

Technology in Banking: An Instrument for Economic Growth¹

Mr Bodhisatva Ganguly, Resident Editor, Economic Times, distinguished guests, ladies and gentlemen. At the very outset, I want to say that it is a pleasure and a privilege to be amidst this august gathering and to be a part of the Banking Technology Conclave 2010. I congratulate the Economic Times for organizing this Technology Conclave, the fourth in the series, on the theme “Leveraging technology for fuelling growth and development”. The contribution of technology to the processes of growth and development is clearly appreciated and universally acknowledged. It is the role of technology in banking in enabling us to meet the challenge of economic growth and ensuring financial stability that is now at the forefront. Effective use of technology has a multiplier effect on growth and development. Technology enables increased penetration of the banking system, increases cost effectiveness and makes small value transactions viable. As the cost of Information and Communications Technology shrink, the time is ripe for using technology to address business growth. Technological innovations change the cost and access equation – making it economically viable for financial service providers, often in partnership, to reach customers including the poor, with a wider range of products and services. We firmly believe that it is not possible to scale up our business models without the adoption of an ICT based delivery model. Hence, the choice of the theme is topical.

2. The rest of my address is structured around four broad thematic sections. Firstly, I propose to explain how technology impels and induces growth. Secondly, the sea change it has brought about in the banking scenario. I shall briefly expound the spin-off benefits that can accrue through adoption of technology by Indian banks. Thirdly, I will touch upon the barriers which impede progress and highlight why have we not been able to optimally tap the full benefits of technology. I will conclude explicating how we are addressing these issues at the level of macro policy. Thus, I will try to present to you a picture in totality ; sharing with you where we stand and where we have to reach in terms of leveraging technology to be part of the flat world, the rapidly globalizing world, with which you as bankers have necessarily to do business with.

Technology and Economic Growth

3. From the end of the eighteenth century with the industrial revolution, the world changed irrevocably. Policy makers came to recognise the potential of technology; its inter-linkage with economic growth; its ability to power development. Technology remains the key driver of all development including banking.

¹ Address by Dr K. C. Chakrabarty, Deputy Governor, Reserve Bank of India at the Economic Times Banking Technology Conclave 2010 on September 3, 2010 at Mumbai

4. Technology adoption enables increased penetration of goods and services. Doubtless you all will concur that technology is no longer merely a mode of automating processes. It has made banking products and services affordable and accessible; simultaneously ensuring viability and profitability due to the processes of customization leading to improved operating margins. Technology allows transactions to take place faster and reduces costs.

5. Technology enhances choices, creates new markets, improves productivity and has a multiplier effect. In the field of banking, technology is the magic bullet which has the potential to extend in a cost effective manner the penetrative reach of banking services and products to a large section of the excluded society by bringing them into the formal financial system. It promises universal access thereby pushing the frontiers of banking outward. It changes the game.

6. Economic growth results both from slow and steady improvements in technology and from knowledge embodied in physical and human capital as well as from the 'breakthrough' inventions. Technology is a concomitant of the rapid pace of global growth and has led to structural change at all levels.

7. In an era of globalisation and consequent demolition of protectionist barriers, banks with the help of technology must adopt appropriate business and delivery models enabling acquisition of new customers and expansion into hitherto uncharted territory. Increasing competition and growing customer aspirations -Gunnar Myrdal's "revolution of rising expectations" - has led to heightened awareness amongst banks of the potential and importance of banking technology .There should not be a disjuncture between information and technology; both together will enable banks to meet the expectations of demanding and tech-savvy customers. Gen-next customers, in an age of instant gratification, demand instant, anytime and anywhere banking facilities. The arrival of foreign and private banks with superior state-of-the-art technology based services created competition and pulled the Indian Banking Industry to rise to meet the challenge of adoption of new technology, new paradigms, and new ways of doing business and the banks have done it admirably. A combination of regulatory and market forces supported the implementation of technology and automation in the Indian banking industry. As a central bank in a developing country, the Reserve Bank of India (RBI) has adopted development of the banking and financial market as one of its prime objectives. "Institutional development" was the hallmark of this approach from 1950s to 1970s. In the 1980s, the Reserve Bank focused on "improvements in the productivity" of the banking sector. Being convinced that technology is the key for improving productivity and efficiency, the Reserve Bank took several initiatives to popularize usage of technology by banks in India.

8. Banks and financial institutions do recognise the potential of Information Technology as an enabler of sophisticated product development, better market infrastructure and implementation of reliable techniques for control of risks. With adaption to a continuous and rapid advance in technology, banking will experience transformational growth. Technology will further open up existing markets and create new markets, new products and services

and efficient delivery channels for the banking industry. Information Technology will provide banking industry with the wherewithal to deal with the challenges of the new economy.

9. Core Banking Solution enables banks to extend the full benefits of ATM, tele-banking, mobile banking, internet banking, card banking (multiple delivery channels) to all customers allowing banks to offer a multitude of customer-centric services on a 24x7 basis from a single location, supporting retail as well as corporate banking activities, as well as all possible delivery channels existing and proposed. The centralisation thus makes a “one-stop” shop for financial services a possibility. Using CBS, customers can access their accounts from any branch, anywhere, irrespective of where they have physically opened their accounts.

Has Banking technology been optimally leveraged?

10. In this backdrop, let me posit just two questions.

Has banking penetration increased?

Has it improved productivity and efficiency?

11. There is a paucity of empirical evidence backed by hard data to conclusively establish this. Much of the anecdotal evidence and broad indicators suggest that it has not happened. Some of the critical indicators for access to finance and performance and efficiency of banks in India along with benchmark indicators for selected high-income OECD member countries are given in annex tables 1 and 2. The penetration indicators reveal that there have been improvements during 2001-08 but still very adverse compared to OECD economies. Improvements in efficiency of the banking system are expected to be reflected, *inter alia*, in a reduction in operating expenditure, interest spread and cost of intermediation in general. The Net Interest Margin of banks has not reduced much; especially when the structure of business has not changed. There is enough empirical evidence to show that the cost of small transactions has not gone down. Unless low-value transactions are not cost-effectively done, it is not going to impact efficiency drastically. The deposit and advances per account has shown a rising trend which signifies that the rise in business is not due to acquisition of customers on the lower end of the pyramid. The intermediation costs of banks in India still tend to be higher than those in developed banking markets. Thus, the penetration has to increase and the cost per transaction has to decrease. The obvious question then to ask is why this has not happened despite technology adoption. Let me attempt to answer this:

Technology must be customer-centric.

12. Technology must be implemented with the customer in focus. Technology must enable customer facilitation in terms of cost, time and convenience. It should be dovetailed to customer needs and expectations. In sharp contrast, technology implementation in our public sector banks appears to be more for regulatory and policy compliance. This has

oriented the banking technology to be more employee friendly rather than customer-friendly.

13. Let us look at the Passenger Reservation System of the Indian Railways. It is also a public sector enterprise implementing a centralised solution. The customers get a single window service whether it is enquiry, reservation, modification, cancellation, or refund, etc. Let us look at the parallel in the banking system. Majority of our banks have implemented CBS in their branches. From a customers' perspective, a single window facility remains unavailable for facilitating and expediting the varied regular transactions and business that he/she needs to conduct at the branch.

14. This begs the larger question. As technology implementation was not customer-centric, even some basic answers elude us. For example, do we, as bankers, know how many customers our banks serve? Do we, as bankers and as customers, know how many products our banks offer? I am sure the answers based on credible information to both these and many such simple questions are not available with us even after the adoption of CBS technology. This has very obvious implications for business growth.

Business Process Re-engineering - a prerequisite

15. Business process re-engineering integral to leverage manpower for business growth and increased profitability, and cetirus paribus to derive optimum benefits of technology up gradation, has not happened at the desired pace. Globally, post technology adoption, only 10 per cent of the banking staff is involved in "back office" jobs and the remaining 90 per cent of the banking staff are freed for performing "front office" jobs of customer acquisition, servicing and retention by ensuring customer loyalty. The constraints hampering the re-engineering of business processes and MIS; implementing technology up gradation programme without abandoning legacy systems; are well appreciated. The net result will be a tinkering with parts rather than the needed systemic overhaul that could have been achieved had the banks adopted a planned transformational management system.

Absence of a strategic vision and action plan

16. For any plan to succeed, there must be a vision and strategy driving implementation. There is clearly absence of vision of how technology is going to drive business and customer relationship. Thus technology adoption in banks is a result of external pressures rather than a vision shared by the bank staff percolating right down from right up or a corporate vision of the positive externalities that will result. Consequently, this lack of long-term vision and strategy have impacted the way technology has been utilised. It has been "implemented"; it has not been embraced, optimised or leveraged to the full.

Information and Technology need to be integrated

17. There was no business and IT plan to leverage technology for increasing business and profits. IT should help banks not just to deliver robust and reliable services to their

customers at a lower cost, but also generate and manage information effectively. Information comprises data collected based on principles of integrity, reliability, and accuracy. Banks are collecting humungous quantities and warehousing volumes of data relating to customers and transactions. The information is not subjected to meaningful analysis, usage and creation of a database with an objective to meet not only the diversified internal and external MIS requirements but also using this information to increase the volume of profitable business using unique techniques of Customer Relationship Management (CRM). It would not be wrong to say that “Information” from “Information Technology” is missing.

Absence of simple cost effective delivery model

18. We are yet to put in place a cost- effective, decentralised and realistic delivery model. Fledgling delivery models are being tried out experimentally. Fixing a problem / glitch when it happens is the weakest link. This issue is even more important considering that increasingly larger number of hitherto un-banked people will interface with the banks through hand-held/ mobile front-end devices. The credibility of the entire system will be at stake and take a hit if the problems are not promptly resolved as they arise and real time solutions are not proffered.

What have we done? The way ahead

19. Having identified the reasons which have inhibited the benefits of banking technology from translating to spin-offs of positive externality and unleashing growth momentum, the way ahead is clear. We need to address the issues and concerns flagged and determine priorities.

Fix the technology and Delivery Model

20. All our efforts would not bear fruit if technology issues are not addressed first. Till today, not all commercial bank and regional rural bank branches are under CBS. Scalable financial inclusion cannot happen without stable and reliable Information and Communications Technology (ICT) based models. The transactions through the hand held front end-devices should be seamlessly integrated with banks’ back-end servers. In our interaction with the banks, we are stressing that the technology aspects deserves our immediate attention. We need to closely analyse whether any technology/vendor/systems shortcomings is hindering the optimal beneficial utilisation of CBS both for centralisation of the back-end processes and information processing capabilities. Banks must view Financial Inclusion as a business opportunity and refine their Delivery Models for greater effectiveness and efficiency. BC based delivery model has been made more flexible and inclusive.

Need to look into BPR, CRM, MIS and IT governance

21. Banks will have to adopt a system of Business Process Re-engineering (BPR) to change their business processes, delivery models, as also information processing systems. They will have to have a re-look at the entire process and have a unified and integrated approach to take full benefits of technology up-gradation in the banks. They will have to fully re-engineer their business processes as per the CBS software. Re-engineering would include developing new process manuals and training of personnel to effectively use the new systems. This would free staff for performing front-office functions.

22. Customer-centric growth is the key to combating competitive market forces and staying ahead of the curve. There is focus on growth in customer base through acquisition, as well as retaining existing customers and increasing their relationship value through an increased share of the wallet. While operational CRM would help banks streamline their delivery channels, CRM packed with the power of Business Intelligence would provide the banks with more actionable information for enhanced decision making. Banks need to leverage on IT to develop comprehensive Customer Relationship Management (CRM) techniques to increase the volume, quality and profitability of business.

23. An associated area which needs improvement is the integrity and reliability of the data; an effective MIS is the sine qua non of efficiency and informed decision making. A seamless data extraction process from the transaction server to the MIS server enabling generation of returns required internally within a bank and submission to external agency almost instantaneously is needed.

24. With the high rate of technological obsolescence and for CRM to succeed, the need for proper IT governance, particularly in the case of banks, is gaining prominence. As in the case of corporate governance, IT governance is the responsibility of the board of directors and executive management. In fact, it could be said that in the banking sector, IT governance is an important sub-set of overall corporate governance. Given the enormity of investment in IT infrastructure and the ever-increasing dependence on IT for operating and managing the day-to-day business activities, there are concerns among various stakeholders and the upsurge in the call for better IT governance has stemmed from this concern. IT governance in banks focuses on information technology systems, their performance and risk management. Adoption of IT governance in banks would result in effective control and deriving better value on the huge IT infrastructure created by banks. This would ultimately result in enabling better alignment between IT and business, create efficiencies, enhance conformity to internationally accepted best practices and improve overall IT performance of banks. So, an integrated IT and business plan and an IT and business strategy for doing business is needed

Take all stakeholders along

25. It is essential to create shared interests and proactive involvement of all the players. Even after all these efforts, banks alone will not be able to do it if all stakeholders like

Governments, both Central and State, Regulators, NGOs, Technology Vendors, Industry Associations, Insurance and Mutual Fund Companies, and society at large are not involved. Big technology players have to come forward to facilitate this process and develop hardware and software appropriate to our country. A planned, strategic and massive concerted effort is needed from all stakeholders. The challenge is huge; the opportunity even more so.

Bring it into Mission Mode with clear cut deliverable target

26. We need a planned approach to the entire gamut of issues. By bringing it into mission mode, we can leverage technology for fuelling exponential growth and driving rapid development of the banking sector with clearly defined, measurable and monitorable targets. The following are essential for that:

- a) Bring the customer focus
- b) Bring more people to the banking fold
- c) Evolve product as per customer requirement and map it.
- d) Establish Technology and BC based delivery model which is simple and cost effective
- e) Information and Technology must be integrated
- f) Ensure MIS streamlining and centralised processing
- g) Have proper IT governance structure

Conclusion

27. Our banks have done a commendable work. The banks have tried to increase penetration, the health of the banking sector is good and technology has been adopted. But let us not be complacent. There is a vast untapped market which is an excellent business opportunity waiting for those who can harness it. Our technology pool is world class which is an added advantage. As leaders of the organisations which would be using technology as a cutting edge towards excellence in services, you would no doubt concur that all the requirements outlined by me need to be addressed holistically, so that it results in increased banking penetration, improved productivity and efficiency and contributes to overall growth and development. We cannot afford to fail. I hope this Conclave will discuss all these issues and come up with a roadmap and an action plan and thereby enable the banking system to play a critical role in ensuring a double digit sustainable and inclusive growth.

Thank You .

Getting Finance Indicators for India, 2001-08

Annex Table1

Indicator	2001	2002	2003	2004	2005	2006	2007	2008	Benchmark (OECD)
Access to finance									
Demographic branch penetration (branches per 100,000 people)	6.42	6.33	6.25	6.26	6.33	6.37	6.35	6.6	10--69
Demographic ATM penetration (ATMs per 100,000 people)					1.63	1.93	2.4	3.28	47--167
Deposit accounts per 1000 people	416.77	420.84	418.67	426.11	432.11	442.87	459.52	467.35	976-1671
Loan accounts per 1000 people	50.99	53.93	55.84	61.88	71.42	78	83.59	89.03	248-513
Geographic branch penetration (branches per 1000 km2)	22.18	22.26	22.41	22.57	22.99	23.46	24.13	25.49	1-159
Geographic ATM penetration (ATMs per 1000 km2)					5.93	7.11	9.11	12.68	1-437
Performance and Efficiency									
Return on Equity (%)	13.8	17.3	21	23	16.9	17	17.31	17.34	1.90--28.10
Return on Assets(%)	0.9	1.1	1.5	1.7	1.3	1.31	1.43	1.57	0.10--1.80
Staff Cost Ratio(%)	68.1	64.7	62.1	60.17	58.29	56.9	54.54	51.55	14.87-- 54.63
Net Interest Margin (%)	2.98	2.66	2.85	3.07	3.07	3.01	2.99	2.61	0.40-2.93

(Source: Getting Finance in South Asia 2010, Kiatchai Sophastienphong , Anoma Kulathunga, The World Bank)

Note: The Benchmark Indicator ranges are for selected high-income OECD member countries (Australia, Canada,France, Germany,Italy,Japan, the republic of Korea, New Zealand and the United States)

Trends in Operating Expenses/ Ratios

Annex Table 2

Indicator	2002	2003	2004	2005	2006	2007	2008	2009
Operating Expenses as percentage of Total Assets(%)	2.2	2.2	2.2	2.1	2.1	1.9	1.8	1.7
Deposits per account (Rs)	25532.19	28609.12	33058.01	37421.68	43108.28	50020.21	55873.93	59217.32
Advances per account (Rs)	116333.52	127072.80	132597.08	149378.22	177190.19	206168.83	225907.46	258751.28
Urban+Metro Business / Total Business (%)	68.96	69.05	71.23	71.99	74.97	76.70	76.83	77.63

(Source: Trend and Progress of Banking in India 2008-09, Basic Statistical Returns of SCBs in India)