities by FIIs, foreign central banks and international institutions and IMF.

\# : Includes external debt of Monetary Authority.

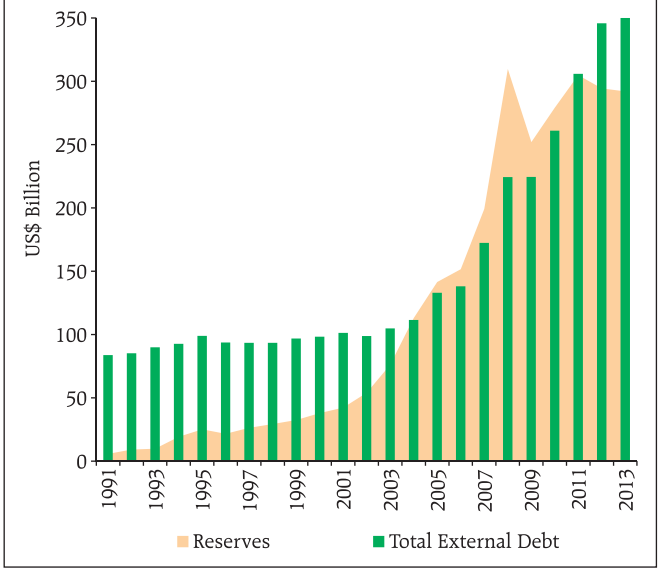
Source: Ministry of Finance, Government of India and Reserve Bank of India.

upward trend in interest payment, however, continued during 2012-13 and comprised 34.9 per cent of total debt servicing as compared with a 27.1 per cent during preceding year reflecting higher stock of total debt and hardening of interest rate in the international financial market. The servicing of ECBs during 2012-13 accounted for 74.2 per cent of the total debt service as against 80.0 per cent during 2011-12, reflecting lower principal repayment of ECBs.

10. Key Indicators of India's External Debt

i. With rise in stock of debt and fall in foreign currency assets, the key indicators of external debt such as debt-GDP ratio, ratio of foreign exchange reserves to total debt and short-term debt as per cent to total debt as well as foreign exchange reserves showed worsening trend in 2012-13 (Table 11). However, debt service ratio improved mainly on account of higher level of current receipts. In comparison with top 20 indebted countries (based on year 2011), India continues to be among the less vulnerable countries (Table 12).

Chart 3: Reserves Cover for External Debt (End-March)



External Debt Management in India

The external debt policy of India continues to regulate the levels of commercial borrowings and their end-use, rationalising the interest rates on NRI deposits, and monitoring short-term debt. In terms of

Table 10: India's External Debt Service Payments

(US$ Million)

Item	1990-91	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
1	2	3	4	5	6	7	8	9
1. External Assistance	2,315	2,942	3,241	3,384	3,461	3,667	3,923	4,255
Repayment	1,187	1,960	2,099	2,375	2,585	2,839	3,125	3,415
Interest	1,128	982	1,142	1,009	876	828	798	840
2. ECBs	3,414	6,331	9,771	10,543	14,742	13,959	25,198	23,224
Repayment	2,004	3,814	6,119	6,578	11,498	10,451	19,782	16,914
Interest	1,410	2,517	3,652	3,965	3,244	3,508	5,416	6,310
3. I.M.F.	778	0	0	0	0	0	0	0
Repayment	644	0	0	0	0	0	0	0
Interest	134	0	0	0	0	0	0	0
4. NRI Deposits Interest	1,282	1,969	1,813	1,547	1,599	1,737	2,313	3,778
5. Rupee Debt Service Repayments	1,193	162	121	101	97	69	79	58
Total Debt Service (1 to 5)	8,982	11,404	14,946	15,575	19,899	19,432	31,513	31,315
Repayment	5,028	5,936	8,339	9,054	14,180	13,359	22,986	20,387
Interest	3,954	5,468	6,607	6,521	5,719	6,073	8,527	10,928
Current Receipts #	25,479	242,811	314,284	356,175	345,144	445,999	528,372	530,163
Debt Service Ratio (6/7) (per cent)	35.3	4.7	4.8	4.4	5.8	4.4	6.0	5.9

#: Current Receipts minus Official Transfers.
Source: Ministry of Finance, Government of India and Reserve Bank of India.

Table 11: India's Key External Debt Indicators

(Per cent)

End March	External Debt in US$ billion	Ratio of External Debt to GDP	Debt Service Ratio	Ratio of Foreign Exchange Reserves to Total Debt	Ratio of Concessional Debt to Total Debt	Ratio of Short-Term Debt to Foreign Exchange Reserves	Ratio of Short-Term Debt to Total Debt
1	2	3	4	5	6	7	8
1991	83.8	28.7	35.3	7.0	45.9	146.5	10.2
1996	93.7	27.0	26.2	23.1	44.7	23.2	5.4
2001	101.3	22.5	16.6	41.7	35.4	8.6	3.6
2002	98.8	21.1	13.7	54.7	35.9	5.1	2.8
2003	104.9	20.3	16.0 *	72.5	36.8	6.1	4.5
2004	112.6	18.0	16.1**	100.3	35.8	3.9	3.9
2005	134.0	18.1	5.9 ^	105.6	30.7	12.5	13.2
2006	139.1	16.8	10.1 #	109.0	28.4	12.9	14.0
2007	172.4	17.5	4.7	115.6	23.0	14.1	16.3
2008	224.4	18.0	4.8	138.0	19.7	14.8	20.4
2009	224.5	20.3	4.4	112.2	18.7	17.2	19.3
2010	260.9	18.2	5.8	106.9	16.8	18.8	20.1
2011R	305.9	17.5	4.4	99.7	15.5	21.3	21.2
2012 PR	345.5	19.7	6.0	85.2	13.9	26.6	22.6
2013P	390.0	21.2	5.9	74.9	11.7	33.1	24.8

P : Provisional. PR: Partially Revised. R: Revised

* : Works out to 12.4 per cent, with the exclusion of pre payment of external debt of US $ 3,430 million.

** : Works out to 8.2 per cent with the exclusion of pre payment of external debt of US $ 3,797 million and redemption of Resurgent India Bonds (RIBs) of US $ 5,549 million.

^ : works out to 5.7 per cent with the exclusion of pre payment of external debt of US $ 381 million.

: works out to 6.3 per cent with the exclusion of India Millennium Deposits (IMDs) repayments of US $ 7.1 billion and pre payment of external debt of US $ 23.5 million.

Source: Ministry of Finance, Government of India and Reserve Bank of India.

hierarchy, long-term flows are preferable to short-term. ECB flows under both the automatic and approval routes are moderated by interest rate ceilings and those under the automatic route are governed by a ceiling

Table 12: International Comparison of Top 20 Debtor Countries 2011

(Per cent)

	External debt in US$ billion	Concessional Debt/ Total debt	External debt/GNI	Short-term debt/ Total Debt	Debt Service Ratio	ST Debt/Total Reserves
China	685.4	5.6	9.4	69.6	3.6	14.9
Russian Federation	543.0	0.4	31.1	12.9	10.5	15.4
Brazil	404.3	2.9	16.6	10.4	19.4	12.0
India	331.2	14.5	20.3	22.9	5.7	25.6
Turkey	307.0	3.4	40.1	27.3	30.2	107.0
Mexico	287.0	1.1	25.2	17.9	11.2	35.7
Indonesia	213.5	21.4	26.0	17.9	14.5	35.8
Ukraine	134.5	0.9	83.3	24.3	30.8	107.6
Romania	129.8	6.8	72.3	22.9	27.5	69.3
Kazakhstan	124.4	1.0	77.9	7.2	34.6	35.5
Argentina	114.7	2.7	26.3	14.5	15.3	38.6
South Africa	113.5	0.0	28.4	16.6	5.3	44.3
Chile	96.2	0.2	41.0	17.8	15.2	40.9
Malaysia	94.5	3.2	34.8	46.3	3.9	33.2
Thailand	80.0	8.3	24.0	56.2	3.8	26.9
Colombia	76.9	2.0	24.3	14.1	15.6	34.5
Philippines	76.0	20.1	33.6	9.2	17.6	10.4
Venezuela	67.9	4.2	21.8	24.6	6.4	168.0
Pakistan	60.2	58.9	27.3	4.2	9.2	17.4
Vietnam	57.8	48.3	49.1	17.2	3.2	73.6

Source: Global Development Finance, World Bank, Ministry of Finance, Government of India and Reserve Bank of India.

on total quantity as well. There is also a ceiling on FII investment in sovereign and corporate debt. In view of the widening CAD during 2012-13, various policy measures have been undertaken to facilitate foreign capital flows to India, particularly debt flows for smooth financing of CAD.

Recent Policy Developments

External Commercial Borrowings and Trade Credits

Taking into account the financing requirements of the corporate sector and prevailing liquidity conditions in the domestic and international financial markets, the Ministry of Finance, Government of India in consultation with the Reserve Bank of India, regularly reviews the policy stance on ECBs and trade credit and introduce various policy measures. The principal elements of policy for ECBs include keeping the maturities long, costs low and encouraging investments in infrastructure and export sectors. ECBs by corporates are permitted through automatic route and approval routes. Proposals that meet minimum criterion are permitted under the automatic route and other cases fall under the approval route is considered by an empowered Committee of the Reserve Bank.

May 2012

The interest rate on export credit in foreign currency was deregulated by allowing banks to freely determine their interest rates on such credit.

June 2012

Indian companies in manufacturing and infrastructure sector and having foreign exchange earnings have been allowed to avail ECBs for repayment of outstanding Rupee loans towards capital expenditure and/or fresh Rupee capital expenditure under the approval route with an overall ceiling of US$ 10 billion for such ECBs.

September 2012

Companies in the infrastructure sector, where "infrastructure" is as defined under the extant guidelines on ECBs, were allowed to avail of trade credit up to a maximum period of five years for import of capital goods as classified by DGFT subject to certain conditions *viz,.* (i) the trade credit must be *abinitio* contracted for a period not less than 15 months and should not be in the nature of short-term roll over and (ii) AD banks are not permitted to issue Letters of Credit/guarantees/Letter of Undertaking (LoU)/Letter of Comfort (LoC) in favour of overseas supplier, bank and financial institution for the extended period beyond three years. On review on December 14, 2012, it was decided to further relax the condition of *'abinitio'* buyers' credit from 15 months to six months for existing trade credit. However, the condition regarding *'abinitio'* buyers' credit for 15 months shall continue for future trade credit.

ECBs were allowed for low cost affordable housing projects as a permissible end-use, under the approval route. Under this scheme, ECBs could be availed of by developers/builders for low cost affordable housing projects. Housing Finance Companies (HFCs)/National Housing Bank (NHB) can also take recourse to ECBs for financing prospective owners of low cost affordable housing units. These guidelines were reviewed and modified in June 2013.

In order to ease financing of domestic companies, the Government announced a reduction in the withholding tax from 20 per cent to 5 per cent on ECBs by Indian companies which will be applicable for a period of three years, *i.e.*, from July 1, 2012 to June 30, 2015 for foreign loans or long-term infrastructure bonds to be raised during this period.

November 2012

SIDBI was included among the eligible borrowers for availing of ECBs for on-lending to MSME sector.

December 2012

Recognising the difficulties of domestic importers in raising trade credit within the existing all-in-cost ceiling, the Reserve Bank had revised the all-in-cost

ceiling from 200 basis points (bps) over six month LIBOR to 350 bps over six month LIBOR on November 15, 2011. After periodic reviews, it was decided that all-in-cost ceiling would continue to be applicable till September 30, 2013 and is subject to review thereafter.

June 2013

It was decided that the scheme of availing of ECBs for working capital for civil aviation sector will continue till December 31, 2013. Considering the developments in the global financial markets, it was decided that the existing scheme of Buyback/ Prepayment of FCCBs under the approval route which expired on March 31, 2013 may be continued till December 31, 2013.

July 2013

ADs were advised that for availment of trade credit, the period of trade credit should be linked to the operating cycle and trade transaction.

Non-Resident Deposits

In May 2012, interest rate ceiling on Foreign Currency Non-Resident [FCNR (B)] deposits of banks was raised from 125 basis points above the corresponding LIBOR/Swap rates to 200 bps for maturity period of one year to less than three years, and to 300 bps for maturity period of three to five years. However, in August 2013, interest rate ceiling on FCNR(B) deposits with maturity period of three to five years was raised to LIBOR/SWAP plus 400 basis points.

Foreign Institutional Investors

To make the debt segments more attractive, all the investor classes were made eligible to invest within the overall limit without any restriction on lock-in period and residual maturity. The limit for investment by FIIs and long term investors registered with SEBI in Government securities including Treasury Bills were enhanced to US$ 30 bn. Investments in Treasury Bills were permitted up to US$ 5.5 billion within the overall limit of US$ 30 bn. Further, long term investors registered with SEBI – Sovereign Wealth Funds (SWFs), Multilateral Agencies, Pension/Insurance/Endowment Funds, Foreign Central Banks have been allowed to invest in Government dated securities up to limit of US$ 5 billion with the overall limit of US$ 30 billion with effect from June 12, 2013. The limit for FII investment in corporate debt has been raised to US$ 51 billion, out of which investments in Commercial paper is permitted up to US$ 3.5 billion.

11. Cross Country Comparison among Top 20 Indebted Countries

i. According to the latest data available on Global Development Finance Online Database, World Bank, the international comparison of external debt of the twenty most indebted countries indicates that India continues to be the fourth most indebted country in 2011 (Table 12).

ii. The element of concessionality in India's external debt portfolio was the fifth highest after Pakistan, Vietnam, Indonesia and Philippines.

iii. India's debt service ratio was sixth lowest after Vietnam, China, Thailand, Malaysia and South Africa.

iv. India's position with respect to short term debt to total external debt was eighth highest with Pakistan having the lowest ratio and China the highest ratio of short-term debt to total external debt. In terms of short-term debt to reserves. India's position was sixth lowest as Pakistan, Russian Federation, China, Brazil and the Philippines had lower ratios than India.

*Consumer Confidence Survey – Q2:2012-13 to Q1:2013-14**

1. Introduction

The Reserve Bank has been conducting Consumer Confidence Survey (CCS) of households on a quarterly basis since June 2010. The survey captures qualitative responses on questions pertaining to economic conditions, household circumstances, income, spending, prices, employment prospects, *etc. The responses are analysed in two parts, viz., current situation as compared with a year ago and expectations for a year ahead.* The quarterly survey results of CCS are released along with the quarterly Macroeconomic and Monetary Developments on the RBI website. This article presents analysis of survey results covering a longer time period, with particular focus on the last four (Q2:2012-13 to Q1:2013-14) rounds of the survey.

2. Sample Coverage and Survey Questionnaire

The survey was conducted in six metropolitan cities, *viz.*, Bengaluru, Chennai, Hyderabad, Kolkata, Mumbai and New Delhi. Each city was divided into three major areas and each major area was further divided into three sub-areas. From each sub-area, about 100 respondents were selected randomly. In each round of survey, 5,400 respondents were selected (900 respondents from each city).

The survey schedule is organised into four blocks covering the respondent's details (Block 1), economic conditions (Block 2), household circumstances and the general views (Block 3) and perception on price level (Block 4). From Q2:2012-13 (10th round) onwards, the survey schedule was modified to include perceptions on future household circumstances, outlay for major expenditures *viz.*, motor vehicle, house, consumer durables, *etc.*, current employment scenario and current/future rate of price increase. Qualitative information is obtained on a three point scale *i.e.*, positive/no change/negative.

3. Survey Results

The survey results are shown for each category based on net response (difference between positive and negative perceptions). For reporting purpose, *current* is used for current situation as compared with one year ago and *future* is used for future situation of one year ahead period.

3.1 Economic Conditions

The net response on current economic conditions declined to negative zone since Q2:2012-13 round (Chart 1).

The optimism regarding future economic conditions has been consistently higher than that pertaining to the current economic conditions (Table 1). However, the net responses in case of future economic conditions have also turned negative in the latest two rounds of the survey. The net responses of both current and future economic conditions appear to show some improvement in Q1:2013-14.

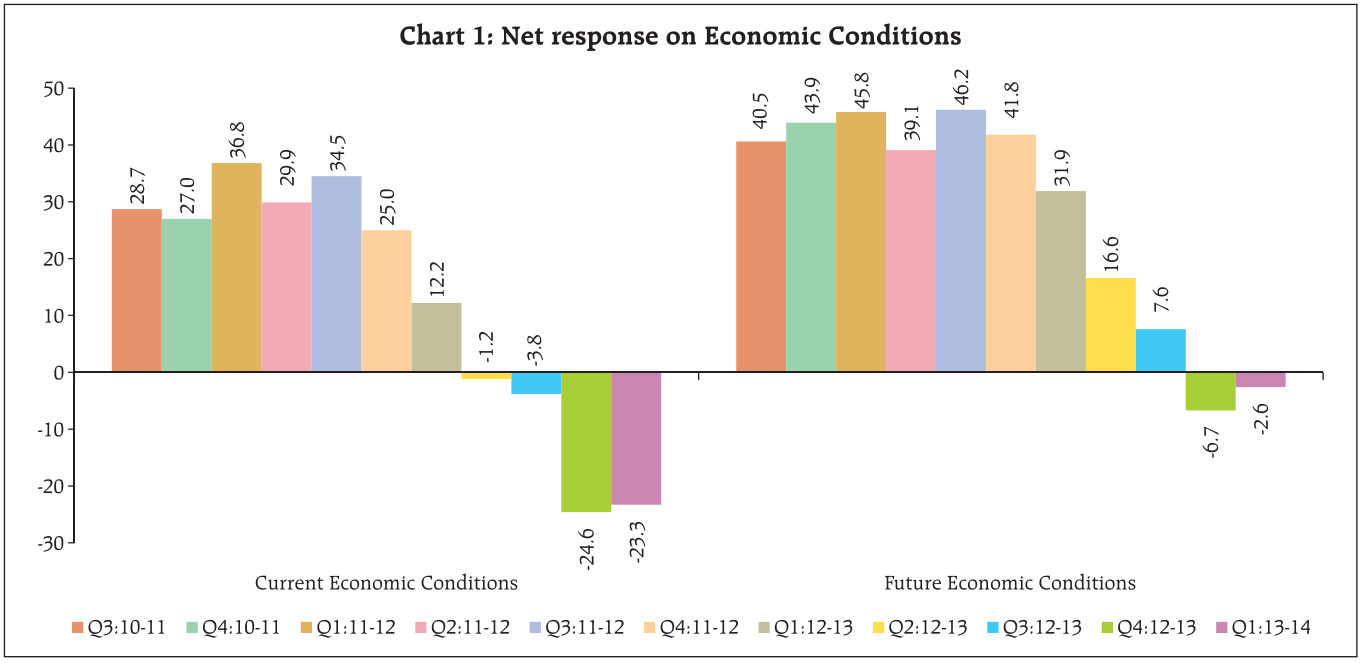
3.2 Household Circumstances

Net response on current household circumstances showed a declining trend since Q3:2011-12 round. It is observed that the outlook on household circumstances has been better than the current scenario (Chart 2).

On the other hand, in terms of the net response, respondents expecting improvement in future household circumstances in the next one year, went up to nearly 28 per cent after remaining at about 22-23 per cent in the earlier three rounds. The net response on current household circumstances has consistently declined during the last four quarters mainly reflecting rise in the relative proportion of negative perceptions (Table 2).

'Salary and business income' and 'prices' are the two major factors that have influenced the respondents'

* Prepared in the Department of Statistics and Information Management, New Delhi. The survey results are those of the respondents and are not necessarily shared by the Reserve Bank of India. The latest round (June 2013) of the survey data was released on July 29, 2013 along with Macroeconomic and Monetary Developments on the RBI Website. The previous article on the subject, along with survey schedule was published in November 2012 issue of the RBI Bulletin.

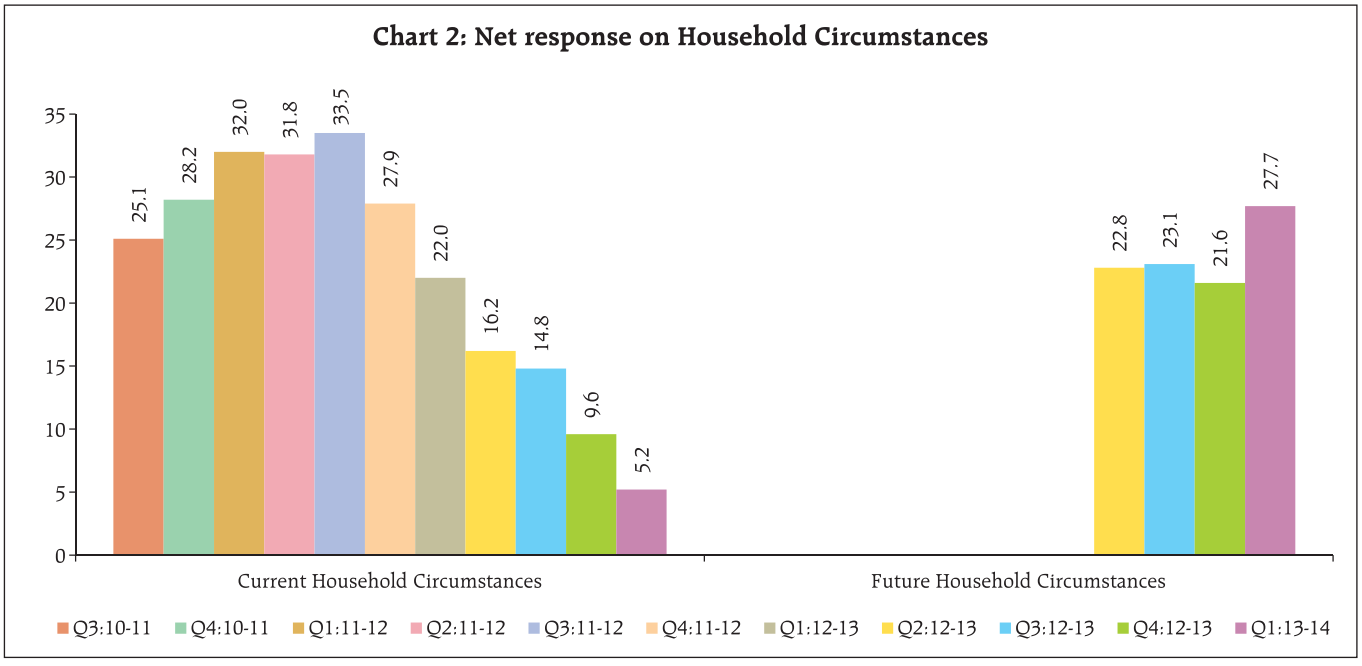


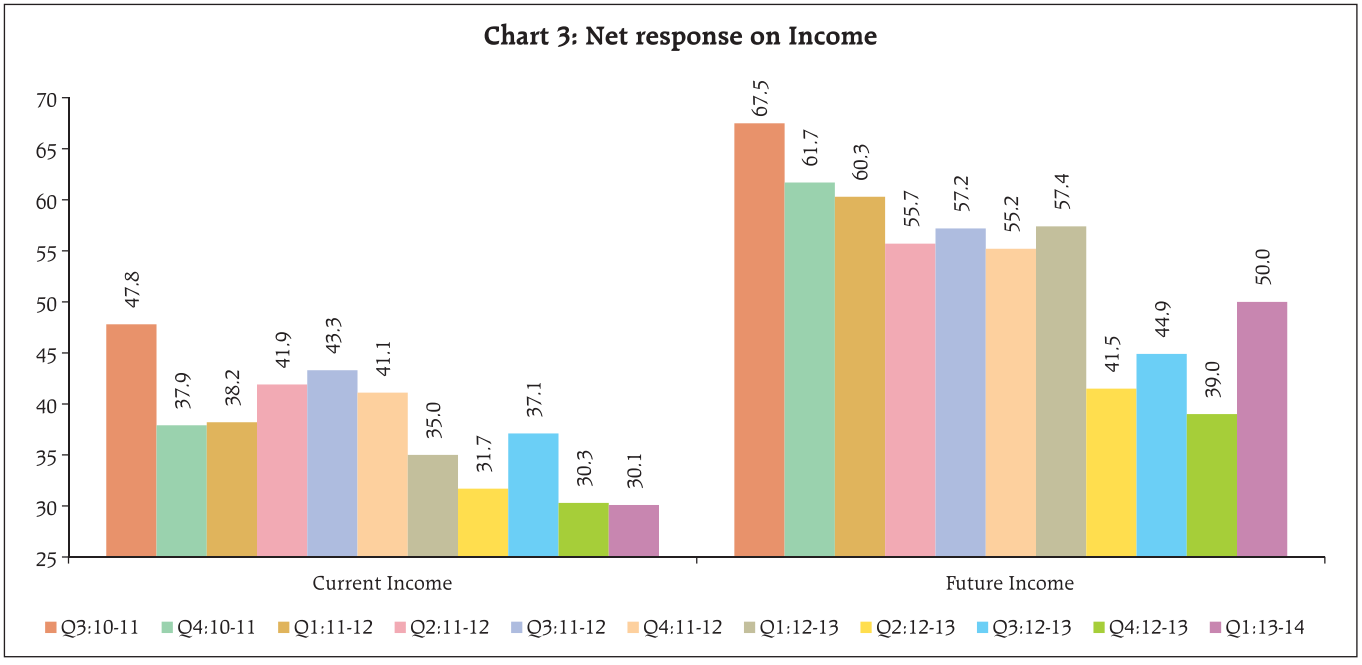
perceptions on household circumstances across all the survey rounds (Table 3).

3.3 Income

The net response on current income perceptions was at its lowest across the survey rounds and has remained consistently lower as compared to the net perceptions on future income. The optimism regarding increase in income one-year ahead improved significantly in the latest round in Q1:2013-14; although the net response at 50 per cent remained well below the peak of 67.5 per cent in Q3: 2010-11 (Chart 3).

The proportion of respondents, who reported relatively higher income as compared to the last year, has declined consistently from 52 per cent in Q3:2012-13 to about 45 per cent in Q1:2013-14. However, this proportion in respect of future income expectations





has remained above 50 per cent during last four quarters. About 30-40 per cent respondents reported that their income has remained at the same level as that of last year or would remain the same next year also (Table 4).

3.4 Spending

The net response on future spending has remained consistently lower as compared to net response on current spending. The net responses on current as well as future spending appear to show some improvement in Q1:2013-14 (Chart 4).

More than three-fourths of the respondents reported that their current spending has increased as compared to a year ago (Table 5). However, this proportion in respect of increased future spending in the next year has been significantly lower.

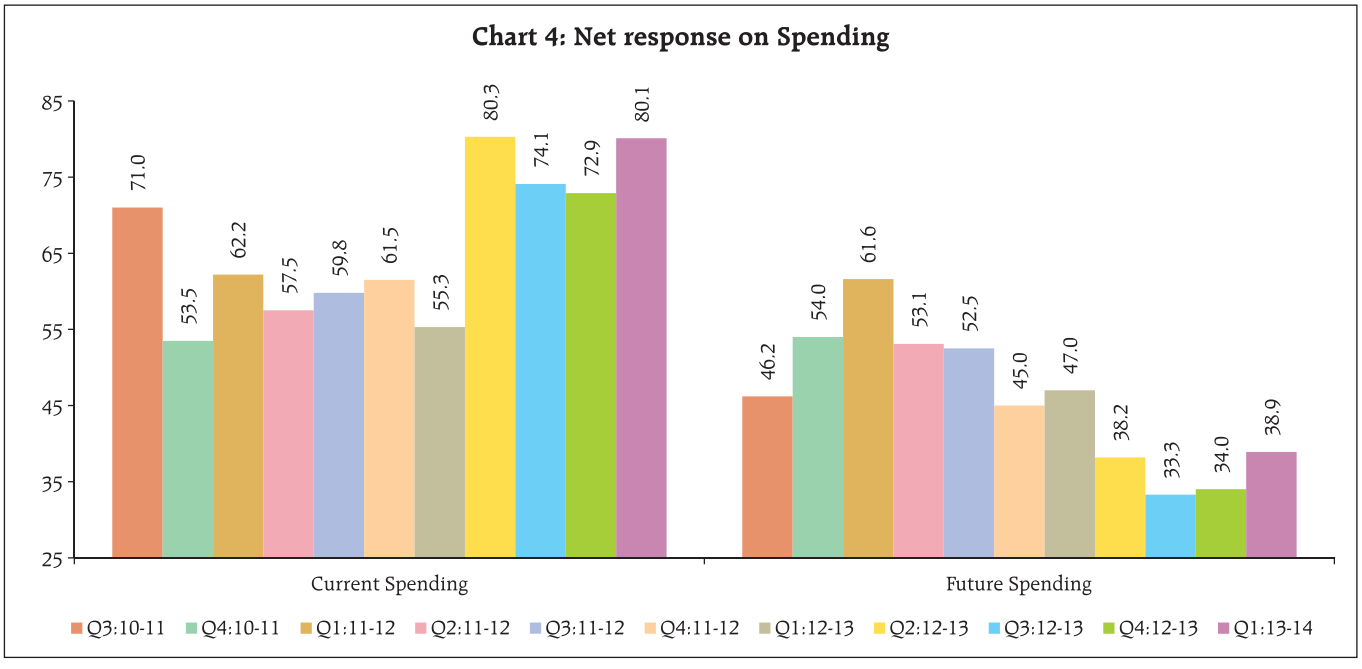
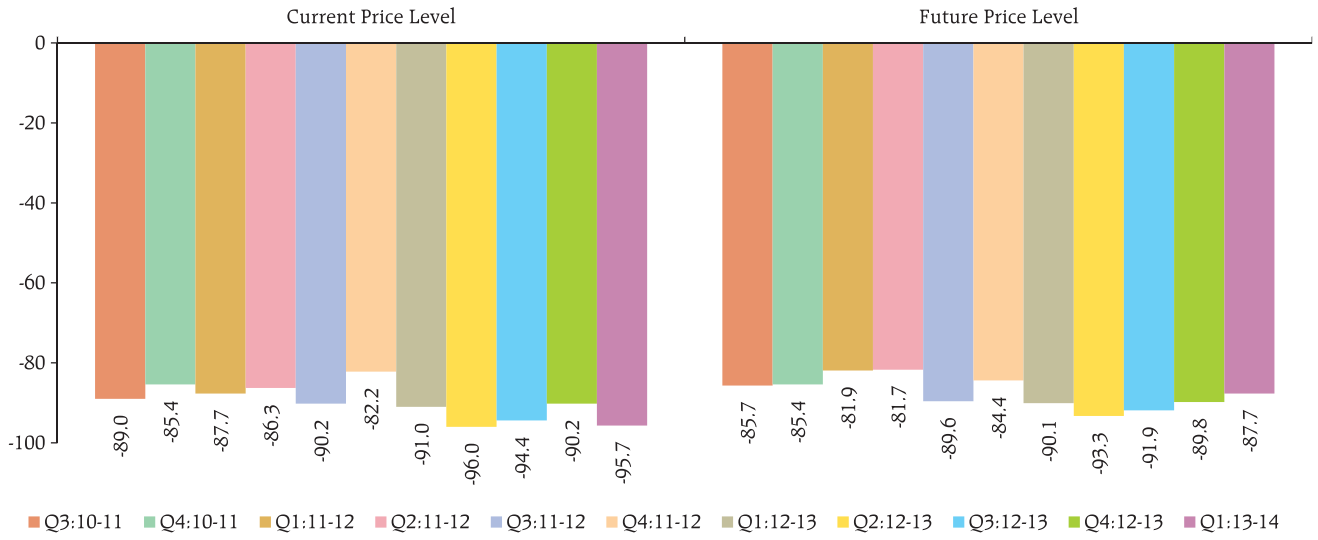


Chart 5: Net response on price levels



Note: Perceptions of increase/decrease in prices is considered to be negative/positive sentiments.

Among the factors that have influenced the perceptions on current spending, 'cost of consumer goods', 'cost of services' and 'income' were observed to be the major factors (Table 6).

3.5 Perceptions on Price Levels and Inflation

Net responses of current price level are more than 90 per cent during last one year. These proportions were marginally lower in respect of net responses on future price levels (Chart 5).

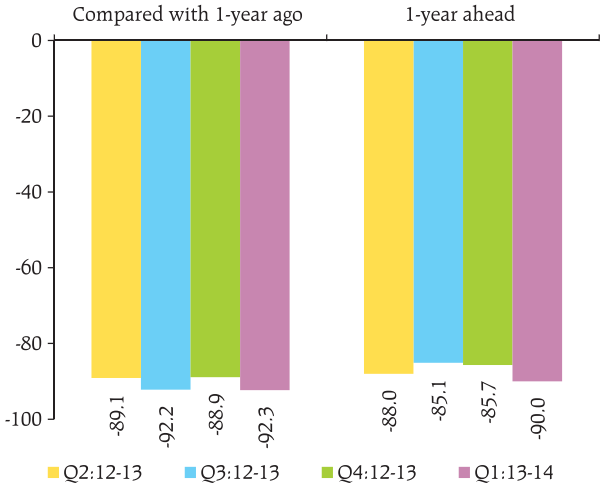
Extending the query, the respondents among those who reported increase in price levels were asked whether the rate of price rise (*i.e.*, inflation) would be higher or same or lower. In terms of net responses, about 90 per cent of respondents perceived higher current inflation whereas expectations for higher future inflation were marginally lower (Chart 6 and Table 8).

3.6 Cross Tabulations on Income vs. Spending and Inflation vs. Spending

The cross tabulation on income and spending for last four rounds are given in Table 9. About 41-47 per cent of respondents reported increase in current spending to be associated with increase in current income. About 32-42 per cent of respondents reported increase in current spending even with current income remaining same or lower. The strength of association of expected increase in future spending with increase in future income is observed to be relatively lower as about 30-39 per cent respondents reported increase in expected spending to be associated with increase in future income.

The cross tabulation on inflation and spending for last four rounds are given in Table 10 providing further

Chart 6: Net response on rate of change in price levels



Note: Perceptions of increase/decrease in prices is considered to be negative/positive sentiments.

insights on spending perceptions. The analyses of responses reveal that about 73-77 per cent of the respondents reported higher current spending in association with higher current inflation. However, the association between the expected spending with expected inflation were relatively lower as 45-52 per cent respondents reported association of increase in future spending with increase in expected inflation.

3.7 Perceptions on other Macroeconomic Indicators

3.7.1 Interest rate: About 68-73 per cent of respondents perceived interest rates are 'high' from borrowers' points of view while about 66-78 per cent of respondents felt interest rates are 'low' from depositor's points of view during Q2:2012-13 to Q1:2013-14 (Table 11).

3.7.2 Employment: In general, the respondents had more optimistic outlook regarding employment. The similar pattern is observed in terms of net responses on employment perceptions (Chart 7).

The proportion of respondents expecting improvement in the future employment scenario has consistently been higher than those who felt improvement in current employment prospects. 42-51 per cent of respondents expected improvement in the future employment scenario whereas about one third of the respondents felt that it will remain the same (Table 12).

3.7.3 Plan for major expenses: Respondents were asked whether it is a good time to make major outlay for any major purchases *viz.*, motor vehicle, house or durable goods. Gold/bullion was added as an item in the list from Q4:2012-13. During the last four rounds, less than 20 per cent of respondents affirmed that they have made outlays for major purchases *viz.*, motor vehicle, house and durable goods. More than one fifth of the respondents reported that it is a good time for purchasing gold, whereas about 61-73 per cent of respondents clearly stated that it is not a good time for any major expenditure (Table 13).

3.8 Consumer Confidence Index

3.8.1 Current Situation Index and Future Expectations Index

In the pre-Q2:2012-13 rounds, the Current Situation Index (CSI) was based on the net responses in respect of economic conditions, household circumstances, income, spending and price levels and Future Expectations Index (FEI) was based on the net responses in respect of economic conditions, income, spending, employment conditions and price levels. From Q2:2012-13, these indices have been worked out using the common set of parameters *viz.*, economic conditions, household circumstances, income,

Chart 7: Net response on Employment Perceptions

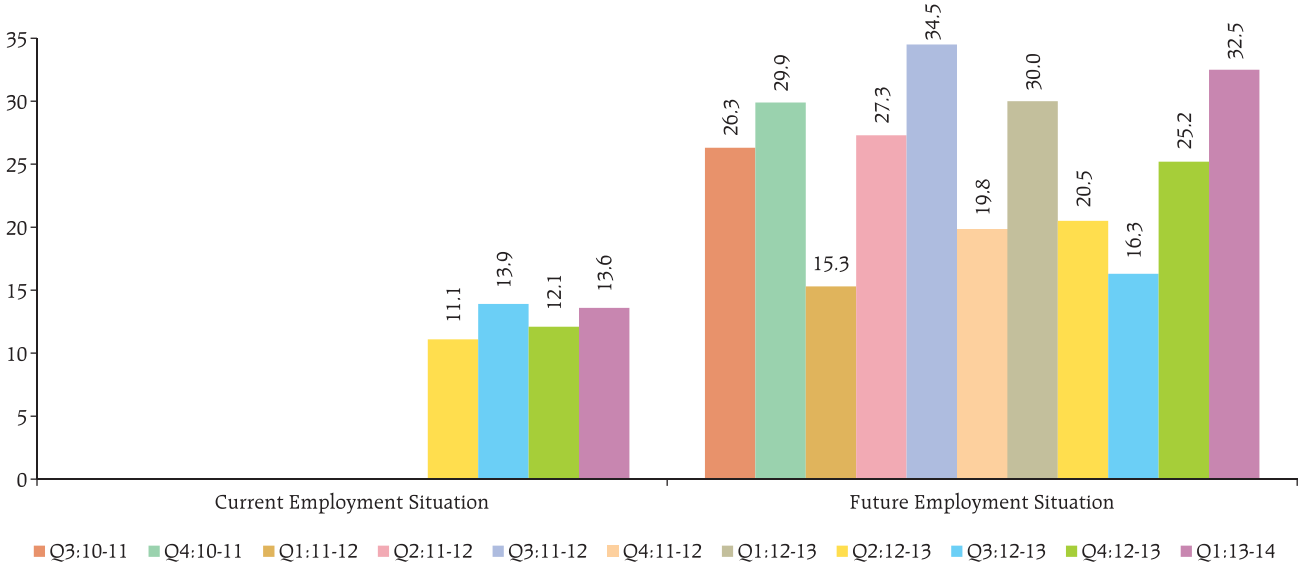
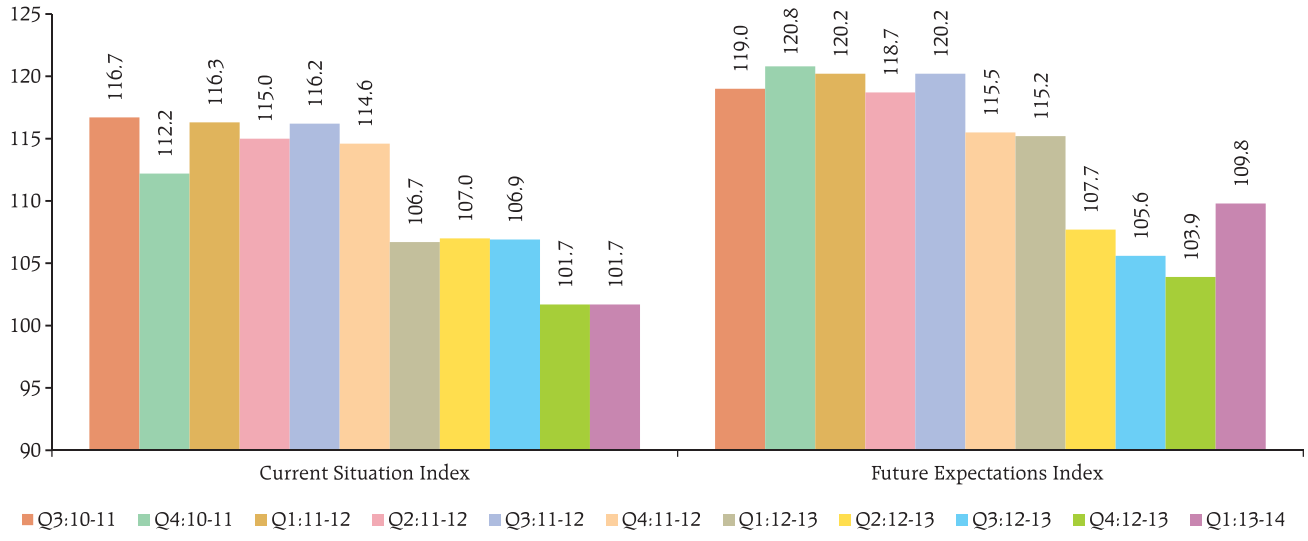


Chart 8: Current Situation Index and Future Expectation Index



Note: Last four quarters Indexes are calculated based on new methodology.

spending, employment conditions and price levels (new methodology in Annex 2).

The consumer confidence has remained subdued in terms of CSI remaining at 101.7 in last two rounds which is the lowest in the history of survey. On the other hand, future expectations shows improvement as FEI moved to 109.8 in Q1:2013-14 from 103.9 in previous quarter which was the lowest FEI (Chart 8 and Table 14). Consumers generally exhibit optimism for future (FEI) as compared to current situation (CSI).

3.8.2 Robustness of Estimates

In order to evaluate the quality of estimates, the confidence intervals for mean CSI and FEI have been estimated using bootstrap methodology. Based on 10,000 re-samples selected through 'simple random sampling with replacement', the 99 per cent bootstrap confidence intervals for mean CSI and mean FEI are given in Table 15. The width of confidence intervals varied between 2.84 to 3.27 indicating robustness of the estimates of CSI and FEI.

Annex 1-Data Tables

Table 1: Opinion on Economic Conditions

(Percentage responses)

	Compared with 1-year ago				1-year ahead			
	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14
Improve	37.5	37.5	28.1	28.2	44.4	39.6	32.8	35.2
Remain same	23.8	21.3	19.3	20.2	27.7	28.5	27.6	27.0
Worsen	38.7	41.2	52.7	51.5	27.8	31.9	39.5	37.8
Net Response	**-1.2**	**-3.8**	**-24.6**	**-23.3**	**16.6**	**7.6**	**-6.7**	**-2.6**

Table 2: Perceptions on Household circumstances

(Percentage responses)

	Compared with 1-year ago				1-year ahead			
	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14
Improve	45.0	44.8	40.3	42.7	44.1	46.0	43.4	49.5
Remain same	26.2	25.1	29.0	19.9	34.7	31.1	34.9	28.7
Worsen	28.8	30.0	30.7	37.4	21.3	22.9	21.7	21.8
Net Response	**16.2**	**14.8**	**9.6**	**5.2**	**22.8**	**23.1**	**21.6**	**27.7**

Table 3: Major Factors influencing views on Household Circumstances

(Percentage responses)

	Compared with 1-year ago				1-year ahead			
	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14
Salary and business income	81.0	76.1	78.5	81.5	83.1	73.8	81.1	88.2
Interest and dividend income	26.2	21.0	25.2	12.4	23.2	23.1	20.1	12.2
Income from real estate sales	22.5	16.9	23.7	7.4	21.1	18.9	16.0	6.4
Prices	50.7	52.6	59.6	64.1	42.5	50.6	55.8	67.2
Change in value of assets	21.9	18.1	21.4	2.7	19.1	20.4	19.8	2.8
The number of dependent in my family	24.4	18.6	14.6	7.6	21.4	17.1	14.3	7.5

Note: As respondents may report multiple factors, the percentage responses may add up to be more than 100.

Table 4: Perceptions on Income

(Percentage responses)

	Compared with 1-year ago				1-year ahead			
	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14
Increase	47.8	52.4	47.5	44.7	51.9	54.5	51.6	59.1
Remain same	36.1	32.3	35.3	40.8	37.8	35.9	35.9	31.8
Decrease	16.1	15.3	17.2	14.5	10.3	9.6	12.5	9.1
Net Response	**31.7**	**37.1**	**30.3**	**30.1**	**41.5**	**44.9**	**39.0**	**50.0**

Table 5: Perceptions on Spending

(Percentage responses)

	Compared with 1-year ago				1-year ahead			
	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14
Increase	83.6	78.5	77.3	84.0	57.9	51.5	52.5	53.5
Remain same	13.0	17.0	18.3	12.2	22.4	30.2	29.0	32.0
Decrease	3.4	4.5	4.4	3.8	19.7	18.2	18.5	14.6
Net Response	**80.3**	**74.1**	**72.9**	**80.1**	**38.2**	**33.3**	**34.0**	**38.9**

Table 6: Major Factors influencing Spending Perception

(Percentage responses)

	Income	Future income	Non-financial assets	Financial assets	Expenditure on real estate	Expenditure on consumer durables	Number of dependents	Cost of consumer goods	Cost of services
Q2:2012-13	44.0	31.0	19.8	17.6	20.7	32.6	29.9	82.3	68.6
Q3:2012-13	46.2	24.3	17.4	15.3	23.7	40.6	36.8	76.3	66.7
Q4:2012-13	47.4	29.4	20.0	18.8	27.0	47.3	27.0	79.3	72.1
Q1:2013-14	45.2	16.2	5.4	13.6	7.4	33.0	20.4	85.1	79.1

Note: As respondents may report multiple factors, total of percentage relating to factors may be more than 100.

Table 7: Perceptions on price level

(Percentage responses)

	Compared with 1-year ago				1-year ahead			
	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14
Increase	96.3	95.0	92.2	96.0	94.9	93.0	91.5	90.2
Remain same	3.4	4.5	5.9	3.7	3.6	5.8	6.7	7.2
Decrease	0.3	0.5	2.0	0.3	1.6	1.1	1.8	2.5
Net Response	**-96.0**	**-94.4**	**-90.2**	**-95.7**	**-93.3**	**-91.9**	**-89.8**	**-87.7**

Note: Perceptions of increase/decrease in prices is considered to be negative/positive sentiments.

Table 8: Perceptions on rate of change in price levels (Inflation)

(Percentage responses)

	Compared with 1-year ago				1-year ahead			
	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14
Increase	90.0	93.0	89.3	92.7	89.9	86.3	86.4	90.2
Remain Same	9.1	6.2	10.4	6.8	8.2	12.5	12.8	9.5
Decrease	0.9	0.8	0.4	0.4	1.9	1.2	0.7	0.3
Net Response	**-89.1**	**-92.2**	**-88.9**	**-92.3**	**-88.0**	**-85.1**	**-85.7**	**-90.0**

Note: Perceptions of increase/decrease in inflations is considered to be negative/positive sentiments.

Table 9: Cross-tabulation of Income and Spending

(Percentage responses)

Income \ Spending		Current Income Vs. Current Spending			Future Income Vs. Future Spending		
		Increase	Remain same	Decrease	Increase	Remain same	Decrease
Q2: 2012-13	Increase	43.3	4.3	0.3	35.4	9.7	7.1
	Remain same	27.9	7.4	0.6	20.0	10.5	7.0
	Decrease	12.4	1.3	2.4	2.6	2.1	5.6
Q3: 2012-13	Increase	47.0	4.8	0.5	33.7	12.4	8.6
	Remain same	21.3	9.8	1.3	15.0	15.2	5.6
	Decrease	10.2	2.4	2.6	2.9	2.6	4.0
Q4: 2012-13	Increase	41.7	5.1	0.7	29.8	12.8	9.2
	Remain same	22.5	11.7	1.1	18.0	12.7	4.9
	Decrease	13.1	1.5	2.6	4.7	3.4	4.4
Q1: 2013-14	Increase	41.4	2.9	0.4	38.8	13.0	6.9
	Remain same	31.7	8.2	1.0	11.4	15.4	4.4
	Decrease	10.9	1.1	2.4	2.7	3.1	3.1

Table 10: Cross-tabulation of Inflation and Spending

(Percentage responses)

Income \ Spending		Current Inflation Vs. Current Spending			Future Inflation Vs. Future Spending		
		Increase	Remain same	Decrease	Increase	Remain same	Decrease
Q2: 2012-13	Increase	76.3	10.7	3.0	52.3	19.3	18.3
	Remain same	7.4	1.5	0.2	4.8	2.2	1.2
	Decrease	0.6	0.2	0.2	0.5	0.8	0.6
Q3: 2012-13	Increase	76.0	13.5	3.4	47.8	22.8	15.6
	Remain same	3.9	1.6	0.7	4.4	5.1	3.1
	Decrease	0.5	0.2	0.0	0.2	0.5	0.5
Q4: 2012-13	Increase	72.6	14.0	2.7	47.6	22.3	16.7
	Remain same	5.3	4.5	0.6	5.4	5.3	2.1
	Decrease	0.2	0.1	0.1	0.2	0.2	0.2
Q1: 2013-14	Increase	76.5	9.7	2.6	45.3	24.0	11.2
	Remain same	4.1	1.6	0.8	3.3	3.7	1.4
	Decrease	0.3	0.0	0.0	0.1	0.1	0.1

Table 11: Borrowers' and Depositors' Perceptions on Interest Rates

(Percentage responses)

	Borrower				Depositor			
	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14
Low	7.8	7.8	6.7	8.9	66.2	74.7	69.9	77.8
Appropriate	24.5	19.2	21.7	19.2	25.4	20.7	26.9	19.7
High	67.7	73.1	71.5	71.9	8.3	4.6	3.2	2.5

Table 12: Current & Future perceptions on Employment

(Percentage responses)

	Compared with 1-year ago				1-year ahead			
	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14	Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14
Improve	42.8	37.2	39.4	40.9	43.6	42.2	47.5	51.1
Remain Same	25.5	39.4	33.3	31.7	33.3	32.0	30.1	30.3
Worsen	31.7	23.3	27.3	27.4	23.1	25.8	22.3	18.6
Net Response	11.1	13.9	12.1	13.6	20.5	16.3	25.2	32.5

Table 13: Perceptions on Outlays for Major Expenditure

(Percentage responses)

		Q2:2012-13	Q3:2012-13	Q4:2012-13	Q1:2013-14
Motor Vehicle	**Yes**	18.6	19.7	15.9	12.8
	Can't Say	9.7	14.4	18.5	16.4
	No	71.7	65.9	65.6	70.8
House	**Yes**	17.4	12.7	14.2	13.6
	Can't Say	11.3	20.5	17.0	13.0
	No	71.2	66.9	68.8	73.4
Durable goods	**Yes**	20.9	20.0	15.6	13.5
	Can't Say	10.4	18.6	17.3	14.9
	No	68.7	61.4	67.1	71.6
Gold	**Yes**			21.7	21.3
	Can't Say			16.9	12.0
	No			61.4	66.7

Table 14: Current and Future Expectations Index

	Q3: 2010-11	Q4: 2010-11	Q1: 2011-12	Q2: 2011-12	Q3: 2011-12	Q4: 2011-12	Q1: 2012-13	Q2: 2012-13	Q3: 2012-13	Q4: 2012-13	Q1: 2013-14
CSI	116.7	112.2	116.3	115.0	116.2	114.6	106.7	106.2	105.5	99.6	99.3
CSI (Revised)								107.0	106.9	101.7	101.7
FEI	119.0	120.8	120.2	118.7	120.2	115.5	115.2	104.7	102.0	100.4	106.2
FEI (Revised)								107.7	105.6	103.9	109.8

Table 15: 99 per cent Bootstrap Confidence Intervals (BCI) Based on 10,000 Resamples

Survey Round	Survey Quarter ended	CSI		FEI	
		99 per cent BCI for Mean	Interval width	99 per cent BCI for Mean	Interval width
10	**Q2:2012-13**	(105.35,108.60)	3.25	(106.08,109.35)	3.27
11	**Q3:2012-13**	(105.41,108.46)	3.05	(103.99,107.16)	3.16
12	**Q4:2012-13**	(100.22,103.06)	2.84	(102.46,105.39)	2.93
13	**Q1:2013-14**	(100.27,103.11)	2.84	(108.34,111.35)	3.01

Annex 2: Methodology
Current Situation Index (CSI) and Future Expectations Index (FEI)

In standard opinion surveys, respondents generally have three reply options such as up/same/down; or above-normal/normal/below-normal; or increase/remain-same/decrease. Because of the difficulty of interpreting all three percentages, the survey results are normally converted into a single quantitative number. One of the most common way of doing this is to use 'Net-Responses' (also called 'Balances' or 'Net Balances'). It is defined as the percentage of the respondents reporting a decrease (negative), subtracted from the percentage reporting an increase (positive). Net Responses can take values from –100 to +100. In this survey, Net Response is used to analyse the Consumer Confidence Survey results. To combine the consumer confidence perceptions on various parameters, two indices are worked out. These are Current Situation Index for reflecting current situation as compared to one year ago and Future Expectations Index to reflect the expectations one year ahead. For calculating the index, the following formula has been used:

Overall Index = 100 + Average (Net Response of selected factors)

Where Net Response = Positive perceptions (per cent) – Negative perception (per cent)

The average net responses on the current perception on various factors, *viz.,* economic conditions, household circumstances, income, spending, price level and employment[@] are used for the calculation of the Current Situation Index.

The average net responses on the future perceptions on various factors, *viz.,* economic conditions, household circumstances[@@], income, spending, price level and employment are used for the calculation of the Future Expectations Index.

[@&@@] : Current employment perception and future household perception have been captured from September 2012. These have been included for calculating CSI and FEI from September 2012, onwards.

CURRENT STATISTICS

Contents

Notes: .. = Not available.
– = Nil/Negligible.
P = Preliminary/Provisional. PR = Partially Revised.

No. 1: Select Economic Indicators

Item	2012-13	2011-12	2012-13		2013-14
		Q4	Q1	Q4	Q1
	1	2	3	4	5
1 Real Sector (% Change)					
1.1 GDP	5.0	5.1	5.4	4.8	4.4
1.1.1 Agriculture	1.9	2.0	2.9	1.4	2.7
1.1.2 Industry	1.2	1.0	-0.2	2.0	-0.9
1.1.3 Services	6.8	7.0	7.6	6.3	6.2
1.1a Final Consumption Expenditure	3.9	9.3	4.7	3.3	3.0
1.1b Gross Fixed Capital Formation	1.7	2.6	-2.2	3.4	-1.2
	2012-13	**2012**		**2013**	
		Jun	**Jul**	**Jun**	**Jul**
	1	2	3	4	5
1.2 Index of Industrial Production	1.2	-2.0	-0.1	-2.2	..
2 Money and Banking (% Change)					
2.1 Scheduled Commercial Banks					
2.1.1 Deposits	14.2	13.5	13.9	13.5	13.4
2.1.2 Credit	14.1	16.5	17.3	13.5	14.9
2.1.2.1 Non-food Credit	14.0	16.1	16.9	13.5	15.1
2.1.3 Investment in Govt. Securities	15.4	16.1	14.1	14.5	13.8
2.2 Money Stock Measures					
2.2.1 Reserve Money (M0)	6.2	7.8	6.6	7.1	6.8
2.2.2 Broad Money (M3)	13.8	15.8	14.0	12.8	12.5
3 Ratios (%)					
3.1 Cash Reserve Ratio	4.00	4.75	4.75	4.00	4.00
3.2 Statutory Liquidity Ratio	23.0	24.0	24.0	23.0	23.0
3.3 Cash-Deposit Ratio	4.8	5.9	5.8	5.3	5.0
3.4 Credit-Deposit Ratio	77.9	76.4	75.3	76.4	76.3
3.5 Incremental Credit-Deposit Ratio	77.1	46.7	27.4	44.8	43.0
3.6 Investment-Deposit Ratio	29.7	29.9	30.7	30.2	30.8
3.7 Incremental Investment-Deposit Ratio	31.9	39.0	53.4	39.8	52.8
4 Interest Rates (%)					
4.1 Policy Repo Rate	7.50	8.00	8.00	7.25	7.25
4.2 Reverse Repo Rate	6.50	7.00	7.00	6.25	6.25
4.3 Marginal Standing Facility (MSF) Rate	8.50	9.00	9.00	8.25	10.25
4.4 Bank Rate	8.50	9.00	9.00	8.25	10.25
4.5 Base Rate	9.70/10.25	10.00/10.50	10.00/10.50	9.70/10.25	9.70/10.25
4.6 Term Deposit Rate >1 Year	7.50/9.00	8.00/9.25	8.00/9.25	7.50/9.00	7.50/9.00
4.7 Savings Deposit Rate	4.00	4.00	4.00	4.00	4.00
4.8 Call Money Rate (Weighted Average)	8.30	8.21	8.03	7.19	8.33
4.9 91-Day Treasury Bill (Primary) Yield	8.19	8.31	8.14	7.48	11.00
4.10 182-Day Treasury Bill (Primary) Yield	8.01	8.31	8.12	7.40	10.73
4.11 364-Day Treasury Bill (Primary) Yield	7.79	8.12	7.98	7.50	10.46
4.12 10-Year Government Securities Yield	7.95	8.15	-	7.39	8.17
5 RBI Reference Rate and Forward Premia					
5.1 INR-US$ Spot Rate (₹ Per Foreign Currency)	54.39	56.31	55.81	59.70	61.12
5.2 INR-Euro Spot Rate (₹ Per Foreign Currency)	69.54	70.91	68.45	77.98	80.95
5.3 Forward Premia of US$ 1-month (%)	7.72	7.67	8.06	6.63	10.41
3-month (%)	7.57	7.17	7.17	6.23	9.69
6-month (%)	7.28	6.36	6.70	5.90	8.90
6 Inflation (%)					
6.1 Wholesale Price Index	7.4	7.6	7.5	4.9	5.8
6.1.1 Primary Articles	9.8	9.8	10.5	8.1	9.0
6.1.2 Fuel and Power	10.6	12.1	8.4	7.1	11.3
6.1.3 Manufactured Products	5.4	5.4	5.9	2.8	2.8
6.2 All India Consumer Price Index	10.21	9.9	9.9	9.9	9.6
6.3 Consumer Price Index for Industrial Workers	10.43	10.1	9.8	11.1	10.9
7 Foreign Trade (% Change)					
7.1 Imports	0.4	-12.2	-1.2	0.1	-6.2
7.2 Exports	-1.8	-6.1	-12.4	-5.3	11.6

Reserve Bank of India

No. 2: RBI - Liabilities and Assets

(₹ Billion)

Item	As on the Last Friday/ Friday						
	2012-13	2012	2013				
		Aug.	Jul. 26	Aug. 9	Aug. 16	Aug. 23	Aug. 30
	1	2	3	4	5	6	7
1 Issue Department							
1.1 Liabilities							
1.1.1 Notes in Circulation	11,772.18	10,895.47	11,902.65	12,008.93	12,071.89	11,974.92	11,875.16
1.1.2 Notes held in Banking Department	0.08	0.14	0.12	0.12	0.11	0.11	0.11
1.1/1.2 Total Liabilities (Total Notes Issued) or Assets	**11,772.26**	**10,895.61**	**11,902.77**	**12,009.05**	**12,072.01**	**11,975.03**	**11,875.27**
1.2 Assets							
1.2.1 Gold Coin and Bullion	740.85	766.12	674.32	664.41	664.41	664.41	664.41
1.2.2 Foreign Securities	11,019.02	10,117.88	11,217.08	11,332.06	11,395.36	11,298.76	11,199.37
1.2.3 Rupee Coin	1.92	1.15	0.91	2.11	1.78	1.39	1.02
1.2.4 Government of India Rupee Securities	10.46	10.46	10.46	10.46	10.46	10.46	10.46
2 Banking Department							
2.1 Liabilities							
2.1.1 Deposits	4,577.50	3,613.24	3,493.41	3,572.77	3,598.46	3,576.51	3,659.86
2.1.1.1 Central Government	817.59	1.01	1.00	0.11	1.01	1.01	9.96
2.1.1.2 Market Stabilisation Scheme	–	–	–	–	–	–	–
2.1.1.3 State Governments	0.42	0.42	0.42	0.42	0.42	0.42	0.42
2.1.1.4 Scheduled Commercial Banks	3,424.24	3,301.17	3,150.97	3,220.35	3,248.45	3,193.76	3,266.90
2.1.1.5 Scheduled State Co-operative Banks	41.29	38.60	31.72	33.16	32.11	32.62	33.42
2.1.1.6 Non-Scheduled State Co-operative Banks	2.37	1.26	2.96	2.59	2.55	2.55	2.45
2.1.1.7 Other Banks	152.48	149.60	142.88	150.57	149.73	150.89	150.79
2.1.1.8 Others	139.10	121.18	163.45	165.56	164.19	195.26	195.93
2.1.2 Other Liabilities	6,959.83	7,068.13	8,053.37	8,312.10	8,506.44	9,241.75	9,612.09
2.1/2.2 Total Liabilities or Assets	**11,537.33**	**10,681.36**	**11,546.77**	**11,884.87**	**12,104.90**	**12,818.26**	**13,271.96**
2.2 Assets							
2.2.1 Notes and Coins	0.08	0.15	0.12	0.12	0.12	0.11	0.11
2.2.2 Balances held Abroad	3,161.94	4,278.21	3,690.78	4,089.85	4,217.36	4,968.39	5,336.89
2.2.3 Loans and Advances							
2.2.3.1 Central Government	–	16.85	186.45	–	–	–	–
2.2.3.2 State Governments	3.70	8.16	3.82	11.00	13.68	7.10	0.29
2.2.3.3 Scheduled Commercial Banks	418.66	63.62	344.34	380.27	407.59	416.66	433.98
2.2.3.4 Scheduled State Co-op.Banks	–	–	0.30	–	–	–	–
2.2.3.5 Industrial Dev. Bank of India	–	–	–	–	–	–	–
2.2.3.6 NABARD	–	–	–	–	–	–	–
2.2.3.7 EXIM Bank	–	–	–	–	–	–	–
2.2.3.8 Others	19.00	32.72	23.71	24.69	26.47	26.89	26.91
2.2.4 Bills Purchased and Discounted							
2.2.4.1 Internal	–	–	–	–	–	–	–
2.2.4.2 Government Treasury Bills	–	–	–	–	–	–	–
2.2.5 Investments	7,185.00	5,445.12	6,516.60	6,541.99	6,616.00	6,575.67	6,660.25
2.2.6 Other Assets	748.93	836.53	780.66	836.95	823.70	823.45	813.52
2.2.6.1 Gold	672.98	695.94	612.54	603.54	603.54	603.54	603.54

No. 3: Liquidity Operations by RBI

(₹ Billion)

Date	Liquidity Adjustment Facility		MSF	Standing Liquidity Facilities	OMO (Outright)		Net Injection (+)/ Absorption (-) (1+3+4+6-2-5)
	Repo	Reverse Repo			Sale	Purchase	
	1	2	3	4	5	6	7
Jul. 2, 2013	747.80	22.90	–	–50.04	–	–	674.86
Jul. 3, 2013	172.15	63.35	–	2.31	–	–	111.11
Jul. 4, 2013	116.90	54.70	–	–2.80	–	–	59.40
Jul. 5, 2013	76.95	31.70	–	–18.90	–	–	26.35
Jul. 8, 2013	137.20	0.40	–	105.10	–	–	241.90
Jul. 9, 2013	510.65	9.70	–	–47.30	–	–	453.65
Jul. 10, 2013	566.85	9.10	–	–23.30	–	–	534.45
Jul. 11, 2013	597.25	88.75	–	30.90	–	–	539.40
Jul. 12, 2013	773.00	6.60	–	–13.00	–	–	753.40
Jul. 15, 2013	923.60	0.25	–	–31.50	–	–	891.85
Jul. 16, 2013	2,163.50	55.15	0.05	137.40	–	–	2,245.80
Jul. 17, 2013	750.00	0.20	–	10.70	–	–	760.50
Jul. 18, 2013	750.01	102.25	–	–54.50	–	–	593.26
Jul. 19, 2013	568.60	52.45	15.00	–4.10	25.32	–	501.73
Jul. 22, 2013	398.40	0.50	–	83.10	–	–	481.00
Jul. 23, 2013	504.75	15.50	–	–58.00	–	–	431.25
Jul. 24, 2013	332.60	44.25	–	115.93	–	–	404.28
Jul. 25, 2013	279.38	69.10	0.05	–48.01	–	–	162.32
Jul. 26, 2013	337.45	7.95	228.50	–2.00	–	–	556.00
Jul. 29, 2013	365.84	0.90	259.20	129.98	–	–	754.12
Jul. 30, 2013	379.53	2.75	26.50	1.13	–	–	404.41
Jul. 31, 2013	376.98	3.92	25.60	0.90	–	–	399.56

No. 4: Sale/ Purchase of U.S. Dollar by the RBI

Item	2012-13	2012	2013	
		Jul.	Jun.	Jul.
	1	2	3	4
1 Net Purchase/ Sale of Foreign Currency (US$ Million) (1.1–1.2)	–2,601.00	–785.00	–2,252.00	–5,976.00
1.1 Purchase (+)	13,648.00	–	469.00	50.00
1.2 Sale (–)	16,249.00	785.00	2,721.00	6,026.00
2 ₹ equivalent at contract rate (₹ Billion)	–153.16	–42.50	–133.82	–354.66
3 Cumulative (over end-March 2013) (US $ Million)	–2,601.00	–1,595.00	–1,841.00	–7,817.00
(₹ Billion)	–153.16	–87.34	–127.27	–481.93
4 Outstanding Net Forward Sales (–)/ Purchase (+) at the end of month (US$ Million)	–11,006.00	–14,459.00	–4,914.00	–4,739.00

No. 5: RBI's Standing Facilities

(₹ Billion)

Item	As on the Last Reporting Friday							
	2012-13	2012	2013					
		Jul. 27	Feb. 22	Mar. 22	Apr. 19	May 31	Jun. 28	Jul. 26
	1	2	3	4	5	6	7	8
1 MSF	–	–	–	–	–	0.1	–	228.5
2 Export Credit Refinance for Scheduled Banks								
2.1 Limit	412.3	424.6	407.2	412.3	422.7	405.4	394.0	393.8
2.2 Outstanding	136.3	110.5	197.6	136.3	139.6	57.9	113.0	218.6
3 Liquidity Facility for PDs								
3.1 Limit	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
3.2 Outstanding	15.2	3.4	6.1	15.2	8.0	10.9	8.1	21.9
4 Others								
4.1 Limit	50.0	50.0	50.0	50.0	–	–	–	–
4.2 Outstanding	–	31.1	–	–	–	–	–	–
5 Total Outstanding (1+2.2+3.2+4.2)	151.5	145.0	203.7	151.5	147.6	68.9	121.1	469.0

Money and Banking

No. 6: Money Stock Measures

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2012-13	2012	2013		
		Jul. 27	Jun. 28	Jul. 12	Jul. 26
	1	2	3	4	5
1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4)	11,447.4	10,583.7	11,674.3	11,801.6	11,581.8
1.1 Notes in Circulation	11,756.4	10,882.1	12,017.8	12,112.1	11,902.7
1.2 Circulation of Rupee Coin	146.0	133.1	149.8	149.8	149.8
1.3 Circulation of Small Coins	7.4	7.4	7.4	7.4	7.4
1.4 Cash on Hand with Banks	462.3	438.9	500.7	467.7	478.1
2 Deposit Money of the Public	7,502.0	6,814.3	8,085.7	7,497.2	7,554.3
2.1 Demand Deposits with Banks	7,469.6	6,788.6	8,061.8	7,392.1	7,492.3
2.2 'Other' Deposits with Reserve Bank	32.4	25.8	24.0	105.0	62.0
3 M_1 (1 + 2)	18,949.4	17,398.0	19,760.0	19,298.8	19,136.1
4 Post Office Saving Bank Deposits	50.4	50.4	50.4	50.4	50.4
5 M_2 (3 + 4)	18,999.8	17,448.4	19,810.4	19,349.2	19,186.5
6 Time Deposits with Banks	64,870.9	60,268.6	67,694.1	68,269.1	68,254.1
7 M_3 (3 + 6)	83,820.2	77,666.7	87,454.1	87,567.9	87,390.1
8 Total Post Office Deposits	259.7	259.7	259.7	259.7	259.7
9 M_4 (7 + 8)	84,079.9	77,926.4	87,713.8	87,827.6	87,649.8

No. 7: Sources of Money Stock (M_3)

(₹ Billion)

Sources	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2012-13	2012	2013		
		Jul. 27	Jun. 28	Jul. 12	Jul. 26
	1	2	3	4	5
1 Net Bank Credit to Government	**27,072.1**	**25,711.1**	**29,268.9**	**29,737.5**	**29,671.4**
1.1 RBI's net credit to Government (1.1.1–1.1.2)	5,905.8	5,471.5	6,784.6	6,857.1	6,701.0
1.1.1 Claims on Government	6,581.4	5,472.9	6,786.0	6,858.5	6,702.4
1.1.1.1 Central Government	6,580.2	5,465.0	6,773.6	6,854.1	6,698.6
1.1.1.2 State Governments	1.2	7.9	12.4	4.0	3.8
1.1.2 Government deposits with RBI	675.6	1.4	1.4	5.0	1.4
1.1.2.1 Central Government	675.2	1.0	1.0	1.0	1.0
1.1.2.2 State Governments	0.4	0.4	0.4	4.0	0.4
1.2 Other Banks' Credit to Government	21,166.3	20,239.7	22,484.3	22,880.4	22,970.5
2 Bank Credit to Commercial Sector	**56,646.6**	**50,828.4**	**58,178.6**	**58,003.5**	**58,098.0**
2.1 RBI's credit to commercial sector	30.6	47.7	21.2	14.5	35.1
2.2 Other banks' credit to commercial sector	56,616.1	50,780.8	58,157.4	57,988.9	58,062.9
2.2.1 Bank credit by commercial banks	52,604.6	47,045.0	54,150.0	53,983.8	54,052.5
2.2.2 Bank credit by co-operative banks	3,968.7	3,678.3	3,963.3	3,961.6	3,966.6
2.2.3 Investments by commercial and co-operative banks in other securities	42.8	57.5	44.0	43.5	43.8
3 Net Foreign Exchange Assets of Banking Sector (3.1 + 3.2)	**16,366.6**	**16,210.0**	**17,377.8**	**17,236.8**	**16,983.1**
3.1 RBI's net foreign exchange assets (3.1.1–3.1.2)	15,580.6	15,700.8	16,591.8	16,450.8	16,197.1
3.1.1 Gross foreign assets	15,580.8	15,701.1	16,592.1	16,451.1	16,197.4
3.1.2 Foreign liabilities	0.2	0.3	0.3	0.3	0.3
3.2 Other banks' net foreign exchange assets	786.0	509.2	786.0	786.0	786.0
4 Government's Currency Liabilities to the Public	**153.4**	**140.5**	**157.2**	**157.2**	**157.2**
5 Banking Sector's Net Non-monetary Liabilities	**16,418.5**	**15,223.5**	**17,528.3**	**17,567.2**	**17,519.5**
5.1 Net non-monetary liabilities of RBI	6,925.0	7,005.5	8,112.9	8,075.3	7,986.2
5.2 Net non-monetary liabilities of other banks (residual)	9,493.4	8,218.0	9,415.5	9,491.9	9,533.3
M_3 (1+2+3+4–5)	**83,820.2**	**77,666.7**	**87,454.1**	**87,567.9**	**87,390.1**

No. 8: Monetary Survey

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2012-13	2012	2013		
		Jul. 27	Jun. 28	Jul. 12	Jul. 26
	1	2	3	4	5
Monetary Aggregates					
NM_1 (1.1 + 1.2.1+1.3)	18,834.7	17,274.8	19,648.7	19,186.0	19,023.1
NM_2 (M_1 + 1.2.2.1)	46,970.6	43,419.9	49,010.8	48,778.4	48,622.2
NM_3 (NM_2 + 1.2.2.2 + 1.4 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	83,575.6	77,362.4	87,228.1	87,300.2	87,310.2
1 Components					
1.1 Currency with the Public	11,461.0	10,595.7	11,686.6	11,813.8	11,594.3
1.2 Aggregate Deposits of Residents	69,865.6	64,753.5	73,187.3	73,028.1	73,142.6
1.2.1 Demand Deposits	7,341.3	6,653.3	7,938.1	7,267.2	7,366.8
1.2.2 Time Deposits of Residents	62,524.3	58,100.3	65,249.2	65,760.9	65,775.8
1.2.2.1 Short-term Time Deposits	28,135.9	26,145.1	29,362.1	29,592.4	29,599.1
1.2.2.1.1 Certificates of Deposit (CDs)	3,831.4	4,138.4	3,514.6	3,531.9	3,446.3
1.2.2.2 Long-term Time Deposits	34,388.4	31,955.1	35,887.1	36,168.5	36,176.7
1.3 'Other' Deposits with RBI	32.4	25.8	24.0	105.0	62.0
1.4 Call/Term Funding from Financial Institutions	2,216.6	1,987.4	2,330.2	2,353.3	2,511.3
2 Sources					
2.1 Domestic Credit	85,823.3	78,374.5	89,678.0	90,030.6	89,884.6
2.1.1 Net Bank Credit to the Government	26,579.4	25,263.8	28,760.1	29,225.4	29,149.9
2.1.1.1 Net RBI credit to the Government	5,905.8	5,471.5	6,784.6	6,857.1	6,701.0
2.1.1.2 Credit to the Government by the Banking System	20,673.6	19,792.3	21,975.5	22,368.3	22,448.9
2.1.2 Bank Credit to the Commercial Sector	59,243.9	53,110.7	60,917.9	60,805.2	60,734.7
2.1.2.1 RBI Credit to the Commercial Sector	30.6	47.7	21.2	14.5	35.1
2.1.2.2 Credit to the Commercial Sector by the Banking System	59,213.4	53,063.0	60,896.7	60,790.6	60,699.6
2.1.2.2.1 Other Investments (Non-SLR Securities)	3,674.6	3,229.0	3,826.7	3,887.6	3,747.9
2.2 Government's Currency Liabilities to the Public	153.4	140.5	157.2	157.2	157.2
2.3 Net Foreign Exchange Assets of the Banking Sector	14,775.0	14,535.7	15,405.7	15,139.4	14,896.5
2.3.1 Net Foreign Exchange Assets of the RBI	15,580.6	15,700.8	16,591.8	16,450.8	16,197.1
2.3.2 Net Foreign Currency Assets of the Banking System	–805.6	–1,165.1	–1,186.1	–1,311.5	–1,300.6
2.4 Capital Account	12,869.4	13,109.0	14,614.1	14,969.5	14,862.5
2.5 Other items (net)	4,306.7	2,579.3	3,398.7	3,057.5	2,765.7

No. 9: Liquidity Aggregates

(₹ Billion)

Aggregates	2012-13	2012	2013		
		Jul.	May	Jun.	Jul.
	1	2	3	4	5
1 NM_3	**83,575.6**	**77,362.4**	**85,965.7**	**87,228.1**	**87,310.2**
2 Postal Deposits	1,398.8	1,294.7	1,398.8	1,398.8	1,398.8
3 L_1 (1 + 2)	**84,974.4**	**78,657.1**	**87,364.5**	**88,626.9**	**88,709.0**
4 Liabilities of Financial Institutions	29.3	29.3	29.3	29.3	29.3
4.1 Term Money Borrowings	26.6	26.6	26.6	26.6	26.6
4.2 Certificates of Deposit	0.3	0.3	0.3	0.3	0.3
4.3 Term Deposits	2.5	2.5	2.5	2.5	2.5
5 L_2 (3 + 4)	**85,003.7**	**78,686.4**	**87,393.8**	**88,656.2**	**88,738.3**
6 Public Deposits with Non-Banking Financial Companies	99.4			99.4	
7 L_3 (5 + 6)	**85,103.1**			**88,755.6**	

No. 10: Reserve Bank of India Survey

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2012-13	2012	2013		
		Jul. 27	Jun. 28	Jul. 12	Jul. 26
	1	2	3	4	5
1 Components					
1.1 Currency in Circulation	11,909.8	11,022.6	12,175.0	12,269.2	12,059.8
1.2 Bankers' Deposits with the RBI	3,206.7	3,417.1	3,465.9	3,242.7	3,328.5
1.2.1 Scheduled Commercial Banks	3,018.9	3,236.6	3,287.7	3,068.1	3,151.0
1.3 'Other' Deposits with the RBI	32.4	25.8	24.0	105.0	62.0
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	15,148.9	14,465.5	15,664.9	15,617.0	15,450.3
2 Sources					
2.1 RBI's Domestic Credit	6,339.9	5,629.6	7,028.7	7,084.2	7,082.3
2.1.1 Net RBI credit to the Government	5,905.8	5,471.5	6,784.6	6,857.1	6,701.0
2.1.1.1 Net RBI credit to the Central Government (2.1.1.1.1 + 2.1.1.1.2 + 2.1.1.1.3 + 2.1.1.1.4 – 2.1.1.1.5)	5,905.0	5,464.0	6,772.6	6,853.1	6,697.6
2.1.1.1.1 Loans and Advances to the Central Government	–	–	15.7	97.8	186.5
2.1.1.1.2 Investments in Treasury Bills	–	–	–	–	–
2.1.1.1.3 Investments in dated Government Securities	6,578.3	5,464.2	6,755.4	6,754.6	6,511.2
2.1.1.1.3.1 Central Government Securities	6,567.8	5,453.7	6,744.9	6,744.1	6,500.7
2.1.1.1.4 Rupee Coins	1.9	0.8	2.5	1.7	0.9
2.1.1.1.5 Deposits of the Central Government	675.2	1.0	1.0	1.0	1.0
2.1.1.2 Net RBI credit to State Governments	0.8	7.5	12.0	4.0	3.4
2.1.2 RBI's Claims on Banks	403.5	110.5	222.9	212.6	346.3
2.1.2.1 Loans and Advances to Scheduled Commercial Banks	403.4	109.2	221.2	211.2	344.3
2.1.3 RBI's Credit to Commercial Sector	30.6	47.7	21.2	14.5	35.1
2.1.3.1 Loans and Advances to Primary Dealers	17.4	6.0	8.1	1.4	21.9
2.1.3.2 Loans and Advances to NABARD	–	–	–	–	–
2.2 Government's Currency Liabilities to the Public	153.4	140.5	157.2	157.2	157.2
2.3 Net Foreign Exchange Assets of the RBI	15,580.6	15,700.8	16,591.8	16,450.8	16,197.1
2.3.1 Gold	1,397.4	1,450.6	1,290.0	1,286.9	1,286.9
2.3.2 Foreign Currency Assets	14,183.4	14,250.4	15,302.0	15,164.2	14,910.4
2.4 Capital Account	6,364.9	6,681.9	7,407.7	7,732.2	7,612.6
2.5 Other Items (net)	560.1	323.6	705.2	343.1	373.7

No. 11: Reserve Money - Components and Sources

(₹ Billion)

Item	Outstanding as on March 31/ last Fridays of the month/ Fridays						
	2012-13	2012	2013				
		Jul. 27	Jun. 28	Jul. 5	Jul. 12	Jul. 19	Jul. 26
	1	2	3	4	5	6	7
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 + 2.4 + 2.5 – 2.6)	15,148.9	14,465.5	15,664.9	15,261.9	15,617.0	15,364.3	15,450.3
1 Components							
1.1 Currency in Circulation	11,909.8	11,022.6	12,175.0	12,201.0	12,269.2	12,188.1	12,059.8
1.2 Bankers' Deposits with RBI	3,206.7	3,417.1	3,465.9	2,999.3	3,242.7	3,108.4	3,328.5
1.3 'Other' Deposits with RBI	32.4	25.8	24.0	61.6	105.0	67.8	62.0
2 Sources							
2.1 Net Reserve Bank Credit to Government	5,905.8	5,471.5	6,784.6	6,417.3	6,857.1	6,696.5	6,701.0
2.2 Reserve Bank Credit to Banks	403.5	110.5	222.9	164.9	212.6	254.6	346.3
2.3 Reserve Bank Credit to Commercial Sector	30.6	47.7	21.2	14.5	14.5	30.5	35.1
2.4 Net Foreign Exchange Assets of RBI	15,580.6	15,700.8	16,591.8	16,561.1	16,450.8	16,365.5	16,197.1
2.5 Government's Currency Liabilities to the Public	153.4	140.5	157.2	157.2	157.2	157.2	157.2
2.6 Net Non- Monetary Liabilities of RBI	6,925.0	7,005.5	8,112.9	8,053.1	8,075.3	8,139.9	7,986.2

No. 12: Commercial Bank Survey

(₹ Billion)

Item	Outstanding as on last reporting Fridays of the month/ reporting Fridays of the month				
	2012-13	2012	2013		
		Jul. 27	Jun. 28	Jul. 12	Jul. 26
	1	2	3	4	5
1 Components					
1.1 Aggregate Deposits of Residents	66,677.8	61,670.4	70,004.9	69,846.4	69,957.3
1.1.1 Demand Deposits	6,623.0	5,939.2	7,221.9	6,551.2	6,650.5
1.1.2 Time Deposits of Residents	60,054.8	55,731.2	62,783.0	63,295.3	63,306.8
1.1.2.1 Short-term Time Deposits	27,024.7	25,079.0	28,252.4	28,482.9	28,488.0
1.1.2.1.1 Certificates of Deposits (CDs)	3,835.3	4,138.4	3,514.6	3,531.9	3,446.3
1.1.2.2 Long-term Time Deposit	33,030.1	30,652.1	34,530.7	34,812.4	34,818.7
1.2 Call/Term Funding from Financial Institutions	2,216.6	1,987.4	2,330.2	2,353.3	2,511.3
2 Sources					
2.1 Domestic Credit	76,376.1	69,430.1	79,301.7	79,587.8	79,575.5
2.1.1 Credit to the Government	20,036.5	19,155.8	21,343.2	21,734.5	21,813.5
2.1.2 Credit to the Commercial Sector	56,339.6	50,274.3	57,958.5	57,853.4	57,761.9
2.1.2.1 Bank Credit	52,604.6	47,045.0	54,150.0	53,983.8	54,052.5
2.1.2.1.1 Non-food Credit	51,664.1	46,067.1	52,469.0	52,847.0	53,041.0
2.1.2.2 Net Credit to Primary Dealers	59.0	62.3	46.6	47.2	26.7
2.1.2.3 Investments in Other Approved Securities	24.5	27.6	24.9	24.3	24.4
2.1.2.4 Other Investments (in non-SLR Securities)	3,651.5	3,139.4	3,737.1	3,797.9	3,658.3
2.2 Net Foreign Currency Assets of Commercial Banks (2.2.1–2.2.2–2.2.3)	–782.2	–1,165.1	–1,186.1	–1,311.5	–1,300.6
2.2.1 Foreign Currency Assets	919.6	482.8	627.2	621.3	635.1
2.2.2 Non-resident Foreign Currency Repatriable Fixed Deposits	826.8	801.1	896.6	952.1	911.1
2.2.3 Overseas Foreign Currency Borrowings	875.0	846.8	916.7	980.7	1,024.5
2.3 Net Bank Reserves (2.3.1+2.3.2–2.3.3)	3,011.7	3,508.0	3,511.2	3,268.7	3,228.4
2.3.1 Balances with the RBI	2,822.7	3,236.6	3,287.7	3,068.1	3,151.0
2.3.2 Cash in Hand	404.9	380.5	444.8	411.8	421.7
2.3.3 Loans and Advances from the RBI	215.9	109.2	221.2	211.2	344.3
2.4 Capital Account	6,374.2	6,185.4	6,964.7	6,995.6	7,008.2
2.5 Other items (net) (2.1+2.2+2.3–2.4–1.1–1.2)	3,337.0	1,929.8	2,327.1	2,349.8	2,026.5
2.5.1 Other Demand and Time Liabilities (net of 2.2.3)	3,241.3	2,736.2	3,144.9	2,891.7	2,819.7
2.5.2 Net Inter-Bank Liabilities (other than to PDs)	–809.8	–646.9	–923.0	–858.7	–860.9

No. 13: Scheduled Commercial Banks' Investments

(₹ Billion)

Item	As on March 22, 2013	2012	2013		
		Jul. 27	Jun. 28	Jul. 12	Jul. 26
	1	2	3	4	5
1 SLR Securities	20,061.0	19,183.4	21,340.2	21,758.8	21,838.0
2 Commercial Paper	324.3	215.2	241.8	267.9	281.4
3 Shares issued by					
3.1 PSUs	86.8	74.2	84.5	85.2	84.7
3.2 Private Corporate Sector	338.0	323.0	336.4	336.4	335.2
3.3 Others	8.7	6.7	8.4	8.5	8.5
4 Bonds/Debentures issued by					
4.1 PSUs	460.5	394.2	464.1	437.5	486.0
4.2 Private Corporate Sector	1,026.2	831.0	1,076.2	995.6	1,019.8
4.3 Others	480.8	426.2	500.5	517.0	581.4
5 Instruments issued by					
5.1 Mutual funds	436.7	477.7	340.6	678.9	399.1
5.2 Financial institutions	489.5	391.2	477.1	471.0	462.0

No. 14: Business in India - All Scheduled Banks and All Scheduled Commercial Banks

(₹ Billion)

Item	As on the Last Reporting Friday (in case of March)/ Last Friday							
	All Scheduled Banks				All Scheduled Commercial Banks			
	2012-13	2012	2013		2012-13	2012	2013	
		Jul.	Jun.	Jul.		Jul.	Jun.	Jul.
	1	2	3	4	5	6	7	8
Number of Reporting Banks	218	236	218	218	151	169	151	151
1 Liabilities to the Banking System	1,368.2	1,138.5	1,121.6	1,077.7	1,331.0	1,106.2	1,085.8	1,039.0
1.1 Demand and Time Deposits from Banks	879.3	785.1	766.8	708.8	846.5	755.7	732.9	674.0
1.2 Borrowings from Banks	398.0	278.5	306.3	316.4	393.6	275.9	304.4	312.7
1.3 Other Demand and Time Liabilities	90.9	74.9	48.5	52.6	90.9	74.6	48.5	52.3
2 Liabilities to Others	75,818.5	69,896.9	79,181.4	79,292.3	73,837.5	68,041.8	77,125.3	77,223.9
2.1 Aggregate Deposits	69,420.0	64,258.9	72,697.1	72,866.1	67,504.5	62,471.4	70,721.4	70,868.5
2.1.1 Demand	6,783.3	6,092.5	7,329.8	6,814.0	6,623.0	5,939.2	7,162.4	6,650.5
2.1.2 Time	62,636.7	58,166.4	65,367.2	66,052.1	60,881.5	56,532.2	63,559.0	64,217.9
2.2 Borrowings	2,227.2	2,002.3	2,343.1	2,523.2	2,216.6	1,987.4	2,329.6	2,511.3
2.3 Other Demand and Time Liabilities	4,171.3	3,635.6	4,141.2	3,903.0	4,116.3	3,583.0	4,074.4	3,844.2
3 Borrowings from Reserve Bank	217.2	110.5	222.9	346.3	215.9	109.2	221.2	344.3
3.1 Against Usance Bills /Promissory Notes	–	–	–	–	–	–	–	–
3.2 Others	217.2	110.5	222.9	346.3	215.9	109.2	221.2	344.3
4 Cash in Hand and Balances with Reserve Bank	3,320.9	3,713.0	3,826.3	3,667.6	3,227.6	3,617.2	3,730.4	3,572.7
4.1 Cash in Hand	414.8	390.8	452.9	432.4	404.9	380.5	442.6	421.7
4.2 Balances with Reserve Bank	2,906.1	3,322.2	3,373.4	3,235.2	2,822.7	3,236.6	3,287.7	3,151.0
5 Assets with the Banking System	2,448.3	2,082.3	2,284.2	2,224.6	2,199.5	1,815.4	1,985.0	1,926.5
5.1 Balances with Other Banks	1,051.5	865.9	1,127.8	1,112.5	960.8	766.7	1,022.5	1,006.7
5.1.1 In Current Account	127.6	113.1	132.0	110.7	111.9	96.7	111.9	95.0
5.1.2 In Other Accounts	923.9	752.8	995.8	1,001.8	848.9	670.0	910.6	911.7
5.2 Money at Call and Short Notice	397.6	307.9	347.7	303.9	296.0	208.1	223.1	185.1
5.3 Advances to Banks	136.1	124.6	144.6	128.6	126.9	117.5	136.3	120.2
5.4 Other Assets	863.0	784.0	664.1	679.6	815.8	723.1	603.1	614.5
6 Investment	20,660.3	19,745.9	21,957.0	22,469.4	20,061.0	19,183.4	21,340.2	21,838.0
6.1 Government Securities	20,633.5	19,716.0	21,932.7	22,443.0	20,036.5	19,155.8	21,317.6	21,813.5
6.2 Other Approved Securities	26.7	29.9	24.3	26.4	24.5	27.6	22.6	24.4
7 Bank Credit	54,281.4	48,530.3	55,756.4	55,781.5	52,604.6	47,045.0	54,045.6	54,052.5
7a Food Credit	1,045.6	1,059.2	1,204.9	1,121.9	964.2	977.9	1,123.6	1,011.5
7.1 Loans, Cash-credits and Overdrafts	52,244.1	46,802.4	53,707.9	53,800.1	50,591.7	45,337.2	52,020.2	52,095.9
7.2 Inland Bills-Purchased	253.1	173.4	248.6	253.2	248.6	168.6	244.8	249.4
7.3 Inland Bills-Discounted	1,109.9	984.2	1,102.7	1,064.5	1,094.5	972.5	1,087.6	1,047.9
7.4 Foreign Bills-Purchased	216.6	188.7	222.7	215.6	214.9	188.3	221.7	214.5
7.5 Foreign Bills-Discounted	457.7	381.6	474.6	448.1	454.7	378.4	471.4	444.9

No. 15: Deployment of Gross Bank Credit by Major Sectors

(₹ Billion)

Item	Outstanding as on				Growth (%)	
	Mar. 22, 2013	2012	2013		Financial year so far	Y-o-Y
		Jul. 27	Jun. 28	Jul. 26	2013-14	2013
	1	2	3	4	5	6
1 Gross Bank Credit	**49,642**	**44,393**	**51,019**	**50,883**	**2.5**	**14.6**
1.1 Food Credit	**946**	**935**	**1,101**	**988**	**4.4**	**5.7**
1.2 Non-food Credit	**48,696**	**43,458**	**49,918**	**49,894**	**2.5**	**14.8**
1.2.1 Agriculture & Allied Activities	**5,899**	**5,453**	**6,051**	**6,027**	**2.2**	**10.5**
1.2.2 Industry	**22,302**	**19,650**	**22,820**	**22,774**	**2.1**	**15.9**
1.2.2.1 Micro & Small	2,843	2,418	2,928	2,910	2.3	20.3
1.2.2.2 Medium	1,247	1,333	1,321	1,318	5.7	–1.1
1.2.2.3 Large	18,211	15,899	18,572	18,546	1.8	16.7
1.2.3 Services	**11,486**	**10,301**	**11,699**	**11,671**	**1.6**	**13.3**
1.2.3.1 Transport Operators	796	791	829	816	2.5	3.2
1.2.3.2 Computer Software	169	147	178	175	3.6	19.0
1.2.3.3 Tourism, Hotels & Restaurants	354	337	362	368	3.9	9.3
1.2.3.4 Shipping	82	74	86	88	6.5	17.5
1.2.3.5 Professional Services	564	498	607	612	8.5	22.9
1.2.3.6 Trade	2,760	2,314	2,818	2,803	1.6	21.1
1.2.3.6.1 Wholesale Trade	1,501	1,290	1,489	1,478	–1.6	14.6
1.2.3.6.2 Retail Trade	1,259	1,024	1,330	1,325	5.3	29.4
1.2.3.7 Commercial Real Estate	1,261	1,158	1,339	1,338	6.1	15.6
1.2.3.8 Non-Banking Financial Companies (NBFCs)	2,570	2,434	2,589	2,565	–0.2	5.4
1.2.3.9 Other Services	2,930	2,548	2,892	2,906	–0.8	14.1
1.2.4 Personal Loans	**9,009**	**8,055**	**9,348**	**9,423**	**4.6**	**17.0**
1.2.4.1 Consumer Durables	84	69	90	92	10.0	33.8
1.2.4.2 Housing	4,600	4,148	4,849	4,910	6.7	18.4
1.2.4.3 Advances against Fixed Deposits	611	496	631	581	–4.9	17.2
1.2.4.4 Advances to Individuals against share & bonds	31	28	30	31	–0.4	12.5
1.2.4.5 Credit Card Outstanding	249	221	230	231	–7.1	4.4
1.2.4.6 Education	550	520	555	566	3.0	8.9
1.2.4.7 Vehicle Loans	1,111	946	1,167	1,168	5.1	23.4
1.2.4.8 Other Personal Loans	1,774	1,627	1,795	1,844	4.0	13.3
1.2A Priority Sector	**15,398**	**14,001**	**16,105**	**16,283**	**5.7**	**16.3**
1.2A.1 Agriculture & Allied Activities	5,899	5,453	6,051	6,027	2.2	10.5
1.2A.2 Micro & Small Enterprises	5,623	4,902	6,103	6,078	8.1	24.0
1.2A.2.1 Manufacturing	2,843	2,418	2,928	2,910	2.3	20.3
1.2A.2.2 Services	2,779	2,483	3,175	3,168	14.0	27.6
1.2A.3 Housing	2,672	2,537	2,866	2,874	7.5	13.3
1.2A.4 Micro-Credit	165	146	173	168	1.5	15.0
1.2A.5 Education Loans	526	498	534	545	3.5	9.4
1.2A.6 State-Sponsored Orgs. for SC/ST	1	1	1	1	2.4	–7.3
1.2A.7 Weaker Sections	2,734	2,410	2,951	3,037	11.1	26.0
1.2A.8 Export Credit	422	394	454	440	4.1	11.6

No. 16: Industry-wise Deployment of Gross Bank Credit

(₹ Billion)

Industry	Outstanding as on				Growth (%)	
	Mar. 22, 2013	2012	2013		Financial year so far	Y-o-Y
		Jul. 27	Jun. 28	Jul. 26	2013-14	2013
	1	2	3	4	5	6
1 Industry	**22,302**	**19,650**	**22,820**	**22,774**	**2.1**	**15.9**
1.1 Mining & Quarrying (incl. Coal)	**346**	**332**	**312**	**320**	**–7.6**	**–3.7**
1.2 Food Processing	**1,174**	**909**	**1,246**	**1,232**	**4.9**	**35.5**
1.2.1 Sugar	330	283	339	322	–2.2	13.8
1.2.2 Edible Oils & Vanaspati	171	123	182	190	11.6	54.3
1.2.3 Tea	26	22	27	29	14.0	34.0
1.2.4 Others	648	481	697	690	6.5	43.5
1.3 Beverage & Tobacco	**165**	**147**	**159**	**156**	**–5.3**	**6.3**
1.4 Textiles	**1,835**	**1,601**	**1,852**	**1,834**	**–0.1**	**14.5**
1.4.1 Cotton Textiles	925	822	922	912	–1.4	10.9
1.4.2 Jute Textiles	22	16	22	21	–6.2	25.1
1.4.3 Man-Made Textiles	189	157	192	192	1.7	22.9
1.4.4 Other Textiles	699	606	715	709	1.3	17.0
1.5 Leather & Leather Products	**87**	**83**	**90**	**90**	**3.6**	**7.8**
1.6 Wood & Wood Products	**77**	**66**	**81**	**81**	**5.1**	**21.8**
1.7 Paper & Paper Products	**283**	**258**	**296**	**300**	**6.0**	**16.2**
1.8 Petroleum, Coal Products & Nuclear Fuels	**643**	**518**	**566**	**535**	**–16.8**	**3.4**
1.9 Chemicals & Chemical Products	**1,592**	**1,191**	**1,480**	**1,445**	**–9.3**	**21.3**
1.9.1 Fertiliser	269	121	225	215	–20.1	77.4
1.9.2 Drugs & Pharmaceuticals	495	457	529	519	4.7	13.4
1.9.3 Petro Chemicals	441	281	337	319	–27.8	13.4
1.9.4 Others	387	331	390	393	1.6	18.6
1.10 Rubber, Plastic & their Products	**312**	**292**	**317**	**313**	**0.3**	**7.4**
1.11 Glass & Glassware	**74**	**67**	**71**	**71**	**–4.5**	**6.6**
1.12 Cement & Cement Products	**459**	**373**	**468**	**481**	**4.8**	**28.8**
1.13 Basic Metal & Metal Product	**3,141**	**2,657**	**3,219**	**3,191**	**1.6**	**20.1**
1.13.1 Iron & Steel	2,366	2,011	2,459	2,443	3.3	21.5
1.13.2 Other Metal & Metal Product	775	646	760	747	–3.6	15.8
1.14 All Engineering	**1,284**	**1,231**	**1,335**	**1,319**	**2.7**	**7.2**
1.14.1 Electronics	334	275	306	308	–8.0	11.9
1.14.2 Others	950	956	1,029	1,011	6.5	5.8
1.15 Vehicles, Vehicle Parts & Transport Equipment	**589**	**575**	**608**	**603**	**2.5**	**4.9**
1.16 Gems & Jewellery	**611**	**524**	**686**	**692**	**13.2**	**32.1**
1.17 Construction	**522**	**507**	**538**	**536**	**2.7**	**5.6**
1.18 Infrastructure	**7,297**	**6,438**	**7,727**	**7,840**	**7.4**	**21.8**
1.18.1 Power	4,158	3,470	4,439	4,552	9.5	31.2
1.18.2 Telecommunications	878	933	910	897	2.2	–3.9
1.18.3 Roads	1,313	1,173	1,408	1,445	10.1	23.2
1.18.4 Other Infrastructure	948	861	970	945	–0.3	9.8
1.19 Other Industries	**1,810**	**1,881**	**1,768**	**1,736**	**–4.0**	**–7.7**

No. 17: State Co-operative Banks Maintaining Accounts with the Reserve Bank of India

(₹ Billion)

Item	Last Reporting Friday (in case of March)/Last Friday/ Reporting Friday					
	2012-13	2012	2013			
		Apr. 27	Mar. 29	Apr. 5	Apr. 19	Apr. 26
	1	2	3	4	5	6
Number of Reporting Banks	31	31	31	31	31	31
1 Aggregate Deposits (2.1.1.2+2.2.1.2)	356.5	314.5	356.5	358.2	361.2	364.0
2 Demand and Time Liabilities						
2.1 Demand Liabilities	127.2	115.6	127.2	122.2	126.2	125.7
2.1.1 Deposits						
2.1.1.1 Inter-Bank	25.0	14.3	25.0	20.6	19.0	17.2
2.1.1.2 Others	70.1	65.6	70.1	70.0	73.4	73.0
2.1.2 Borrowings from Banks	10.2	11.7	10.2	10.2	10.2	9.9
2.1.3 Other Demand Liabilities	21.8	23.9	21.8	21.5	23.6	25.6
2.2 Time Liabilities	802.5	724.8	802.5	819.2	811.9	810.4
2.2.1 Deposits						
2.2.1.1 Inter-Bank	507.0	464.9	507.0	522.4	515.7	511.3
2.2.1.2 Others	286.4	248.8	286.4	288.2	287.8	291.0
2.2.2 Borrowings from Banks	0.5	3.2	0.5	–	–	–
2.2.3 Other Time Liabilities	8.6	7.9	8.6	8.6	8.4	8.1
3 Borrowing from Reserve Bank	–	–	–	–	0.1	0.4
4 Borrowings from a notified bank / State Government	319.3	269.3	319.3	318.2	319.0	321.9
4.1 Demand	132.1	105.1	132.1	131.5	131.1	133.9
4.2 Time	187.2	164.2	187.2	186.7	187.9	187.9
5 Cash in Hand and Balances with Reserve Bank	44.2	36.2	44.2	31.9	33.0	34.9
5.1 Cash in Hand	2.1	1.9	2.1	2.0	1.9	2.0
5.2 Balance with Reserve Bank	42.1	34.3	42.1	30.0	31.1	32.9
6 Balances with Other Banks in Current Account	7.0	5.0	7.0	6.5	6.3	6.5
7 Investments in Government Securities	269.3	255.0	269.3	269.4	271.7	271.5
8 Money at Call and Short Notice	156.2	154.4	156.2	162.6	159.8	153.1
9 Bank Credit (10.1+11)	365.0	312.0	365.0	366.4	365.8	363.4
10 Advances						
10.1 Loans, Cash-Credits and Overdrafts	364.9	311.9	364.9	366.2	365.8	363.4
10.2 Due from Banks	570.8	459.9	570.8	566.7	558.7	563.5
11 Bills Purchased and Discounted	0.1	0.1	0.1	0.2	0.1	0.1

Price and Production

No. 18: Consumer Price Index (Base: 2010=100)

Group/Sub group	2012-13			Rural			Urban			Combined		
	Rural	Urban	Combined	Jul. 12	Jun. 13	Jul. 13	Jul. 12	Jun. 13	Jul. 13	Jul. 12	Jun. 13	Jul. 13
	1	2	3	4	5	6	7	8	9	10	11	12
1 Food, beverages and tobacco	**125.0**	**124.3**	**124.8**	**123.2**	**133.8**	**136.1**	**123.1**	**135.7**	**138.3**	**123.2**	**134.4**	**136.8**
1.1 Cereals and products	117.8	115.2	117.1	113.4	128.6	130.1	109.1	129.7	130.8	112.3	128.9	130.3
1.2 Pulses and products	112.1	113.6	112.6	109.5	116.7	116.9	111.1	114.8	114.4	110.0	116.1	116.1
1.3 Oils and fats	138.5	145.6	140.8	135.9	142.4	142.4	144.3	143.5	142.7	138.6	142.8	142.5
1.4 Egg, fish and meat	128.8	128.8	128.8	126.3	139.0	141.8	125.1	146.0	146.3	125.9	141.4	143.3
1.5 Milk and products	132.6	128.0	130.9	130.6	140.4	141.6	126.2	134.8	136.0	129.0	138.3	139.5
1.6 Condiments and spices	126.1	121.9	124.9	123.6	131.7	132.1	119.8	129.2	130.5	122.5	131.0	131.6
1.7 Vegetables	129.8	121.7	127.2	138.9	144.0	155.8	135.4	152.1	170.3	137.8	146.6	160.4
1.8 Fruits	137.4	135.9	136.7	137.6	147.9	148.8	141.9	147.7	149.2	139.5	147.8	149.0
1.9 Sugar etc	108.9	109.3	109.0	103.5	110.1	110.3	104.5	107.1	106.9	103.8	109.2	109.3
1.10 Non-alcoholic beverages	124.5	124.2	124.4	122.1	131.9	132.9	120.6	134.6	135.2	121.5	133.1	133.9
1.11 Prepared meals etc	124.1	125.2	124.6	121.7	131.4	132.7	121.7	134.4	135.3	121.7	132.9	134.0
1.12 Pan, tobacco and intoxicants	132.2	133.4	132.6	130.9	140.3	141.3	131.3	144.9	146.2	131.0	141.6	142.6
2 Fuel and light	**127.4**	**124.8**	**126.4**	**125.2**	**134.0**	**135.2**	**121.8**	**132.0**	**132.8**	**123.9**	**133.2**	**134.3**
3 Housing	**--**	**121.0**	**121.0**	**--**	**--**	**--**	**118.4**	**130.1**	**130.9**	**118.4**	**130.1**	**130.9**
4 Clothing, bedding and footwear	**131.6**	**132.5**	**131.9**	**128.5**	**139.5**	**140.7**	**129.6**	**140.7**	**141.5**	**128.9**	**139.9**	**141.0**
4.1 Clothing and bedding	132.1	133.8	132.7	128.9	140.1	141.3	130.7	142.3	143.2	129.5	140.9	142.0
4.2 Footwear	128.5	125.0	127.2	126.3	136.0	137.2	122.9	131.1	131.8	125.1	134.2	135.2
5 Miscellaneous	**120.7**	**116.8**	**118.9**	**118.9**	**125.5**	**126.4**	**115.1**	**122.0**	**123.5**	**117.1**	**123.9**	**125.1**
5.1 Medical care	116.6	115.2	116.2	115.0	121.5	121.9	113.3	120.7	121.4	114.4	121.2	121.7
5.2 Education, stationery etc	117.2	116.5	116.8	115.9	122.4	123.2	115.6	124.0	126.4	115.7	123.3	124.9
5.3 Recreation and amusement	114.4	106.6	109.7	113.1	118.8	119.7	105.3	111.2	111.9	108.4	114.2	115.0
5.4 Transport and communication	122.0	117.4	119.4	119.9	127.4	129.4	115.6	121.5	123.9	117.5	124.1	126.3
5.5 Personal care and effects	117.9	115.0	116.7	116.0	123.6	124.4	113.4	119.8	120.0	114.9	122.1	122.6
5.6 Household requisites	127.9	119.8	124.6	125.7	130.0	130.2	117.6	124.2	124.5	122.4	127.7	127.9
5.7 Others	131.5	132.6	131.9	129.8	141.0	142.1	128.7	144.3	145.4	129.4	142.3	143.4
General Index (All Groups)	**124.5**	**121.8**	**123.3**	**122.6**	**132.1**	**133.8**	**119.9**	**130.5**	**132.2**	**121.4**	**131.4**	**133.1**

Source: Central Statistics Office, Ministry of Statistics and Programme Implementation, Government of India.

No. 19: Other Consumer Price Indices

Item	Base Year	Linking Factor	2012-13	2012	2013	
				Jul.	Jun.	Jul.
	1	2	3	4	5	6
1 Consumer Price Index for Industrial Workers	2001	4.63	215	212	231	235
2 Consumer Price Index for Agricultural Labourers	1986-87	5.89	672	656	729	740
3 Consumer Price Index for Rural Labourers	1986-87	–	673	658	730	741

Source: Labour Bureau, Ministry of Labour and Employment, Government of India.

No. 20: Monthly Average Price of Gold and Silver in Mumbai

Item	2012-13	2012	2013	
		Jul.	Jun.	Jul.
	1	2	3	4
1 Standard Gold (₹ per 10 grams)	30,164	29,468	27,178	26,928
2 Silver (₹ per kilogram)	57,602	53,061	43,664	41,634

Source: Bombay Bullion Association Ltd.

No. 21: Wholesale Price Index

(Base: 2004-05 = 100)

Commodities	Weight	2012-13	2012	2013		
			Jul.	May	Jun. (P)	Jul. (P)
	1	2	3	4	5	6
1 ALL COMMODITIES	**100.000**	**167.6**	**165.8**	**171.4**	**172.7**	**175.4**
1.1 PRIMARY ARTICLES	**20.118**	**220.0**	**219.1**	**227.3**	**232.5**	**238.8**
1.1.1 Food articles	**14.337**	**211.8**	**212.4**	**223.1**	**229.8**	**237.7**
1.1.1.1 Food Grains	4.090	207.1	199.8	216.8	220.3	224.4
1.1.1.1.1 Cereals	3.373	199.9	190.3	213.7	218.3	223.9
1.1.1.1.2 Pulses	0.717	241.3	244.8	231.6	229.7	226.7
1.1.1.2 Fruits & Vegetables	3.843	198.4	211.3	214.5	230.5	254.6
1.1.1.2.1 Vegetables	1.736	210.1	230.1	236.4	286.4	337.3
1.1.1.2.2 Fruits	2.107	188.8	195.8	196.4	184.5	186.4
1.1.1.3 Milk	3.238	208.1	208.9	213.2	213.7	213.8
1.1.1.4 Eggs, Meat & Fish	2.414	244.5	240.4	257.4	265.2	266.7
1.1.1.5 Condiments & Spices	0.569	209.5	204.0	232.0	229.8	231.5
1.1.1.6 Other Food Articles	0.183	242.2	238.6	239.9	241.1	237.5
1.1.2 Non-Food Articles	**4.258**	**201.9**	**199.7**	**208.5**	**208.8**	**210.7**
1.1.2.1 Fibres	0.877	208.3	215.7	219.1	228.3	240.3
1.1.2.2 Oil Seeds	1.781	198.0	196.0	207.3	202.5	200.2
1.1.2.3 Other Non-Food Articles	1.386	211.1	204.8	209.6	210.6	213.0
1.1.2.4 Flowers	0.213	148.5	131.5	167.5	171.1	160.8
1.1.3 Minerals	**1.524**	**346.9**	**336.5**	**320.2**	**324.9**	**328.5**
1.1.3.1 Metallic Minerals	0.489	439.0	442.4	379.2	392.8	379.1
1.1.3.2 Other Minerals	0.135	204.7	197.2	216.9	216.9	216.9
1.1.3.3 Crude Petroleum	0.900	318.2	299.8	303.6	304.3	317.7
1.2 FUEL & POWER	**14.910**	**186.5**	**179.5**	**191.9**	**194.0**	**199.8**
1.2.1 Coal	2.094	208.6	210.3	189.7	191.5	191.5
1.2.2 Mineral Oils	9.364	202.5	189.9	208.0	211.0	220.3
1.2.3 Electricity	3.452	129.8	132.4	149.6	149.6	149.6
1.3 MANUFACTURED PRODUCTS	**64.972**	**147.1**	**146.1**	**149.3**	**149.3**	**150.2**
1.3.1 Food Products	**9.974**	**163.5**	**160.8**	**167.3**	**167.7**	**168.9**
1.3.1.1 Dairy Products	0.568	176.1	176.4	176.6	177.0	177.6
1.3.1.2 Canning, Preserving & Processing of Food	0.358	144.0	142.6	152.8	152.5	155.2
1.3.1.3 Grain Mill Products	1.340	156.0	147.8	162.4	164.2	166.4
1.3.1.4 Bakery Products	0.444	130.0	129.0	136.7	137.0	139.5
1.3.1.5 Sugar, Khandsari & Gur	2.089	185.7	180.7	185.0	185.6	184.8
1.3.1.6 Edible Oils	3.043	148.1	148.2	147.1	146.1	144.9
1.3.1.7 Oil Cakes	0.494	210.8	213.4	228.1	228.5	231.2
1.3.1.8 Tea & Coffee Proccessing	0.711	163.3	159.0	179.1	183.2	196.0
1.3.1.9 Manufacture of Salt	0.048	182.2	181.8	185.0	185.0	185.0
1.3.1.10 Other Food Products	0.879	164.6	161.5	173.0	173.3	175.5
1.3.2 Beverages, Tobacco & Tobacco Products	**1.762**	**175.3**	**171.8**	**182.2**	**181.4**	**181.8**
1.3.2.1 Wine Industries	0.385	124.8	124.4	126.9	125.3	125.1
1.3.2.2 Malt Liquor	0.153	171.5	171.2	170.9	170.9	170.9
1.3.2.3 Soft Drinks & Carbonated Water	0.241	152.8	151.5	160.5	159.5	159.9
1.3.2.4 Manufacture of Bidi, Cigarettes, Tobacco & Zarda	0.983	201.3	195.4	210.8	210.5	211.1
1.3.3 Textiles	**7.326**	**131.4**	**130.0**	**135.7**	**135.3**	**136.4**
1.3.3.1 Cotton Textiles	2.605	146.2	145.1	153.3	152.2	153.6
1.3.3.1.1 Cotton Yarn	1.377	157.2	155.7	167.8	166.5	167.9
1.3.3.1.2 Cotton Fabric	1.228	133.9	133.3	137.1	136.1	137.5
1.3.3.2 Man-Made Textiles	2.206	124.1	121.6	127.4	127.5	128.9
1.3.3.2.1 Man-Made Fibre	1.672	124.0	121.3	126.7	126.8	128.3
1.3.3.2.2 Man-Made Fabric	0.533	124.3	122.8	129.9	129.9	130.8
1.3.3.3 Woollen Textiles	0.294	142.6	140.4	150.3	148.2	150.4
1.3.3.4 Jute, Hemp & Mesta Textiles	0.261	177.8	175.2	183.8	183.0	183.3
1.3.3.5 Other Misc. Textiles	1.960	111.9	111.8	112.9	113.5	113.7
1.3.4 Wood & Wood Products	**0.587**	**171.0**	**170.9**	**175.2**	**175.3**	**175.8**
1.3.4.1 Timber/Wooden Planks	0.181	140.5	140.4	141.8	141.9	142.0
1.3.4.2 Processed Wood	0.128	178.9	179.1	182.7	183.4	183.7
1.3.4.3 Plywood & Fibre Board	0.241	193.6	193.3	199.9	199.6	200.6
1.3.4.4 Others	0.038	146.1	146.5	152.6	152.6	152.3

No. 21: Wholesale Price Index (Concld.)

(Base: 2004-05 = 100)

Commodities	Weight	2012-13	2012	2013		
			Jul.	May	Jun. (P)	Jul. (P)
	1	2	3	4	5	6
1.3.5 Paper & Paper Products	**2.034**	**136.6**	**134.7**	**140.6**	**140.5**	**140.5**
1.3.5.1 Paper & Pulp	1.019	135.8	134.7	139.1	138.9	139.0
1.3.5.2 Manufacture of boards	0.550	128.2	126.3	130.3	130.4	130.1
1.3.5.3 Printing & Publishing	0.465	148.2	144.5	155.9	156.0	156.0
1.3.6 Leather & Leather Products	**0.835**	**134.2**	**135.1**	**138.1**	**138.1**	**142.5**
1.3.6.1 Leathers	0.223	112.2	112.9	112.7	112.1	112.5
1.3.6.2 Leather Footwear	0.409	149.8	151.4	153.7	155.1	159.5
1.3.6.3 Other Leather Products	0.203	126.9	126.8	134.7	132.3	141.3
1.3.7 Rubber & Plastic Products	**2.987**	**137.5**	**136.7**	**142.2**	**142.4**	**144.4**
1.3.7.1 Tyres & Tubes	0.541	163.1	163.0	170.9	169.2	173.3
1.3.7.1.1 Tyres	0.488	162.9	162.8	171.6	169.7	173.8
1.3.7.1.2 Tubes	0.053	165.1	164.9	165.1	165.1	168.7
1.3.7.2 Plastic Products	1.861	127.0	125.8	131.9	132.5	134.7
1.3.7.3 Rubber Products	0.584	147.4	147.3	148.3	149.1	148.6
1.3.8 Chemicals & Chemical Products	**12.018**	**143.6**	**142.6**	**145.9**	**146.0**	**147.6**
1.3.8.1 Basic Inorganic Chemicals	1.187	147.8	146.1	149.5	149.2	149.5
1.3.8.2 Basic Organic Chemicals	1.952	140.3	138.6	142.1	141.3	142.8
1.3.8.3 Fertilisers & Pesticides	3.145	144.7	144.0	147.1	147.2	148.1
1.3.8.3.1 Fertilisers	2.661	149.0	148.3	151.5	151.4	152.5
1.3.8.3.2 Pesticides	0.483	121.2	120.4	123.0	123.9	123.5
1.3.8.4 Paints, Varnishes & Lacquers	0.529	143.6	144.4	145.1	145.2	147.1
1.3.8.5 Dyestuffs & Indigo	0.563	126.9	127.1	128.0	128.3	129.2
1.3.8.6 Drugs & Medicines	0.456	124.2	123.9	126.2	126.2	126.2
1.3.8.7 Perfumes, Cosmetics, Toiletries etc.	1.130	151.9	152.1	155.0	154.9	157.1
1.3.8.8 Turpentine, Plastic Chemicals	0.586	140.0	138.2	145.7	145.8	145.5
1.3.8.9 Polymers including Synthetic Rubber	0.970	135.3	134.4	137.8	139.4	147.9
1.3.8.10 Petrochemical Intermediates	0.869	164.2	161.2	163.6	164.2	165.8
1.3.8.11 Matches, Explosives & other Chemicals	0.629	142.6	142.5	147.3	148.9	149.4
1.3.9 Non-Metallic Mineral Products	**2.556**	**163.3**	**162.8**	**166.4**	**166.6**	**166.4**
1.3.9.1 Structural Clay Products	0.658	164.7	162.7	170.3	171.6	171.8
1.3.9.2 Glass, Earthenware, Chinaware & their Products	0.256	130.8	130.4	130.9	130.5	130.0
1.3.9.3 Cement & Lime	1.386	168.6	169.5	170.5	170.3	169.9
1.3.9.4 Cement, Slate & Graphite Products	0.256	163.2	159.1	169.6	169.2	170.1
1.3.10 Basic Metals, Alloys & Metal Products	**10.748**	**166.1**	**166.6**	**163.0**	**163.0**	**162.3**
1.3.10.1 Ferrous Metals	8.064	156.3	157.5	154.3	153.9	153.4
1.3.10.1.1 Iron & Semis	1.563	161.6	164.8	154.6	153.0	151.9
1.3.10.1.2 Steel: Long	1.630	169.7	171.3	166.4	166.1	165.4
1.3.10.1.3 Steel: Flat	2.611	154.2	154.7	153.5	153.3	152.5
1.3.10.1.4 Steel: Pipes & Tubes	0.314	128.0	128.9	127.4	127.3	127.5
1.3.10.1.5 Stainless Steel & alloys	0.938	156.8	156.8	156.6	157.1	156.1
1.3.10.1.6 Castings & Forgings	0.871	138.9	138.4	141.8	140.4	143.2
1.3.10.1.7 Ferro alloys	0.137	151.7	152.1	152.5	152.1	151.9
1.3.10.2 Non-Ferrous Metals	1.004	160.9	160.5	160.6	162.0	162.3
1.3.10.2.1 Aluminium	0.489	134.1	133.4	133.4	134.4	134.8
1.3.10.2.2 Other Non-Ferrous Metals	0.515	186.4	186.1	186.5	188.2	188.5
1.3.10.3 Metal Products	1.680	216.0	214.1	205.8	207.2	204.9
1.3.11 Machinery & Machine Tools	**8.931**	**128.4**	**128.2**	**130.6**	**130.4**	**131.5**
1.3.11.1 Agricultural Machinery & Implements	0.139	137.0	136.9	137.7	137.7	139.3
1.3.11.2 Industrial Machinery	1.838	146.2	145.8	149.5	148.5	148.6
1.3.11.3 Construction Machinery	0.045	135.7	135.3	137.0	136.9	137.1
1.3.11.4 Machine Tools	0.367	154.4	152.8	158.2	158.3	158.7
1.3.11.5 Air Conditioner & Refrigerators	0.429	112.5	112.5	114.2	114.5	113.9
1.3.11.6 Non-Electrical Machinery	1.026	122.9	122.7	122.9	122.9	123.1
1.3.11.7 Electrical Machinery, Equipment & Batteries	2.343	133.0	133.0	135.5	135.3	138.9
1.3.11.8 Electrical Accessories, Wires, Cables etc.	1.063	143.4	143.8	149.3	149.3	149.1
1.3.11.9 Electrical Apparatus & Appliances	0.337	117.4	117.1	117.5	117.5	117.7
1.3.11.10 Electronics Items	0.961	86.7	86.2	86.7	86.4	87.3
1.3.11.11 IT Hardware	0.267	89.2	89.2	88.0	88.0	88.0
1.3.11.12 Communication Equipments	0.118	94.1	94.4	96.3	96.3	96.7
1.3.12 Transport, Equipment & Parts	**5.213**	**129.8**	**128.8**	**132.2**	**132.7**	**133.2**
1.3.12.1 Automotives	4.231	129.0	127.9	131.7	132.2	132.7
1.3.12.2 Auto Parts	0.804	130.2	129.8	131.6	131.7	132.4
1.3.12.3 Other Transport Equipments	0.178	147.3	146.8	148.0	148.0	148.7

Source: Office of the Economic Adviser, Ministry of Commerce and Industry, Government of India.

No. 22: Index of Industrial Production (Base:2004-05=100)

Industry	Weight	2011-12	2012-13	April-June		June	
				2012-13	2013-14	2012	2013
	1	2	3	4	5	6	7
General Index	**100.00**	**170.3**	**172.2**	**167.5**	**165.7**	**168.0**	**164.3**
1 Sectoral Classification							
1.1 Mining and Quarrying	14.16	128.5	125.5	125.6	120.0	122.1	117.1
1.2 Manufacturing	75.53	181.0	183.3	176.7	174.6	178.1	174.2
1.3 Electricity	10.32	149.3	155.2	157.3	162.8	157.0	157.0
2 Use-Based Classification							
2.1 Basic Goods	45.68	150.0	153.6	151.7	151.3	151.2	148.4
2.2 Capital Goods	8.83	267.8	251.6	223.4	216.1	235.0	219.4
2.3 Intermediate Goods	15.69	144.4	146.7	145.3	147.5	145.4	147.0
2.4 Consumer Goods	29.81	186.1	190.6	186.8	182.3	185.8	181.6
2.4.1 Consumer Durables	8.46	295.1	301.1	307.8	269.0	307.2	274.8
2.4.2 Consumer Non-Durables	21.35	142.9	146.9	138.8	147.9	137.7	144.6

Source : Central Statistics Office, Ministry of Statistics and Programme Implementation, Government of India.

Government Accounts and Treasury Bills

No. 23: Union Government Accounts at a Glance

(Amount in ₹ Billion)

Item	Financial Year	April–July			
	2013-14 (Budget Estimates)	2012-13 (Actuals)	2013-14 (Actuals)	Percentage to Budget Estimates	
				2012-13	2013-14
	1	2	3	4	5
1 Revenue Receipts	10,563.3	1,688.3	1,761.6	18.0	16.7
1.1 Tax Revenue (Net)	8,840.8	1,427.9	1,451.1	18.5	16.4
1.2 Non-Tax Revenue	1,722.5	260.4	310.5	15.8	18.0
2 Capital Receipts	6,089.7	2,684.7	3,450.1	48.4	56.7
2.1 Recovery of Loans	106.5	27.0	34.6	23.2	32.5
2.2 Other Receipts	558.1	13.3	9.4	4.4	1.7
2.3 Borrowings and Other Liabilities	5,425.0	2,644.3	3,406.1	51.5	62.8
3 Total Receipts (1+2)	16,653.0	4,372.9	5,211.7	29.3	31.3
4 Non-Plan Expenditure	11,099.8	3,233.0	3,714.3	33.3	33.5
4.1 On Revenue Account	9,929.1	2,903.5	3,319.2	33.5	33.4
4.1.1 Interest Payments	3,706.8	806.2	863.1	25.2	23.3
4.2 On Capital Account	1,170.7	329.4	395.1	31.6	33.8
5 Plan Expenditure	5,553.2	1,140.0	1,497.4	21.9	27.0
5.1 On Revenue Account	4,432.6	931.9	1,216.2	22.2	27.4
5.2 On Capital Account	1,120.6	208.1	281.2	20.7	25.1
6 Total Expenditure (4+5)	16,653.0	4,372.9	5,211.7	29.3	31.3
7 Revenue Expenditure (4.1+5.1)	14,361.7	3,835.4	4,535.3	29.8	31.6
8 Capital Expenditure (4.2+5.2)	2,291.3	537.5	676.3	26.2	29.5
9 Revenue Deficit (7-1)	3,798.4	2,147.2	2,773.8	61.3	73.0
10 Fiscal Deficit {6-(1+2.1+2.2)}	5,425.0	2,644.3	3,406.1	51.5	62.8
11 Gross Primary Deficit [10-4.1.1]	1,718.1	1,838.2	2,543.0	94.8	148.0

Source: Controller General of Accounts, Ministry of Finance, Government of India.

No. 24: Treasury Bills – Ownership Pattern

(₹ Billion)

Item	2012-13	2012	2013					
		Jul. 27	Jun. 21	Jun. 28	Jul. 5	Jul. 12	Jul. 19	Jul. 26
	1	2	3	4	5	6	7	8
1 14-day								
1.1 Banks	–	–	–	–	–	–	–	–
1.2 Primary Dealers	–	–	–	–	–	–	–	–
1.3 State Governments	1,422.2	708.2	696.9	663.6	625.8	534.5	657.9	622.3
1.4 Others	3.7	12.0	17.6	9.8	10.0	10.3	9.6	5.1
2 91-day								
2.1 Banks	345.6	618.9	448.8	413.2	431.0	361.6	393.6	358.3
2.2 Primary Dealers	248.9	388.2	246.4	231.1	249.1	272.7	277.0	258.7
2.3 State Governments	282.0	450.6	645.3	623.1	673.1	668.1	618.1	702.9
2.4 Others	174.4	180.5	99.3	161.1	147.1	213.1	126.6	197.9
3 182-day								
3.1 Banks	234.9	158.7	225.9	243.8	239.7	213.3	239.6	236.7
3.2 Primary Dealers	207.9	294.3	241.8	227.3	336.8	227.2	216.1	251.5
3.3 State Governments	–	–	–	–	–	–	–	–
3.4 Others	199.2	147.1	174.3	170.9	65.5	201.6	136.4	103.8
4 364-day								
4.1 Banks	335.7	191.5	324.9	338.6	353.1	292.7	323.8	282.9
4.2 Primary Dealers	447.9	602.8	524.0	525.2	565.8	555.8	539.6	528.9
4.3 State Governments	3.8	5.9	2.9	9.7	9.7	9.7	9.7	9.7
4.4 Others	517.4	295.4	449.4	434.5	379.3	449.9	435.0	486.5
5 Total	4,423.5	4,054.1	4,097.4	4,051.9	4,086.1	4,010.3	3,982.8	4,045.3

No. 25: Auctions of Treasury Bills

(Amount in ₹ Billion)

Date of Auction	Notified Amount	Bids Received			Bids Accepted			Total Issue (6+7)	Cut-off Price	Implicit Yield at Cut-off Price (per cent)
		Number	Total Face Value		Number	Total Face Value				
			Competitive	Non-Competitive		Competitive	Non-Competitive			
	1	2	3	4	5	6	7	8	9	10
91-day Treasury Bills										
2013-14										
Jun. 26	70	67	195.44	27.98	37	70.00	27.98	97.98	98.17	7.4769
Jul. 3	70	68	223.65	97.21	37	70.00	97.21	167.21	98.16	7.5186
Jul. 10	70	56	179.70	35.86	33	70.00	35.86	105.86	98.17	7.4769
Jul. 24	70	69	99.49	99.07	58	63.64	99.07	162.71	97.33	11.0031
Jul. 31	70	127	121.25	27.81	98	70.00	27.81	97.81	97.27	11.2573
182-day Treasury Bills										
2013-14										
Jun. 19	50	55	193.91	0.01	18	50.00	0.01	50.01	96.44	7.4031
Jul. 3	50	51	113.38	0.00	35	50.00	0.00	50.00	96.35	7.5974
Jul. 31	50	144	191.12	1.14	42	50.00	1.14	51.14	94.92	10.7332
364-day Treasury Bills										
2013-14										
Jun. 12	50	68	164.06	–	14	50.00	–	50.00	93.12	7.4086
Jun. 26	50	83	117.17	6.86	51	50.00	6.86	56.86	93.04	7.5012
Jul. 10	50	60	124.31	0.13	17	50.00	0.13	50.13	93.00	7.5476
Jul. 24	50	96	106.78	0.07	63	50.00	0.07	50.07	90.55	10.4649

Financial Markets

No. 26: Daily Call Money Rates

(Per cent per annum)

As on	Range of Rates	Weighted Average Rates
	Borrowings/ Lendings	Borrowings/ Lendings
	1	2
July 2, 2013	6.00-7.45	7.20
July 3, 2013	6.00-7.30	7.09
July 4, 2013	5.82-7.20	6.84
July 5, 2013	5.50-6.90	6.57
July 6, 2013	5.65-7.25	6.37
July 8, 2013	5.50-7.80	6.89
July 9, 2013	6.00-7.30	7.16
July 10, 2013	6.00-7.35	7.16
July 11, 2013	6.00-7.40	7.19
July 12, 2013	6.00-7.25	7.14
July 13, 2013	6.30-7.05	6.90
July 15, 2013	6.00-7.60	7.21
July 16, 2013	6.20-9.50	8.53
July 17, 2013	6.20-9.25	8.10
July 18, 2013	5.00-8.00	7.43
July 19, 2013	6.00-7.35	7.16
July 20, 2013	5.00-7.15	6.66
July 22, 2013	6.20-7.40	7.20
July 23, 2013	5.00-7.50	7.14
July 24, 2013	6.20-10.15	9.05
July 25, 2013	6.20-10.15	8.27
July 26, 2013	6.20-10.25	9.75
July 27, 2013	6.95-10.50	9.08
July 29, 2013	6.50-10.25	10.00
July 30, 2013	6.00-10.25	10.00
July 31, 2013	6.00-10.25	9.64
August 1, 2013	6.50-10.25	9.07
August 2, 2013	5.75-10.00	8.64
August 3, 2013	4.00-8.67	6.69
August 5, 2013	6.50-9.75	8.90
August 6, 2013	6.50-10.35	8.79
August 7, 2013	7.00-10.30	9.74
August 8, 2013	6.25-10.25	9.98
August 10, 2013	5.50-10.25	8.77
August 12, 2013	7.00-10.50	10.18
August 13, 2013	7.00-10.35	10.21
August 14, 2013	6.50-10.50	10.22

No. 27: Certificates of Deposit

Item	2012	2013			
	Jul. 27	Jun. 14	Jun. 28	Jul. 12	Jul. 26
	1	2	3	4	5
1 Amount Outstanding (₹ Billion)	4,155.3	3,547.5	3,644.9	3,571.5	3,361.8
1.1 Issued during the fortnight (₹ Billion)	54.2	541.2	614.1	45.7	32.4
2 Rate of Interest (per cent)	8.40-10.00	7.75-8.70	7.95-8.71	7.50-8.40	7.90-9.85

No. 28: Commercial Paper

Item	2012	2013			
	Jul. 31	Jun. 15	Jun. 30	Jul. 15	Jul. 31
	1	2	3	4	5
1 Amount Outstanding (₹ Billion)	1,732.3	1,702.5	1,355.9	1,694.3	1,495.8
1.1 Reported during the fortnight (₹ Billion)	290.0	408.1	263.6	428.1	66.0
2 Rate of Interest (per cent)	7.43-14.50	7.57-12.79	7.58-12.71	7.36-12.62	7.43-12.36

No. 29: Average Daily Turnover in Select Financial Markets

(₹ Billion)

Item	2012-13	2012	2013					
		Jul. 27	Jun. 21	Jun. 28	Jul. 5	Jul. 12	Jul. 19	Jul. 26
	1	2	3	4	5	6	7	8
1 Call Money	250.1	206.4	265.6	301.3	223.8	245.0	226.6	180.9
2 Notice Money	73.2	57.6	78.9	60.8	89.5	103.8	59.0	50.8
3 Term Money	9.4	8.2	4.8	9.6	11.5	6.2	10.1	2.2
4 CBLO	832.7	781.0	1,423.4	1,292.5	1,675.6	1,387.4	1,464.9	1,475.2
5 Market Repo	747.8	744.0	1,039.7	1,148.4	1,015.7	1,345.2	743.1	1,073.3
6 Repo in Corporate Bond	0.1	–	–	–	–	–	–	–
7 Forex (US $ million)	51,021	50,579	51,402	60,632	45,514	48,865	45,296	43,229
8 Govt. of India Dated Securities	491.3	354.4	904.6	582.9	959.3	779.3	466.3	363.3
9 State Govt. Securities	10.0	11.2	17.3	11.8	12.5	7.6	7.1	5.0
10 Treasury Bills								
10.1 91-Day	20.7	21.4	20.5	10.5	33.9	24.2	17.7	27.4
10.2 182-Day	9.3	12.7	10.1	8.5	22.2	14.5	9.9	4.9
10.3 364-Day	17.2	18.8	27.7	30.3	33.6	22.7	11.8	26.8
10.4 Cash Management Bills	–	–	–	–	–	–	–	2.2
11 Total Govt. Securities (8+9+10)	548.5	418.6	980.2	644.1	1,061.5	848.4	512.8	429.6
11.1 RBI	7.3	0.77	2.06	0.79	5.50	0.97	7.63	2.03

No. 30: New Capital Issues By Non-Government Public Limited Companies

(Amount in ₹ Billion)

Security & Type of Issue	2012-13		2012-13 (Apr.-Jul.)		2013-14 (Apr.-Jul.)		Jul. 2012		Jul. 2013	
	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount
	1	2	3	4	5	6	7	8	9	10
1 Equity Shares	48	138.8	10	5.3	7	13.7	3	0.2	2	0.1
1A Premium	44	120.9	10	4.5	6	12.6	3	0.1	2	0.0
1.1 Prospectus	32	49.4	7	4.6	6	9.5	2	0.1	2	0.1
1.1.1 Premium	30	46.0	7	4.1	5	9.1	2	0.0	2	0.0
1.2 Rights	16	89.4	3	0.7	1	4.2	1	0.1	–	–
1.2.1 Premium	14	74.9	3	0.4	1	3.5	1	0.1	–	–
2 Preference Shares	–	–	–	–	–	–	–	–	–	–
2.1 Prospectus	–	–	–	–	–	–	–	–	–	–
2.2 Rights	–	–	–	–	–	–	–	–	–	–
3 Debentures	6	22.2	1	6.0	2	8.7	1	6.0	1	7.4
3.1 Prospectus	6	22.2	1	6.0	2	8.7	1	6.0	1	7.4
3.2 Rights	–	–	–	–	–	–	–	–	–	–
3.2.1 Convertible	–	–	–	–	–	–	–	–	–	–
3.2.1.1 Prospectus	–	–	–	–	–	–	–	–	–	–
3.2.1.2 Rights	–	–	–	–	–	–	–	–	–	–
3.2.2 Non-Convertible	6	22.2	1	6.0	2	8.7	1	6.0	1	7.4
3.2.2.1 Prospectus	6	22.2	1	6.0	2	8.7	1	6.0	1	7.4
3.2.2.2 Rights	–	–	–	–	–	–	–	–	–	–
4 Bonds	–	–	–	–	–	–	–	–	–	–
4.1 Prospectus	–	–	–	–	–	–	–	–	–	–
4.2 Rights	–	–	–	–	–	–	–	–	–	–
5 Total (1+2+3+4)	54	161.0	11	11.3	9	22.4	4	6.2	3	7.5
5.1 Prospectus	38	71.6	8	10.6	8	18.2	3	6.1	3	7.5
5.2 Rights	16	89.4	3	0.7	1	4.2	1	0.1	–	–

Source: Based on prospectus/advertisements issued by companies, replies to Reserve Bank's questionnaire and information received from SEBI, stock exchanges, press reports, etc.

External Sector

No. 31: Foreign Trade

Item	Unit	2012-13	2012	2013				
			Jul.	Mar.	Apr.	May	Jun.	Jul.
		1	2	3	4	5	6	7
1 Exports	₹ Billion	16,352.6	1,284.2	1,672.5	1,282.4	1,318.6	1,377.8	1,544.3
	US $ Million	300,570.6	23,140.4	30,742.2	23,583.9	23,969.0	23,592.9	25,834.5
1.1 Oil	₹ Billion	3,276.8	230.0	307.6	276.4	254.8	249.0	..
	US $ Million	60,290.7	4,145.2	5,654.5	5,082.5	4,632.6	4,263.1	..
1.2 Non-oil	₹ Billion	13,075.8	1,054.1	1,364.9	1,006.0	1,063.7	1,128.8	..
	US $ Million	240,279.8	18,995.3	25,087.7	18,501.3	19,336.4	19,329.8	..
2 Imports	₹ Billion	26,731.1	2,254.2	2,206.0	2,286.3	2,457.5	2,096.5	2,277.6
	US $ Million	491,487.2	40,619.5	40,548.2	42,045.7	44,673.2	35,901.1	38,102.6
2.1 Oil	₹ Billion	9,204.6	765.3	728.7	769.5	828.1	745.3	759.7
	US $ Million	169,319.3	13,816.9	13,393.5	14,151.0	15,054.2	12,762.3	12,709.4
2.2 Non-oil	₹ Billion	17,526.6	1,488.8	1,477.3	1,516.8	1,629.4	1,351.2	1,517.9
	US $ Million	322,167.9	26,802.6	27,154.7	27,894.6	29,619.1	23,138.7	25,393.2
3 Trade Balance	₹ Billion	–10,378.5	–970.0	–533.5	–1,003.9	–1,139.0	–718.8	–733.3
	US $ Million	–190,916.6	–17,479.0	–9,805.9	–18,461.8	–20,704.2	–12,308.2	–12,268.1
3.1 Oil	₹ Billion	–5,927.8	–535.3	–421.0	–493.1	–573.3	–496.3	..
	US $ Million	–109,028.6	–9,671.7	–7,739.0	–9,068.5	–10,421.6	–8,499.3	..
3.2 Non-oil	₹ Billion	–4,450.8	–434.7	–112.5	–510.8	–565.7	–222.4	..
	US $ Million	–81,888.0	–7,807.3	–2,067.0	–9,393.3	–10,282.6	–3,808.9	..

Source: DGCI & S and Ministry of Commerce & Industry.

No. 32: Foreign Exchange Reserves

Item	Unit	2012	2013					
		Aug. 17	Jul. 12	Jul. 19	Jul. 26	Aug. 2	Aug. 9	Aug. 16
		1	2	3	4	5	6	7
1 Total Reseves	**₹ Billion**	**16,096**	**16,778**	**16,693**	**16,522**	**16,859**	**17,027**	**17,221**
	US $ Million	**288,919**	**280,188**	**279,203**	**280,163**	**277,167**	**278,602**	**278,808**
1.1 Foreign Currency Assets	₹ Billion	14,296	15,102	15,017	14,849	15,195	15,361	15,551
	US $ Million	256,657	252,136	251,137	252,051	249,896	251,349	251,561
1.2 Gold	₹ Billion	1,435	1,287	1,287	1,287	1,268	1,268	1,268
	US $ Million	25,715	21,556	21,556	21,556	20,747	20,747	20,747
1.3 SDRs	SDRs Million	2,886	2,887	2,887	2,887	2,887	2,887	2,887
	₹ Billion	243	260	260	258	265	269	272
	US $ Million	4,357	4,334	4,343	4,374	4,353	4,398	4,394
1.4 Reserve Tranche Position in IMF	₹ Billion	122	130	130	129	132	129	130
	US $ Million	2,191	2,162	2,167	2,183	2,172	2,107	2,105

No. 33: NRI Deposits

(US$ Million)

Scheme	Outstanding				Flows	
	2012-13	2012	2013		2012-13	2013-14
		Jul.	Jun.	Jul.	Apr.-Jul.	Apr.-Jul.
	1	2	3	4	5	6
1 NRI Deposits	**70,822**	**62,483**	**71,123**	**72,997**	**7,407**	**6,656**
1.1 FCNR(B)	15,188	14,343	15,087	15,408	–625	220
1.2 NR(E)RA	45,924	37,271	47,183	48,627	8,448	6,447
1.3 NRO	9,710	10,868	8,853	8,962	–417	–11

No. 34: Foreign Investment Inflows

(US$ Million)

Item	2012-13	2012-13	2013-14	2012	2013	
		Apr.-Jul.	Apr.-Jul.	Jul.	Jun.	Jul.
	1	2	3	4	5	6
1.1 Net Foreign Direct Investment (1.1.1–1.1.2)	**19,819**	**5,434**	**8,659**	**1,613**	**1,830**	**2,187**
1.1.1 Direct Investment to India (1.1.1.1–1. 1.1.2)	**26,953**	**7,957**	**8,491**	**2,042**	**1,803**	**2,016**
1.1.1.1 Gross Inflows/Gross Investments	**34,298**	**9,795**	**10,695**	**2,490**	**2,354**	**2,567**
1.1.1.1.1 Equity	22,884	6,244	7,349	1,560	1,518	1,731
1.1.1.1.1.1 Government (SIA/FIPB)	2,319	1,024	499	505	132	69
1.1.1.1.1.2 RBI	15,967	3,720	4,119	757	880	1,213
1.1.1.1.1.3 Acquisition of shares	3,539	1,159	2,436	212	432	374
1.1.1.1.1.4 Equity capital of unincorporated bodies	1,059	341	296	86	74	74
1.1.1.1.2 Reinvested earnings	9,880	3,025	2,744	766	686	686
1.1.1.1.3 Other capital	1,534	526	601	163	150	150
1.1.1.2 Repatriation/Disinvestment	**7,345**	**1,838**	**2,204**	**447**	**551**	**551**
1.1.1.2.1 Equity	6,853	1,479	2,035	447	509	509
1.1.1.2.2 Other capital	493	359	169	1	42	42
1.1.2 Foreign Direct Investment by India (1.1.2.1+1.1.2.2+1.1.2.3–1.1.2.4)	**7,134**	**2,523**	**–169**	**430**	**–27**	**–171**
1.1.2.1 Equity capital	7,101	1,813	1,296	432	284	212
1.1.2.2 Reinvested Earnings	1,189	396	396	99	99	99
1.1.2.3 Other Capital	4,331	1,655	1,282	378	376	304
1.1.2.4 Repatriation/Disinvestment	5,488	1,342	3,143	479	786	786
1.2 Net Portfolio Investment (1.2.1+1.2.2+1.2.3–1.2.4)	**26,891**	**196**	**–4,847**	**2,118**	**–8,627**	**–4,624**
1.2.1 GDRs/ADRs	187	154	20	60	20	–
1.2.2 FIIs	27,582	442	–5,183	2,148	–8,726	–4,703
1.2.3 Offshore funds and others	–	–	–	–	–	–
1.2.4 Portfolio investment by India	878	400	–316	90	–79	–79
1 Foreign Investment Inflows	**46,710**	**5,630**	**3,812**	**3,730**	**–6,797**	**–2,437**

No. 35: Outward Remittances under the Liberalised Remittance Scheme (LRS) for Resident Individuals

(US$ Million)

Item	2012-13	2012	2013		
		Jun.	Apr.	May	Jun.
	1	2	3	4	5
1 Outward Remittances under the LRS	**1,206.4**	**137.3**	**141.8**	**115.3**	**92.1**
1.1 Deposit	20.1	1.5	4.8	2.2	1.3
1.2 Purchase of immovable property	77.7	3.2	9.7	7.2	8.6
1.3 Investment in equity/debt	236.9	19.1	33.6	13.3	12.5
1.4 Gift	261.6	24.8	38.7	28.8	22.5
1.5 Donations	4.5	0.5	0.4	0.2	0.1
1.6 Travel	44.8	3.8	3.2	4.3	1.1
1.7 Maintenance of close relatives	226.6	15.1	22.7	23.3	9.3
1.8 Medical Treatment	4.9	0.4	0.2	0.6	0.2
1.9 Studies Abroad	124.7	10.3	10.2	16.9	7.1
1.10 Others	204.1	58.7	18.4	18.5	29.4

No. 36: Indices of Real Effective Exchange Rate (REER) and Nominal Effective Exchange Rate (NEER) of the Indian Rupee

Item	2011-12	2012-13	2012	2013	
			August	July	August
	1	2	3	4	5
36-Currency Export and Trade Based Weights (Base: 2004-05=100)					
1 Trade-Based Weights					
1.1 NEER	87.38	78.32	77.20	72.54	68.82
1.2 REER	101.38	94.61	93.51	87.98	83.46
2 Export-Based Weights					
2.1 NEER	89.13	80.05	78.94	74.22	70.41
2.2 REER	104.05	97.42	96.34	90.47	85.82
6-Currency Trade Based Weights					
1 Base: 2004-05 (April-March) =100					
1.1 NEER	84.44	75.55	74.81	68.89	64.61
1.2 REER	111.51	104.95	104.06	96.80	90.83
2 Base: 2012-13 (April-March) =100					
2.1 NEER	111.77	100.00	99.03	91.18	85.52
2.2 REER	106.25	100.00	99.15	92.24	86.54

No. 37: External Commercial Borrowings (ECBs)

(Amount in US$ Million)

Item	2012-13	2012	2013	
		Jul.	Jun.	Jul.
	1	2	3	4
1 Automatic Route				
1.1 Number	825	53	71	72
1.2 Amount	18,395	1,070	1,006	2,320
2 Approval Route				
2.1 Number	92	-	10	11
2.2 Amount	13,651	-	947	1,386
3 Total (1+2)				
3.1 Number	917	53	81	83
3.2 Amount	32,046	1,070	1,953	3,706
4 Weighted Average Maturity (in years)	6.27	5.53	5.34	6.65
5 Interest Rate (per cent)				
5.1 Weighted Average Margin over 6-month LIBOR or reference rate for Floating Rate Loans	2.73	3.03	3.04	1.51
5.2 Interest rate range for Fixed Rate Loans	0.00-12.44	0.00-6.10	0.00-10.00	0.00-11.00

No. 38: India's Overall Balance of Payments

(US $ Million)

Item	Jan-Mar 2012 (PR)			Jan-Mar 2013 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	**264,141**	**269,878**	**–5,738**	**275,986**	**273,305**	**2,681**
1 CURRENT ACCOUNT	**138,344**	**160,112**	**–21,768**	**142,127**	**160,297**	**–18,170**
1.1 MERCHANDISE	**80,172**	**131,690**	**–51,518**	**84,772**	**130,408**	**–45,635**
1.2 INVISIBLES	**58,172**	**28,421**	**29,751**	**57,355**	**29,890**	**27,465**
1.2.1 Services	38,075	20,554	17,521	37,819	20,860	16,960
1.2.1.1 Travel	5,462	3,238	2,224	5,489	2,719	2,770
1.2.1.2 Transportation	4,681	4,311	370	4,513	3,433	1,080
1.2.1.3 Insurance	635	337	298	604	305	300
1.2.1.4 G.n.i.e.	47	214	–166	126	323	–197
1.2.1.5 Miscellaneous	27,250	12,455	14,795	27,086	14,079	13,006
1.2.1.5.1 Software Services	17,199	329	16,870	17,691	586	17,106
1.2.1.5.2 Business Services	7,204	7,574	–370	6,569	7,484	–915
1.2.1.5.3 Financial Services	1,495	1,902	–406	1,093	1,192	–99
1.2.1.5.4 Communication Services	395	491	–97	454	247	207
1.2.2 Transfers	17,824	1,021	16,803	16,896	1,205	15,690
1.2.2.1 Official	99	160	–62	98	195	–97
1.2.2.2 Private	17,725	861	16,864	16,798	1,010	15,788
1.2.3 Income	2,273	6,846	–4,573	2,640	7,825	–5,185
1.2.3.1 Investment Income	1,688	6,274	–4,586	1,840	7,250	–5,411
1.2.3.2 Compensation of Employees	585	572	13	800	574	226
2 CAPITAL ACCOUNT	**125,797**	**109,212**	**16,586**	**133,557**	**113,008**	**20,549**
2.1 Foreign Investment	**63,574**	**48,291**	**15,282**	**67,176**	**50,129**	**17,048**
2.1.1 Foreign Direct Investment	9,241	7,885	1,356	10,658	4,924	5,733
2.1.1.1 In India	8,557	4,343	4,214	9,064	1,893	7,171
2.1.1.1.1 Equity	6,098	4,262	1,836	5,751	1,856	3,895
2.1.1.1.2 Reinvested Earnings	2,051	–	2,051	2,732	–	2,732
2.1.1.1.3 Other Capital	408	81	327	581	37	544
2.1.1.2 Abroad	684	3,541	–2,857	1,594	3,032	–1,438
2.1.1.2.1 Equity	684	1,765	–1,081	1,594	2,066	–472
2.1.1.2.2 Reinvested Earnings	–	302	–302	–	297	–297
2.1.1.2.3 Other Capital	–	1,474	–1,474	–	669	–669
2.1.2 Portfolio Investment	54,333	40,407	13,926	56,518	45,204	11,314
2.1.2.1 In India	54,223	40,125	14,098	56,343	44,804	11,540
2.1.2.1.1 FIIs	54,193	40,125	14,068	56,343	44,804	11,540
2.1.2.1.1.1 Equity	–	–	–	43,819	34,171	9,648
2.1.2.1.1.2 Debt	–	–	–	12,525	10,633	1,892
2.1.2.1.2 ADR/GDRs	30	–	30	–	–	–
2.1.2.2 Abroad	110	282	–172	175	400	–225
2.2 Loans	**36,346**	**33,609**	**2,737**	**42,802**	**33,584**	**9,218**
2.2.1 External Assistance	1,120	817	303	1,415	887	529
2.2.1.1 By India	17	57	–39	13	84	–72
2.2.1.2 To India	1,103	760	342	1,402	802	600
2.2.2 Commercial Borrowings	8,189	5,907	2,282	8,792	4,571	4,221
2.2.2.1 By India	807	776	31	263	154	109
2.2.2.2 To India	7,382	5,131	2,251	8,529	4,417	4,112
2.2.3 Short Term to India	27,037	26,885	152	32,594	28,126	4,468
2.2.3.1 Suppliers' Credit > 180 days & Buyers' Credit	26,288	26,885	–597	30,765	28,126	2,639
2.2.3.2 Suppliers' Credit up to 180 days	749	–	749	1,829	–	1,829
2.3 Banking Capital	**24,503**	**22,504**	**1,999**	**17,926**	**21,497**	**–3,572**
2.3.1 Commercial Banks	24,454	22,408	2,046	17,926	21,472	–3,546
2.3.1.1 Assets	162	5,857	–5,696	206	9,518	–9,312
2.3.1.2 Liabilities	24,293	16,551	7,742	17,720	11,954	5,766
2.3.1.2.1 Non-Resident Deposits	21,013	16,355	4,658	15,423	12,629	2,794
2.3.2 Others	48	95	–47	–	26	–26
2.4 Rupee Debt Service	**–**	**47**	**–47**	**–**	**31**	**–31**
2.5 Other Capital	**1,375**	**4,761**	**–3,386**	**5,654**	**7,767**	**–2,113**
3 Errors & Omissions	**–**	**555**	**–555**	**302**	**–**	**302**
4 Monetary Movements	**5,738**	**–**	**5,738**	**–**	**2,681**	**–2,681**
4.1 I.M.F.	–	–	–	–	–	–
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	5,738	–	5,738	–	2,681	–2,681

No. 39: India's Overall Balance of Payments

(₹ Billion)

Item	Jan-Mar 2012 (PR)			Jan-Mar 2013 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	**13,280**	**13,568**	**–288**	**14,949**	**14,804**	**145**
1 CURRENT ACCOUNT	**6,955**	**8,050**	**–1,094**	**7,698**	**8,683**	**–984**
1.1 MERCHANDISE	**4,031**	**6,621**	**–2,590**	**4,592**	**7,064**	**–2,472**
1.2 INVISIBLES	**2,925**	**1,429**	**1,496**	**3,107**	**1,619**	**1,488**
1.2.1 Services	1,914	1,033	881	2,048	1,130	919
1.2.1.1 Travel	275	163	112	297	147	150
1.2.1.2 Transportation	235	217	19	244	186	58
1.2.1.3 Insurance	32	17	15	33	17	16
1.2.1.4 G.n.i.e.	2	11	–8	7	18	–11
1.2.1.5 Miscellaneous	1,370	626	744	1,467	763	704
1.2.1.5.1 Software Services	865	17	848	958	32	927
1.2.1.5.2 Business Services	362	381	–19	356	405	–50
1.2.1.5.3 Financial Services	75	96	–20	59	65	–5
1.2.1.5.4 Communication Services	20	25	–5	25	13	11
1.2.2 Transfers	896	51	845	915	65	850
1.2.2.1 Official	5	8	–3	5	11	–5
1.2.2.2 Private	891	43	848	910	55	855
1.2.3 Income	114	344	–230	143	424	–281
1.2.3.1 Investment Income	85	315	–231	100	393	–293
1.2.3.2 Compensation of Employees	29	29	–	43	31	12
2 CAPITAL ACCOUNT	**6,325**	**5,491**	**834**	**7,234**	**6,121**	**1,113**
2.1 Foreign Investment	**3,196**	**2,428**	**768**	**3,639**	**2,715**	**923**
2.1.1 Foreign Direct Investment	465	396	68	577	267	311
2.1.1.1 In India	430	218	212	491	103	388
2.1.1.1.1 Equity	307	214	92	312	101	211
2.1.1.1.2 Reinvested Earnings	103	–	103	148	–	148
2.1.1.1.3 Other Capital	21	4	16	31	2	29
2.1.1.2 Abroad	34	178	–144	86	164	–78
2.1.1.2.1 Equity	34	89	–54	86	112	–26
2.1.1.2.2 Reinvested Earnings	–	15	–15	–	16	–16
2.1.1.2.3 Other Capital	–	74	–74	–	36	–36
2.1.2 Portfolio Investment	2,732	2,031	700	3,061	2,448	613
2.1.2.1 In India	2,726	2,017	709	3,052	2,427	625
2.1.2.1.1 FIIs	2,725	2,017	707	3,052	2,427	625
2.1.2.1.1.1 Equity	–	–	–	2,373	1,851	523
2.1.2.1.1.2 Debt	–	–	–	678	576	102
2.1.2.1.2 ADR/GDRs	2	–	2	–	–	–
2.1.2.2 Abroad	6	14	–9	9	22	–12
2.2 Loans	**1,827**	**1,690**	**138**	**2,318**	**1,819**	**499**
2.2.1 External Assistance	56	41	15	77	48	29
2.2.1.1 By India	1	3	–2	1	5	–4
2.2.1.2 To India	55	38	17	76	43	33
2.2.2 Commercial Borrowings	412	297	115	476	248	229
2.2.2.1 By India	41	39	2	14	8	6
2.2.2.2 To India	371	258	113	462	239	223
2.2.3 Short Term to India	1,359	1,352	8	1,765	1,523	242
2.2.3.1 Suppliers' Credit > 180 days & Buyers' Credit	1,322	1,352	–30	1,666	1,523	143
2.2.3.2 Suppliers' Credit up to 180 days	38	–	38	99	–	99
2.3 Banking Capital	**1,232**	**1,131**	**101**	**971**	**1,164**	**–193**
2.3.1 Commercial Banks	1,229	1,127	103	971	1,163	–192
2.3.1.1 Assets	8	294	–286	11	516	–504
2.3.1.2 Liabilities	1,221	–	389	960	–	312
2.3.1.2.1 Non-Resident Deposits	1,056	822	–	835	684	–
2.3.2 Others	2	5	–2	–	1	–1
2.4 Rupee Debt Service	–	**2**	**–2**	–	**2**	**–2**
2.5 Other Capital	**69**	**239**	**–170**	**306**	**421**	**–114**
3 Errors & Omissions	–	**28**	**–28**	**16**	–	**16**
4 Monetary Movements	**288**	–	**288**	–	**145**	**–145**
4.1 I.M.F.	–	–	–	–	–	–
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	288	–	288	–	145	–145

No. 40: Standard Presentation of BoP in India as per BPM6

(US $ Million)

Item	Jan-Mar 2012 (PR)			Jan-Mar 2013 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account	**137,706**	**159,412**	**–21,706**	**142,041**	**160,118**	**–18,078**
1.A Goods and Services	**117,708**	**151,706**	**–33,998**	**122,591**	**151,267**	**–28,676**
1.A.a Goods	**80,043**	**131,690**	**–51,647**	**84,772**	**130,408**	**–45,635**
1.A.a.1 General merchandise on a BOP basis	80,172	115,536	–35,364	82,893	113,985	–31,092
1.A.a.2 Net exports of goods under merchanting	–129	–	–129	1,880	609	1,270
1.A.a.3 Non-monetary gold	–	16,155	–16,155	–	15,813	–15,813
1.A.b Services	**37,665**	**20,016**	**17,650**	**37,819**	**20,859**	**16,960**
1.A.b.1 Manufacturing services on physical inputs owned by others	–	–	–	12	12	–
1.A.b.2 Maintenance and repair services n.i.e.	–	–	–	36	80	–43
1.A.b.3 Transport	4,686	4,333	353	4,513	3,433	1,080
1.A.b.4 Travel	5,462	3,238	2,224	5,489	2,719	2,770
1.A.b.5 Construction	219	329	–110	301	455	–154
1.A.b.6 Insurance and pension services	635	337	298	604	305	300
1.A.b.7 Financial services	1,495	1,902	–406	1,093	1,192	–99
1.A.b.8 Charges for the use of intellectual property n.i.e.	85	990	–905	65	1,159	–1,094
1.A.b.9 Telecommunications, computer, and information services	17,614	923	16,691	18,217	952	17,265
1.A.b.10 Other business services	6,832	7,035	–203	6,569	7,484	–915
1.A.b.11 Personal, cultural, and recreational services	118	69	49	262	144	119
1.A.b.12 Government goods and services n.i.e.	47	214	–166	126	323	–197
1.A.b.13 Others n.i.e.	473	647	–174	529	2,602	–2,073
1.B Primary Income	**2,273**	**6,845**	**–4,572**	**2,640**	**7,825**	**–5,185**
1.B.1 Compensation of employees	585	572	13	800	574	226
1.B.2 Investment income	1,619	6,081	–4,462	1,547	6,819	–5,272
1.B.2.1 Direct investment	659	6,032	–5,373	479	3,009	–2,530
1.B.2.2 Portfolio investment	–	–	–	31	943	–912
1.B.2.3 Other investment	–	44	–44	77	2,866	–2,790
1.B.2.4 Reserve assets	960	6	955	960	1	959
1.B.3 Other primary income	69	192	–123	293	432	–139
1.C Secondary Income	**17,725**	**861**	**16,864**	**16,810**	**1,027**	**15,783**
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	17,725	861	16,864	16,798	1,010	15,788
1.C.1.1 Personal transfers (Current transfers between resident and/ non-resident households)	17,192	756	16,437	16,220	918	15,302
1.C.1.2 Other current transfers	533	105	428	578	92	486
1.C.2 General Government	–	–	–	12	17	–5
2 Capital Account	**99**	**252**	**–153**	**581**	**430**	**150**
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	1	92	–91	6	10	–4
2.2 Capital transfers	99	160	–62	574	420	154
3 Financial Account	**131,534**	**109,120**	**22,415**	**133,334**	**115,708**	**17,626**
3.1 Direct Investment	**9,241**	**7,885**	**1,356**	**10,658**	**4,924**	**5,733**
3.1.A Direct Investment in India	8,557	4,343	4,214	9,064	1,893	7,171
3.1.A.1 Equity and investment fund shares	8,149	4,262	3,887	8,483	1,856	6,627
3.1.A.1.1 Equity other than reinvestment of earnings	6,098	4,262	1,836	5,751	1,856	3,895
3.1.A.1.2 Reinvestment of earnings	2,051	–	2,051	2,732	–	2,732
3.1.A.2 Debt instruments	408	81	327	581	37	544
3.1.A.2.1 Direct investor in direct investment enterprises	408	81	327	581	37	544
3.1.B Direct Investment by India	684	3,541	–2,857	1,594	3,032	–1,438
3.1.B.1 Equity and investment fund shares	684	2,067	–1,383	1,594	2,363	–769
3.1.B.1.1 Equity other than reinvestment of earnings	684	1,765	–1,081	1,594	2,066	–472
3.1.B.1.2 Reinvestment of earnings	–	302	–302	–	297	–297
3.1.B.2 Debt instruments	–	1,474	–1,474	–	669	–669
3.1.B.2.1 Direct investor in direct investment enterprises	–	1,474	–1,474	–	669	–669
3.2 Portfolio Investment	**54,303**	**40,407**	**13,896**	**56,518**	**45,204**	**11,314**
3.2A Portfolio Investment in India	54,193	40,125	14,068	56,343	44,804	11,540
3.2A.1 Equity and investment fund shares	35,425	26,244	9,181	43,819	34,171	9,648
3.2A.2 Debt securities	18,768	13,881	4,887	12,525	10,633	1,892
3.2.B Portfolio Investment by India	110	282	–172	175	400	–225
3.3 Financial derivatives (other than reserves) and employee stock options	**–**	**–**	**–**	**1,031**	**1,942**	**–911**
3.4 Other investment	**62,253**	**60,828**	**1,425**	**65,119**	**60,937**	**4,181**
3.4.1 Other equity (ADRs/GDRs)	30	–	30	–	–	–
3.4.2 Currency and deposits	21,061	16,450	4,611	15,423	12,654	2,768
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	48	95	–47	–	26	–26
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	21,013	16,355	4,658	15,423	12,629	2,794
3.4.2.3 General government	–	–	–	–	–	–
3.4.2.4 Other sectors	–	–	–	–	–	–
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	12,750	12,777	–26	12,710	14,301	–1,591
3.4.3A Loans to India	11,927	11,945	–18	12,434	14,063	–1,629
3.4.3B Loans by India	824	832	–8	276	238	38
3.4.4 Insurance, pension, and standardized guarantee schemes	–	–	–	7	19	–12
3.4.5 Trade credit and advances	27,037	26,885	152	32,594	28,126	4,468
3.4.6 Other accounts receivable/payable - other	1,374	4,716	–3,342	4,392	5,856	–1,464
3.4.7 Special drawing rights	–	–	–	–	–	–
3.5 Reserve assets	**5,738**	**–**	**5,738**	**–**	**2,681**	**–2,681**
3.5.1 Monetary gold	–	–	–	–	–	–
3.5.2 Special drawing rights n.a.	–	–	–	–	–	–
3.5.3 Reserve position in the IMF n.a.	–	–	–	–	–	–
3.5.4 Other reserve assets (Foreign Currency Assets)	5,738	–	5,738	–	2,681	–2,681
3 Total assets/liabilities (Instrument wise)	**131,534**	**109,120**	**22,415**	**133,334**	**115,708**	**17,626**
3.0.1 Equity and investment fund shares	44,368	32,855	11,513	55,109	40,752	14,357
3.0.2 Debt instruments	80,024	71,549	8,476	73,833	66,420	7,413
3.0.3 Other financial assets and liabilities	7,142	4,716	2,426	4,392	8,537	–4,145
4 Net errors and omissions	**–**	**–**	**–555**	**–**	**–**	**302**

No. 41: Standard Presentation of BoP in India as per BPM6

(₹ Billion)

Item	Jan-Mar 2012 (PR)			Jan-Mar 2013 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account	**6,923**	**8,015**	**–1,091**	**7,694**	**8,673**	**–979**
1.A Goods and Services	**5,918**	**7,627**	**–1,709**	**6,640**	**8,193**	**–1,553**
1.A.a Goods	**4,024**	**6,621**	**–2,597**	**4,592**	**7,064**	**–2,472**
1.A.a.1 General merchandise on a BOP basis	4,031	5,809	–1,778	4,490	6,174	–1,684
1.A.a.2 Net exports of goods under merchanting	–6	–	–6	102	33	69
1.A.a.3 Non-monetary gold	–	812	–812	–	857	–857
1.A.b Services	**1,894**	**1,006**	**887**	**2,048**	**1,130**	**919**
1.A.b.1 Manufacturing services on physical inputs owned by others	–	–	–	1	1	–
1.A.b.2 Maintenance and repair services n.i.e.	–	–	–	2	4	–2
1.A.b.3 Transport	236	218	18	244	186	58
1.A.b.4 Travel	275	163	112	297	147	150
1.A.b.5 Construction	11	17	–6	16	25	–8
1.A.b.6 Insurance and pension services	32	17	15	33	17	16
1.A.b.7 Financial services	75	96	–20	59	65	–5
1.A.b.8 Charges for the use of intellectual property n.i.e.	4	50	–46	4	63	–59
1.A.b.9 Telecommunications, computer, and information services	886	46	839	987	52	935
1.A.b.10 Other business services	343	354	–10	356	405	–50
1.A.b.11 Personal, cultural, and recreational services	6	3	2	14	8	6
1.A.b.12 Government goods and services n.i.e.	2	11	–8	7	18	–11
1.A.b.13 Others n.i.e.	24	33	–9	29	141	–112
1.B Primary Income	**114**	**344**	**–230**	**143**	**424**	**–281**
1.B.1 Compensation of employees	29	29	1	43	31	12
1.B.2 Investment income	81	306	–224	84	369	–286
1.B.2.1 Direct investment	33	303	–270	26	163	–137
1.B.2.2 Portfolio investment	–	–	–	2	51	–49
1.B.2.3 Other investment	–	2	–2	4	155	–151
1.B.2.4 Reserve assets	48	–	48	52	–	52
1.B.3 Other primary income	3	10	–6	16	23	–8
1.C Secondary Income	**891**	**43**	**848**	**910**	**56**	**855**
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	891	43	848	910	55	855
1.C.1.1 Personal transfers (Current transfers between resident and/ non-resident households)	864	38	826	879	50	829
1.C.1.2 Other current transfers	27	5	22	31	5	26
1.C.2 General Government	–	–	–	1	1	–
2 Capital Account	**5**	**13**	**–8**	**31**	**23**	**8**
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	–	5	–5	–	1	–
2.2 Capital transfers	5	8	–3	31	23	8
3 Financial Account	**6,613**	**5,486**	**1,127**	**7,222**	**6,267**	**955**
3.1 Direct Investment	**465**	**396**	**68**	**577**	**267**	**311**
3.1.A Direct Investment in India	430	218	212	491	103	388
3.1.A.1 Equity and investment fund shares	410	214	195	459	101	359
3.1.A.1.1 Equity other than reinvestment of earnings	307	214	92	312	101	211
3.1.A.1.2 Reinvestment of earnings	103	–	103	148	–	148
3.1.A.2 Debt instruments	21	4	16	31	2	29
3.1.A.2.1 Direct investor in direct investment enterprises	21	4	16	31	2	29
3.1.B Direct Investment by India	34	178	–144	86	164	–78
3.1.B.1 Equity and investment fund shares	34	104	–70	86	128	–42
3.1.B.1.1 Equity other than reinvestment of earnings	34	89	–54	86	112	–26
3.1.B.1.2 Reinvestment of earnings	–	15	–15	–	16	–16
3.1.B.2 Debt instruments	–	74	–74	–	36	–36
3.1.B.2.1 Direct investor in direct investment enterprises	–	74	–74	–	36	–36
3.2 Portfolio Investment	**2,730**	**2,031**	**699**	**3,061**	**2,448**	**613**
3.2A Portfolio Investment in India	2,725	2,017	707	3,052	2,427	625
3.2A.1 Equity and investment fund shares	1,781	1,319	462	2,373	1,851	523
3.2A.2 Debt securities	944	698	246	678	576	102
3.2.B Portfolio Investment by India	6	14	–9	9	22	–12
3.3 Financial derivatives (other than reserves) and employee stock options	**–**	**–**	**–**	**56**	**105**	**–49**
3.4 Other investment	**3,130**	**3,058**	**72**	**3,527**	**3,301**	**226**
3.4.1 Other equity (ADRs/GDRs)	2	–	2	–	–	–
3.4.2 Currency and deposits	1,059	827	232	835	685	150
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	2	5	–2	–	1	–1
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	1,056	822	234	835	684	151
3.4.2.3 General government	–	–	–	–	–	–
3.4.2.4 Other sectors	–	–	–	–	–	–
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	641	642	–1	688	775	–86
3.4.3A Loans to India	600	601	–1	673	762	–88
3.4.3B Loans by India	41	42	–0	15	13	2
3.4.4 Insurance, pension, and standardized guarantee schemes	–	–	–	–	1	–1
3.4.5 Trade credit and advances	1,359	1,352	8	1,765	1,523	242
3.4.6 Other accounts receivable/payable - other	69	237	–168	238	317	–79
3.4.7 Special drawing rights	–	–	–	–	–	–
3.5 Reserve assets	**288**	**–**	**288**	**–**	**145**	**–145**
3.5.1 Monetary gold	–	–	–	–	–	–
3.5.2 Special drawing rights n.a.	–	–	–	–	–	–
3.5.3 Reserve position in the IMF n.a.	–	–	–	–	–	–
3.5.4 Other reserve assets (Foreign Currency Assets)	288	–	288	–	145	–145
3 Total assets/liabilities (Instrument wise)	**6,613**	**5,486**	**1,127**	**7,222**	**6,267**	**955**
3.0.1 Equity and investment fund shares	2,231	1,652	579	2,985	2,207	778
3.0.2 Debt instruments	4,023	3,597	426	3,999	3,598	402
3.0.3 Other financial assets and liabilities	359	237	122	238	462	–225
4 Net errors and omissions	**–**	**–**	**–28**	**–**	**–**	**16**

No. 42: International Investment Position

(US$ Million)

Item	As on Financial Year /Quarter End							
	2012-13		2012				2013	
			Mar.		Dec.		Mar.	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
	1	2	3	4	5	6	7	8
1 Direct Investment Abroad/in India	119,510	233,678	112,376	222,206	118,072	225,094	119,510	233,678
1.1 Equity Capital and Reinvested Earnings	84,851	223,143	82,048	213,109	84,081	215,009	84,851	223,143
1.2 Other Capital	34,659	10,535	30,329	9,097	33,991	10,085	34,659	10,535
2 Portfolio Investment	1,390	182,957	1,472	165,820	1,521	169,058	1,390	182,957
2.1 Equity	1,307	139,460	1,455	125,327	1,440	128,932	1,307	139,460
2.2 Debt	83	43,497	17	40,493	81	40,126	83	43,497
3 Other Investment	34,822	338,456	28,979	298,661	28,677	329,914	34,822	338,456
3.1 Trade Credit	3,921	88,961	–39	67,327	5,671	84,590	3,921	88,961
3.2 Loan	4,917	165,893	5,982	160,221	3,524	165,576	4,917	165,893
3.3 Currency and Deposits	13,058	71,004	11,144	58,778	6,888	67,758	13,058	71,004
3.4 Other Assets/Liabilities	12,926	12,597	11,893	12,335	12,592	11,990	12,926	12,597
4 Reserves	292,046	–	294,397	–	295,638	–	292,046	–
5 Total Assets/ Liabilities	447,768	755,091	437,225	686,687	443,907	724,067	447,768	755,091
6 IIP (Assets - Liabilities)		–307,323		–249,462		–280,159		–307,323

Payment and Settlement Systems

No. 43: Payment System Indicators

System	Volume (Million)				Value (₹ Billion)			
	2012-13	2013			2012-13	2013		
		May	Jun.	Jul.		May	Jun.	Jul.
	1	2	3	4	5	6	7	8
1 RTGS	**68.52**	**6.69**	**6.14**	**6.58**	**1,026,350.05**	**71,678.93**	**76,755.54**	**80,774.86**
1.1 Customer Transactions	63.99	6.26	5.74	6.15	512,997.84	44,931.62	47,929.52	48,216.21
1.2 Interbank Transactions	4.52	0.44	0.41	0.42	163,843.20	13,791.49	14,453.90	14,206.66
1.3 Interbank Clearing	0.009	0.001	0.001	0.001	349,509.02	12,955.83	14,372.11	18,352.00
2 CCIL Operated Systems	**2.26**	**0.30**	**0.24**	**0.23**	**501,598.49**	**64,457.15**	**53,820.77**	**58,250.71**
2.1 CBLO	0.16	0.01	0.01	0.02	120,480.39	12,176.45	15,389.59	19,764.77
2.2 Govt. Securities Clearing	0.70	0.15	0.08	0.07	119,947.98	26,762.78	15,166.88	13,885.62
2.2.1 Outright	0.66	0.15	0.08	0.07	65,920.33	19,125.65	9,032.88	7,182.59
2.2.2 Repo	0.041	0.005	0.004	0.004	54,027.65	7,637.13	6,134.00	6,703.03
2.3 Forex Clearing	1.40	0.14	0.14	0.14	261,170.12	25,517.92	23,264.30	24,600.32
3 Paper Clearing	**1,313.48**	**103.43**	**104.41**	**110.61**	**99,982.25**	**7,930.22**	**7,310.28**	**7,946.28**
3.1 Cheque Truncation System (CTS)	275.04	32.74	32.26	39.91	21,779.52	2,535.76	2,461.31	2,952.53
3.2 MICR Clearing	823.31	54.24	50.63	51.26	57,503.97	4,000.99	3,439.13	3,350.37
3.2.1 RBI Centres	496.81	31.80	29.15	29.07	36,045.97	2,338.48	2,071.26	1,908.31
3.2.2 Other Centres	326.50	22.45	21.47	22.19	21,458.00	1,662.51	1,367.87	1,442.06
3.3 Non-MICR Clearing	215.31	16.44	21.52	19.45	20,898.28	1,393.47	1,409.84	1,643.38
4 Retail Electronic Clearing	**694.07**	**67.06**	**71.54**	**81.99**	**31,881.14**	**3,318.97**	**3,565.72**	**3,824.88**
4.1 ECS DR	176.53	15.25	15.36	15.88	1,083.10	95.47	102.72	101.89
4.2 ECS CR (includes NECS)	122.18	9.42	12.52	15.05	1,771.28	153.57	207.63	274.80
4.3 EFT/NEFT	394.13	42.02	43.19	50.42	29,022.42	3,067.98	3,253.07	3,444.39
4.4 Interbank Mobile Payment Service (IMPS)	1.23	0.38	0.47	0.65	4.33	1.94	2.30	3.80
5 Cards	**6,398.35**	**591.07**	**578.86**	**609.40**	**18,637.36**	**18,172.58**	**1,760.09**	**1,766.31**
5.1 Credit Cards	399.13	38.71	37.02	42.59	1,243.93	1,259.72	115.03	111.75
5.1.1 Usage at ATMs	2.52	0.23	0.22	0.23	14.42	13.34	1.27	1.36
5.1.2 Usage at POS	396.61	38.48	36.80	42.36	1,229.51	1,246.38	113.76	110.39
5.2 Debit Cards	5,999.21	552.36	541.84	566.81	17,393.44	16,912.86	1,645.06	1,654.56
5.2.1 Usage at ATMs	5,530.16	504.69	493.93	514.36	16,650.08	16,141.56	1,574.17	1,577.34
5.2.2 Usage at POS	469.05	47.68	47.91	52.45	743.36	771.30	70.89	77.22
6 Prepaid Payment Instruments (PPIs)	**66.94**	**10.51**	**10.60**	**12.40**	**79.22**	**6.15**	**5.57**	**6.18**
6.1 m-Wallet	32.70	7.01	7.01	7.94	10.01	1.98	1.86	2.20
6.2 PPI Cards	33.76	3.45	3.56	4.41	49.62	2.10	2.05	1.96
6.3 Paper Vouchers	0.48	0.05	0.04	0.05	19.60	2.07	1.66	2.02
7 Mobile Banking	**53.30**	**6.87**	**6.63**	**7.03**	**59.90**	**11.94**	**11.48**	**12.84**
8 Cards Outstanding	**350.75**	**361.27**	**368.32**	**374.22**	–	–	–	–
8.1 Credit Card	19.55	19.61	19.15	18.80	–	–	–	–
8.2 Debit Card	331.20	342.25	349.17	355.42	–	–	–	–
9 Number of ATMs (in actuals)	**114014**	**118867**	**121617**	**124072**	–	–	–	–
10 Number of POS (in actuals)	**854290**	**929929**	**947731**	**952634**	–	–	–	–
11 Grand Total (1.1+1.2+2+3+4+5+6)	**8,543.60**	**779.07**	**771.78**	**821.22**	**1,329,019.50**	**136,252.85**	**128,845.87**	**134,217.22**

Occasional Series

No. 44: Small Savings

(₹ Billion)

Scheme		2011-12	2012		2013	
			Feb.	Dec.	Jan.	Feb.
		1	2	3	4	5
1 Small Savings	**Receipts**	**1,907.50**	**154.04**	**160.86**	**170.20**	**159.51**
	Outstanding	**6,065.85**	**6,057.95**	**6,019.61**	**6,016.26**	**6,020.72**
1.1 Total Deposits	**Receipts**	**1,665.51**	**133.14**	**140.79**	**147.37**	**134.38**
	Outstanding	**3,607.22**	**3,601.64**	**3,663.38**	**3,663.20**	**3,668.84**
1.1.1 Post Office Saving Bank Deposits	Receipts	859.05	73.83	70.94	75.63	67.32
	Outstanding	340.70	329.86	372.45	376.64	380.23
1.1.2 MGNREG	Receipts	9.38	1.34	2.89	3.15	4.60
	Outstanding	0.56	–	–9.36	–9.97	–10.14
1.1.3 National Saving Scheme, 1987	Receipts	1.38	0.03	–	0.01	0.04
	Outstanding	40.58	39.19	39.21	39.02	38.90
1.1.4 National Saving Scheme, 1992	Receipts	0.13	–0.01	–0.01	0.01	–0.09
	Outstanding	4.07	4.18	3.40	3.38	3.26
1.1.5 Monthly Income Scheme	Receipts	284.24	15.81	16.09	16.39	14.33
	Outstanding	2,052.88	2,069.88	2,019.69	2,016.29	2,016.16
1.1.6 Senior Citizen Scheme	Receipts	29.86	0.93	1.74	2.16	1.76
	Outstanding	267.63	269.56	245.68	242.43	241.58
1.1.7 Post Office Time Deposits	Receipts	136.52	12.98	18.06	18.60	16.60
	Outstanding	273.91	273.20	314.96	320.20	324.96
1.1.7.1 1 year Time Deposits	Outstanding	168.69	168.54	201.67	205.68	209.45
1.1.7.2 2 year Time Deposits	Outstanding	13.11	13.16	14.11	14.32	14.51
1.1.7.3 3 year Time Deposits	Outstanding	42.07	42.15	40.69	40.51	40.18
1.1.7.4 5 year Time Deposits	Outstanding	50.04	49.35	58.49	59.69	60.82
1.1.8 Post Office Recurring Deposits	Receipts	344.95	28.23	31.08	31.42	29.82
	Outstanding	626.61	615.49	677.09	674.94	673.62
1.1.9 Post Office Cumulative Time Deposits	Outstanding	0.06	0.06	0.04	0.05	0.05
1.1.10 Other Deposits	Outstanding	0.22	0.22	0.22	0.22	0.22
1.2 Saving Certificates	**Receipts**	**179.77**	**16.27**	**16.72**	**17.64**	**18.21**
	Outstanding	**2,098.70**	**2,115.84**	**1,981.76**	**1,970.80**	**1,963.67**
1.2.1 National Savings Certificate VIII issue	Receipts	103.26	16.02	16.36	17.81	18.07
	Outstanding	550.69	544.20	614.79	624.26	633.59
1.2.2 Indira Vikas Patras	Receipts	–	–	–0.01	–	–
	Outstanding	8.94	11.65	8.81	8.79	8.79
1.2.3 Kisan Vikas Patras	Receipts	76.51	0.25	0.37	–0.17	0.14
	Outstanding	1,539.60	1,560.54	1,346.64	1,324.11	1,305.22
1.2.4 National Saving Certificate VI issue	Outstanding	–0.69	–0.63	–0.74	–0.76	–0.76
1.2.5 National Saving Certificate VII issue	Outstanding	–0.49	–0.51	–0.64	–0.65	–0.64
1.2.6 Other Certificates	Outstanding	0.65	0.59	12.90	15.05	17.47
1.3 Public Provident Fund	**Receipts**	**62.22**	**4.63**	**3.35**	**5.19**	**6.92**
	Outstanding	**359.93**	**340.47**	**374.47**	**382.26**	**388.21**

Source: Accountant General, Post and Telegraphs.

No. 45: Ownership Pattern of Government of India Dated Securities

(Per cent)

Category	2012			2013	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
1 Commercial Banks	33.88	33.91	33.98	34.50	34.47
2 Bank-Primary Dealers	10.34	10.63	9.98	9.36	9.38
3 Non-Bank PDs	0.08	0.10	0.15	0.11	0.08
4 Insurance Companies	21.19	21.30	19.54	18.56	19.20
5 Mutual Funds	0.29	0.55	1.20	0.68	1.24
6 Co-operative Banks	3.07	3.03	2.89	2.81	2.78
7 Financial Institutions	0.34	0.37	0.64	0.75	0.63
8 Corporates	1.37	1.61	1.62	1.14	1.20
9 FIIs	0.89	1.10	1.24	1.61	1.59
10 Provident Funds	7.31	7.19	7.12	7.37	7.19
11 RBI	17.62	16.02	15.95	16.99	18.22
12 Others	3.63	4.20	5.68	6.12	4.02

No. 46: Combined Receipts and Disbursements of the Central and State Governments

(₹ Billion)

Item	2008-09	2009-10	2010-11	2011-12	2012-13 RE	2013-14 BE
	1	2	3	4	5	6
1 Total Disbursements	**15,996.77**	**18,521.19**	**21,451.45**	**24,156.41**	**28,322.59**	**32,120.56**
1.1 Developmental	9,437.08	10,628.08	12,676.97	14,171.87	17,021.74	18,693.76
1.1.1 Revenue	7,521.03	8,513.03	10,260.24	11,369.06	13,651.69	14,946.30
1.1.2 Capital	1,699.72	1,868.38	1,935.80	2,153.25	2,750.78	3,293.09
1.1.3 Loans	216.33	246.67	480.93	649.57	619.27	454.37
1.2 Non-Developmental	6,374.53	7,687.34	8,520.46	9,672.11	10,906.17	12,951.93
1.2.1 Revenue	5,873.44	7,086.94	7,765.94	8,900.44	10,080.99	11,536.98
1.2.1.1 Interest Payments	2,834.54	3,145.70	3,485.61	3,996.01	4,614.23	5,350.56
1.2.2 Capital	487.07	594.08	747.48	752.43	797.27	1,389.84
1.2.3 Loans	14.02	6.32	7.04	19.23	27.91	25.10
1.3 Others	185.16	205.77	254.02	312.42	394.68	474.87
2 Total Receipts	**15,648.03**	**18,458.08**	**21,535.61**	**24,480.03**	**28,133.89**	**32,105.37**
2.1 Revenue Receipts	11,170.98	12,105.59	15,788.20	16,870.93	20,404.12	23,625.53
2.1.1 Tax Receipts	9,263.02	9,846.11	12,500.67	14,416.45	16,985.18	19,905.70
2.1.1.1 Taxes on commodities and services	5,468.55	5,580.66	7,393.66	8,680.98	10,374.42	12,147.94
2.1.1.2 Taxes on Income and Property	3,779.59	4,249.31	5,087.19	5,707.63	6,584.20	7,730.19
2.1.1.3 Taxes of Union Territories (Without Legislature)	14.88	16.14	19.82	27.85	26.56	27.58
2.1.2 Non-Tax Receipts	1,907.96	2,259.48	3,287.53	2,454.48	3,418.94	3,719.82
2.1.2.1 Interest Receipts	253.68	257.48	250.78	288.60	268.57	289.58
2.2 Non-debt Capital Receipts	154.44	368.92	322.93	441.50	414.57	649.90
2.2.1 Recovery of Loans & Advances	146.11	114.99	82.06	253.97	173.16	89.33
2.2.2 Disinvestment proceeds	8.33	253.93	240.87	187.53	241.41	560.57
3 Gross Fiscal Deficit [1 - (2.1 + 2.2)]	**4,671.35**	**6,046.68**	**5,340.32**	**6,843.98**	**7,503.90**	**7,845.13**
3A Sources of Financing: Institution-wise						
3A.1 Domestic Financing	4,561.20	5,936.30	5,104.76	6,719.50	7,481.76	7,739.53
3A.1.1 Net Bank Credit to Government	3,778.15	3,918.53	3,147.10	3,877.98	3,355.13	..
3A.1.1.1 Net RBI Credit to Government	1,747.89	1,500.10	1,849.70	1,391.80	548.40	..
3A.1.2 Non-Bank Credit to Government	783.05	2,017.77	1,957.66	2,841.52	4,126.63	..
3A.2 External Financing	110.15	110.38	235.56	124.48	22.14	105.60
3B Sources of Financing: Instrument-wise						
3B.1 Domestic Financing	4,561.20	5,936.30	5,104.76	6,719.50	7,481.76	7,739.53
3B.1.1 Market Borrowings (net)	3,510.16	5,070.19	4,151.75	6,207.62	6,765.82	7,042.41
3B.1.2 Small Savings (net)	–1.38	374.62	545.34	–190.88	83.84	–35.32
3B.1.3 State Provident Funds (net)	208.51	355.35	362.36	333.96	310.09	322.64
3B.1.4 Reserve Funds	–130.56	–155.71	35.62	178.51	63.32	114.62
3B.1.5 Deposits and Advances	117.37	175.68	342.92	119.00	203.06	101.85
3B.1.6 Cash Balances	348.74	63.11	–84.16	–323.62	188.69	15.18
3B.1.7 Others	508.36	53.06	–249.06	394.91	–133.06	178.15
3B.2 External Financing	110.15	110.38	235.56	124.48	22.14	105.60
4 Total Disbursements as per cent of GDP	*28.4*	*28.6*	*27.5*	*26.9*	*28.3*	*28.2*
5 Total Receipts as per cent of GDP	*27.8*	*28.5*	*27.6*	*27.3*	*28.1*	*28.2*
6 Revenue Receipts as per cent of GDP	*19.8*	*18.7*	*20.3*	*18.8*	*20.4*	*20.8*
7 Tax Receipts as per cent of GDP	*16.5*	*15.2*	*16.0*	*16.1*	*17.0*	*17.5*
8 Gross Fiscal Deficit as per cent of GDP	*8.3*	*9.3*	*6.9*	*7.6*	*7.5*	*6.9*

Source : Budget Documents of Central and State Governments.

Explanatory Notes to the Current Statistics

Table No. 1
1.2 & 6: Annual data are averages of months.
3.5 & 3.7: Relate to ratios of increments over financial year so far.
4.1 to 4.4, 4.8, 4.12 & 5: Relate to the last day of the month/financial year.
4.5, 4.6 & 4.7: Relate to five major banks on the last Friday of the month/financial year.
4.9 to 4.11: Relate to the last auction day of the month/financial year.

Table No. 2
2.1.2: Include paid-up capital, reserve fund and Long-Term Operations Funds.
2.2.2: Include cash, fixed deposits and short-term securities/bonds, *e.g.*, issued by IIFC (UK).

Table No. 4
Maturity-wise position of outstanding forward contracts is available at http://nsdp.rbi.org.in under ''Reserves Template''.

Table No. 5
Special refinance facility to Others, i.e. to the EXIM Bank, is closed since March 31, 2013.

Table No. 6
For scheduled banks, March-end data pertain to the last reporting Friday.
2.2: Exclude balances held in IMF Account No.1, RBI employees' provident fund, pension fund, gratuity and superannuation fund.

Table Nos. 7 & 11
3.1 in Table 7 and 2.4 in Table 11: Include foreign currency denominated bonds issued by IIFC (UK).

Table No. 8
NM_2 and NM_3 do not include FCNR (B) deposits.
2.4: Consist of paid-up capital and reserves.
2.5: includes other demand and time liabilities of the banking system.

Table No. 9
Financial institutions comprise EXIM Bank, SIDBI, NABARD and NHB.
L_1 and L_2 are compiled monthly and L_3 quarterly.
Wherever data are not available, the last available data have been repeated.

Table No. 17
2.1.1: Exclude reserve fund maintained by co-operative societies with State Co-operative Banks
2.1.2: Exclude borrowings from RBI, SBI, IDBI, NABARD, notified banks and State Governments.
4: Include borrowings from IDBI and NABARD.

Table No. 24
Primary Dealers (PDs) include banks undertaking PD business.

Table No. 30
Exclude private placement and offer for sale.
1: Exclude bonus shares.
2: Include cumulative convertible preference shares and equi-preference shares.

Table No. 32
Exclude investment in foreign currency denominated bonds issued by IIFC (UK) and foreign currency received under SAARC SWAP arrangement. Foreign currency assets in US dollar take into account appreciation/depreciation of non-US currencies (such as Euro, Sterling and Yen) held in reserves. Foreign exchange holdings are converted into rupees at rupee-US dollar RBI holding rates.

Table No. 34
1.1.1.1.2 & 1.1.1.1.1.4: Estimates.
1.1.1.2: Estimates for latest months.
'Other capital' pertains to debt transactions between parent and subsidiaries/branches of FDI enterprises.
Data may not tally with the BoP data due to lag in reporting.

Table No. 35
1.10: Include items such as subscription to journals, maintenance of investment abroad, student loan repayments and credit card payments.

Table No. 36
Increase in indices indicates appreciation of rupee and vice versa. For 6-Currency index, base year 2010-11 is a moving one, which gets updated every year. Methodological details are available in December 2005 issue of the Bulletin.

Table No. 37
Based on applications for ECB/Foreign Currency Convertible Bonds (FCCBs) which have been allotted loan registration number during the period.

Table Nos. 38, 39, 40 & 41
Explanatory notes on these tables are available in December issue of RBI Bulletin, 2012.

Table No. 43
1.3: Pertain to multilateral net settlement batches.
3.1: Pertain to two centres - New Delhi and Chennai.
3.3: Pertain to clearing houses managed by 21 banks.
6: Available from December 2010.
7: Include IMPS transactions.

Table No. 44
1.1.1: Receipts include interest credited to depositors' account from time to time.
1.1.9: Relate to 5-year, 10-year and 15-year cumulative time deposits. Exclude Public Provident Fund.
1.2.4 to 1.2.6: Negative figures are due to rectification of misclassification.
1.3: Data relate to Post Office transactions.

Table 45
Includes securities issued under the Market Stabilisation Scheme and the special securities, *e.g.*, issued to the oil marketing companies.

Table 46
(-): Indicates surplus/net outflow.
Data from 2011-12 onwards pertains to budgets of 27 state governments.
Total receipts and total expenditure exclude National Calamity Contingency Fund expenditure.
1 & 2: Data are net of repayments of the Central Government (including repayments to the NSSF) and State Governments.
1.3: Represents compensation and assignments by States to local bodies and Panchayati Raj institutions.
2: Data are net of variation in cash balances of the Central and State Governments and includes borrowing receipts of the Central and State Governments.
3A.1.1: Data as per RBI records.
3B.1.1: Includes borrowings through dated securities and 364-day Treasury Bills.
3B.1.2: Represent net investment in Central and State Governments' special securities by the National Small Savings Fund (NSSF).
3B.1.6: Include Ways and Means Advances by the Centre to the State Governments.
3B.1.7: Include Treasury Bills (excluding 364-day Treasury Bills), loans from financial institutions, insurance and pension funds, remittances, cash balance investment account.

Detailed explanatory notes are available in the relevant press releases issued by RBI and other publications/releases of the Bank such as **Handbook of Statistics on the Indian Economy**.

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2. Time Series data are available at the Database on Indian Economy (http://dbie.rbi.org.in).
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