



## Technology & IT Governance in Indian Banking

**Gaurang Trivedi, PhDc**

Saurashtra University, Rajkot, India

[Trivedi.gaurang.d@gmail.com](mailto:Trivedi.gaurang.d@gmail.com)

Phone : 93276 82228

### **Abstract :**

Technology as the differentiator has become the driver of the Indian banking business since the past decade with the financial sector reforms providing firm foundation. The question of implementing technology has now transformed into 'how from the estimate, the cost per transaction through a branch, ATM and Internet works out to about Rs.66, Rs.22 and Rs.10 respectively, ignoring the extreme variations owing to the investment cost vis-à-vis the number and nature of the transactions. Moreover, technology has resulted in improved quality of service, any time/any where banking, focused product delivery, cross selling opportunities, multi-channel touch points for consumption of services, etc. This paper explores the various dimensions of technology that banks are considering to go hi tech. They will also touch governance issues. Finally it shows how banking has changed with the advent of modern technology in the Indian Banking Sector.

**Keywords:** Technology, Consumption, Foundation, delivery, Variations



## **1. Introduction**

Technology as the differentiator has become the driver of the Indian banking business since the past decade with the financial sector reforms providing firm foundation. The question of implementing technology has now transformed into 'how from the estimate, the cost per transaction through a branch, ATM and Internet works out to about Rs.66, Rs.22 and Rs.10 respectively, ignoring the extreme variations owing to the investment cost vis-à-vis the number and nature of the transactions. Moreover, technology has resulted in improved quality of service, any time/any where banking, focused product delivery, cross selling opportunities, multi-channel touch points for consumption of services, etc.

## **2. IT Governance – An overview:**

As the success of the banking business increasingly tends to hinge on the proper adoption and utilization of technology, IT Governance has assumed great significance. Simply put, IT Governance is nothing but a subset of Corporate Governance concerned about ensuring appropriate direction and control of IT activities to the benefit of an organization. IT Governance implies adoption of a defined framework of plan, do, check and act using performance metrics, key goal indicators and maturity models. This paper attempts to present the current status of technology adoption by the banks in India, the trend and opportunities, challenges and, finally,



with the developed appreciation of the overall context, it provides a practical guide to the process of IT Governance.

### **3. Status of IT adoption by banks:**

While the foreign banks operating in India made the beginning, the new private sector banks aggressively started pursuing technology-based service offering. However, the public sector banks had to move over from the load of the past legacy. The technology adoption by these banks had been dictated more by regulatory roadmap (notably, the two Rangarajan Committees, the Saraf Committee and the Vasudevan Committee) and mandates by CVC till recently than by any conscious alignment with business strategy. The poor communication infrastructure and the hostile labour unions of the then era did not help the cause either.

However, the rapid strides made by the technology sector and their swift adoption by the competitors since the middle of the past decade have forced these banks also to get into the act by beginning to offer IT-facilitated products and services. Today, almost every commercial bank branch is at some stage of technology adoption, be it Automated Ledger Posting Machines, Total Branch automation or Core Banking Solution (CBS). Keeping in view the large branch network of these banks, the Core Banking solution(CBS) is being laid across by them in a phased manner.

According to latest estimates, CBS covers around 40% of the bank branches accounting for nearly 70% of the 2 business volume. ATMs (including shared ATMs aided further by the National financial Switch initiative of RBI), internet banking, any branch banking, credit cards,



debit cards, etc, are being increasingly offered. There are over 11,000 ATMs across the country and 11 million net connections with around 23 million users.

#### **4. Trends and Opportunities:**

Technology has enabled the banks to conceive deliver, manage and integrate their products in line with the customers' need. A range of services is now provided to both retail and corporate customers covering different financial products, sweep-in/sweep-out facilities, channel financing, straight through processing, etc. to name a few. The multi-channel banking has acquired further dimensions to include third party payments, such as utility bills, through different channels including ATMs (the new ATM technologies come with nearly 150 types of offerings), mobile banking, etc. Further extension of RTGS in scope and width and the introduction of the cheque truncation systems should raise the customer expectation bar even higher. The day is not far off when the banks would be viewed more as technology companies offering banking products and services and services. While bank branches would continue to function, they would reorient themselves as relationship centers rather than routine banking service providers.

More technology spends are expected in the near future on areas such as implementation of data centre, expansion of CBS, Business Continuity Plan (BCP)/Disaster Recovery Plan (DRP) installations, IT Security, Electronic Data Interchange (EDI), Storage solutions such as Storage Area Network (SAN)/Network Access Storage (NAS) to take care of the hundreds of terabytes



of electronic data being generated, cheque truncation solutions, compliance to regulatory standards like Basel II implementations, customer Relationship Management (CRM) solutions, data ware house and data mining tools, channel integration, global treasury, performance monitoring tools etc. Another area of great interest concerns the mergers and acquisitions of banks wherein banks with techno-synergy can combine to benefit from the same. A case in point is the recent acquisition of Global Trust Bank by the Oriental Bank of Commerce. It is pertinent to note that, on an average, IT constitutes about 20% of the total expenditure of the banks. A major opportunity lies in the outreach to rural centers which could bridge the urban-rural digital divide. As noted in the draft report of the Bank's Internal Group set-up to examine the issues relating to rural credit and micro-finance, opportunities abound in the sector with several possible options like smart card-based Kisan Credit Cards, smart card solutions for Self-Help Groups (SHG), bio-metric ATMs, information kiosks with local language and voice facility, call centers, e-marketing of SHG's products through the bank's payment gateways, etc.

## **5. Challenges**

While development in technology have thrown-up an array of opportunities for the banks, they have also brought along a whole set of challenges to deal with. One of the major challenges has been the requirement to integrate several islands of applications developed on varied platforms for catering to different services over a period of time.



**5.1** There is, realistically speaking, no single banking solution available to take care of the enterprise-wide requirements like SAP in the manufacturing sector. In the circumstances, the option seems to be to go for the best of breed solutions.

**5.2.** As the life cycle of the technological products is becoming shorter, banks have to consider the costs of huge investments made in the hardware and software vis-à-vis their expected benefits. Unfortunately, the response of the customers to the services offered through the new channels can be fickle. For example, as per a survey conducted sometime ago by C Fore for Outlook Money in the four metros and Bangalore, 63% of the respondents used ATMs while 80% went to branches. The utilisation of tele/net banking was just around 4%. The insufficient penetration may be attributable to lack of awareness, fear, need for personalized service, unrealistic expectations and, in some cases (like need for java enabled mobile hand sets), upgradation cost of equipments with the customer. All these point to the need for appropriate publicity and education exercise. Further, the new dispensations should be carefully planned to prevent channel cannibalization unless otherwise they benefit in the long run.

**5.3.** The technological upgradation necessitated by obsolescence in due course would call for fool-proof mechanism for migration to the new system to ensure complete data integrity. Considering the need to maintain 24x7 real time capabilities, the switch-over to the new system should also be non-disruptive and totally transparent to the customers.

**5.4.** The risks arising out of outsourcing need to be suitably mitigated through proper selection proper selection of vendors, comprehensive agreement, etc. Dependency on third party service providers for provision of certain services (say, for example, ATMs) does pose certain



limitations on the range and level of services offered to the customers. An appropriate Service Level Agreement (SLA) with the vendors should cover the service needs of the banks.

**5.5.** Security is a major issue in a technology-based, networked environment. As per a study conducted by the Research International, 81% of the surveyed business units agreed that information/data is a key business asset and 86% perceived impact of crisis caused by failure of systems, etc. as drastic. An insecure system can expose a bank to serious operational regulatory and reputational risks. While some frauds may require computer expertise, most losses are caused by simple methods like identity theft through social engineering. An analysis of computer-related frauds leads one to the conclusion that most computer criminals are employees of the same organization. Bugs in system or application software also cause insecure environment. While it may be difficult to altogether avoid the limitations caused by the system software, proper support agreement with the application vendor and through user acceptance testing should mit

**5.6** Human Resources (HR) can be an important limiting factor in the IT-based delivery initiatives of any bank and, particularly so, of the Indian public sector banks. The average age profile of (he employees in these banks is back to around 48 years (as against about 30 years in new private sector banks) after the marginal initial dip consequent to the implementation of the VRS earlier. The process reengineering and change management aspects require motivation and intensive training of the staff.

**5.7** Apart from off-site reporting, the technological solutions should also take care of other regulatory requirements such as, Know Your Customer (KYC), Anti-Money Laundering



(AML), etc. Banks would be increasingly required to maintain a profile of each and every customer and filter the transactions not matching the profile in a straight through transaction processing (STP) environment. Further, regulatory issues concerning e-banking and risk management need to be kept in view.

## 6. Role of IT Governance

From the above discussion, it would appear obvious that IT Governance in the Indian banking industry has to assume the importance it deserves to seize the emerging opportunities as well as to manage the challenges. The responsibility in this regard should range from setting the IT strategy to reviewing the performance of the IT function and organisation for suitable direction. The following table illustrates the indicative responsibilities of the management vis-a-vis the IT Governance of a bank in setting the strategy, policies and reviewing as well as asking the right questions concerning various relevant areas:

## 7. IT Governance of banks

### Strategy and Alignment

- i) Does the bank have a clear IT strategy?
- ii) If so, how is it aligned to the business strategy?
- iii) Whether suitable IT organisation and appropriate resources are ensured in consonance with the IT strategy?



**IT Policy issues**

- i) Does the bank have a clear vision on the course of development of applications – outsourcing in-house?
- ii) Do documented outsourcing and in-house development policies exist in the bank? If not, what action has been taken to lay down these policies?
- iii) Has the IT security policy been established? Whether the bank has subscribed itself to IT standards such as ISO17799?
- iv) Does the bank follow a standard IT process governance framework such as Control Objectives for Information and related Technology (COBIT)?
- v) Whether the charter of the IS Audit function in the bank is exhaustive and the same is carried-out purposefully?
- vi) Is there a system in place to ensure compliance to legal and regulatory prescriptions and guidelines on e-banking, etc.?

**Proposals for new IT investment**

- i) Is the proposal in line with the approved IT strategy?
- ii) How does the proposal map to the business goal (short/medium/long term)?
- iii) Is it supported by a detailed project analysis?
- iv) If a new delivery channel is proposed, whether it is direct towards a niche segment or across the board? Determine the gaps in servicing any segment, check for new opportunities and provide suitable direction.



v) Is there a possibility of the new delivery channel negatively impacting an existing channel? If so, whether it is justified by the need for, say, retaining market competitiveness?

vi) Whether the proposal conforms to the bank's outsourcing/in-house development policy?

vii) Whether the surplus capabilities, if any, of the existing IT infrastructure can, instead, be utilised?

viii) Is the proposed technological solution state-of-the-art?

ix) Whether scalability (Le., expandable option) is ensured, where appropriate, to take care of higher level of transactions in future?

x) Whether redundancy, where appropriate, is ensured to enable uninterrupted supply?

xi) How will the proposed solution integrate with the existing enterprise wide IT environment? Whether open/generic standards are proposed to facilitate inter-operability?

xii) Whether the bank has/expects to have reasonable pool of expertise to manage the proposed solution? Proposals for imparting expertise - details.

xiii) If regulatory approval is required for the proposal, whether it has been taken/being taken?

### **Value delivery**

i) Review the performance of the projects - both cost and time overruns to be looked into.

ii) Direct establishment of metrics for evaluation and assess the results. For eg., cost/transaction to be worked-out across services delivered over different channels. Utilisation of cost effective channels vis-a-vis the other channels by the customers should be examined and



guidance the customers should be examined and guidance for improving the performance to be provided, where appropriate.

iii) Check the market share of the various IT-based services offered and provide suitable direction.

iv) Analyse the impact of IT-based services on the bank's bottom line and reputation and suggest the future course of action.

v) Determine the Rol and review the same against the projection for suitable action. Other positive results like retention of customers, addition of more customers, etc., should also be kept in view in the assessment.

### **Management of IT resources**

i) Determine whether IT resources are managed efficiently by seizing the opportunities offered by up-to-date technologies.

ii) Whether the IT resources are/will be able to support the -present and future business need efficiently and effectively?

iii) Is the bank committed to training and educating the staff on the operation and management of relevant technologies?

iv) Review the change management policies and procedures.

### **Performance measurement**

i) Establish the relevant metrics/benchmarks and review them - e.g., the instances and durations of downtime during the review period, number and nature of customer complaints received, utilisation level of network bandwidth/ system capacity, etc.



ii) Review the performance of third party vendors vis-a-vis the SLA.

### **Risk management**

i) Review the provisions for DRP/BCP for their adequacy and coverage. Whether the relevant procedures are reviewed and updated, simulated tests being carried-out, etc.

ii) Review the implementation of the IT security policy by the bank – whether detailed instructions and procedural guidelines are in place, whether suitable organisational structure has been established to implement the policy, steps taken for imbining the enterprise-wide security consciousness, etc.

iii) Set the direction for devising the metrics on the subject and review the taken for imbining the enterprise-wide security consciousness, etc.

iv) Set the direction for devising the metrics on the subject and review the same - e.g., number of outages in service caused by security attacks / denial of service, number of customer complaints received on non-availability of/deficient service, etc.

v) Verify compliance to regulatory prescriptions.

## **8. Conclusion**

In the industry, IT has graduated from being viewed as a Cost Centre to a Profit Centre. The line between IT and non-IT functions has got increasingly blurred. The IT personnel have to know the business and the business personnel should be IT conscious. The limited security-oriented perspective of IT has given way to wider areas such as value for investment, performance measurement, etc. As more and more Indian banks are moving towards



centralization and beginning to offer innovatively packaged multi-channel products involving huge investment, IT Governance has become the norm of the day. Thankfully, it is already practiced knowingly or unknowingly by the Top Managements of the banks in some form or other as observed from the several IT related subjects finding place in the agenda of most Board meetings. However, adoption of a structured IT Governance framework would enable a bank to perform its business in an orderly and effective manner benefiting the customers and, in the process, aid in its own survival and growth. This needs to be considered against the fact that nearly 70% of all customer defections is a result of poor customer service. After all, it is estimated that it costs 5 times more to acquire new customers than to retain the existing ones and that about 20% of the customers contribute to 80% of the profits.

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