RISK AND TECHNOLOGY MANAGEMENT IN BANKING INDUSTRY

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ABSTRACT

The Indian financial system, particularly the banking system is very diverse. All over India there are numerous co-operative banks and the Regional Rural Banks. And, there are some highly profitable foreign banks. There are many odd entities known as NBFCs – Non-Banking Finance Companies. The regulatory authority for all these, except for the co-operative banks, is the RBI – Reserve Bank of India. India still does not have world class banks. However, the huge size of the State Bank of India, coupled with the strength of several subsidiaries, is an indication that the Indian banks can go global. No less is the strength of the “nationalised banks’” share. Some banks already have overseas presence and many more are in the process of breaking the national barriers. Technology caught the fancy of the Indian banking czars in the ‘80s. Today, technology has made fair inroads into the domain of banking in India. Not only the entry-level technology but, the core-banking technology or the networked banking technology has also gained a lot of ground. The ‘private banks’ like the HDFC Bank and ICICI Bank, are in the forefront having implemented technology to the level which is comparable to the best, from world standards. Risk and Reward go hand in hand. The banking fraternity best understands this wisdom. But, the million dollar question is how much risk is enough? Where to draw the line?

When does risk go out of hands? The sub-questions arising out of this are complex enough. Therefore, the answers are not going to come by easily. As far as the structured Risk Management mechanism is concerned, we seem to be on course. Reserve Bank of India has

Key Words: Banking, Risk Management, Technology Management
1. INTRODUCTION

Financial System is the most important institutional and functional vehicle for economic transformation of any country. Banking sector is reckoned as a hub and barometer of the financial system. As a pillar of the economy, this sector plays a predominant role in the economic development of the country. The geographical pervasiveness of the bank

2. THE CHANGING PARADIGM OF BANKING

Change is the only constant factor in this dynamic world and banking is not an exception. The changes staring in the face of bankers relates to the fundamental way of banking-which is undergoing rapid transformation in the world of today, in response to the forces of completion productivity and efficiency of operations, reduced operating margins better asset/liability management, risk management, any time also been relentlessly following up with the banks. As a result, the RMA – Risk management Architecture, is in place at most of the banks.

Coupled with the range and depth of their services make the system an indispensable medium in every day transactions. The virtual monopoly of banks in ‘Payment Mechanism’ touches the lives of millions of people every day and every where. Thus the banking sector has been playing a significant role as growth facilitator. And any where banking. The major challenge faced by banks today is to protect the falling margins due to the impact of competition. Another significant impact of banks today is the technology issue. There is an imperative need for not mere technology upgradation but also its integration with the general way of functioning of banks to give them an edge in respect of services provided to optimizing the use of funds and building up MIS for decision making and better management of assets and liabilities and risk assumed which in turns have a direct impact on the balance sheet of banks as a whole. Word over, technology has demonstrated potential to change methods of selling marketing, advertising, designing, pricing and distributing financial products of an electronic, self-service product delivery channel. All these changes call for a new, more dynamic, aggressive and challenging work culture to meet the demands of customer relationships, product differentiation, brand values, reputation, corporate governance and regulatory prescriptions.

The Indian financial system, particularly the banking system is very diverse. The State Bank of India occupies the top slot, which has been in existence since 1806. It has 9038 fully computerized branches, in India and abroad, 3814 ATMs and has deposits to the tune of Rs. 3,18,619 crores, Then, there are 7 subsidiary banks of SBI, like the State Bank of Mysore etc. These seven subsidiaries have a branch network of 4596 branches, with a

3. THE ERA OF MERGERS AND ACQUISITIONS

All this has lead the Indian banking industry towards the next logical step of deposit base of Rs. 1,14,272 crores. There are large banks known as the ‘nationalised banks’ which have huge government ownership along with significant private share holders. There are relatively new private sector banks, most of which are multinationals. All over India there are numerous co-operative banks and the Regional Rural Banks. And, there are some highly profitable foreign banks. There are many odd entities known as NBFCs – Non-Banking Finance Companies. The regulatory authority for all these, except for the cooperative banks, is the RBI – Reserve Bank of India.

India still does not have world class banks. However, the huge size of the State Bank of India, coupled with the strength of several subsidiaries, is an indication that the Indian banks can go global. No less is the strength of the “nationalised banks”’ share. Some banks already have overseas
presence and many more are in the process of breaking the national barriers.

M & A s, mergers and acquisitions. State Bank of India and it’s subsidiaries are in the process of forming themselves into a giant entity, huge enough to ensure a place in the Guinness Book of World Records.

Two big nationalized banks, Bank of India and Union Bank of India, have announced their plans to merge into one entity. Sometime back, Reserve Bank of India ensured a supervised merger of the beleaguered GTB – Global Trust Bank with the OBC – Oriental Bank of Commerce. That the exercise succeeded without creating a commotion among the GTB clientele speaks of the maturity of the Indian banking industry and the deftness with which the Reserve Bank of India handled the issue. So, mergers and acquisitions are here to stay! The banking circle is agog with rumours of which big fish is going to swallow which small fish. Many foreign banks are known to have been on these ‘fishing expeditions’. The bankers are still on the high seas and the size of their catch is still not known! The year 2005 promises a lot of action. A lot of bank logos are bound to go into the oblivion, but only after ensuring a more-than-fair return to their stakeholders. Interestingly, the so-called ‘small fishes’ have demonstrated amazing dexterity and presence of mind and have modernized themselves beyond belief. This transformation, on the one hand, will help these banks to stay afloat on their own and in the eventuality of a takeover, hostile or otherwise, will make the buyers to pay for all the value-additions that they would have made.

3.1 The Entry of Technology in Indian Banking

Technology caught the fancy of the Indian banking czars in the ‘80s. The main hurdle, in a country known for its socialistic leanings and democracy, came from the trade unionists. In a country struggling to implement employment generation oriented plans, ideas of mechanization and consequent, and inevitable, loss of jobs did not gel well. They tried to stall the idea until the market forces over took the scene. Once the bankers tasted blood there was no let-go of the situation. Today, technology has made fair inroads into the domain of banking in India.

Basic computerization has been achieved in the entire banking industry. So much so, that a good number of ‘co-operative banks’ spread all over India have also been computerized. In short, in the banking industry in India today, a bank, which is not computerised, stands out for its non-compliance!

Not only the entry-level technology but, the core-banking technology or the networked banking technology has also gained a lot of ground. The ‘private banks’ like the HDFC Bank and ICICI Bank, are in the forefront having implemented technology to the level which is comparable to the best, from world standards.

4. THE QUANTUM OF GLOBAL INVESTMENT IN TECHNOLOGY

There’s no doubt that it’s big business. A report by the Tower Group states that banks will allocate over one-fourth of their technology budgets, approximately $37.5 billion on a global basis, on core banking software, hardware and services.

A recent Nasscom-McKinsey study on the global software business revealed that the Banking, Financial Services and Insurance (BFSI) segment would continue to be the largest vertical and drive software revenues. According to this study, the BFSI segment contributed $68.3 billion out of a total market size of $326.8 billion in the year 1997, a 21 percent contribution. By the year 2008, the BFSI segment contribution is expected to grow to $261.7 billion out of a total market size of $1010.4 billion, a 26 percent contribution. These figures highlight the importance of BFSI to the software industry.
A Gartner report says that banking software will grow at a CAGR of 13.5 percent from 2000 to 2005. The total revenue from packaged software was $22 billion in 2002 and is expected to grow at 8 percent to reach $38 billion in 2005. Industry pundits estimate that Indian banks spend Rs 150 crore and above on software and hardware for core and Internet banking on an average. When the investments are in this range, it calls for a deeper analysis of the subject.

4.1 The Bankers’ Interpretation of Technology:

Technology is a less understood but much hyped concept in the Indian banking industry. The general perception is that it is the panacea for all human inefficiencies. In a positive way, it is said to be the vehicle which can translate your wishful thinking into realities. Here, the technology drives the people or the people drive technology is not known. Sadly, technology is becoming a sort of cat and mouse story. Here, the mouse refers to the mouse as well as the “mouse”, cat refers to the human endeavour to make technology equal to human intelligence, if not overtake it.

Technology is becoming a more and deeper rooted mechanism. The initial euphoria when computer technology was born was that it is going to be the ‘be-all’ aid to the banker. So much so that, in the 70s somebody wrote that, in future, a billionaire can float a bank single handedly, of course, aided by the computers. Therefore, the common belief among the bankers in India is that the technology is not only a substitute for human drudgery but also the panacea for all kinds risks, including those caused by their own lack of supervision! But, technology, as it is evolving day by day, is unwittingly throwing up its many inadequacies and the techies are scurrying around to find newer and newer patches to plug those gaping holes.

I shall enumerate my statement with some simple examples.

Technology started as a cost cutting, time saving and man power saving device. But, present day technology is not like that. Actually, it is demanding a lot of investments, time and manpower, may be in another form.

- Enormous investments have been made in buying technology, adding to the costs.
- A lot of time-investment has gone into imbibing the technology and,
- A new breed and creed of man-power has entered the banking portals in the garb of ‘computer techies’!

DR – Disaster Recovery was not a concept ever thought of by the pioneers of computer technology. They always looked at the brighter side of technology and never assumed that it can cause a disaster also! The terms like Hot Site evolved only to give meaning to the concepts like the Disaster Recovery, which itself was a new kind of expression. Human mind is trying to delegate more and more of its chores to technology. While human mind is a superb, unbeatable super-computer, technology is only a poor cousin of that. The stronger the machine, the more inadequacies fall out.

Human mind is an amalgam of all the technological phrases that have evolved so far – you built a Hard Disk and the race for hard disk capacity started in no time. Today, some people talk of the Hard Disk capacity of their computers, as if it is a status symbol. No sooner you find a bigger hard disk, human ingenuity finds newer stuff to load on to it, be it text, be it sound, be it graphics or a combo of all like the streaming video. The hard disk capacity of the human mind is infinite.

A bigger Hard Disk did not necessarily mean big relief; it became a cause of concern. What if my hard disk crashes was the nagging question. Thus evolved the concept of “Backup”. Multifarious solutions were invented to tackle this issue, like the floppyies, the CDs and the Tapes. So far so good.
What if my data base refuses to open up? So, the concept of BCP – Business Continuity Plan evolved. The more you store, the more is the risk and this risk is potent enough to cause a disaster. And, the DRP – Disaster Recovery Plan was conceived.

I am crammed with data, can I store some of my less needed data else where ? Yeah, sure, and, that was the starting point of Data Warehousing and Data Purging concepts.

Thus, the levels of sophistication being achieved by us are giving way to newer demands on the technology. And enormous time, energy and resources are being expended to devise newer controls. All this could have been okay but for the speed of technology obsolescence. By the time we are comfortable with one level of technology that level goes for a toss and a more sophisticated technology takes over. And, it is not easy for an industry like banking to switch gears at that speed.

4.2 Risk in Banking Industry

Risk and Reward go hand in hand. The banking fraternity best understands this wisdom. But, the million dollar question is how much risk is enough? Where to draw the line? When does risk go out of hands? The sub-questions arising out of this are complex enough. Therefore, the answers are not going to come by easily.

Bankers have awaken to this reality and in the recent past a lot of effort has been made to go into the genesis of this concept called risk. Your friendly local banker makes efforts and efforts are made at the multi-national level under the aegis of Basle II.

Risks reside in business processes and so business process mapping is a pre-requisite for risk identification. But, how many banks have documented the processes ? Not many. This will not make risk assessment comprehensive. The result can be detrimental to the interests of banks as a low risk can be put to costly mitigation processes, leaving a higher risk being unattended.

Bankers have identified three basic risks

- Credit Risks
- Market Risks
- Operational Risks

Many more risks are being unearthed like,

- Reputation Risks
- Information Risk
- Exchange Rate Risk

However, I shall not elaborate the areas of risks in banking. Rather, I would deal with the concept of Risk Management, which is the focus of this Paper.

4.3 Risk Management

Risk Management is not new to banking industry. The concept of risk evolved from the day the concept of banking evolved. From that day onwards bankers have been managing risks in their own way. Now, the induction of technology is calling for an effective framework to tackle risks. Earlier, the processes of control, audit and supervision were all guided by the transactions. Now, the industry has seen the need for shift from transaction based supervision to risk based supervision.

Accordingly, Reserve Bank of India has taken the lead in inculcating the need for RBS – Risk Based Supervision of banks in India, with the objectives of allocating supervisory resources and paying supervisory attention in accordance with the risk profile of each bank. The RBS process essentially involves continuous monitoring and evaluation of the risk profiles of the banks in relation
to their business strategy and exposures. This would be done with the construction of a Risk Matrix for each bank. Reserve Bank has proposed:

- Risk Profiling of the Banks.
- Setting up of a supervisory Programme
- Drawing up of a Monitorable Action Plan.
- Introduction of Enforcement Process and Incentive framework
- Induction of external auditors in banking supervision
- Imparting Change Management Implications for the banks.

**However, the success of this depends on the following**

- Quality and Reliability of Data
- Soundness of Systems and Technology
- Appropriateness of Risk Control Mechanism developed and adopted by the banks
- Supporting corporate, HR and organizational back up.

1. The quality and reliability of the data remains a suspect. It is neither because of the inaccuracy in accounting nor because of any fraudulent activities. It is due to the poor quality of “migration” to computerized environment without cleansing the data.

   Data cleansing and data enrichment efforts on an on-going basis, go a long way in ensuring smooth transition to computerized environment. Complacency and misplaced faith seem to be the causative factors of these lacunae.

2. Soundness of Systems and Technology is of course there. Here the trouble seems to be of a peculiar nature. Initially, bankers were reluctant to embrace technology, courtesy the belligerent attitude of the trade unions. When they did make a move to adopt it, technology had moved a notch upwards and most of the banks were saddled with the outdated technology. Private Banks entered the field at this stage and flaunted the state of the art tech savvyness. For a while it looked as if the Indian banking is about to be taken over by the private banks. Once the euphoria subsided, the fence jumpers came back to the nationalized banks’ fold. Then, the nationalized banks flexed their muscles and went shopping for the in-things in technological gizmos. Today, the level playing field is in place. Major nationalized banks, even some Co-Operative banks, are offering what the Blue Eyed Boys were boasting of all along. The days to come, in this sense, will be interesting to watch.

3. Then, let us look at the appropriateness of Risk Control Mechanism developed and adopted by the banks. This is also the focus of my Paper being presented to you now. On paper, yes, most of the banks claim to be having their RCM in place. Practically speaking the answer is NO. The reasons are multifarious,

4. Inadequate description of the term RISK. – Risk is a very complex expression to quantify. A sensible way of describing risk is by listing what it is NOT ! The real risk cannot be seen. A foreseen risk is not a risk at all. In accepting the expression that the RISK and REWARD complement each other, we unknowingly imply and involve the human wisdom. A human mind takes a calculated risk, a computer merely calculates. But, it calculates it so fast that the human being’s ability to take a decision is vastly facilitated by that. A banker earns his profit not by listing all these risks. He earns his profits by accepting the possibility of occurrence of some risks not listed in that compendium of risks. The logic is, if those risks materialize the reward will vanish. If not, it is a tribute to the
bankers’ maturity and the cause for swelling profits. The element of profit is loaded into the interest as an essential component. A banker arrives at a credit decision by the inter-play of his professional expertise, mental assessment of the borrower, aided by the diverse data – statements, statistics, ratios, percentages et all – complemented by his READING of the borrower / situation. Provided the data placed before him is accurate, his reading of the customer / situation, becomes THE deciding factor in extending the credit line. A Winning banker reads BETWEEN the lines, others just read! I am not talking of this invisible element in this context when I say, “inadequate description of the term RISK”. I am talking of the inadequacies of the bankers in deciding upon their requirements. I call these risks as quantifiable risks. Many bankers base their judgment relying on the adequacy of the data placed before them and not by calling for the missing links. This is what I call as the inadequate description of risk.

5. Lacunae existing in migration stage are not remedied. This is a simple problem but with a potential to cause damage. Data cleansing and data enrichment should be the preconditions to migrate to the new level of computerization. Many banks have overlooked this area and are content with the safe migration. This is a one time exercise which should be undertaken by the banks.

6. Lack of understanding of technology among the senior bankers. Age does prove to be a barrier in assimilating technology faster. Today’s generation adapts and adopts the current level of technology in real time. But, the older generation takes its time to comprehend technology.

7. Increasing demands of technology are very expensive – Technology in itself is never secure or so it seems. The framework of technology is so fragile that it needs the support of so many security measures. The hallmark of human brain is that, unlike technology, it is totally secure. But technology keeps discovering the need for many modes of security. The vocabulary of technology keeps expanding with newer terminologies like DRP – Disaster Recovery Plans, Hot Sites, Networked environment, Data Storing and retrieval, Firewalls etc. Every new development assures enhanced safety and security of data, but with a hefty price tag attached to it.

8. The threat of technology obsolescence – banks are physically disappearing and banking is flourishing! The concepts like Internet banking, Phone banking and Mobile banking coupled with the mobile work-force like the Relationship Managers and marketers-on-foot, who can sell you anything from a Credit Card to a Housing Loan, have broken down the physical walls of bank branches. Today it appears as if we have reached the zenith of technology. But, tomorrow is another day! Wifi and Bluetooth, emboldened by the broadband seem to be the goodies of tomorrow. The assimilation of these technologies themselves will be an expensive proposition. Then comes the attendant risks. As of now wireless technology is not considered to be very safe and secure. That itself makes us pay for the security infra-structure. Thus, one level of technology becoming obsolete and the dawn of a new level of technology place a heavy monetary burden on the end users, apart from causing the logistic gaps.

Lack of bankers with dual talent – Hands-on experience of banking AND the capacity to understand the current level of technology makes a good bank executive. The slow-intake of technology by the senior bankers has created a piquant situation where by the time and energy spent on technology assimilation is much more than the time devoted to their core-competence namely banking. Any executive who has this dual talent demonstrates a migratory trend..

9. Misplaced total faith in technology. Technology is what technology does and NOTHING more! Bankers get confused between their thinking faculties and the computing capabilities of the technology. One is not the substitute for the other! Technology is good when it is viewed from the
angle of its limitations. The moment you assume it to be anything more than a catalyst, the problems start. The speed, the accuracy, the analytical strength and its multi dimensional, multimedia presentation are no substitute for the capacity to think. Many bankers run the risk of

10. Bestowing this virtue also on the technology. Displaced solace drawn from CAR – Capital Adequacy Ratio. Capital Adequacy Ratio merely specifies the benchmarks of capital requirements, for indulging in every kind of banking activity. Adequate capital does not mean adequate cover towards risk management. Adequate capital only empowers a bank to indulge in specified banking activity and it provides no cover from the inherent risks. One should not hope to live longer merely by increasing the life insurance cover obtained by him! Still, should you choose to die, the stipulated insurance cover is certainly available for the asking.

11. Basle II places considerable responsibility on the shoulders of the bankers. Basle II calls for a complete overhaul of banking and pin-points the possible pit-falls. Again, the preparedness to adopt Basle II is misunderstood by the bankers as their umbrella to shield against the Risk management. Bankers assume the three types of traditional risks viz Credit, Market, and Operations to be the only risks. The other types of risks viz Reputation and Exchange Rate Risk are also equally potent ones.

12. A new kind of risk is adding to the list -Information Risk. Today, the ‘Branch’ barriers are broken and networked single entity is in place. This itself happens to be a great risk for the uninitiated. Further, there is no geographical boundary for the banks which is penetrated by a small gizmo called the mobile phone. Believe me, today a mobile phone is indeed capable of wreaking havoc in a technologically unprepared and un-safeguarded bank.

13. There is no substitute to hard work, particularly among the banking fraternity. The CONTROL duties allocated to them, to be performed by them and them alone, cannot be delegated to machines. Machines do not CONTROL anything. They merely translate your instructions into processes and actions. Human brain works on intuitions, a machine doesn’t. Therefore, you have to instruct your machine in unambiguous terms. Computer is said to

**Setting up of a RMA – Risk Management Architecture**

- Adoption of Risk-focused Internal Audit.
- Strengthening of MIS

Be a slave in the hands of its master and where the master falters, the roles get inter-changed! Some one has beautifully coined a joke that, a computer is just like your wife; it remembers every small mistake committed by you and pops it up at the least expected time.

5. **RMA – RISK MANAGEMENT Architecture**

Banks have realized that there is a lot at stake and have woken up to the realities of Risk Based Supervision. The stringent provisions of Basle II norms have given them an opportunity to clean up their stables. Compliance with CAR – Capital Adequacy Ratio, not an easy task, has added to the confidence level of the banks. Reserve Bank of India has also made it mandatory for all banks to fall in line with Basle II accord. Thus, the banks have taken the Risk Based approach in their stride and have initiated many measures, such as, management Information System and Information Technology.
• Addressing of HRD issues
• Setting up of Compliance Units.
• Reserve Bank has drawn up a schedule for implementation of this transitional task

CRISIL, the leading credit rating institution of India has drawn a road map for the implementation of IRM – Integrated Risk management by Banks by March 2005. CRISIL has drawn up another chart defining the datelines for IRM implementation. Most of the Indian banking industry has fallen in line and are geared up to perform in the IRM – Integrated Risk Management era.

6. CONCLUSION

As far as the structured Risk Management mechanism is concerned, we seem to be on course. Reserve Bank of India has also been relentlessly following up with the banks. As a result, the RMA – Risk management Architecture, is in place at most of the banks. Compliance with Basle II norms is giving a common identity to Indian banks and also ensuring a level playing field to enter the international banking arena. With the WTO provisions coming into being in a big way, Basle II norms being applied, core banking solutions in place, at major banks, Risk Management Architecture having been built and Reserve Bank of India continuing to play the role of a friend, philosopher and guide, Indian banking, in 2005, is poised for a lot of action coupled with safety and security.

7. REFERENCES

2. Retail Banking in the New Flavour by P S Sodhi: IBA Bulletin: December 2004
3. Retail Banking in India: The Key Growth Driver by Manoranjan Sharma: Professional Banker (ICFAI), February 2005
7. Retail Lending takes the lead: IIBF: November 2004
9. Retail Banking– An Overview: DrTS Padmanabhan: Banking Finance: October 2004
12. Retail Finance: A safe bet for the next five years: CRIS Infac (research subsidiary of CRISIL) study: The Best of CRISIL 2003