G Padmanabhan: Techno – banking – prospects and challenges

Inaugural address by Mr G Padmanabhan, Executive Director of the Reserve Bank of India, at the 6th ET Banking Technology Conclave '12, Mumbai, 9 October 2012.

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Distinguished ladies and gentlemen,

I am honoured to be invited to deliver the key note address at the 6th edition of the ET Banking Technology Conclave. I am also thankful to the organizers for their kind gesture in asking me to deliver the inaugural rather than the valedictory address, as originally intended. I was rather apprehensive of delivering a valedictory address in a Seminar like this, since – drawing a cricket analogy – it would be like going in as the last man to bat, having just walked into the stadium, having no clue about the state of the match!

Over the past few decades, modern business organizations have been investing increasingly substantial amounts of money in information technology (IT) with the objective of improving their operational efficiency, product innovation and competitive ability in the industry. This has enabled them in simplifying their processes, improving efficiency levels, and also reaching out to a wider range of customers. The banking sector too has followed the same path. Use of technology has also opened up new markets, new products, new services and efficient delivery channels particularly for the banking industry. Further, technological innovation has enabled a broader reach for consumer banking and financial services, and in India's case, it is playing an important role in moving towards continued and inclusive growth.

Global perspective

Let us see what is happening globally and how technology enabled banking is being taken forward. In the recent past, banking has seen a decrease in the number of traditional competitors due to industry consolidation. At the same time, there has been an increase in the number of competitors for each customer and relationship. Technology-enabled improvements and the desire to improve earnings have led many banks to enter new markets (global and national) driving increased competition in local markets by the adoption of new technology. Competition from non-banks and virtual entities have also increased. This, combined with a growing appetite for customization and personalization, has driven the need to constantly transform applications and offerings to meet new competition and changing customer preferences, expectations, and needs.

As customers are now demanding new levels of personalised and prompt service, the banks have adapted/are adapting to survive/find new value in their existing systems and ways to explore new market opportunities while relentlessly improving their quality of products and services.

Innovation leading to product differentiation is going to play an important role in days to come. Many of you must have recently read about Japanese banks planning to introduce ATMs that allow customers to carry out transactions with a scan of their palm in case they forget or lose their plastic cards. Another experimentation of using heartbeat for authentication of users is also on. While such areas should also be the focus areas for banks in India too, the more obvious concern for us here is the need for using technology and innovations towards achieving an inclusive growth. In this context, I would now like to focus a little on the Indian technology story.

The Bharat story

Just to trace how this has been possible, I would like to take you back in time. Till the early 80s, no major breakthrough in technology implementation was achieved by the industry. Since then adoption of information and communication technology in a phased manner has enabled a transformational change in banking operations and payment systems in the country.

Has this technology adoption helped the banking sector in achieving a profitable growth? The business of the Indian banks over the last 10 years alone has gone up 10 times without banks having to recruit additional manpower even in a scenario when the stated aim of technology adoption in India was not labour saving. IT has also had a positive impact on the payment and settlement systems of the country with some of the path breaking initiatives having been implemented in this sphere of activity. The "electronification" of payment systems has been the hallmark of the decade that has gone by and this has resulted in risk mitigation to a large extent. The positive trend in the profitability indicators[1] – Net profit, Profit Per Employee and Business Per Employee over the years-may be attributable to the successful implementation of IT initiatives/innovation by the banks. Further, research has shown a positive correlation between the level of implemented IT and both profitability and cost savings. In the Indian context, technological innovation and investment in IT during the period 2005–06 to 2009–10 has led to efficiency gains for the scheduled commercial banks (Rajput and Gupta, 2011).[2]

The basic technology adoption by banks in the country is more or less complete. It is now essential for banks to look at improving the efficiency and effectiveness of the IT Infrastructure created. Technology has its own set of challenges to be addressed. These are the need to have high availability of IT systems, efficient and effective business continuity plans, system of periodical assessment of the risks for IT and IS systems, conduct of regular audit, taking care of IT obsolescence and the likes. Newer areas of technology initiatives apart from risk management of the enterprise include, CRM using business intelligence, improving internal effectiveness and managing risks arising out of IT implementation. Today, the banks are at cross roads as far further technology adoption is concerned.

Important questions that need to be answered before moving ahead are:

(a) Is the ROI on technology spending satisfactory? For instance, banks that were in the forefront of adopting cheque truncation have now started asking whether they aggressively go for cheque truncation or full electronification of payments.

(b) How do banks balance the goals of profitability using technology and customer interest protection which includes passing on the gains of technology adoption to customers?

(c) What were the failings of technology model in the past? Should the entire banking system have gone in for standardization in critical areas? Today, there is no standardization even of account numbering convention or a common identifier for different types of payments. Are these proving to be hurdles for smooth migration to next level of technology deployment?

(d) Is sharing of infrastructure here to stay or is the financial sector special, throwing up the issues of security and confidentiality of customer data? What are its implications on the costs?

These issues lead me to the related big question flagged for discussion at this Conclave.

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1 Global Journal of Enterprise Information System Volume-3 Issue-I

2 ibid

Investments in technology – does it require a strategic shift?

Banks have implemented CBS which marked a paradigm shift in more sense than one and branch customers are now bank customers as they can access their accounts from any branch for defined purposes. Although CBS provides much-needed flexibility to innovate and adapt to a dynamic environment, the challenge lies in assessing the effect of CBS especially the basic assessment as to whether it can be leveraged to achieve new goals? The move to the next trajectory may include addressing the changing customer imperatives, using technology for inclusive banking, aligning IT with future business objectives, risk and fraud management, meeting the changed regulatory prescriptions etc. This often presupposes shared infrastructure, standardisation, and interoperability. The move from "ownership" to "membership" model is also seen as an effective solution for banks. The regulatory initiatives relating to ATM, POS and Mobile banking which have resulted in these infrastructures becoming national are important steps towards these goals. However it may be necessary to ponder and evaluate the benefits of technology for a common customer of a bank. An average customer of a bank has a savings bank account, a fixed deposit account, makes a few remittances in a year and has a loan account as well. Has he been able to make use of technology for the conduct of these transactional services, especially if he has no access to the Internet? Such a customer may still have to continue through branch based banking and may not really feel the benefits of technology at all.

An issue that has caught the fancy of all, these days is Cloud computing which as you know may be understood as "a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications, and services)". However, the processes for Cloud accreditation, Cloud audit assurance, etc. are yet to mature. Further, issues relating to Cloud Governance, data security and privacy for customers of banks, etc. are also yet to be completely examined. In short, cloud computing solutions do provide an opportunity for development, but, subject to resolution of critical issues relating to security, privacy and governance.

Use of technology to facilitate regulatory compliance

Now let us shift our focus to other issues that banks are grappling with, especially those related to credit risk and need for complying with KYC/AML/CFT requirements. Can use of technology or shared efforts make these tasks easier without compromising on quality? The step taken by the Securities Exchange Board of India in setting up a KYC Registration Agency (KRA) is often cited for replication in the banking industry.

As you may aware, a Working Group constituted by the Government of India has proposed the introduction of unique identifiers for customers across different banks and Financial Institutions (FI) for setting up a centralized KYC Registry. In fact, banks have been advised to make an immediate beginning to issue a unique customer identification code (UCIC)[3] for their customers. This UCIC would enable the banks to identify a customer, track the facilities availed, monitor financial transactions in various accounts, improve risk profiling, take a holistic view of customer profile and smoothen banking operations for that customer. Once this is implemented across the banks and FIs, it would be feasible to move towards a centralised KYC Registry, which will eliminate duplication of efforts and refine the KYC/AML/CFT verifications across the financial system.

The industry is also looking to Aadhaar database for compliance of KYC/AML/CFT requirements. UIDAI now provides an e-KYC service, through which the KYC process can be performed electronically.

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[3] RBI circular DBOD. AML.BC. No.109/14.01.001/2011–12 dated June 08, 2012

Similarly, Aadhaar holds tremendous potential as an authentication tool in financial transactions. In our "Payment Systems in India: Vision 2012–15" we have echoed this sentiment. In our roadmap for securing card present transactions, we have identified Aadhaar biometric authentication for securing "mag stripe" cards. The Aadhaar Enabled Payment Systems (AEPS) which would facilitate fund transfer through micro ATMs would utilise this authentication. However, banks need to overcome the technology challenges of integrating Aadhaar with their legacy systems to leverage on the benefits of biometric authentication.

Downloading ideas from other sectors to banking

As a result of all the technology initiatives, the era of big data is upon us. Today data in banks is growing much faster than their business growth. In many industries, the data is growing at over 50% and banking industry is no exception. Big data should not be viewed from the perspective of storage. The volume, velocity and variety, (3 Vs as they are called) are the three dimensions of big data. There is a huge opportunity to leverage big data for sustainable business growth and improving customer engagement and customer intimacy.

A study[4] has revealed that only two banks are listed among the world's 50 most innovative companies. So what can banks learn from innovation leaders in other industries and how can they use this knowledge to industrialise their innovation capabilities and truly differentiate themselves? This study has identified some key areas which banking industry may have to keep in mind as below:

- Be customer centric
- Manage the business of tomorrow with the same discipline as the business of today
- Foster an innovative culture
- Manage innovation with structure and discipline
- Invest in and leverage leading technologies

In contrast, it is easier to push innovative ideas in other sectors as innovation thrives in organisational cultures and environments that foster flexibility, creativity and risk-taking. Let us see the innovation stories in other sectors. Innovation in the retail sector has come a long way in the recent years. It is revolutionising the way we transact business or communicate with persons or do research or play games. The extent and reach of the likes of Amazon, Flipkart, Google, Twitter, Facebook, Wii, X-box and so many more innovations is just amazing.

Speak of innovation and technology, one cannot resist talking about Apple and Steve Jobs. What amazes everyone is the vision of this person who thought so ahead of his times. Let us not get into his style of functioning; the gadgets that he has given to us are world class. The user friendly nature of the gadgets that Apple produces makes them the "most preferred" in their class. Be it the I-pod, I-phone or the I-pad – they continue to dominate the sales in their respective markets with their innovative products. Can banking in India become the ultimate customer experience?

It is aptly said that, Narayana Hrudayalaya is Walmart personifying the service spirit of Mother Teresa. By thinking differently about everything from the unusually high number of patients it treats to the millions for whom it provides insurance – and by thinking a lot like the world's largest retailer – the hospital group is able to continually wring out costs. The hospital negotiates for better prices and buys directly from manufacturers, cutting out distributors. Starting with cardiac care, an equipment-intensive specialty, made it easier for the hospital

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[4] Innovation Excellence: What Banks Can Learn from Top Innovators in Other Industries, Accenture

group to expand into other areas that require the same infrastructure. Can banks look to reduce costs like the way Narayana Hrudayalaya has done?

The key lesson for banks to learn is that perhaps they need not wait for their customers to decide what they want but to take the lead when it comes to developing new products or technologies. Companies like Apple or Google did not wait for innovation to happen, rather they were proactive and their innovation processes never stop.

What should the banks do to emulate these examples? Of course the first fundamental pre requisite is to refine the quality of data. It is this data which facilitates banks to profile their customers, which in turn would enable them to be well on a growth trajectory using technology. While banks have made investments in building technology infrastructure, the same cannot be said of building and digitizing quality data. Present IT systems of banks are essentially built to manage structured data. There are lot of business insights and value in semi-structured and unstructured data. CBS of today is essentially a transaction processing engine which handles structured data. Banks need to build systems to capture and analyze unstructured and semi-structured data as well. In short, banks need to look at BEYOND CORE BANKING and move from a mere transaction processing system to an information processing system with focus on CRM, data warehousing, business intelligence, risk management etc.

I would like end my thoughts on the subject quoting Einstein, who once said, “Any fool can make things bigger more vibrant and more complex. It takes a touch of genius and lots of courage to move in the opposite direction”.

HR Tools : necessity for next wave of growth

The last decade was impressive for the Indian banking industry. The banking industry has grown at an average annual growth rate of over 18 percent over the last decade, with the return on assets at around 1.1 percent as on March 31, 2012. However, even though opportunities have increased for banks, some HR issues and challenges have emerged that banks will have to resolve if they are to emerge successful in the medium to long term.

The main HR challenges that banks face today relate to recruiting and retaining talent. Historically, Indian Banks have attracted talent in the country, which has helped them not only develop a strong leadership base but also an efficient frontline. However, in the coming years, owing to a large number of retirements, and attrition rates across organisations, banking sector in general, and public sector banks, in particular, may face a growing manpower crisis. How do they cope with this? Attrition is manageable to a certain extent provided acquisition keeps pace with attrition. The solution lies in not just recruiting skilled professionals but in nurturing the talent in a manner so as to provide the right atmosphere to enable them grow with the institution. We also need to realise that unless this talent is properly trained, motivated and mentored; it is difficult to retain them.

The other HR challenges faced by banks are related to putting in place systemic succession planning, empowering the “second rung”, stimulating all cadres of employees, managing effective change within the organisation and outsourcing. While the HR has a lot of work to do while it comes to dealing with the issues cited above, the one related to outsourcing requires more than a HR intervention. The assessment of performance across a myriad of functions in banks also needs to be reviewed so as to result in employee motivation and thus, retention.

It is but natural for banks to outsource their IT related activities including application development when the sector as a whole, is facing a shortage of skilled professionals. However outsourcing brings in its wake, several risks. The failure of a service provider in providing a specified service, a breach in security/ confidentiality, or non-compliance with legal and regulatory requirements by either the service provider or the outsourcing bank can lead to financial losses or loss of reputation for the bank and could also lead to systemic risks within the entire banking system in the country. It has happened in the past and it could happen in future too. It would therefore, be imperative for any bank outsourcing its activities to ensure effective management of these risks.

How can these issues be effectively managed? Can this be achieved by maintaining a subsidiary employing professionals with the requisite IT skills and remuneration at par with their peers in the IT industry so as to obviate the necessity of outsourcing. The challenge here is to provide the right remuneration and a career progression path for the recruited skilled talent. Please remember these employees would not only be comparing themselves with their colleagues in the parent organisation but also their peers in the IT industry and vice-versa. To keep them motivated is, therefore, not a small challenge.

We could unanimously agree with N R Narayana Murthy who has once said, "Our assets walk out of the door each evening. We have to make sure that they come back the next morning". In other words, retaining talent is as important as identifying and recruiting them in the first place.

Concluding thoughts

I have shared some of my thoughts on the sessions scheduled for the day. In the sixth edition of this conclave, I would like to leave you all with a few more questions with no definite answers, hoping that some views emerge during the course of the day.

How can we work towards balancing customer's comfort, convenience and security?

Studies have shown that customers acceptance of electronic banking depends on factors like convenience, experience, perceived accessibility, safety and security. Despite measures taken by the banks and the industry as a whole, new means of perpetrating cyber frauds bypassing the security measures are emerging. We need to keep ahead of the fraudsters by investing and adopting technology.

Having said that, let me flag the other side of the story viz. customer's convenience. Customers prior to onset of electronic banking used to carry out "face to face" banking in a branch. Customers have high level of confidence, sense of security and ease and convenience in such banking. This is now being replaced by electronic banking and paper based cheques with electronic payments. Does the electronic banking provide same level of comfort and convenience?

For ensuring safety and security, banks and RBI have taken several initiatives such as additional factor of authentication, OTPs, multilayer passwords, etc. Have we given a thought about the inconvenience caused to customers when OTPs are not delivered on time, payment pages expire while prompting PIN/OTP, keying in multilayered passwords, etc. Have we thought of the customer's difficulty in navigating through the maze of security protocols? Do these security measures put in place for securing transactions discouraging the customers from adopting electronic banking? Banks need to examine how they can make the electronic transactions safe and secure while providing customers equal or more level of ease, comfort and convenience when compared to branch banking.

How do we protect the customer in an electronic banking environment?

Let me also raise the issue of consumer protection and responsibilities of banks and customers in an electronic banking environment where physical transaction is replaced by electronic transaction, physical trail is replaced by electronic trail, a signature is replaced with a digital one. How can we define the roles and responsibilities of banks and customers in such an environment to achieve a win-win situation for all?

Will e-banking be affected by language and literacy barriers?

Inadequate knowledge, lack of support and handholding, unfamiliar language and literacy could be barriers in using electronic banking. So focus should be on removing these barriers. Currently all interface pages on internet banking are mostly in English. Use of Hindi and other local languages could facilitate easy understanding by customers. Further, adoption of electronic banking would require moving the customers from being "assisted" initially to becoming "self-reliant" in using modern banking technologies. Another related customer service issue is how to service differently-abled customers in a e-banking scenario?

Is pricing of electronic banking transactions competitive?

Benefits of using technology include cost reduction, convenience, service improvements, and risk mitigation, etc. for the banks. These benefits should percolate to the customer as well. On the other hand, banks would also need to recover costs to fund their existing and future technological requirements to maintain and improve their service level. Thus, the banks must find ways of balancing the two sides appropriately. Is this best left to banks or regulators/government?

How can banks help in moving towards a less-cash society?

As a penultimate thought, let me draw your attention to the Vision we have for Payment Systems in India. The focus of the Vision Document is to inculcate the habit of cash less payments in the citizens of the country for a less-cash society. This would require concerted efforts from all of us. As a regulator, at best, we can facilitate an enabling regulatory and policy framework. However, the execution and achievement of the Vision would be purely driven by the banks and non-bank entities. In this context, could the industry think setting quantitative targets for itself? Is it possible for the industry to set quantifiable targets in terms of reducing the number of cheques, increasing the number of electronic transactions, increasing the acceptance infrastructure etc? Could the industry also think of providing incentives for banks for achieving the quantifiable targets?

Finally, since the theme of the Conclave is on profitable growth, let us understand that profitable growth pre-supposes a few premises as under:

(a) Do we have a compelling mission, vision and differentiated strategy that all our stakeholders fully understand and accept?

(b) Do we have the right people, processes and organizational structure to achieve our aspirations?

(c) Do we have an organization-wide culture that helps us grow profitably and ethically?

(d) Do we have an environment where technology based systems are risk free, convenient to use and cost effective as well as being efficient?

(e) Finally, has it become relevant for every organization to mandatorily publish annual reports on IT covering certain essential aspects in a prescribed format?

I would like to conclude with what Aristotle said: "We are what we repeatedly do. Excellence then is not an act but a habit". Let us work towards this.

Thank you for your attention.