

## E – BANKING

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**Abstract :** Online banking (Internet banking or E-banking) allows customers of a financial institution to conduct financial transactions on a secured website operated by the institution, which can be a retail bank, or virtual bank,

The customers can do all of banking transactions 24 hours a day, seven days a week. Many of the transactions which are done over the counter can now be done on the Internet, on a computer, at home - or anywhere else in the world where internet services are available. In order for customers to use their banks online services they need to have a personal computer and an Internet connection. Their personal computer becomes their virtual banker who assists in banking transactions.

### INTRODUCTION

Information Technology is a buzzword in today's organizations and society. Banks today operate in a highly globalized, liberalized, privatized and a competitive environment. There is competition between various banks for providing more and more customer friendly services. In order to survive in this environment banks have to use IT or banking at the doorstep of customers. IT has introduced new business paradigm. It is increasingly playing a significant role in improving the services in the banking industry. Indian banking industry has witnessed a phenomenal developments due to sweeping changes that are taking place in the information technology. And globalization of banking services in the process Electronic banking has emerged.

### HISTORY

Telephones and televisions are used daily by many people; alongside these media the Internet has become more important and useful for an increasing number of people. The Internet has existed since the late 1960s but for most of that time it was only accessible to governments and for scientific research purposes. By the mid 1990s, as web interfaces improved, it became available to the public and E-commerce developed, allowing businesses to offer their products and services on the web. E-commerce became possible in early 1990s when the Internet was opened to commercial use. With the 24\7 availability of Internet commerce websites, it has become very important to the users to trace and track their transactions, as they occur to ensure the account status and stability. Thus, it has become very important to have banks that can serve, support and work with e-commerce companies and consumers 24\7. E banking provides banking services and systems that connect to ecommerce websites allowing customers to check their transactions online, allow businesses to accomplish their goals, and allow customers to move money around to accomplish their financial transactions

Evolution of e-banking: E-banking came into being in UK and USA. It became prominently popular during 1960s through electronic funds transfers and credit cards. The concept of web-based banking came into existence in Europe and USA in the beginning of 1980s.

The UK's first home online banking services known as Home link was set up by Bank of Scotland for customers of the Nottingham Building Society (NBS) in 1983. The system used was based on the UK's

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Prestel view link system and used a computer, such as the BBC Micro, or keyboard connected to the telephone system and television set. The system allowed on-line viewing of statements, bank transfers and bill payments. In order to make bank transfers and bill payments, a written instruction giving details of the intended recipient had to be sent to the NBS who set the details up on the Home link system. Typical recipients were gas, electricity and telephone companies and accounts with other banks. Details of payments to be made were input into the NBS system by the account holder via Prestel.

### **E-BANKING IN INDIA:**

In India e-banking is of fairly recent origin. The traditional model for banking has been through branch banking. Only in the early 1990s there has been start of non-branch banking services. The good old manual systems on which Indian Banking depended upon for centuries seem to be losing its place today. The credit of launching internet banking in India goes to ICICI Bank. Citibank and HDFC Bank followed internet banking services in 1999. Several initiatives have been taken by the Government of India as well as the Reserve Bank of India to facilitate the development of e-banking in India. The Government of India enacted the IT Act, 2000 with effect from October 17, 2000 which provided legal recognition to electronic transactions and other means of electronic commerce. The Reserve Bank is monitoring and reviewing the legal and other requirements of e-banking on a continuous basis to ensure that e-banking would develop on sound lines and e-banking related challenges would not pose a threat to financial stability. A high level Committee under chairmanship of Dr. K.C. Chakraborty and members from IIT, IIM, IDRBT, Banks and the Reserve Bank prepared the „IT Vision Document- 2011-17? , for the Reserve Bank and banks which provides an indicative road map for enhanced usage of IT in the banking sector.

To cope with the pressure of growing competition, Indian commercial banks have adopted several initiatives and e-banking is one of them. The competition has been especially tough for the public sector banks, as the newly established private sector and foreign banks are leaders in the adoption of e-banking. Indian banks offer to their customers following e-banking products and services:

- ★ Automated Teller Machines (ATMs)
- ★ Internet Banking
- ★ Mobile Banking
- ★ Phone Banking
- ★ Telebanking
- ★ Electronic Clearing Services
- ★ Electronic Clearing Cards
- ★ Smart Cards
- ★ Door Step Banking
- ★ Electronic Fund Transfer

### **THE THREE BROAD FACILITIES THAT E-BANKING OFFERS ARE:**

- ★ Convenience- Complete your banking at your convenience in the comfort of your home.
- ★ No more Qs- There are no queues as the banking transactions are done through mobile or PC at home or wherever internet services are available.
- ★ 24x7 service- Bank online services are provided 24 hours a day, 7 days a week and 52 weeks a year as the banks server operates all through day and night.

### **OBJECTIVES OF THE STUDY:**

- ★ To identify various e-banking services/products adopted by Indian banks.
- ★ To study the system of e-banking
- ★ To study the challenges faced by Indian banks in adoption of technology

### **HOW E-BANKING WORKS**

Internet banking provides benefits for the bank and for the customers using it. Because an automated website can be accessed 24 hours a day, E-Banking provides cost savings for banks because they don't need human operators to keep the bank services functioning. In order to access a financial institution's online banking facility, a customer having personal Internet access is required to register with the bank or the institution for the services, and set up a password for verification. Banks now routinely

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allocate customers numbers (also under various names), whether or not customers intend to access their online banking facility.

The customer can link to the customer number any of those accounts which the customer controls, which may be cheque, savings, loan, credit card and other accounts.

### **A BANK CUSTOMER CAN PERFORM NON-TRANSACTIONAL TASKS THROUGH ONLINE BANKING, INCLUDING -**

- ★ viewing account balances
- ★ viewing recent transactions
- ★ downloading bank statements, in PDF format
- ★ ordering cheque books
- ★ downloading periodic account statements
- ★ Downloading applications for M-banking, E-banking etc.
- ★ Bank customers can transact banking tasks through online banking, (NEFT & RTGS)
- ★ Paying third parties, including bill payments and telegraphic/wire transfers Investment purchase or sale
- ★ Loan applications and transactions.
- ★ Register utility bills and make bill payments

### **WHY IS E-BANKING IMPORTANT?**

Internet banking provides benefits for the bank and for the customers using it. Because an automated website can be accessed 24 hours a day, E-Banking provides cost savings for banks because they don't need human operators to keep the bank services functioning. The benefits are summarized below:

- ★ More transactions are carried out over the Internet than in the physical branches
- ★ Banks are offering more than banking services; they are offering services on the bank website such as tax services, as allowing customers to fill out the tax application online, calculating the taxes, tax payments etc.
- ★ People can bank from any place that has Internet, so it is not limited to a time or a place as it was with physical banking
- ★ With Internet banking people can check their account status and use other services.
- ★ Internet banking allows customers to be alerted via email and phone of every update and change that occurs in their account, which differentiates it from physical banking where customers have to go to the bank to check for updates.
- ★ Internet banking may be more cost effective for banks, which can then lower the fees for the customers

### **IMPACT OF E-BANKING ON TRADITIONAL SERVICES:**

One of the issues currently being addressed is the impact of E-banking on traditional banking players. After all, if there are risks inherent in going into E-banking there are other risks in not doing so E-banking transactions are much cheaper than branch or even phone transactions. As mentioned earlier, every bank today has to swiftly migrate to e-banking because of its inherent advantages.

E-banking is just banking offered via a new delivery channel. It simply gives consumers another service (just as ATMs did). Like ATMs, E-banking will impact on the nature of branches although it will not remove their value. The start-up costs of an e-bank are high. Establishing a trusted brand is very costly as it requires significant advertising expenditure in addition to the purchase of expensive technology (as security and privacy are key to gaining customer approval).

E-banks have already found that retail banking only becomes profitable once a large critical mass is achieved. Consequently many e-banks are limiting themselves to providing a tailored service to the better off.

Nobody really knows which of these versions will triumph. This is something that the market will determine. However, supervisors will need to pay close attention to the impact of E-banks on the traditional banks.

### **SECURITY THE HIGH RISK AREA**

The security for all netizens is of utmost importance. Day by day the online transactions are exposed to high risks as the hackers continuously monitor the online transactions for their own benefits. Financial institutions have set up various security processes to reduce the risk of unauthorized online access to a customer's records, The use of a secure website has become almost universally adopted. Though single password authentication is still in use, it by itself is not considered secure enough for online banking in

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some countries. Basically there are two different security methods in use for online banking.

The PIN/TAN system where the PIN represents a password, used for the login and TANs representing one-time passwords to authenticate transactions. TANs can be distributed in different ways; the most popular one is to send a list of TANs to the online banking user by postal letter. The most secure way of using TANs is to generate them by need using a security token. These token generated TANs depend on the time and a unique secret, stored in the security token.

Another way to provide TANs to an online banking user is to send the TAN of the current bank transaction to the user's (GSM) mobile phone via SMS. The SMS text usually quotes the transaction amount and details; the TAN is only valid for a short period of time. Normally the one time pass word provided online through sms is valid for half an hour.

Signature based online banking where all transactions are signed and encrypted digitally. The Keys for the signature generation and encryption can be stored on smartcards or any memory medium, depending on the concrete implementation.

Further, the interface and the pop ups are also have the time limit. Once the specified time is over, the interface becomes non operative.

### **ATTACKS / HACKING**

Attacks on online banking used today are based on deceiving the user to steal login data and valid TANs. Two well known examples for those attacks are phishing and pharming. Cross-site scripting and key logger/Trojan horses can also be used to steal login information.

A method to attack signature based online banking methods is to manipulate the used software in a way, that correct transactions are shown on the screen and faked transactions are signed in the background. The most recent kind of attack is the so-called Man in the Browser attack, where a Trojan horse permits a remote attacker to modify the destination account number and also the amount.

### **PRECAUTIONS / COUNTERMEASURES**

There exist several countermeasures which try to avoid attacks. Digital certificates are used against phishing and pharming, the use of class-3 card readers is a measure to avoid manipulation of transactions by the software in signature based online banking variants. To protect their systems against Trojan horses, users should use virus scanners and be careful with downloaded software or e-mail attachments.

### **INTERNET BANKING SECURITY**

Banks are very conscious of the security of all Customer information. All Online banking transactions sent over the Internet are specially encrypted using 128-bit encryption to maximise Internet Banking security.

Only registered users can access e-banking. When a customer registers he will receive a unique Access ID number and a temporary password. When first time service is used, the customers are asked to select a password of your choice. Therefore no-one else can access the information, and the customers must keep these numbers confidential.

E-banking includes a special service called 'Secure Email' which allows the customer to communicate with bank throughout online banking. This is provided in a secure environment to protect information. To protect privacy, the banks recommend not use standard Internet email when communicating information about your accounts.

### **E-BANKING SECURITY TOKENS**

The customers are required to enter Access ID and secret password to begin e-banking session. As a second level of protection, Bank provides all customers the option of Security Tokens. The customer will be required to have a Security Token if the customer is authorizing payments to third parties. It looks like a key ring with a digital number display. At the press of a button, it generates a six-digit number called an Authentication Key. A different number will be generated every 36 seconds and each number can only be used once. This reduces the risk of criminals conducting any unauthorized activity as they will not have the Token to access the Authentication Key.

**CONCLUSION:**

This paper highlights on the basic concept of e-banking and tries to cover the various areas of e-banking. In today's competitive world the banks in all countries have to resort to e-banking practices because of its inherent benefits to banks and to all stakeholders. Internet security no doubt is area of great concern but we cannot survive today without facing and overcoming the concerns.