Information Technology Challenges to Banks*

VEPA KAMESAM

It is always a pleasure to be amongst senior representatives of the banks to share some thoughts on the challenges faced by them. As a person who strongly believes that technology holds the key to the future success of Indian banking, I thought that I would focus the attention of my address to this area which although has been gaining attention has yet to be addressed with renewed vigour by most of the Indian banks.

The impact of Information Technology has been felt mostly in the financial sector in view of the competitive advantage for banks resulting in efficient customer service. The challenges facing the banking and financial community emanate from high growth in volumes of financial transactions, the effects of globalisation and the integration of many hitherto distinct markets. There is thus the need for not mere technology upgradation but also integration of technology with the general way of functioning of banks.

Computerisation is the tool that would give banks an edge is respect of service providing to their constituents, better housekeeping optimising the use of funds –and building up of MIS for empirical decision making which has a relationship with the critical aspect of asset-liability management which in turn has a direct impact on the balance sheet of banks as a whole. In order for computerisation to take care of the emerging needs, the recommendations of the Committee on Technology Upgradation in the Banking Sector (1999), have a direct bearing. These are:

- Need for standardisation of hardware, operating systems, system software, application software to facilitate interconnectivity of systems across branches
- Need for high levels of security
- Communication and networking – use of networks which would facilitate centralised databases and distributed processing
- Need for a technology plan with periodical upgradation
- Need for business process re-engineering
- Need to address the issue of human relations in a computerised environment
- Sharing of technology experiences

The latest direction of the RBI is the implementation of the Generic Architecture for networking of banks – consisting of the ‘tree topology’ for the older banks (as the Bank of Maharashtra) which have branches reporting to controlling offices and then to the head office and the ‘star topology’ for the newer banks which have connectivity between the branches directly by the head office - to enable banks to plan their computerisation of newer activities. The INdian FINancial NETwork (INFINET) established by the Institute for Development and Research in Banking Technology, provides the networked environment as a Closed User Group network,

now open to banks and financial institutions and is available for the transfer of funds related and other messages. It is essential that banks exploit the facilities made available by this network by wide usage of the network.

Payment systems using information technology tools is another area of focus - the Reserve Bank of India has played a lead role in this sphere of activity - with the introduction of cheque clearing using the MICR (Magnetic Ink Character Recognition) technology in the late eighties. The thrust has been on reducing the time taken for settlement of the clearing process. The latest in this series is the impending introduction of the Real Time Gross Settlement System (RTGS) which aims at interbank settlement of large value funds in a real time environment, for which work is on at an advanced stage by the Reserve Bank.

To facilitate growth in the government securities market and for smoother trading, the Reserve Bank is putting in place a Negotiated Dealing System (NDS) which provides for screen based trading of government securities; this facility would be integrated with the Securities Settlement System (SSS) which would take care of the accounting requirements of government securities to be performed in a centralised Public Debt Office (PDO) environment at the RBI.

To help banks in efficient funds management, and to provide for movement of funds using the accounts maintained by the banks at the various RBI locations, the Centralised Funds Management System (CFMS) is being implemented.

One of the benefits that technology has ushered in is the capacity for centralised data storage with decentralised processing, resulting in initiatives such as ‘Anywhere Banking’, ‘ Anytime Banking ’, ‘Shared Networks’ etc., which need to be popularised by more banks. For banks, one of the prime thrust areas is the reduction of the non-performing a ssets (NPAs); and for quick information flow on assets and for timely action for the reduction of NPAs, technology could provide a pivotal role, by means of sound management information systems based on data warehousing which helps in data mining for obtaining results in any manner so as to facilitate better decision making using empirical data.

Internet banking is emerging as a buzz word – but then it requires a great deal of security when online banking and funds related activities based on Internet are implemented. Suitable firewalls, proxy servers, authentication of messages, and other security features would have to be developed.

Yet another development gaining importance is the usage of cards – especially smart cards which can be used for access, security purposes by staff / authorised people and as multi-purpose cards by constituents of banks for operating on their accounts and for facilitating movements of funds in a secure and electronic manner.

The increasing dependence of banks on computer technology are receiving attention from banking regulators the world over from the perspective of addressing the risks of computer frauds. The Basle Committee of Banking Supervisors has addressed some of the operational risks arising out of security breach of banks computer systems and misuse of computer products in its document “ Risk Management for Electronic Banking and Electronic Money Activities” (March 1998). In a manner similar to the movements the world over, migration from paper based

payment systems to electronic (and other) systems is taking place at a fast pace. The primary challenges arising from this trend are the need to match the speed at which the changes are taking place - in the areas of regulation, control and supervision over these systems - some of which may be offered by non-bank entities.

The risk of failure of any system is the most important risk to be contended with, and the participants in any system would have to be insulated against this risk - which constitutes the systemic risk which is prime concern to central banks. Banks have to take the best possible risk control measures and ensure that adequate risk reduction mechanisms are in place before any new system is in place.

Large scale adoption of technology also has many challenges to be overcome. There would be a wide degree of variation in the levels of computerisation of operations of the banks and the induction of technology - as in computer hardware, operating systems and system software within a bank and across banks. Inter-operability is the key-word in this context apart from making software interfaces and maintenance of these.

As part of efforts towards facilitating inter-bank communication, the Structured Financial Messaging Solution (SFMS) of the Reserve Bank would provide for standardised message formats for all applications of banks where inter-bank message transmission or inter-bank funds movement is involved. I am sure that all banks would be using these message formats which would also aid them in ‘Straight Through Processing’.

Some of the opportunities for the New Age Banking are :

Broadening the base of computerisation to cover the activities at all branches and controlling office and ensure that these computers are networked is a first set of activities which banks have to make. Connectivity of computers could be achieved through the INFINET. The benefits of all these would be in better funds management, asset -liability management and risk management for banks and for the central bank in risk based supervision of banks including payment systems.

Emergence of services such as e-commerce and Electronic Data Interchange (EDI) for interconnectivity of banks and their customers accompanied by changes in the delivery channels of the products offered by banks to their customers - all resulting out of the high level of technology absorption at banks and the whole-hearted commitment of the senior functionaries of the banks.

Greater level of computer awareness among staff by means of training - through their own training establishments and from professional technical organisations.

An effective security policy offering a shared vision of how the controls in the workplace should be implemented with the objective of protecting data, information and eventually, the economic value of the organisation is also essential. These controls have to be supplemented by surveillance, monitoring and auditing to detect unusual usage patterns and deficiencies.

The next imperative is to conduct computer security audit. This is an activity that is gaining importance of late and is perhaps one of the best tools available for combatting computer crime. Audit of computer security –especially by professional organisations – is a vital requisite to

ensure that complacency within the organisation does not result.

The challenges detailed above all stare at our face and I am sure that the inputs gained by all of you would have put you in better stead to face them with more vigour and confidence at your respective institutions. I wish you luck in all your future endeavours and that you all continue the process of sharing of experiences. All these would result in technology offering itself as a good tool for improved customer service, better house-keeping and increased systemic efficiency and thus in increased productivity.

*** Keynote Address by Shri Vepa Kamesam, Deputy Governor, Reserve Bank of India at the National Seminar on Information Technology Challanges to Banks held at the Mahratta Chamber of Commerce, Industries and Agriculture, Pune on September 28, 2001.**