## PART III : REVIEW OF LITERATURE

Emerging economies are low-income, rapid growth countries using economic liberalization as their primary engine of growth. They fall in two groups: developing countries in Asia, Latin America, Africa and the Middle East and the transition economies in the former Soviet Union and China. Private and public enterprises have had to develop unique strategies to cope with the broad scope and rapidity of economic and political change in emerging economies.

Financial crisis and capital outflows that took place in the 1990s in emerging economies shook international markets. The behavior of financial markets in these economies and the volatility of capital flows raise troubling questions about the stability of markets in emerging economies and their impact on economic performance (Joyce Joseph P, 2001).

Makin Tony (1999) stated that in the East Asian region, foreign investors had initially misjudged the extent of exchange rate risk by effectively presuming that many Asian central banks were bearing the foreign exchange rate risk through pegged exchange rates. As a result, capital flows responded strongly to interest rate differentials and foreign borrowing remained unhedged against the possibility of large currency depreciations. Crisis prevention would therefore be achieved through major reform of banking practices in the region.

Torri Michelgiglielmo (1975) commented in his article – The case of India's Bank Nationalization" that in 1969, Indira Gandhi presented a set of radical economic

guidelines, including the suggestion that either we can consider the nationalization of the top five or six banks or issue directions that resources of banks should be reserved to a larger extent for public purpose.

Whybrow Martin, 2005 said that it is understandable that the phrase 'service oriented architecture' (SOA) is met with scepticism in some quarters. Whatever tags are bandied around, a growing number of banks are embarking on major projects aimed at transforming their operations. This has started to change some of the dynamics of the sector, arguably playing into the hands of larger suppliers.

The theory is this. On the operational side, banks have honed their silos to such an extent that further improvements are difficult. "Like squeezing a dry dishcloth," said one industry watcher recently. Business process outsourcing (BPO) can be viewed as one more step in this honing process, albeit with mixed results.

On the business side, the processes are essentially little changed from 20 years ago. Manual processes were automated at the outset; subsequent system replacements have done little more than replicate the first systems. What has changed is the level of complexity. Jens Hanker, partner at Accenture, gives the example of a Top 100 bank which today has more than 350 products, compared with fewer than 100 in 1985. That bank has 43 different transaction accounts and more than 40 processing centres. No wonder dealing with banks is complicated, which is why customers seldom receive good service or swift answers to their queries. Systems do not talk, there is a lot of rekeying, and - for all the investment in CRM and data warehouses - most institutions still fail to come with a single view of the customer.

### *3.1 Real time core banking – replacing the core systems*

New banking requirements and customer demands are challenging traditional banking practices. This environment has put added strain on the antiquated core systems found in many large banks around the globe. Most of these systems have been in place since the 1960s and 1970s, built in-house using the technology of the day. A growing number of banks are considering replacing existing core systems with next generation vendor solutions. This shift to vendor solutions not only represents a significant move from the more traditional homegrown solutions, but also promises greater speed to market, lower cost, advanced functionalities and higher success rates. Replacement strategies are also beginning to stray from the more traditional 'big bang' approach in which a full replacement is completed at one time. This approach has not met with much success and therefore is not likely to be the method of choice for most large institutions. This method is better suited to smaller financial firms with less complex needs and architectures. The risks inherent in this method are extremely high and customers may be alienated if the migration is not completed flawlessly. On the positive side, however, this migration method is likely to be completed in the least amount of time. Many large banks today are instead taking more of a phased approach. With this approach, solutions are replaced on either a region-by-region basis or a product line-by-product line.

Proponents of the regional approach include many global institutions that, as a result of constant upgrades and adaptations to meet the varied needs of different regions, are running as many as 120 different core systems. The regional migration approach is a phased one in which an institution migrates one region's system at a time. Smaller,

foreign branches are typical starting points; larger regions replace their systems in later phases. Citibank and Sumitomo Mitsui are examples of banks that have taken this approach. The rationale for selecting this method is that its step-by-step approach reduces risks from the technology and project points of view. Product sets also vary by region making this approach a logical one for institutions with several foreign branches.

The other approach to replacement, product-line migration, addresses the short-term issues which lines of business often have by tackling their problems first as opposed to the region or branch as a whole. It delivers short-term return for the business line as well as a long-term solution for the bank as the solution is scalable and can often be rolled out to other business lines when the bank is ready.

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*Replacement and regional trends*

The urgency for core system replacement differs from bank to bank, with many continuing to deny the need for new systems, fearing the costs and associated risks. Replacement projects will therefore be slow to take off with only a handful of the largest global banks with projects now in place. Regional trends will also be a factor.

*Lower spend in Asia Pacific*

While demand exists for new core banking systems in the Asia Pacific region, the sense of urgency is not comparable to what we are seeing in other parts of the world where activity among the largest banks has been much greater. Countries in this region have very large populations but these countries are not generally faced with the same complexity and volumes of transactions as in other parts of the world, lessening their

need for more advanced systems, at least in the short term. This region has been hit hard by the current recession as well as by the effects of bad loans and corporate corruption. Much of the financial services industry is being restructured. While spending on IT continues to grow, it is doing so at a much slower rate.

Solution providers are seeing a lot of growth potential in countries such as India, Singapore and China. For instance, now that China has become a member of the WTO, it is moving ahead quickly from a technology standpoint. As foreign companies increasingly enter this market, there will be a growing need for new technologies. This region has an advantage over other regions of the world. Because it is starting from scratch, many of the challenges associated with replacement of older systems and with resistance from users comfortable with older technologies are avoided. For these reasons, core systems spending will be less in Asia Pacific than in Europe and North America.

*Legacy of the 1960s*

Investing in new core systems is not yet a priority for most banks, but will become increasingly important as a growing number of banks begin to realise that their antiquated systems are no longer adequately meeting their needs. The market is already beginning to see signs of change as a handful of the world's largest institutions have begun to migrate from mainframe systems built during the 1960s and 1970s to more modern, next-generation solutions.

While transactions have not changed much over the last few decades, external requirements have. Customer expectations are greater, as is the need for information.

Older systems face integration issues and making changes within them is, at times, impossible. Small and medium-sized banks, whose need to replace core systems may be less urgent, are also likely to replace their older systems with more modern ones better aligned with their more customer-centric strategies.

In addition to an increasing number of system replacements, several other trends are expected to shape the industry over the next few years. These trends include: a gradual movement away from mainframe systems, an increasing number of vendor-built solution deployments, a shift toward browser-based solutions and a greater focus on the US market.

As the world's largest institutions lead the way with core system replacement, their implementations are being closely observed by other banks and their success is likely to lead to greater momentum within the industry. Those that have taken on the these projects have already begun to reap the benefits of greater efficiency, easier access to information and the ability to add new applications without the fear of system crashes. While the costs as well as the risks are high, these banks are confident that the ultimate benefits will be far greater (Barry Christine, 2004).

## *3.2 Literature review*

*The relevant literature has been categorized into two major components:*

### 3.2.1 Role of technology in improving operating efficiencies

***Literature dealing with the role of technology in improving operating efficiencies in banking and other organization.***

It appears that literature confirms the enormous role that technology has played in driving down costs and upping operating efficiencies in banking organizations across the world.

> Technological systems of Indian banks have been rated more advanced than China and Russia; at par with Japan, but less advanced than Singapore, UK and USA. (FICCI Annual Survey, 2006)

#### 3.2.1.1 International Retail banking as a strategy

Physical technology would appear to be of relatively little importance in explaining competitiveness in international retail banking. Banks can purchase much of the technology and many of the computer systems from supplier firms which operate internationally. Furthermore, differences in the structure of payments systems, regulations on the use of such systems, and similar factors limit the transferability of domestic systems.

Banks from competitive and highly developed markets may be more efficient and more advanced than their host country counterparts (Aliber 1976). U.S. banks in particular have introduced innovations to many countries, although most such innovations have

been for the corporate sector. In retail banking, the issue has been more one of generally greater efficiency because of managerial expertise.

**The Changing Face of Retail Banking**

Everyone has their own views on what retail banks will look like in the future. But some things seem certain. Retail banking is still the main force in banking, and will stay that way for the foreseeable future, despite the relentless growth of investment banking, corporate banking, asset management, hedge fund management and other forms of finance.

The retail banks are facing intensifying competition and declining margins around the globe, and must take steps to protect their customer bases at home and to explore high-growth markets abroad. If they do not, they will face serious threats to their revenue shares and profitability.

These competitive pressures are coming from different directions: deregulation and the opening of international markets, the expansion of direct and online banking, non-bank entrants, and rising customer expectations. Banks that cannot cope will risk being taken over by those that can, particularly in mature markets with low growth rates. Rapidly developing technology will shape much of this change. (Imenson Michael, 2008).

**3.2.1.2 Technology, firm, strategies and jobs in Retail banking**

Larry W. Hunter; Annette Bernhardt; Katherine L. Hughes and Eva Skuratowicz's studies suggested that during the 1980s and 1990s, banking saw a dramatic influx of new information technology, as well as pronounced changes in the organization of work.

Drawing on case studies of the branch jobs in two large American banks, their goal was two-fold: to examine the extent to which the stylized account of skill-biased technological change actually holds with respect to these jobs, and to identify additional organizational factors that may help to explain why some branch workers' earnings have risen while others' have dropped.

Their study begins with the premise that decisions governing the distribution of new technologies in the workplace are not determined solely by the skill requirements of the technology itself. Managers also consider the larger dictates of business strategy, and their decisions about technology must be considered in the context of strategically driven work restructuring. These strategic considerations may also result in a differential distribution of rewards, even among workers who participate in technological upgrading providing a deeper and more nuanced understanding of some of the mechanisms that have contributed to rising inequality.

Analyses of individual earnings data are less definitive: some evidence suggests that jobs in higher-technology workplaces require higher levels of skill and thus command higher wages (Krueger 1993), but there are alternative explanations for these relationships. The picture is further complicated because technological change as defined in the inequality literature typically refers to a broad but vague assortment of unobserved changes in <he production process. The term "technological change" can refer not only to changes in machines, computer hardware, and computer software, but also to changes in the way that work is organized. Thus organizational restructuring-including th; introduction of new work practices-may also have implications for skills and earnings (Cappelli et al. 1997; Smith 1997).

Finally, changes in technology and work practices may themselves be driven by managerial business strategies. For example, research in the service sector has shown growing use of market segmentation strategies. Segmentation strategies, in guiding the deployment of technology and the reorganization of work, can lead to job stratification. Higher-value customer segments have been found to be associated with higher wages and better opportunities for workers in a diverse range of industries, including fast-foods and retail sales (Bailey and Bernhardt 1997), computers and high-tech, telecommunications ( Batt 2000), nursing homes (Eaton 2000; Hunter 2000), and financial services (Keltner and Finegold 1996).

Given this complexity, evidence from the ground-the firms and the specific workplaces in which restructuring occurs and technology is actually implemented-may advance our understanding of the underlying processes that have led to increased inequality. This evidence is critical, for it has become clear that firms are responding to increased competition and restructuring work in ways that are not easily captured by deterministic views of technology.

The business press abounds with examples of innovative companies that have created high-quality and well-paid jobs, yet just as prevalent are accounts of low-wage strategies, deskilled jobs, and substitution of contingent workers for full-time workers. Firms may also use technology to differentially reorganize jobs: upskilling in some parts of the organization, automating and routinizing in others. Thus restructuring and technology can interact to produce different outcomes for workers, within the same industry and even the same firm. Firm level research is required to shed light on some of the *mechanisms* that have produced the aggregate trends in wages, showing in more detail the ways in

which technology is introduced into the workplace and how it transforms job content and skill requirements, and adding explanatory power to our accounts of change in the labor market based on surveys of individuals or industries. In this paper, they therefore examine the strategic and technological trends that have led to changes in front-line banking jobs, drawing on both industry-level analysis and case studies of two large American banks. They note that changes within organizations can affect earnings outcomes through two routes: they may change the distribution of workers across jobs with different wages, or they may alter the content of particular jobs and thus the wages that those jobs command (Cappelli 1996; Attewell 1987).

**American Banking in the 1980s and 1990s - Competition and Technology**

From the 1940s until the early 1980s, competition in the American banking industry was restricted. The Bank Act of 1933 (usually called the Glass-Steagall Act) established commercial banking as a distinct entity by separating both the ownership and the activities of commercial banks from those of other financial service providers. The Federal Deposit Insurance Corporation insured individuals' deposits against bank failure, banks with FDIC charters were prohibited from offering investment and insurance products and many states had strict regulations prohibiting or limiting interstate banking. The resulting stability in the industry especially characterized its retail side, which provided financial products and services to individuals and small businesses through local branches. The 1980s and early 1990s, in contrast, have been characterized as "the most turbulent period in banking since the Great Depression" (Berger, Kashyap, and Scalise 1995). Banks introduced a vast array of new information technology-hardware,

software, and telecommunications equipment- spending about $60,000 per employee on information technology over the1980s (Keltner 1995). The introduction of Automatic Teller Machines (ATMs) and new back-office processing technologies dramatically decreased the costs associated with handling and processing individual transactions. New software dramatically improved the ability of banks to manage their huge stores of customer data. Telephone banking, and more recently PC-based banking, also appeared as alternative channels for delivery of retail financial services. These new technologies interacted with gradual deregulation3 to reshape the industry. Deregulation had three major effects. First, it prompted consolidation of the industry. The loosening of interstate banking laws allowed banks to expand their operations across state lines and encouraged a wave of banking mergers. Improvements in technology made consolidation more desirable, allowing economies of scale and reducing the costs associated with backoffice processing. Thus the banking industry shrank from over 12,000 banks in 1987 to only 8,000 banks by 1995 (Berger, Kashyap, and Scalise 1995), and consolidation continues to this day. Second, deregulation heightened price competition among banks. New technologies intensified the competition, improving banks' ability to adjust prices and terms of financial products. Basic financial services began to resemble commodity products. As margins on these standard products diminished, reducing payroll costs through tighter and more flexible staffing arrangements became integral to survival in the industry. Third, as deregulation broke down barriers between banks and other financial services providers, banks began to offer investment products through their branch networks, often in partnership with mutual fund companies. They also explored partnerships with insurance companies (witness the 1998 merger of Citicorp and

Travelers). With this opening of markets; banks began to develop and introduce technologies designed to make the cross-selling of multiple financial products efforts more effective. Integrated databases provided more complete information on customer relationships and transaction patterns, and more sophisticated software helped banks to identify sales opportunities and to act on those opportunities. Banks directed "transaction-based approaches" (Keltner and Finegold 1996) toward customers with low profit potential, seeking to lower costs by replacing teller service with ATMs and telephone banking. By contrast, "relationship banking" strategies targeted wealthy customers, small business clients, and others with profit potential. These customers were provided with the individualized service and financial advising that in the past had been reserved for corporate clients. Banks sought to increase the number of high-end customers and to boost revenues from their accounts by providing a wide range of financial services, such as insurance and investment products.

Ward Judy (2004) said that most banks continue to have a lot to learn about online customer service. The bottom line is that the technologies to do a pretty good job are out there, but institutions are not doing a very good job of using those technologies. They need to move beyond the content and look very seriously at support.

**3.2.1.3 Using technology to enable better business**

As banks continue to provide an increasing number of financial services and products, they face the challenge of integrating disparate systems into a coherent and efficient infrastructure while delivering the highest level of customer service and convenience.

There are many obstacles to becoming a customer-centric organization and developing solutions to overcome these challenges is difficult.

The Commonwealth Bank has responded to this challenge with its Which new Bank strategy. Technology invariably plays a role in the realization of such strategies, but while technology initiatives aligned to business outcomes can provide a competitive edge, their benefits can be difficult to realize.

For example, how can financial institutions break down silos, meet compliance obligations and develop a framework that allows users to access information from a central source? More importantly, how can they design a computing environment that is agile enough to accommodate constant change? And what role do emerging standards like XML, Web services and service orientated architecture play?

While the Commonwealth Bank is working with many technology partners to deliver its Which new Bank strategy, one of the key alliances the bank has formed is with Microsoft.

Jeff Jacobs, General Manager, Strategy and Enterprise Architecture, Technology Services at the Commonwealth Bank, says Microsoft .NET technology contributes to providing the agility to develop deeper customer relationships, through ease of integration and access to information, as well as increased operational efficiency. It helps bank employees make better and faster decisions to take advantage of market changes. The underlying Microsoft platform also provides an integrated computing environment that helps the bank realise its vision of low-cost seamless computing.

For the Commonwealth Bank, improved customer service is the future of banking. This is why it has developed CommSee, technology that will underpin a cultural change at the

bank by giving staff a single view of customers and all their interactions with the bank. CommSee will replace all customer-facing technology in the bank's 1,000 branches and its call centres. This includes the majority of the front-end applications but also, through a major contribution from EDS, a significant improvement to the bank's infrastructure, which will enable quicker deployment of new applications in the future.

The CommSee platform is fundamentally different from the bank's former front-end system in that it focuses not on isolated and bank-centric service silos across products and channels, but on integrated and customer-centric services across products and channels.

CommSee is a shared technology platform that provides all customer-facing staff with consistent information about a customer. CommSee provides one log-on to access a single view of a customer's total relationship with the bank; immediate online access to imaged signature and authority cards; and a complete record of all customer discussions and correspondence regardless of how people contact the bank.

John Beggs, Executive General Manager, Global Markets, and Director of the CommSee project, says CommSee will improve both the customer experience and the staff experience at the bank.

'CommSee allows us to provide a faster, more consistent service no matter where or how a customer contacts us,' Beggs says. 'We will be able to see what accounts, holdings and relationships customers have with us, know when they last contacted us and quickly access their imaged signatures, authorities and documents to follow through on their requests.'

Beggs says CommSee provides customer-facing staff with a modern technology system and the right customer information to resolve most customer queries the first time they ask.

'CommSee provides better quality information that allows staff to identify customers, their holdings and relationships. We can serve customers more proactively and close sales, improve control and management of tasks and serve customers faster with streamlined processes.'

CommSee is based on Microsoft's .NET architecture. Asked why the bank built CommSee in-house rather than purchasing a package, Beggs says packaged CRM implementations can be expensive to integrate and customise.

'We realise that design and build software applications can be high-risk, but enterprise architectures and software tools have improved dramatically over the last five years,' Beggs says.

'Microsoft's .NET provides a step-change in capability of development tools and platform technology. Early identification and design of key frameworks reduces the risk for in-house build of individual business functions.'

While singing the praises of .NET, Beggs makes the point that the bank is also using J2EE. The bank is focusing on integration between the two.

'We choose technology depending on what will add most value,' Beggs says. 'With .NET we can focus on the substantial skill base of developers and engineers familiar with

Microsoft technology and use the most current Microsoft technology designed for developing applications on the Microsoft platform. We also received strong organisational relationship support from Microsoft.'

The Commonwealth Bank has learnt many lessons during its CommSee project, most importantly, the need for CEO and senior management sponsorship in such complex projects. Beggs says the bank's relationship with Microsoft was also critical in verifying design features and load bearing capacities and in showing the bank how it could be more creative.

'Microsoft added a lot of value by coming up with new ideas as opposed to what everyone else is doing in the market,' Beggs says. 'Staged iterative development was an effective management approach and another lesson learnt was the need to continuously communicate progress with other parts of the organisation.'

*Wealth Management Adviser platform and Smart client technology*

The Commonwealth Bank must have access to up-to-the-minute data from many sources, including customers, partners and suppliers. The bank also demands more from its applications so that staff are empowered to act, plan, analyze, visualize and explore information, not just read it. This is why the bank is deploying smart client technology.

A smart client application is an easily deployed and managed client application that provides a responsive and interactive experience leveraging local resources and intelligently connecting to distributed data sources.

This application framework can aggregate multiple applications into one or more business processes that span multiple business areas, a concept which was previously difficult to achieve.

'Smart client technology will allow our people to create a better customer experience', says Jacobs. 'It will give them the ability to access critical business information through data caching in a way that has limited dependency on availability or quality of their network connection.' (Jacob Jeffs and Beggs John, 2005).

### 3.2.1.4 Core Banking Transformation

Core banking can be defined as the main product account and customer systems that a bank has--and may have had for a number of decades. It typically comprises the institution's core retail banking, institutional banking and wealth management systems.

Proponents of the concept of core banking transformation believe that a complete overhaul of legacy systems is required to improve institutions' operational efficiency and agility, to enable the provision of 'anytime, anywhere' banking to customers, and to enhance the individual institution's differentiation in the market.

On the other side, some would argue that wholesale system replacement is an unduly complex, expensive, risky and time-consuming exercise. They would say that, in such a fast-moving industry as financial services, it is not a viable proposition to stop everything to change the systems that enable a bank's entire product and service delivery capability.

*A complex decision*

Sanat Rao, Infosys Technologies' global head, sales--Finacle, explains that core banking is the integrated banking technology platform that serves both the bank and the end-customer's banking requirements, and that typical core banking platforms comprise a fully integrated front-end with back-end, and multi-channel transaction capabilities.

He told Australian Banking & Finance magazine that core banking platforms generally come with integrated customer information, a product factory supporting both assets and liabilities, pricing engines, automated workflow tools, exception management, user management, access management, authentication, general ledger, accounting engines, reporting engines, support for exposure management, organization management (i.e. bank, branch information), along with interfacing capabilities for other systems such as mutual funds, insurance and credit cards.

Rao goes on to describe 'core banking transformation' as the activities involved in replacing and changing a set of legacy systems and associated processes in a bank.

He says that core banking transformation not only involves technology replacement, but also the review of current business processes and customer service, thereby arriving at a target operating model that includes (but is not limited to) defining the channel strategy, the effective use of the branch channel, orientation of staff towards operational efficiency, process orchestration, cost reduction, acquiring more customers and selling more to existing customers, addressing compliance and regulatory requirements, moving

towards open systems and standards, automation of routine and mundane work, and empowering customers to carry out routing transactions in a 'self-help' mode.

"From a systems perspective, core banking transformation also involves the review of existing systems and tools, and defining strategies around what systems are to be replaced, retained, interfaced and integrated in order to create a simple eco-system within the bank," says Rao.

"During a core banking transformation initiative, from a process efficiency and cost perspective, strategies around off-shoring and outsourcing banking-related activities will also be considered."

The decision to undertake core banking transformation is therefore one of the most momentous a financial institution can ever make, due to the extraordinary cost and time factors, and the fact that it affects every aspect of the business.

However, after a period of maintaining existing, outmoded legacy systems, there eventually comes a time when the replacement of such systems becomes an inevitability.

There are many compelling reasons to move on such a project sooner rather than later. A well thought out core banking transformation can help a bank to globalize, to diversify, to innovate new products and services and take advantage of reduced time to market, to address compliance and regulatory requirements, to reduce cost and minimize risk, and to be more agile and proactive in addressing market and customers requirements.

"Many of our customers who have undertaken the transformation journey are able to demonstrate increased agility, speed, innovation and improved customer service. Over and beyond these benefits, banks have demonstrated that their cost of operations and technology ownership costs are less than 15 per cent of their peers," Rao says.

"These banks have also demonstrated, time and again, the reduced cost of ownership due to the employment of open systems and standards based systems. The resulting reduction of man power to manage the technology infrastructure is another benefit of a core banking transformation."

Such transformation can also take many different forms, from an immediate, wholesale replacement of all systems to a gradual, evolutionary metamorphosis.

It doesn't always involve throwing out the entire back end and replacing it with a brand new one that does everything, all at one go. That is one model for doing it. Another model might involve, say, throwing out just the savings account system and putting a new savings account system in, and then slowly but surely working across all the stovepipes.

At the same time, decisions need to be made about personnel retraining, changing people's roles and amending business processes, with consideration given to the possibility of outsourcing certain functions.

The time it takes to complete a transformation can also vary, from 18 months to a number of years. And the cost involved can be counted, in most cases, in the hundreds of millions of dollars (Lewis Peter-John, 2007).

### 3.2.1.5 Customer service using the right banking technology

Small to mid-size retail banks today are in a fierce struggle to attract and retain customers in what has become an increasingly competitive marketplace. Changing banks is so simple that consumers will quickly take their business elsewhere over the smallest inconvenience.

Customers might bring their business to a smaller bank or building society because they want a personalized relationship, yet they expect "big bank" customer service. They want prompt and secure access to bank staff, financial data and cash; as well as swift decisions regarding loan and credit card applications.

Until recently, all of this required a large bank's budget for equipment and staff. Today, however, even the smallest bank can provide world-class customer service at an extremely reasonable cost and with a bountiful return on investment. The four key areas of network technology that enable banks to improve customer service are integrated voice/data systems, gateways, security and gigabit ethernet, as described below.

*Integrated voice and data systems*

Ensuring the data network carries voice traffic gives a bank an advantage in cost savings and new applications. The current generation of high-speed ethernet networks can level the playing field for any small to mid-size bank. Able to carry both data and voice traffic at once, these integrated networks leverage internet protocol (IP) telephony systems to deliver advanced call features for a fraction of the installation fees and phone company charges required by traditional phone systems. These IP-based voice solutions make

customer relationship management and one-to-one marketing easier than ever before. By linking caller ID to customer databases, banks can identify callers and access their account to direct them to the proper department or cross-sell new products and services. With features like call transfer and direct inward dialing, customer calls reach their destination quickly with minimal time on hold.

In addition, banks with multiple offices can seamlessly transfer customers to different departments, regardless of location. Banks can even create voicemail boxes for tellers without permanent extensions, as well as forward calls to top executives' mobile phones, further reinforcing the message that key people are always available.

These advanced features guarantee a speedy, accurate response to every call--assuring customers that their needs are a top priority.

*Gateways*

A bank cannot afford to be an electronic island in today's interconnected financial environment. Customers expect to be able to access their accounts through the bank's website, make withdrawals and check balances at other banks' automated teller machines; and use debit cards to make point-of-service transactions through ATM networks. They also expect to be able to transfer money between financial institutions and pay bills, loans, and credit cards electronically.

To provide this uninterrupted account access, banks must connect their own computer networks to those of other institutions and to the internet. The end result is increased customer convenience.

*Security*

Customers want to know that their assets and information are available to them only and that other parties can't access confidential information. To give customers this level of protection, banks can rely on firewalls to keep out hackers.

Embedded firewalls ensure that users access only the information they're authorized to view, while encryption guards data as it travels over the internet. Multi-layer switching restricts data traffic to necessary departments. Access points for wireless local area networks should also include these enterprise-level security features.

With these safeguards at work, customers can be reassured that their cash, account balances, credit card data and other private data is secure.

*Gigabit ethernet*

Upgrading to a gigabit ethernet infrastructure will ensure that the bank has the capability to share data up to 100 times faster than previously possible. Gigabit ethernet transfers data from desk to desk at high speeds, enabling staff to answer questions sooner, make loan decisions faster and move funds more easily.

It also boosts web banking, allowing customers to instantly complete transactions online. A gigabit network also supports high-bandwidth graphics, permitting banks to save space and reduce administrative work by storing cheques and other documents as image files instead of paper.

*Using the right tools*

In today's busy world, consumers look to their bank to provide up-to-the-minute tools and information that make money management easier. Banks offering these tools not only stand to meet their customers' high expectations, but they can also diversify into insurance, financial services and other new revenue streams.

When small and mid-size banks invest in technology to better serve their customers, they can compete effectively against any big bank that looks to move into their area (Clarke Mike, 2003).

### 3.2.1.6 Technology can build relationships

We are living in an age where the mobile phone, the PDA and e-mail have become a part of everyday living standards. These tools have improvised the customer-service provider relation in a considerable manner. They have also shot up the customer expectation from a service provider. Earlier, the customer would have borne, even if the company took a 3-day time period to respond to an enquiry. Although it's very advantageous, it has also placed the employees in a much more hyper-competitive environment. Those tools are helpful, but your competitors too have the same tools. And they certainly don't replace that one-on-one or face contact with the customer.

Sometimes, they get in the way. If we measure the average customer engagement in the banking industry 10 years ago, it was close to about 10 per cent. Now, it is under three per cent because, instead of going in and talking to a teller, you go and talk to an ATM machine. Though these machines are very convenient, they do not do much in terms of creating actual customer engagement. Therefore, one of the major challenges is that the

companies have to keep the contact alive in an environment where we are seeing less of it. However, succumbing to pressures of cost-cutting and notions of efficiency, they seem to be moving away from this concept.

*CRM in the New Age Bank Branch*

Clearly, the traditional model of branch banking has undergone a sea change. The branches have moved on from being primarily service-oriented to sales and service outlets, with the focus on cross-selling.

The customer walks into the branch to deposit some cash. He finishes his transaction and walks over to the personal banker's desk for an account detail query. Not only does the personal banker resolve the customer's query, but is in a position to cross-sell the product and service options which the customer could avail of, at preferential rates, based on his account and transaction history. The new-age branch of the modern bank is a one-stop financial supermarket to fulfill all the financial needs of the customer.

However, a change in mindset and focus alone is not enough. For the new model to succeed, the front-line employees have to be empowered enough to take important decisions and make preferential offers to customers in an instant manner. This would depend on the quality of information that the personal banker at the branch has at his/her fingertips. It is also necessary that the information be consistent across all branches and other direct access channels like the ATMs, Phonebanking, Mobilebanking and Netbanking, throughout the country. The customers today have become more demanding and expect 24-hour access to their bank accounts through these various channels.

In order to fulfill the requirements of the bank's employees as well as the customer, centralized processing with a data warehouse is a must. At HDFC Bank, the management

embarked on this journey when it implemented the data warehousing solution, which enables the managers to have a holistic view of all relationships of the customers, helping the bank understand them and their requirements better.

The bank always had the data required to make informed decisions that would help it meet its business objective. Yet, collecting and analyzing this data was a lengthy and cumbersome process. It was stored in disparate sources and the task of compiling and analyzing this information took a lot of time. What was required was a system whereby the business teams could easily analyze the customer transactions and banking behaviour in several permutations and combinations and make it available to the customer-interfacing staff.

**3.2.1.7 Database**

A full-fledged data warehouse could eliminate the time-consuming hurdle of working with disparate sources. The warehouse pulls information from different transaction systems and customer interface channels, and centralizes it in a single database.

The database would enable the bank to understand the type of product that a particular customer would avail of, how frequently the customer uses that product, the transaction characteristics and the customer's banking behavior. The bank can also find out profitability of the customer which is critical in offering preferential pricing so that the relationships could not only be sustained but even enhanced. The profitability metrics are used extensively in service differentiation. Certain profitable customers are given the "preferred" status in service deliveries and pricing. The bank could also identify the channels of transaction mostly preferred by the profitable customers so that it can step up its investment in those channels.

In addition, the bank would also be in a position to undertake the database driven marketing efforts based on the banking behavior of the customer. If he has used his card in an apparel shop, send him customized mailers incentivising him if he spends more in certain apparel shops or marketing programs to merchants who facilitate usage of the bank's cards on the bank's terminals.

**3.2.1.8 Internet Banking**

Internet banking is the technology that allows banking customers to do the things they would normally do at their bank from the comfort of home with a connection to the internet. The history of internet banking begins as progressive banks realized and harnessed the power of the internet revolution. In the year 2000, an estimated 14 million Americans banked online, according to pew Internet and American Life. In comparison, by 2004, some 53 million Americans were into online banking transactions. Obviously then, online banking is one of the fastest growing internet activities in the US.

Internet banking services have grown from simply allowing customers to check balances, to trading assets. Today, banks like ING Direct are functioning entirely online, with no brick and mortar building. With the costs saved by requiring fewer employees and the lack of facility expenses, these virtual banks can often offer higher interest rates than their traditional counterparts. Internet banking gives you the power to control your finances completely. You are no longer tied down to managing your money during the hours the bank is open. If you want to transfer a balance after business hours, you can. If you have access to the internet and have number of recurring monthly bills, then you should use internet banking to make your life easier.

Harvey Jones (2006) observed that one common complaint in this high-speed world is that while you can conduct banking transactions instantly online, you have to wait between three and five working days for your payments to be processed. While the cash leaves your account immediately, it won't arrive for almost an entire working week. Banks earn interest on this floating cash--an estimated 50 [pounds sterling] million a year.

Banks will reimburse customer's losses if their systems failed to detect or prevent fraud, or a staff member made a mistake. But the customer might get nothing if the mistake is his/her responsibility--failed to log off from your bank's site correctly or disclosed passwords to anybody.

Kasturi Nageshwar Rao (2006) has observed that in India, while the performance of Public Sector Banks has been satisfactory of late, there is need first, to strengthen their fundamentals, before embarking on consolidation.

Given that there are varied types of banks in the country and the reporting requirements of all categories may not be uniform, the adoption of a generic architecture for all banks as a whole becomes difficult. Implementation of a standardized system of tools for risk measurement all over the financial sector for e-reporting or online transmission of the returns becomes an arduous task. Therefore, standardization of the broad parameters will attain broad objectives.

Amidst bill pay and funds transfer innovations that allow online bankers to more easily make use of the money in their bank account, most online bankers still spend much of each online banking session simply looking for information. As part of the Q4 2004

Banker Scorecard, Musto Chris (2005) reviewed which banks are providing the best experiences for online users seeking account information. The two banks that scored the highest for this task, which the Scorecard calls "Check Accounts," are E*Trade and Bank of America. Although these two banks occupy opposite ends of the spectrum in terms of branch presence, their practices reveal a common understanding about what creates an effective online banking experience. At Bank of America and E*Trade, online banking does not just cater to checking customers and other online bankers, it has become part of the value proposition that helps sell these products. For the average sample bank, technological change lowered the real cost of bank production by about 1.0% per year over the sample period. Larger banks, however, realized a greater percentage reduction in costs than did smaller banks. Within the limitation of the data and specification of the empirical model, the result suggest that technological change acted to lower the real cost of bank production between 1980 and 1986, with larger banks enjoying a higher percentage cost saving. Most technology experts advise businesses that the role of technology is to help streamline a business operation, lower costs and allow the organization to focus on high-leverage activities. Direct selling and marketing management still require too much direct human intervention to be suited for widespread adoption of the CRM solutions available today. Banks have several choices about which type of technology to employ in servicing demand deposits. The choices include conventional bookkeeping machines, electronic bookkeeping machines, punchcard tabulating equipment, off-line sorter, computer off premises and computer on premises. Electronic Document Management (EDM) is a significant development in organizations that will create some major changes in the ways organizations process information and

conduct business. The technology is new, powerful and rapidly evolving but that rapid rate of change will make it difficult to build a compatible technical infrastructure to support document management. This effort is justified, however, because there are applications in several business areas that can benefit from EDM tools and techniques.

*Features of Internet banking*

Today, internet banking services are quite varied. One of the best features of online banking is putting the user in control. The user controls all bill paying, transfers, and investments from home.

There are other features, though, of online banking. One of these is increased accessibility to your account information. Users of online banking services can access their account information from anywhere in the world. This is particularly helpful for businesses. Internet business banking is becoming increasingly popular, as businesses are becoming more global in their reach. Now business persons can access their accounts, even when on overseas trips. Business internet banking is extremely popular for this reason.

*Advantages of Internet banking services*

The advantages of internet banking are obvious. Business persons can access their personal and business account information while saving a trip to the bank. You can check your balance whenever you need to, even if the bank is closed. Not only that, you can pay your bills online as well, which saves both time and money on postage.

Another advantage of internet banking is the ability to easily compare services offered by different banks. You can buy financial products and apply for loans online, and in doing so you can compare your options to ensure that you get the best possible services.

You can even buy insurance through internet banking services. Stocks, bonds and other investments can be managed with online banking from your home or office, independent of a financial intermediary like a stockbroker.

*A convenient tool for Financial Service Providers*

The internet has touched almost all aspects of our lives. The emergence of e-commerce has revolutionized the way we live, shop, entertain and interact. Therefore, it should not come as a surprise if it tries to influence the way we save and invest.

Today, when the customer is king and service providers are pulling out all stops to satisfy him, financial service providers cannot be far behind. In their quest to differentiate their services and gain an advantage over their competitors, financial service providers are trying to provide services at the customer's home. The internet has emerged as a convenient channel for these service providers.

Living in India, we might find these ideas too far-fetched but the truth is that the Internet has changed the way these services are delivered, particularly in countries where internet penetration is high. The different ways in which the internet is trying to revolutionize the delivery of the financial services and products are given below.

- Internet banking
- Electronic bill payment
- Online brokerages
- Online delivery of financial products (eg. Mortgages)

*Challenges*

One of the challenges before a bank which is trying to become e-enabled is that data is scattered across countries. Integration of this data is necessary if the bank has to succeed

on the net. The second challenge is related the basket of financial products being offered by financial service providers. In developed countries, financial service providers use the internet to expand into new products. Banks are getting into mutual funds and vice-versa. However, in India, archaic regulations do not allow companies to have a close relationship with banks owned by them or to offer products, which are offered by another category of service providers. As a result, companies like ICICI are forced to keep their banking arm separate from the main company. They are also prevented from offering products, which fall under the purview of banks. This is a serious impediment for innovation in the financial service sector. Moreover, it prevents Indian financial service providers from exploiting the power of the net.

Given these challenges, only a bank (or financial service provider) which moves fast can think of succeeding in this sector. Another key success factor will be the value which the online operations of the banks will be offering to the consumer. This is what will differentiate between similar offerings from many providers of financial products and services. Starting now will give the organization an advantage in terms of the networking it will be able to achieve. This will help it in meeting the first challenge. Banks (or financial service providers) should be ready to launch their operations within days of the liberalization of the sector. This will allow them to reach a critical mass and establish themselves in the e-world.

Many consumers today are turning to the ease and convenience of internet banking to take care of their financial needs. With the new levels of access made possible by the internet, people can now check the status of their finances at the click of a button.

The history of internet banking has evolved from simply allowing customers to check balances online, to now being able to trade stocks and bonds from the comfort of their home.

**3.2.1.9 Electronic fund transfer (EFT)**

EFT is a system for transferring money from one bank to another without using paper money. Its use has become widespread with the arrival of personal computers, cheap networks, improved cryptography and the internet.

Since it is affected by financial fraud, the electronic funds transfer act was implemented. This federal law protects the consumer in case a problem arises at the moment of the transaction.

EFT evolved from the common funds transfer of the past. Since the $19^{th}$ century, and with the help of telegraphs, funds transfers were common in commercial transactions. Finally, it migrated itself to computers and become the electronic money transfers of today.

One of the most common EFTs is direct deposit. It is used by employers for depositing their employers for depositing their employee salaries in a bank account. Another kind of EFT is the automatic charge to your check or saving account. For example, when you are paying a mortgage, the bank will discharge the monthly payment from a pre-accorded bank account. The benefit is that the customer does not have to go to the bank to do it.

Another kind of EFT is a cash card. With this type of card you can spend a prepaid amount of money until the balance is zero. So, if you wish to make a gift certificate without tying up your beneficiary with one store, you can buy a cash card from your favourite bank.

ATMs are also used for EFTs. Since an automatic teller machine is much cheaper than a group of bank tellers, it has helped bring costs down and benefit the consumer.

Points of sale (POS) are also part of this group. Those little blue or dark blue machines in which you pass your card are doing an electronic fund transfer from your account to the reail account. Imagine how the world without them was, Slow, wasn't it ?

*Benefits of EFT*

The main advantage of an electronic funds transfer is time. Since the transaction is done electronically, the bank does not need to hire a person to drive the loans to the other bank. Other savings are the cost of the transport, its maintenance and insurance. EFTs have revolutionized modern banking.

Another benefit is immediate payment, which brings an up-to-date cash flow. You won't hear either about lost cheques.

The good thing is that a lot of merchants and consumers have found these advantages and have migrated to EFTs. So it is not 1995 when only some companies offered this service and only some people used it for buying things and paying their bills. And, as the consumer base increased, so did the type of services. EFTs are a good example of the wonders of an open market economy.

*Problems with EFT*

The main problem with electronic funds transfer is security. Since the popularization of the internet, a series of scams have appeared, trying to lure consumers to give away bank accounts, personal identification numbers or paying for goods or services they never received.

The companies that give an EFT service have always stated that they are not responsible for any fraud, but they know that their customer base will depend on how secure their systems are. For these reasons, almost financial institutions have implemented processes for validating the security of an operation.

Another measure that may have caused some inconveniences to consumers is the establishment of limits for money transfers. The limits came because EFTs were used for tax evasion. And, since the attacks on the World Trade Center on September 11, 2001, the US government has imposed a series of measures to control any activity related to terrorist funding.

Unfortunately, even with all of these security measures, it is common to hear about crimes related to EFTs. Although security has tightened and financial cryptography has improved a lot in the last five years, there is no such thing as an unbreakable system or a 100 per cent secure transaction (The WEEK, 2008)

### 3.2.2 Specifics of CRM initiatives

***Literature dealing with the specifics of CRM initiatives in banking and other organizations, their success rates and also their relationship with the technological inputs provided.***

There is a growing body of academic and practitioner literature on CRM, most of the research in this field being conducted in the Western context. In the emerging countries like Asia, the difference is not only about the level of technology adoption and infrastructure, but also about the way decisions are made and technology is used to form relations, and the deeply routed values of employees and customers who drive the

competitive performance of CRM. It has been well accepted that CRM is a strategic initiative. But, surprisingly, the CRM literature is largely silent on the issue of competitive reaction in dynamic markets of emerging Asian economies (Boulding, et. al., 2005).

It appears that on the customer front, while there is a growing realization of the need to streamline and enhance effectiveness of customer management processes, literature seems ambivalent about the success achieved by various organizations in attaining the same, be with or without the help of technological advancements. The following set of issues, collected from the literature survey, seem to validate the notion.

#### 3.2.2.1 CRM Systems

Over the last decade, there has been an explosion of interest in CRM. The role of IT in enhancing customer relationships has been considered very crucial (Thwaites and Lee, 1994; Pine Peppers and Rogers, 1995; Grant and Schlesinger, 1995; Day, 2000). All over the world many organizations have turned towards IT enabled CRM initiatives, and the enthusiasm about these investments are continuously growing. To be competitive globally as well as in the Indian market, lots of companies in India have also invested in technological initiatives for managing customer relationships.

*CRM in emerging countries of Asia*

The emerging Asian markets have been one of the most volatile and dynamic markets of the world with a growing disposable income, shift in consumption patterns, global competition, software revolutions, and growing rates of technology adoptions. These fast

growing economies and changing business environment provide the most suitable context for this study.

Generally CRM has been defined from atleast three perspectives: narrowly and tactically, as a particular technology solution that is considered at functional level; wide-ranging technology solutions level and customer centric that is considered at organization level (Payne and Frow, 2005). After a long debate, practitioners and researchers agree on a point that CRM should be considered at the organizational level and the key elements of CRM relates to strategy, the intelligent use of data and technology, the acquisition of customer knowledge and the diffusion of this knowledge to the appropriate stakeholders, the development of appropriate relationships with specific customers and the integration of processes across many areas of the firm and across the network of firms that collaborate to generates customer value (Boulding, et. al., 2005).

CRM in the emerging countries of Asia has moved from a narrow perspective of "an information technology product" to "a series of information technology initiatives" and "a strategic initiative." In the organizations, customer-centricity has started occupying board-room time. Increased competition, margin pressures and demanding customers are forcing companies to look at CRM in a big way (Sinha, Sahu, Desai, 2007).

The Asian CRM literature has not been able to reflect these changes in the business practices of CRM appropriately. Though in Asia, the relationships have provided foundation of business activities for thousands of years, there are inherent values embedded in the CRM literature that do not reconcile with the public face of Asian values (Peppers and Rogers, 2002). Except for a few exploratory surveys and case studies

by practioners, very few empirical studies related to CRM have been conducted in the Asian context (Jain, Jain and Dhar, 2003; Kabiraj, Agarwal and Singh, 2004; Chen and Ching, 2004). None of these studies focused on the issues relevant to the dynamic markets in the emerging countries of Asia. There are only a few studies (Day, 2002; Reinartz, 2004; Jayachandran, Sharma, Kaufman, and Raman, 2005) that explore the role of IT in CRM in the Western context. In the context of emerging countries of Asia, the difference is not only about the level of technology adoption and infrastructure, but also about the decision making styles, organizational processes and structures, the way technology is used to form relations in specific context, and the deeply routed values of employees and customers who are at the heart of CRM (Peppers and Rogers, 2002). Stronger information silos across functions and less willingness to share information makes cross functional integration more complex ( Martinsons, 1991).

Dyer Alyssa (2003) noted that often driven by the need to improve customer satisfaction and retention, CRM systems can aid in understanding a customer or segment to focus sales and marketing activities. Lifetime value will be better understood to allow for organizations to think about potentially good prospects and the overall return on the relationship that is developed over time. CRM systems will be blended with operational and back- office systems to provide a seamless, real-time data environment. CRM will not only be about servicing the customer better, but also servicing the customer in the best interests of the customer as well as the business itself. While CRM may already seem to be an old and jaded term, there is a bright future ahead that will bring new ways for small and mid-sized organizations to communicate, operate and strategize to manage their personnel, customers and prospects. Customer expectations are rising due to

increasing affluence in the emerging economies, greater awareness due to media explosion and increasing customer diversity. Fortunately, for businesses, advances in affordable technology will help them meet these divergent needs from demanding customers. Advances in technology have made an impact on all stages from production to final consumption. They are allowing marketers to offer unique solutions to individual customers. Whether or not we believe that Mrs. Jones needs a new set of flippers, we can bet that CRM is here to stay and that it will continue to change the way we work and live. Customer Satisfaction and Productivity relation with one another is of substantial and growing importance, especially in light of expected continued growth in services throughout the world economy. Below is a diagram that illustrates our point of view about the strategic role and utility of CRM systems within relevant business functions.

Dyer Alyssa (2003) further suggested that we can oversimplify the value of CRM systems by defining CRM as a technology that provides the following services: 1) the aggregation of data to create a single, accessible source (whether physical or virtual), 2) the analysis and presentation of that data as usable information by individuals doing strategic planning or executing strategic sales/marketing initiatives, and 3) tools and information to provide front-line personnel - or systems - that are interacting with customers and prospects the ability to make timely, educated decisions that benefit both the customer and company. One of the greatest stumbling blocks of the most so called CRM packages is that they are simply too big and cumbersome by design. By the time they are conceived, programmed, configured, installed and commissioned the company's needs have a changed and the software is outdated. To overcome this problem, companies need to be more specific when defining the parameters and objectives of their

CRM strategies. CRM revenue in Asia Pacific overall is forecast to be worth US$1 billion come 2003. Hong Kong itself boasts the highest tele-density in the world, with CRM installations within the telecoms sector last year accounting for 44 per cent of total CRM sales. By 2005, the biggest market opportunity for end-user implementations is expected to be found in the banking and finance sector. Those prepared to adopt a wait and see approach look set to be the biggest losers. Although some businesses may be prepared to wait, their customers won't. There is no better time to gear up and go head-on with competition than now. Keeping ahead of the learning curve through peer-to-peer networking, and analysis of the latest software solutions are key drivers for adding value to the customer-savvy enterprise. The generally accepted purpose of Customer Relationship Management (CRM) is to enable organizations to better serve its customers through the introduction of reliable processes and procedures for interacting with those customers. A successful CRM strategy is usually implemented through a software package designed to support these processes. Major areas of CRM focus on service automated processes, personal information gathering and processing, and self-service. It attempts to integrate and automate the various customer serving processes within a company. Many call centers use CRM software to store all of their customer's details. When a customer calls, the system can be used to retrieve and store information relevant to the customer. By serving the customer quickly and efficiently, and also keeping all information on a customer in one place, a company aims to make cost savings, and also encourage new customers. CRMs are not however considered universally good - some feel it invades customer privacy and enable coercive sales techniques due to the information companies now have on customers by persuasion technology. However,

CRM does not necessarily imply gathering new data, it can be used merely to make "better use" of data the corporation already has. But in most cases they are used to collect new data. At the outset of any customer-relationship building initiative, there must first be a comprehensive, enterprise-level plan. One that takes into account current and long-range business objectives, marketplace realities, and the best available technologies to enable the initiative. The plan is developed, refined, and approved – and then executed. What brings you to the next level is how you think of customers. Viewing them as your most important asset – as relationships you invest in, nurture and grow. Every customer contact is an opportunity to increase the value of your customer asset, building loyalty, retention, increased sales and profitability. Cost per interaction, response rates, click-through rates, sales per employee, customer profitability. All these measures and more is what companies infatuated with CRM are desperately seeking. And of course, the software they will buy will capture the data and easily produce reports with all these measures sharply printed. The problem is this view of CRM and measurement is simply naïve. How a company actually digests information and acts upon it is the harder yet more crucial part of implementing CRM programs and software. Simply having information does not ensure CRM success. Timely action is needed. And the more high performance the technology, the more adept the drivers must be.

#### 3.2.2.2 Banks and better service

Banks boost their revenue through both traditional interest income and a range of other activities such as wealth management. What has changed, however, is the banks' shift of emphasis away from trying to grow through acquiring customers. In the case of ANZ

Bank and St George in particular, the banks' strategy has changed very much to getting more business out of existing customers.

Naturally, customers who are satisfied with the service, offer more potential to take up a greater range of banking business on offer. Thus it is no accident that most of the banks are emphasizing customer service, with some investing vast sums of money in this area.

While building and improving customer relations is always a good thing, make no mistake that the banks' efforts are aimed primarily at improving profits in the longer term. The big question is whether all the money and effort will result in an improved bottom line.

With margin pressure increasing, the credit cycle running out of steam and competition intensifying, there is a growing need to provide better value to customers through both better service in traditional areas such as transactions, as well as investment advice.

While all banks have differing customer service strategies and are at different stages of implementation, the approaches of the CBA and Westpac provides some interesting insights

*Which new Bank?*

The CBA describes its $1.5 billion, three year, Which new Bank strategy as a complete service transformation. The strategy is not only very bold, but an all-embracing effort intended to transform most aspects of the CBA's customer service, people and processes.

Simply put, the bank's vision is to excel in customer service and to focus on everything it does. The bank has clear strategic targets, timelines and a vast number of separate work streams to implement it. There is plenty of focus on the bottom line as well, with the bank expecting major cost savings and revenue gains over the next three years. This all involves not only top level management commitment, but serious investment to upgrade systems to ensure more efficient delivery of products and service to the customer, as well as less paperwork.

*The results*

In May the CBA updated the market on the progress of the program. The bank reported it was ahead of schedule in terms of expected revenue benefits.

*Westpac and Ask Once*

Westpac's customer service strategy is not as dramatic in form as CBA's Which new Bank. It is however more ambitious in terms of where Westpac sees itself in terms of market leadership. Ask Once, launched in 2002, involved enhancing the bank's problem resolution processes, improving branch services and expanding opening hours. It also introduced new services and equipped staff to better deal with customer service issues.

As its name suggests, Ask Once was about equipping staff to become better equipped to take responsibility for resolving customers' problems. Staff were not expected to know all the answers, just where to find the answers. But the staff member initially handling the customer's query retained the responsibility to have it resolved. A customer experience program was being carried under the umbrella of Ask Once. It encouraged staff to listen

to customers about what needs fixing, or the type of service they want and how they want it. To implement this, Westpac had taken the view that it needed to encourage customers to communicate their complaints to the bank. In other words, in order to fix what is wrong the bank needed to know about it. Staff were therefore encouraged to receive customer queries and complaints and to log them into an on line tracking system. From this, the bank could analyze the causes and seek solutions.

Customers were kept informed about the progress of their complaint or query through the web site or published phone contacts, with staff given set timelines to report back to the customer. The customer knew that they had a person who would be the point of contact to resolve their problem. Behind that, Westpac had a process that would support the staff to ensure that he/she would get back to the customer. A common complaint was that customers had to wait too long in branches to be served. Westpac had addressed the problem not by putting on more staff, but addressing the root of the problem. By greeting customers as they stand in line, staff were able to ascertain their needs and initiate other suggestions as to how to do their banking other than over the counter. This had worked well for the bank.

*Concern for competitors*

For the smaller regional banks and credit unions, the big banks' new-found focus on customer service must be a concern. Many of these smaller providers have used their size and superior customer service as a key differentiator. While regional banks and credit unions still enjoy a customer service/customer satisfaction advantage, inevitably the big banks will close some of this gap.

To date, it is clear that major banks such as CBA and Westpac are making progress; and that these changes will deliver better and more efficient customer service. Their customer service strategies also have the potential to improve the bottom line, although they will have to do more to deliver major revenue gains in the longer term.

#### 3.2.2.3 Where Workflow automation is headed

Banks have used workflow automation software in certain business applications for decades, yet there is increasing recognition in the industry that workflow automation is still an information technology area with un-tapped potential for boosting productivity, managing critical business processes, and improving customer service. There has been a resurgence of interest in work-flow applications in banks, where other new technologies--document and check imaging in particular--are reviving the need for workflow automation. However, despite its benefits, the technology is applicable only for certain business applications, so it's important to know where, how, and why it's best applied.

*Where workflow automation works best*

Any workflow system, however elementary or elaborate, consists of four elements: the information contained in documents, forms, or files; a set of tasks to be performed on this information; people assigned to perform those tasks; and a set of rules that define how the work is to be processed. So while work-flow is defined as the procedures that people use in processing information, workflow automation refers to the use of information technology to govern the routing of data to and from the people performing workflow tasks. Workflow automation is applicable in the "middle ground" of information

processing, where tasks being performed are sufficiently complex that they can't be fully computer automated and human intelligence is still required to get a job done, but where tasks are also sufficiently simple that they can be modeled and administered with software. Workflow automation works best where a type of recurring task can be performed by any one of a team of individuals and the work needs to be queued and distributed in the most efficient way, or where multiple steps must be performed on the same set of documents or files by multiple users to complete a job.

The appropriate type of workflow automation software to use for a particular business application depends on the nature of the work being automated. Workflow automation software generally falls into three main categories. Production-based software supports repetitive, standardized, highly structured and system-driven tasks dictated by a well-defined set of procedures. It's the most expensive, but most powerful, type of workflow software. Project-based software supports more flexible, short-term, team-based functions. It's best for groupware-type applications, but requires the most advanced tools for document, folder, and case management. Electronic mail-based workflow software is built on an electronic mail messaging platform. It's the most flexible and adaptable of all, and most appropriate for user-controlled routing of information among individuals in a workgroup, but also the least powerful.

One of the first applications of workflow automation software in banking was in the loan collections area, in the 1970s. In these systems, loan collection applications extracted data on delinquent accounts from mainframe loan accounting systems. These delinquent accounts were queued for collection according to certain criteria and assigned to

collectors. The workflow automation software retrieved customer information and displayed it on data terminals for collectors, kept track of all actions that occurred during each customer contact, and recorded customer responses to collection actions. It also monitored and reported on the performance of collectors, and automated the scheduling of follow-up actions such as returning phone calls, generating letters, and notifying credit agencies.

Integrated image and workflow systems are being adopted rapidly by banks for three major reasons. First, although banking is primarily a transaction-driven business, banks must still process and maintain large volumes of business documents for regulatory, auditing, legal, and management purposes. Second, the information contained in paper documents is critical for performing certain banking functions, such as account origination and management, customer service, and general records management. Finally, these systems enable quick processing, shared access to documents, and re-design and standardization of work functions, and thus make possible re-engineering of business processes where existing data entry, customer service, or records management operations using paper documents or micrographic records are costly, inefficient, and non-standardized.

Not all documents in banks are suitable for image and workflow applications, of course. Internally generated reports and memoranda already exist in electronic form, and can be processed using the bank's own systems. Two types of systems are available While workflow automation software is used in both full-page document imaging and check imaging, the two types of systems are quite different.

Full-page (or file folder) image and workflow systems are a proven, mature technology, using general-purpose hardware and software applicable to any industry. They're designed for processing multi-page documents and multiple documents per folder, and the workflow is typically user-initiated and user-controlled. In these applications, the work-flow software is often a "middleware" application, generally unseen by the end user, on which a specific banking business function is built. Typical banking applications for these systems include maintaining customer correspondence files for credit card servicing, organizing and processing mortgage documents, and routing loan documents among commercial lending team members. The number of multi-user systems installed in banks is growing at about 25% annually.

Check imaging systems, in contrast, are banking-specific, and designed for high-speed, system-controlled processing. Check imaging is an emerging technology (particularly in high-volume applications) and is essentially an add-on to existing check processing systems. The complexity of workflow automation in check processing can vary, depending on the function performed, the processing volume, and the time-urgency of the application. In low-volume, user-initiated applications performed on single items (such as research and adjustments), workflow automation can be simple. In contrast, at a large bank, proof of deposit processing is a multi-user, time-urgent application performed on large volumes of checks, involving multiple work steps (data entry, transaction balancing, reject/re-entry processing, and cash letter generation), so the workflow automation required is complex and difficult to implement. The number of check image and workflow systems installed in banks is more than doubling each year, largely due to adoption of small-scale systems at community banks where low check volumes, flexible

single-user work processes, and server-based systems make solutions affordable and practical. In large banks, special-purpose applications, where image-enabled services for selected customers can provide fee income and market differentiation, are taking preference over more costly full-volume and full-function check imaging systems.

The banking industry is constantly exploring the potential of improving its productivity through new electronic payment technologies, messaging systems, and automated methods of communicating with and serving customers-often with a reduction on replacement of paper processing. Despite these efforts, however, the use of paper documents in banks continues to climb, due mainly to regulatory issues, and the clear benefits of image technology for processing these documents will ensure that workflow automation has a future in banks for years to come (Medeiros David W., 1996).

#### 3.2.2.4 Future challenges for Indian banks

A few broad challenges facing the Indian banks are: threats of risks from globalisation; implementation of Basel II; improvement of risk management systems; implementation of new accounting standards; enhancement of transparency and disclosures; enhancement of customer service; and application of technology.

*Globalisation – a challenge as well as an opportunity*

The waves of globalization are sweeping across the world, and have thrown up several opportunities accompanied by concomitant risks. Integration of domestic market with international financial markets has been facilitated by tremendous advancement in information and communications technology. There is a growing realization that the

ability of countries to conduct business across national borders and the ability to cope with the possible downside risks would depend, *inter alia*, on the soundness of the financial system. This has necessitated convergence of prudential norms with international best practices as well consistent refinement of the technological and institutional framework in the financial sector through a non-disruptive and consultative process.

*Opening up of the Capital Account*

The Committee on Fuller Capital Account Convertibility (Chairman: Shri S.S. Tarapore) observed that under a full capital account convertibility regime, the banking system would be exposed to greater market volatility, and this necessitated enhancing the risk management capabilities in the banking system in view of liquidity risk, interest rate risk, currency risk, counter-party risk and country risk that arise from international capital flows. The potential dangers associated with the proliferation of derivative instruments – credit derivatives and interest rate derivatives also need to be recognised in the regulatory and supervisory system. The issues relating to cross-border supervision of financial intermediaries in the context of greater capital flows are just emerging and need to be addressed.

*Basel II implementation*

The Reserve Bank and the commercial banks have been preparing to implement Basel II, and it has been decided to allow banks some more time in adhering to new norms. As against the deadline of March 31, 2007 for compliance with Basel II, it was decided in

October 2006 that foreign banks operating in India and Indian banks having presence outside India would migrate to the standardized approach for credit risk and the basic indicator approach for operational risk under Basel II with effect from March 31, 2008, while all other scheduled commercial banks are required to migrate to Basel II by March 31, 2009.

It is widely acknowledged that implementation of Basel II poses significant challenge to both banks and the regulators. Basel II implementation may also be seen as a compliance challenge. But at the same time, it offers two major opportunities to banks, *viz.*, refinement of risk management systems; and improvement in capital efficiency. The transition from Basel I to Basel II essentially involves a move from capital adequacy to capital efficiency. This transition in how-capital is used and how much capital is needed will become a significant factor in return-on-equity strategy for years to come.

The reliance on the market to assess the riskiness of banks would lead to increased focus on transparency and market disclosure, critical information describing the risk profile, capital structure and capital adequacy. Besides making banks more accountable and responsive to better-informed investors, these processes enable banks to strike the right balance between risks and rewards and to improve the access to markets. Improvements in market discipline also call for greater coordination between banks and regulators.

*Improving Risk Management Systems*

Basel II has brought into focus the need for a more comprehensive risk management framework to deal with various risks, including credit and market risk and their inter-

linkages. Banks in India are also moving from the individual silo system to an enterprise-wide risk management system. While the first milestone would be risk integration across the entity, the next step would entail risk aggregation across the group both in the specific risk areas as also across the risks. Banks would, therefore, be required to allocate significant resources towards this endeavour. In India, the risk-based approach to supervision is also serving as a catalyst to banks' migration to the integrated risk management systems. However, taking into account the diversity in the Indian banking system, stabilizing the RBS as an effective supervisory mechanism is another challenge.

*Corporate Governance*

To a large extent, many risk management failures reflect a breakdown in corporate governance which arise due to poor management of conflict of interest, inadequate understanding of key banking risks, and poor Board oversight of the mechanisms for risk management and internal audit. Corporate governance is, therefore, the foundation for effective risk managements in banks and, thus, the foundation for a sound financial system. Therefore, the choices which banks make when they establish their risk management and corporate governance systems have important ramifications for financial stability. Banks may have to cultivate a good governance culture building in appropriate checks and balances in their operations. There are four important forms of oversight that should be included in the organizational structure of any bank in order to ensure appropriate checks and balances: (i) oversight by the board of directors or supervisory board; (ii) oversight by individuals not involved in the day-to-day running of the various business areas; (iii) direct line supervision of different business areas; and (iv)

independent risk management, compliance and audit functions. In addition, it is important that key personnel are fit and proper for their jobs. Furthermore, the general principles of sound corporate governance should also be applied to all banks, irrespective of their unique ownership structures.

*Implementation of New Accounting Standards*

Derivative activity in banks has been increasing at a brisk pace. While the risk management framework for derivative trading, which is a relatively new area for Indian banks (particularly in the more structured products) is an essential pre-requisite, the absence of clear accounting guidelines in this area is a matter of significant concern. The World Bank's ROSC on Accounting and Auditing in India has commented on the absence of an accounting standard which deals with recognition, measurement and disclosures pertaining to financial instruments. The Accounting Standards Board of the Institute of Chartered Accountants of India (ICAI) is considering issue of Accounting Standards in respect of financial instruments. These will be the Indian parallel to International Accounting Standards 32 and 39. The proposed Accounting Standards will be of considerable significance for financial entities and could, therefore, have implications for the financial sector. The formal introduction of these Accounting Standards by the ICAI is likely to take some time in view of the processes involved. In the meanwhile, the Reserve Bank is considering the need for banks and financial entities adopting the broad underlying principles of IAS 39. Since this is likely to give rise to some regulatory/prudential issues, all relevant aspects are being comprehensively examined. The proposals in this regard would, as is normal, be discussed with the market

participants before introduction. Adoption and implementation of these principles are likely to pose a great challenge to both the banks and the Reserve Bank.

*Supervision of financial conglomerates*

The financial landscape is increasingly witnessing entry of some of the bigger banks into other financial segments like merchant banking, insurance etc. Emergence of several new players with diversified presence across major segments make it imperative for supervision to be spread across various segments of the financial sector. In this direction, an inter-regulatory Working Group was constituted with members from RBI, SEBI and IRDA. The framework proposed by the Group is complementary to the existing regulatory structure wherein the individual entities are regulated by the respective regulators and the identified financial conglomerates are subjected to focused regulatory oversight through a mechanism of inter-regulatory exchange of information. As a first step in this direction, an inter-agency Working Group on Financial Conglomerates (FC) comprising the above three supervisory bodies identified 23 FCs and a pilot process for obtaining information from these conglomerates has been initiated. The complexities involved in the supervision of financial conglomerates are a challenge not only to the Reserve Bank of India but also to the other regulatory agencies, which need to have a close and continued coordination on an on-going basis.

In view of increased focus on empowering supervisors to undertake consolidated supervision of bank groups and since the Core Principles for Effective Banking Supervision issued by the Basel Committee on Banking Supervision have underscored consolidated supervision as an independent principle, the Reserve Bank had introduced,

as an initial step, consolidated accounting and other quantitative methods to facilitate consolidated supervision. The components of consolidated supervision include, consolidated financial statements intended for public disclosure, consolidated prudential reports intended for supervisory assessment of risks and application of certain prudential regulations on group basis. In due course, consolidated supervision as introduced above would evolve to cover banks in mixed conglomerates, where the parent may be non-financial entities or parents may be financial entities coming under the jurisdiction of other regulators.

*Application of Advanced Technology*

The role of technology in banking in creating new business models and processes, in maintaining competitive advantage, in enhancing quality of risk management systems in banks, and in revolutionizing distribution channels, cannot be overemphasized. Recognizing the benefits of modernizing their technology infrastructure, banks are taking the right initiatives. While doing so, banks have four options to choose from: they can build a new system themselves, or buy best of the modules, or buy a comprehensive solution, or outsource. A further challenge which banks face in this regard is to ensure that they derive maximum advantage from their investments in technology and avoid wasteful expenditure which might arise on account of uncoordinated and piecemeal adoption of technology; adoption of inappropriate/ inconsistent technology and adoption of obsolete technology. A case in point is the implementation of core banking solution by some banks without assessing its scalability or adaptability to meet Basel II requirements.

*Financial Inclusion*

While banks are focusing on the methodologies of meeting the increasing demands placed on them, there are legitimate concerns with regard to the banking practices that tend to exclude rather than attract vast sections of population, in particular pensioners, self-employed and those employed in unorganized sector. While commercial considerations are no doubt important, banks have been bestowed with several privileges, especially of seeking public deposits on a highly leveraged basis, and consequently they should be obliged to provide banking services to all segments of the population, on equitable basis. Further, experience has shown that consumers' interests are at times not accorded full protection and their grievances are not properly attended to. Feedback received reveals recent trends of levying unreasonably high service/user charges and enhancement of user charges without proper and prior intimation. It is in this context that the Governor, Reserve Bank of India had mentioned in the Annual Policy Statement 2005-06 that RBI will take initiatives to encourage greater degree of financial inclusion in the country; setting up of a mechanism for ensuring fair treatment of consumers; and effective redressal of customer grievances.

With the increasing levels of globalization of the Indian banking industry, evolution of universal banks and bundling of financial services, competition in the banking industry will intensify further. The banking industry has the potential and the ability to rise to the occasion as demonstrated by the rapid pace of automation which has already had a profound impact on raising the standard of banking services. The financial strength of individual banks, which are major participants in the financial system, is the first line of

defense against financial risks. Strong capital positions and balance sheets place banks in a better position to deal with and absorb the economic shocks.

To summarize, it appears that there is not enough documented validation of the role of technology in driving effective customer management initiatives. Moreover, most of the research efforts are focused on organizations in the developed markets. Hence, there is a necessity to revisit the propositions with regards to the role of technology in customer relationship building. Also, to the best of my knowledge, this will be one of the first comprehensive attempts to study these issues in the context of Indian Banks.

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