

Chapter - 1

INTRODUCTION

1.1.1 Information Technology and the Communication Networking Systems have revolutionised the functioning of banks and other financial institutions the world over. In the highly industrialised countries, access to any financial entity is on an on-line basis. Banks as well as other financial entities in India have only recently entered the world of information technology and computer networking. It will take some time for banks to adopt the state-of-the-art technology in their day-to-day operations. The financial sector reforms of the nineties and the opening up of the economy and its integration with global markets have facilitated speedier computerisation in the banking sector, as a means to minimising the costs of operations and improving customer services and the overall efficiency over the medium term.

1.1.2 The Committee on Banking Sector Reforms (Narasimham Committee – II) has in the Report, dealt with, in detail, the issues in technology upgradation and observed that most of the technologies that could be considered suitable for India have been introduced in some form or the other as a pilot. The desired success has not, however, been achieved. The Committee has also listed certain action points for implementation in this regard

1.2 Constitution of the Committee

1.2.1 In order to examine the various issues pertaining to technology upgradation in the banking sector and to suggest steps that facilitate implementation of the spirit of the recommendations of the Narasimham Committee–II, in this regard in a time-bound manner, the Reserve Bank of India appointed, in September 1998, a “Committee on Technology Upgradation in the Banking Sector” having representation from the Government, Reserve Bank of India, banks and academic institutions associated with information technology. The Memorandum dated September 5, 1998 relating to the constitution of the Committee is at **Appendix-1** The composition of this Committee is at **Appendix-2**. An extract of the relevant paragraphs of the Report of Narasimham Committee-II is given at **Appendix-3**.

1.2.2 The terms of reference for the Committee on Technology Upgradation are as follows:

a) To suggest necessary legislative changes for implementation of electronic funds transfer, with, inter alia, emphasis on :

- Encryption of Public Switching Telephone Network (PSTN) lines ;
- Admission of electronic files as evidence
- Treating Electronic Funds Transfers on par with crossed cheques / drafts for purposes of Income Tax etc. ;
- Record keeping ;

- b) To recommend approaches for development of Intra-bank/Intra-city communication network to facilitate connectivity with VSATs
- c) To suggest ways to bring about computerisation of Government accounts in an expeditious and efficient manner
- d) To work out modalities necessary for development and optimal utilisation of a secure, robust Wide Area Network (WAN) based on satellite with the necessary security systems, by banks and other financial institutions, to ultimately develop a sound and efficient payments system
- e) To examine methods by which technological upgradation in banks and financial institutions could be effected and in the context study the feasibility of establishment of standards, designing payments system backbone and standards relating to security levels, messages and smart cards by IDRBT.
- f) To make recommendations for development of data warehousing and data mining, with a view to creating opportunities for development of efficient Management Information System (MIS) in near future
- g) To recommend guidelines for outsourcing of programs development and implementation work, and
- h) To make recommendations on any other related issues.

1.3 Approach of the Committee

1.3.1 It took time to get confirmation of members' consent to be associated with the Committee. As a result, the first meeting of the Committee could take place only on November 6, 1998. The Committee's approach has been to focus on the terms of reference and provide practical solutions to the problems associated with technology upgradation in banks. It has not considered the possibility of new technologies emerging in the very near future that may make customer visits to banks redundant. The Committee also felt that even where technologies are developed to dramatically change the functioning of banks, it would take time for Indian banks to adapt to them. The thrust of the Committee is to provide guidance to the manner in which technology upgradation has to proceed about in the medium term, say of 3 – 5 years from now. It is essential that the question of technology upgradation is revisited and reviewed after five years so that there is orderly co-movement in both technology and management of banks. It is in this spirit, six sub-groups were formed to concentrate essentially on the terms of reference and recommend measures to accomplish them at the very first meeting of the Committee.

1.3.2 The Sub-Groups were:

1. *Sub-Group on Legislative framework for electronic banking ;*
2. *Sub-Group on Outsourcing of services and technology by banking sector*

3. *Sub-Group on strategy for intra-bank / intra-city networking*
4. *Sub-Group on Computerisation of Government Transactions*
5. *Sub-Group on standardisation and application development for VSAT network*
6. *Sub-Group on Data warehousing and MIS for banking sector*

The details on the constitution and composition of the Sub-Groups are at **Appendix-4**.

1.4 Technology Implications

1.4.1 Technology adoption and absorption in Indian banking so far has revolved round two basic themes viz., Retail Banking and Corporate Banking. Retail banking has leaned more on basic technology infrastructure. Modern technology tools like data warehousing and data mining are yet to be developed and access to modern technology has to be brought about to make the new products accessible. In corporate banking, however, there is dominance of specific products offered by few banks concentrated on very narrowly defined customer segments. The dominant features in the developed economies are “specialised banks targeting specific segments” and “banking with most friendly bank”, whereas in the Indian context, it is the principle of “all banks to all people” and “banking at the nearest bank”. The Indian challenge, therefore, is obviously to integrate the retail-corporate model into the rural-urban co-development paradigm. Higher level customer service, timeliness, efficiency and risk management can be developed at less cost, if infrastructure improvements are effected within a design of a comprehensive master plan.

1.4.2 The Narasimham Committee-II also observed that bank automation needs to be coupled with process re-engineering and expedited. The country’s IT status today, insofar as the banking industry is concerned, is that it is entering the Twenty-first Century with the industry designed during the Nineteenth Century to deliver results in the Twentieth Century.

1.4.3 Subsequent to the appointment of this Committee, a Notification No.8(1)(h) 98(2) dated November 27, 1998, was issued by the Central Vigilance Commission directing all the banks to computerise 70 percent of their business before January 1, 2001 to improve vigilance administration. The Notification is given at **Appendix-5**. Responding to the Notification, the Reserve Bank wrote to the Chairmen and Managing Directors of all public sector banks to draw a time bound programme for phased computerisation and proper monitoring. This opportunity will have to be utilised for adoption of industry standards so that, in addition to efficient customer service and better house keeping, the banks would prepare themselves to be ready for computer networking in order to ensure inter-branch connectivity and interface with their Treasury Department in an on-line real time environment. This development has been kept in view by the Committee while making its recommendations on upgradation of technology in banks.

1.5 Layout of the Report

1.5.1 The Reports of the Sub-Groups formed by the Committee were discussed by the Committee, keeping in view the recommendations of the Report of Narasimham

Committee – II at its meetings held in March and April 1999 and the views of the Committee were crystallised, which are detailed in this Report in 9 chapters, including the introductory chapter and a chapter on the Recommendations.

1.5.2 The issues relating to the inter-city and intra-city communication network architecture and application architecture for the Indian Financial Network (INFINET) based on VSAT technology and the strategies to be planned by the banks are dealt with in Chapter 2. The various standards for messages, operating system and system software alongwith the security standards are discussed in Chapter 3. Guidelines on the types of services that can be outsourced and for formulating a healthy outsourcing strategy by the banks are detailed in Chapter 4.

1.5.3 Chapter 5 has been devoted to suggesting ways of bringing about computerisation of Government accounts in an expeditious and efficient manner, while Chapter 6 discusses issues relating to Data Warehousing and Data Mining and the adoption of these new technological developments by the banks for evolving an efficient Management Information System (MIS) in the near future. The consequential legislative changes and proposals for separate enactments and amendments to the existing Acts and Regulations required for the implementation of the various recommendations relating to electronic fund / message transfer, etc, providing legal backing thereof, are detailed in Chapter 7.

1.5.4 Technology upgradation in the banking sector cannot be viewed in isolation. The related factors such as the systems and procedures now in vogue and how to re-engineer them, the availability of adequate personnel with necessary technical skills and the interaction among the banks in sharing the experiences insofar as technology issues are concerned should also be taken into account for achieving real upgradation in technology as envisaged by Narasimham Committee-II. These issues are discussed in Chapter 8.

1.5.5 Any literature, be it a report, paper or write-up, on technology issues will necessarily be strewn with technical terms and phrases, acronyms and abbreviations. Though the Committee has taken care to minimise the use of such technical terminology and to ensure the easy readability of the report, use of some technical terms could not be avoided. A list of such abbreviations, acronyms and short-forms, used in this Report is given at the end of the Report at **Annexure 18**.

1.6 Acknowledgements

1.6.1 Of the twenty two members of the Committee, three members could not associate themselves with the Committee for the entire term of the Committee on account of their transfers out of the functional areas of the respective institution and they were replaced by other officials. Accordingly, in March, 1999, Shri D.K.Tyagi, took the place of Shri Sudhir Srivastava, Director, Banking Division; Shri R.V.Iyer took the place of Shri R Narasimhan, of Bank of Baroda while Shri Ahsih Rege took the place of Shri K.S.Nayak of Standard Chartered Bank. The Committee sincerely acknowledges the support given by the three outgoing members and places on record its appreciation of their services.

The convenors and members of the Sub-Groups worked most diligently and produced reports of high quality. The Committee places on record their grateful thanks to them. Shri S. Ganesh Kumar, DGM and Shri G.Srinivas, AGM, members of the Payment Systems Group of DIT, provided invaluable support in drafting the chapter on outsourcing. The Committee sincerely thanks them all.

1.6.2 The secretarial support to the Committee was ably provided by the Department of Information Technology, Reserve Bank of India. The Committee wishes to record its appreciation to the Secretarial Team consisting of Ms.Nilima Ramteke, AGM, Shri A.P.Hota, DGM and Shri M.A.Srinivasan, GM, DIT, for organisation of the meetings of the Committee and for assisting the Committee in the preparation of background material and drafting of the Report.

1.6.3 The Member-secretary of the Committee, Shri S.R.Mittal has worked with a missionary zeal, and ensured that quality is not compromised while pursuing the large agenda on banking technology that touches upon myriad facets of banking. The Committee would like to record its gratitude to him, without whose efforts the report would not have been completed.