

ELECTRONIC BANKING (E-BANKING)



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Meaning of E-Banking

- E-banking implies performing basic banking transactions by customers round the clock globally through Electronic Media.
- Banking divisions have to be it based, with the spread of digital economy.
- E-banking is knowledge based and mostly scientific in using electronic devices of the computer revolution. The banking has to be E-banking in the new century.
- The salient features of virtual banking are the overwhelming reliance on IT and the absence of physical bank branches to deliver banking services to customers. The principal types of virtual banking services include:
 - Automated Teller Machines(ATMs)
 - Electronic Funds Transfer at point of sale(EFTPoS)
 - Smart cards.
 - Stored value cards
 - Phone Banking.
 - Home Banking
 - Internet and Intranet Banking

Traditional banking vs E-Banking

Traditional banking

The customer has to visit the branch of the bank in person to perform the basic banking operations. (account enquiry, funds transfer, cash withdrawals)

E-Banking

The customers to perform the basic banking transactions by sitting at their office or at homes through viewing their Account details and perform (PC or LAPTOP)

The customers can access the banks website for viewing their Account details and perform the transactions on account as per their requirement.

Customer are being provided with additional delivery channels which are more convenient to customers and are cost effective to the

ELECTRONIC DELIVERY CHANNELS

- Banking activities through the traditional delivery channel of branch networks are on the decline and customers can now do banking business from the comfortable confines of their homes using most modern electronic delivery channels. The information technology has enabled banks to increase the range of their products also and market them more effectively.
- The popular electronic delivery channels are the following:
 - » ATMs
 - » Smart Cards
 - » Tele Banking
 - » Internet Banking

ATMs

- ATMs of many banks are nothing but virtual branches, as customers can conduct any transactions, through the touch screens.
- They are user friendly and they have mass acceptability.
- At present, banks have started outsourcing and sharing of ATM services to reduce cost.
- Banks have started dispensing Railway tickets, Air tickets, Movie tickets etc. ATM
- ATMs with finger print scanning technology etc. are on the move.
- In future, a bank's ATM would function like a kiosk delivering more on non-cash transactions, there by reducing fixed and operating costs.

SMART CARDS

- The smart card technology is also widely used by bankers to market their products. Smart card, which is a chip-based card, is a kind of an electronic purse.
- The card also recognizes different voices and compares with the recorded original voice.
- The smart card is a microchip which will store a monetary value. When a transaction is made using the card, the value is debited and the balance comes down automatically.

TELE-BANKING

- Tele-banking is increasingly used as a delivery channel for marketing banking services. A customer can do wntire non-cash related banking over the phone anywhere and at anytime.
- Automatic Voice Recorded (AVR) or ID numbers are used for rendering Tele-banking services which have added convenience to customers.

INTERNET BANKING

- Internet banking reduces banks operating expenses mainly due to savings on prohibitive estate costs and expensive staff salary. The cost per transaction in internet banking will be only one-tenth of a regular branch transactions.
- *In internet banking, customer of a bank with PC and a browser, can have accounts to his bank's website, and thereafter perform various banking functions. This bank's services from anywhere and at any time.*

FACETS OF E-BANKING

E-Banking means the conduct of banking electronically. It calls for elimination of paper-based transactions and radical change in the banking operations. E-banking will operate through internet, extranet and intranet.

E-Banking must have at least the following dimensions:

- *Customer-to-Bank E-banking (EB)*
- *Bank-to-Bank E-banking*
- *Electronic Central Banking*
- *Intranet procurement*

- CUSTOMER-TO-BANK E-BANKING:

Banking products and services such as deposits, remittances, credit cards etc. as well as all important banking information's can be made available with easy access to customers on internet. Customer can make use of these services with no restricted office hours, no queues, no tellers and no waiting. The banking operations have to be guarded against unauthorized access by intruders.

- BANK-TO-BANK E-BANKING:

This form of electronic banking is for transacting inter-bank transactions such as money-at-call etc. This type of E-banking is driving extranets, which is restricted to bank only. It is secured and unauthorized access is less.

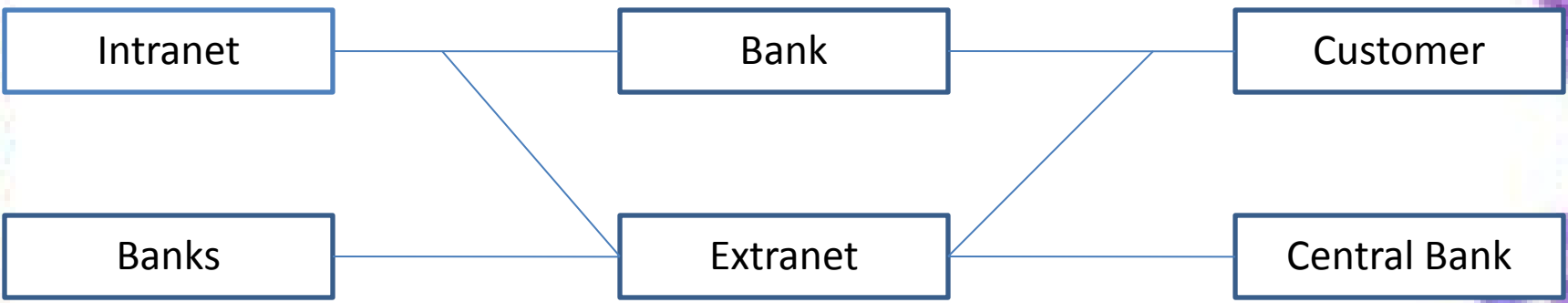
- ELECTRONIC CENTRAL BANKING:

This E-central banking all banks within the purview of a central bank are interconnected on extranet to facilitate clearing of cheques, management of cash reserves, open market operations, discounting of bills etc. In fact, the central bank has to be connected with the Government treasury on extranet to carry out its functions as agent of the Government. *The central banks on all countries can be inter-linked with the I.M.F World Bank and other international financial institutions through extranets.*

- **INTRANET PROCUREMENT:**

For the transactions that are internal to a bank, between the bank and its branches and subsidiaries, intranet procurements of banking is required.

The Extranet-intranet-internet relationship that exists in the process of E-Banking is presented :



TRUNCATED CHEQUE AND E-CHEQUE

TRUNCATED CHEQUE	E-BANKING
It is nothing but an electronic image of a physical paper cheque.	It is exact mirror image of paper cheque. It is electronic image of a paper cheque.
The addition of digital signature of the truncating bank or Clearing House to the truncated cheque is optional since the Negotiable instrument Act is silent on this issue.	It is generated, written and signed in a secured manner using digital signature which has been legally recognized. It may or may not have bio-metric signature. Digital signature of the drawer is compulsory.

ADVANTAGES OF E-BANKING

- Round the clock banking
- Convenient banking
- Low cost banking(service)
- Low cost banking (establishment)
- Quality banking
- Speed banking
- Service banking

- *Round the clock banking:*

world-wide 24hours and 7days a week banking services are made possible. In fact, there are no restricted office hours for E-banking performing of basic banking transactions by customers round the clock globally.

- *Convenient banking:*

E-banking increase the customer's convenience. No personal visit to the branch is required. Customer, simply sitting at their office or at home through PC or LAPTOP.

- *Low cost Banking(service):*

The cost of transaction through internet banking is much less than any other traditional mode.

- *Low cost Banking(Establishment):*

Banks can access to a greater number of potential customers without the commitment cost of physically opening branches . There is much saving on the cost of infrastructure.

- *Quality Banking:*

E-Banking allows the possibility of improved quality and an enlarged range of services being made available to customers.

- *Speed Banking:*

The increased speed of response to customer requirements under E-Banking will lead to greater customer satisfaction and handling a larger number of transactions at a lesser time.

- *Service Banking:*

E-banking creates strong basic infrastructure for the banks to embark upon many cash management products and to venture in the new fields like E-commerce, EDI etc. It adds conveniences to the entire banking services apart from widening the range of services.

CONSTRAINTS IN E-BANKING

The following factors contribute as major impediments in the smooth implementation of E-banking.

- Start-up-cost
- Training and maintenance
- Lack of skilled personnel
- Security
- Legal issues
- Restricted clientele and technical problems
- Restricted business
- Destruction of pricing mechanism

Start-up-cost:

- The connection cost to the internet or any other mode of electronic communication.
- The cost of sophisticated hardware, software and other related components including modem, routers, bridges, network management system etc.,
- The cost of maintenance of all equipment, websites, skill level of employees etc

Training and maintenance:

- The introduction of E-banking involved 24hours support environment, quality service to end users and other partners which would necessitate a well qualified and robust group of skilled people to meet external and internal commitments and bank has to spend a lot on training in the organization after necessary training. The bank has to outsource certain functions and services to maintain the level of standards and state of readiness.

Lack of skilled Personnel:

In a fast changing technological scenario, the obsolescence of technology is fast and hence there is always shortage of skilled personnel.

Security:

In a paperless banking transactions, many problems of security are involved. Providing appropriate security many require a major initial investments in the form of application encryption techniques, implementation of firewalls etc. In spite of implementations of several security measures, the possibility of a security breach cannot be ruled out.

Legal issues:

- It is uncertain as to what possible legal issues may pop up in future as banking on internet progresses.
- The legal issues should cover unauthorized access, and unauthorized modification of data, wrongful communication, punishment to be meted out to combat computer crime.
- To prevent computer crimes, the country's banking legislation needs to make suitable provisions with a thorough consultation and discussion among the legal as well technical experts.

Restricted clientele and Technical Problems:

- The phone connections are not always perfect and, on a home PC, the modern connection often breaks off, requiring another tedious log on.
- Local calls are not free generally and so the customer has to pay every time he checks his balances.

Restricted Business:

- Many deposits and some withdrawals require the use of postal services.
- Some banks have automated their front-end process for the customers, but still largely depend upon manual process at the back-end

Destruction of Pricing Mechanism:

- The internet may also destroy the basic business pricing models.
- The internet creates perfect market conditions where prospective consumers have access to more information and can more readily compare rates and financial products offerings.
- Now players in the field have lower costs than old banks.
- The web allows customers to easily compare all the products and their prices and sign-up for the products irrespective of location.

SECURITY MEASURES

- Most of the problems mentioned above are in the nature of teething problems and they can be eliminated over a period of time.

Authenticity controls	To verify identity of individuals like password , PIN etc.
Accuracy controls	To ensure the correctness of the data flowing across the network
Completeness controls	To make sure that no data is missing
Redundancy controls	To see that data is travelled and processed only. No repetitive sending of data
Privacy controls	To protect the data. Unauthorized access.
Audit trail controls	To ensure keeping chronological role of events that are occurred in the system.
Existence controls	To make sure that ongoing availability of all the system
Efficient controls	To ensure that the system uses minimum resources to achieve the desired goal.
Fire wall controls	Unauthorized users accessing the private network which are connected to internet.
Encryption controls	To enable only those who possess secret key to decrypt cyber text.