



W H I T E P A P E R

E-BUSINESS

Any-Where Money

Internet Banking Systems

Abstract

With the rapid advances in the telecommunication systems and digital technology, it is difficult to predict how Internet banking will improve and expand over the coming years. However, with the number of computers increasing every year, the electronic delivery of services is rapidly becoming popular in the banking sector. The Indian experience of E-banking is gradually merging with its international counterparts. While the private sector and the multi-national banks have been first and expeditiously adopting Internet technology in client servicing, there is a gradual trend towards the major public sectors and numerous co-operative units to move in the same direction. A mix of policy support and security assurance should propel E-banking adoption further in India.

Net 4 India Limited

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Introduction

Competition and the constant changes in technology and lifestyles have changed the face of banking. Nowadays, banks are seeking alternative ways to provide and differentiate amongst their varied services. Customers, both corporate as well as retail, are no longer willing to queue in banks, or wait on the phone, for the most basic of services. They demand and expect to be able to transact their financial dealings where and when they wish to. With the number of computers increasing every year, the electronic delivery of banking services is becoming the ideal way for banks to meet their clients' expectations.

Online banking or e-banking can be defined as online systems which allow customers to plug into a host of banking services from a personal computer by connecting with the bank's computer over the telephone wires. Technology continues to make online banking easier for the average consumer. Banks are using a variety of names for online banking services, such as PC banking, home banking, electronic banking or Internet banking. Regardless of the given name, these systems certainly offer specific advantages over the traditional banking methods.

How E-banking helps

- **COMPETITION:** Banks feel the need to offer e-banking services today just to keep up with the competitors and to be able to retain their existing customers.
- **NEW MARKETS:** The Internet is not only a low cost approach to determine new distribution channels but also to establish a presence in new and up coming markets.
- **CUSTOMER SERVICE:** E-banking offers banks an opportunity to improve on their customer service by collecting and managing information pertaining to their customers and their individualistic preferences.
- **REVENUE POTENTIAL:** E-banking also provides an opportunity to build on their relationships with their existing customers. For Example, bank Web portals could offer purchasing services for business travel or insurance to generate more revenue.
- **REDUCE COSTS:** E-banking is an opportunity for banks to reduce their overhead costs as the need for physical branches is drastically cut down. The running cost of an ordinary bank account for 50-60 per cent of their revenues, whereas the running cost of Internet banking are a mere 15-20 per cent of revenues. For example, in India, Net banking is estimated to cost just INR 2 per transaction compared to the INR 43 incurred while banking at the branch.

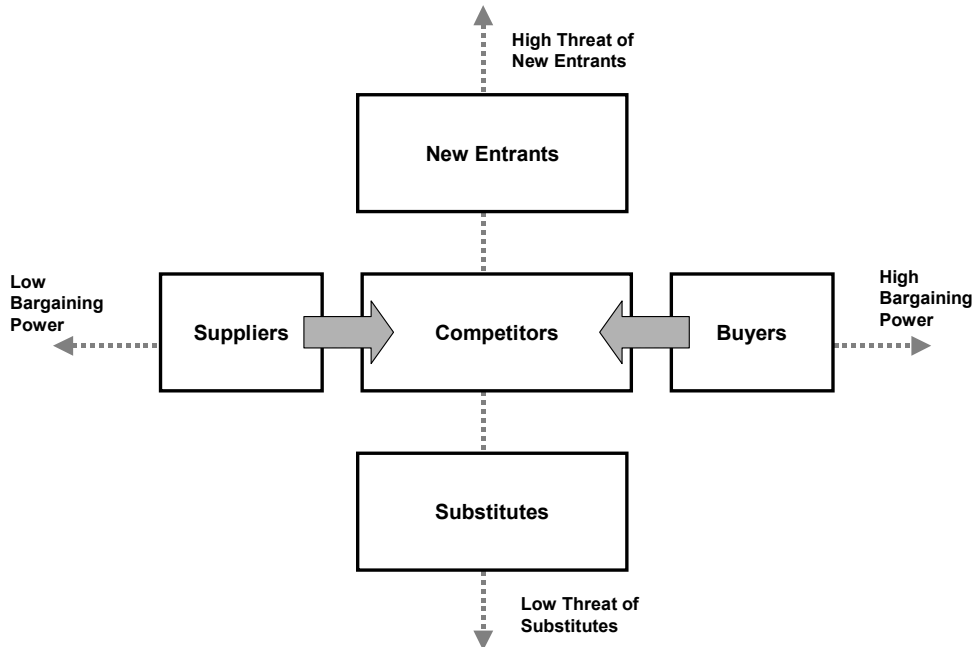
Porter's 5-Forces in E-banking

Porter identified the five competitive forces, which tend to drive down the profitability of any industry as comprising

- Threat of competitors
- Barriers to entry
- Bargaining power of suppliers
- Bargaining power of buyers and
- Threat of substitutes.

The application of the Porter's Model to the banking industry clearly shows that this sector has reached the mature stage of its lifecycle. The trend towards electronic delivery of products and services is particularly important to the financial industry, where the shift is partly as a result of the consumer's demand, but is also partly a result of the competitive environment. Large organizations initially introduced Electronic Banking to simplify their salary and payroll problems.

Figure 1: Application of the Porter's 5-Forces Model extended to the Banking Industry



BARRIERS TO ENTRY: Barriers to an entry in banking industry no longer exist. Competitors can come from any industry to “disintermediate” banks. Product differentiation is very difficult for banks, since most products sold in retail banking are constrained by legal or industry regulations, and, are therefore, readily limited.

BARGAINING POWER OF SUPPLIERS: Theoretically, the bargaining power of suppliers would be high in this industry, as there are a small number of fairly large players in the industry. But, the development of online banks and financial intermediaries in areas such as Mobile banking or home banking has lowered the bargaining power of the suppliers.

BARGAINING POWER OF CONSUMERS: Bargaining Power of Consumers is increasing. Switching costs are becoming lower with Internet Banking gaining momentum and as a result consumers’ loyalties are harder to retain.

THREAT OF SUBSTITUTES: Competition from the non-banking financial sector is increasing rapidly. Sony and Software giants such as Microsoft are attempting to replace the banks as intermediaries.

Advantage: Customer

- Consumers can use their computers and a telephone modem to dial in from home or any site where they have access to a computer.
- The services are available seven days a week, 24 hrs a day
- Transactions are executed and confirmed almost instantaneously.
- Also, the range of transactions available is fairly broad. Consumers can do everything from simply checking on an account balance to applying for a mortgage.
- Time saving and convenient.

Advantage: Organizations

- Improve customer access
- Facilitate the offering of more services
- Increase customer loyalty
- Attract new customers
- Increase customer satisfaction
- Reduction in costs, as the need for physical branches is reduced
- 24x7 client-servicing- for general services
- Reduction in cost, as the need for manpower is reduced
- Transparent and fast response
- Directly reflected on the account statement, need for data entry is eliminated.

Changing the Rules

ENTRY TO MARKET: The Internet has helped demolish one of the biggest entry barriers to the banking market – the need for a large bank network. The lower start-up costs and maintenance of the “Internet Bank Branch” makes it more attractive for start-up banks and for those wishing to break into new markets.

ONLINE SERVICING: Many new banking services for corporations will soon become available via the Internet and those already online will be greatly improved. With advances in technology, more and more corporations will be able to access the most up-to-date rates, select and confirm their deal, submit settlement instructions and confirmations via the Web and finally, check their accounts as the transaction is carried out.

TURNING THE POWER OF THE INTERNET INWARD: E-banking technology alone cannot only enhance what the bank can do for its customer, but it can also help the employees do their jobs effectively. For example: Union Bank of California has turned the search power of the Internet inward by creating information portals. These corporate Web pages allow employees to create customized desktops with information relevant to their jobs.

“NEW” BANKS: The Internet has inspired many corporations to throw their own hat into the banking arena although they appear to be primarily with the retail-banking sector at present. In Japan, 7-Eleven, Itochu and Sony have announced plans to venture into banking. The success or failure of these “new banks” is hugely dependent on their branding efforts, the proposition offered and its strategic execution.

The Do's of Net Banking

RELATIONSHIP: Banks and other financial institutions in India cannot go completely virtual, physical branches help forge a ‘relationship’ with the customer that a virtual bank cannot. Most customers in India prefer direct and personal contact with their bankers.

PERSONALIZATION: Banking Solutions become truly personalized when they are able to respond to the changing customer needs. For Example, Software that might tell you which credit card balance to pay off first, or alert you in advance when your Cheque will bounce. This level of personalization is still lacking in the banking solutions offered by Indian banks.

INTEGRATION: Another importance aspect is integrating customer service interface and channels, so that the customer deals with a single channel that caters to diverse needs such as kiosks, ATM's, Web TV, mobile phones, pagers and branch counters. Banks need to be 'one stop shops' for an entire range of personal finance products – from loans and insurance to mutual funds and even tax-savings instruments. This is being done by 'account aggregators' such as Yodlee, Corillian, eBalance and VerticalOne that lets you log into the website and track information as diverse as bank and credit card balances, value of investments, and frequent-flier miles from several sites, each of which has it's own username and password.

INNOVATION: Nowadays, banks need to depend on product innovation, expanding their range of their products and service offerings. Apart from just online accounts, e-banks would need to tailor specific products for the Internet, like online bill presentment or credit card with instant online approval. Many Internet Banks like Egg have taken the lead in offering innovative products like Egg card – a credit card that features an introductory zero percent interest rates.

Security Issues

One of the major issues concerning customers and organizations is the security aspect of E-banking. It is only natural that business customers show concern about sending their personal details and account numbers over the Internet. The security measures are implemented partly by the bank and partly by the customers themselves through their own vigilance.

TRANSACTION SECURITY: The data exchanged between the bank and a customer is coded or encrypted using secure servers with 40/128 bit SSL¹ servers, which sit behind firewalls. The likelihood of a computer hacker breaking through these security measures is very remote.

ACCESS SECURITY: On registration, normally two levels of security are used each time the customer accesses their account details with a user ID and password. A third level of authentication can be built in also, to protect misuse, for example querying the user's date-of-birth.

ACCOUNT HOLDER'S VIGILANCE: However tight the bank's security system is, it is not sufficient on its own. Business customers need to play their part too and exercise caution when banking online like not divulging their pin number or password to any third party, or by not leaving their pin lying around.

¹ Secure Sockets Layer

E-banking in India

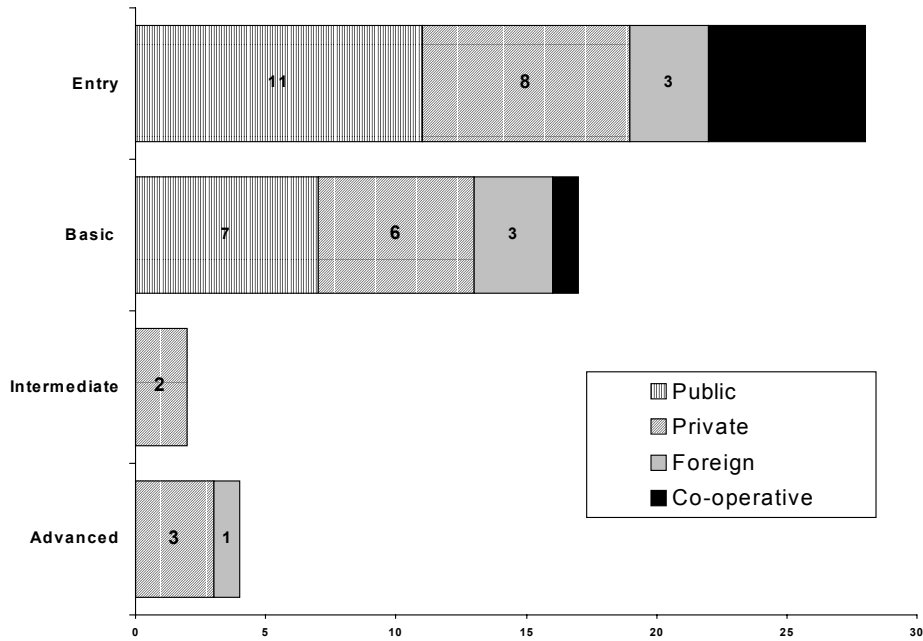
In India, the Internet banking market is in the earliest stages of development. Only 51 banks are currently offering any kind of Internet banking services. Out of which 55% are “Entry Level” sites, offering little more than company information and basic marketing materials. Only 8% offer “advanced” transactional services, such as online fund transfer, transactions and cash management services.

In general, the foreign and private banks are far ahead of the Public Sector or Cooperative Banks in terms of the number of sites and their level of development.

Classification of current Internet banking sites

- **ENTRY LEVEL:** Offers general information on the institution. Essentially a glorified brochure with no interactive capabilities. Example: General product information, company news, press releases.
- **BASIC LEVEL:** Increased functionality, offering all ‘Entry Level’ items plus basic interactive tools and some origination capabilities. Examples: Download on account applications and email to customer service.
- **INTERMEDIATE LEVEL:** Allow account access, tracking and viewing. Have the ‘skeletal’ features of a complete Internet bank. Examples: Check balances on-line, submit account applications electronically and reporting.
- **ADVANCED LEVEL:** ‘Complete’ Internet bank offering full functionality and security. Customers can securely move money to and from accounts online. Examples: Inter-account transfers, trading and electronic exchanges.

Figure 2: Projected number Internet banking site by class



Source: Internet research

By the year 2002, a large sophisticated and highly competitive Internet Banking market will develop.

Several factors will drive the increase:

- There is a lot of room to expand
- Increase in Internet usage to drive demand side pressure
- Emergence of open standards for banking functionality
- Growing customer awareness and need for transparency
- Global players in the fray
- Faster Response time
- Cost of Operations are less

Who offers what?

The Indian scenario

Citibank

- See up-to-date account information
- View transaction details
- View account statement for up to 12 months
- Order demand drafts to couriered free to over 200 locations
- Order a cheque book
- Stop payments
- Request a deposit slip
- Pay utility bills
- Email queries

ICICI Bank

- Account information - Summary of accounts and transactions
- Bill payment
- Funds Transfer including third-party transfers
- Request for cheque book, stop payment, account opening,
- Reporting loss of ATM² card
- Online e-shopping payments
- Communication with Account Manager
- Personalized viewing of content updates – personal finance, select articles on e-commerce, information technology, lifestyles, travel and news.

² Automatic Teller Machine

HDFC Bank

- Real-time account information including transactions
- Transfer money between accounts
- Bill payment facility
- Third party funds transfer – within HDFC bank
- Request for Demand Draft/Bankers Cheque
- Stop payment requests
- Opening fixed-deposit accounts
- Sending messages to the bank via e-mail

Global Trust Bank

- Account information and transaction details
- Depository accounts
- Fund transfer between branches
- Requests for Cheque Books, Demand Drafts\ Bankers Cheque, Term Deposit Account Opening, Renewal of Term Deposits and Change of Address
- Email queries
- Customize content as per the viewing preferences

Global E-banking practices

- Deposit Products online including Checking Savings, Money Market and Certificate of Deposits
- Check Account's Information,
- Receive airlines mileage for banking with certain banks – co promotion
- Receive and pay e-bills online
- Download account information to the personal finance management software viz., Quicken or MS-Money
- Access financial planning tools to calculate loan payments/ tax burden
- View time-trend of various financial indicators, including interest rates

- Transfer funds between accounts
- Interactive tools to help customers find an account that best suits their needs
- Single login provides access to multiple accounts held at a Bank
- Internal transfers from deposit A/c to loan A/c, Including Credit Cards
- Online mortgaging
- View a/c balances and transfer money through Web-enabled Cell Phones or PDA's.

Future of E-banking

With rapid advances in telecommunication systems and digital technology, it is difficult to predict how e-banking will improve and expand in the coming years. For example, Internet Banking via mobile phones using Wireless Application Protocol (WAP) or banking services through the TV screen via the new interactive TV channels may become established.

It is likely that the number of customers wanting to utilize online banking will increase which could lead to high street banks offering personalized services and better online customer care.

To combat computer crime and increase security levels, banks may consider new security measures such as iris, voice and fingerprint recognition, smart cards and electronic signatures.

Virtual Banking – Case Study

Virtual banks distinguish themselves from traditional banks in that 100 per cent of their business is on the Net. Online banking by comparison is a service offered by traditional banks where the user and the bank share a dedicated line that runs on software, also called “dial-up” banking. V-banks are able to provide better services and interest rates through tremendous cost savings on infrastructure. D. R. Grimes, CEO of Net.Bank said “half the expenses of traditional banks are in the branch system, yet those branches only deliver 10 per cent of the transactions. It’s a very inefficient distribution system.” Net.Bank offers ATM cards, Debit Cards, Online Bill paying and unlimited check writing. Net.Bank pays customers 3 per cent interest on their checking, compared to with a traditional banking industry average of around 1 per cent. Other offerings include money market accounts, certificates of deposits and mortgage loans. Net.Bank has been profitable for the past four quarters, after launching its initial public offerings in July 1997. Net.Bank expects to top \$1 billion in assets by year’s end and reach \$2 billion by the end of 2000. “Those are the numbers that would take a traditional bank 10 years to reach”, Mr. Grimes said.

However, traditional banks can retain their market share by:

- 1. Emphasizing their advantages relative to e-banks, and*
- 2. Reducing their expense-to-income ratios*

Furthermore, branches generate 80% to 90% of new deposits, Loans and investments in the U.S. Consequently, a traditional bank that also offers e-banking may have an advantage over both “regular” banks as well as e-banks.

The Banking sector, as a whole, is undergoing a transformation, primarily because of the advent of the Internet. Financial institutions are realizing that e-banking is not just another distribution channel for their services, but a revolution as the Internet and its associate development challenge the traditional banking practices and core business units.

Corporate banks are carefully considering the best way forward and many are viewing the e-banking phenomenon as an opportunity and not a threat. Smaller banks need to look at how they can best compete in this market. Developing their own Internet solutions is rarely possible and so they must look at other options to facilitate e-banking and e-commerce initiatives.

E-business platform from Net4India

Net 4 India Limited delivers e-business platforms, which are customized to meet individual organization requirement. These platforms are a combination of hardware, software application, OS environment, bandwidth and physical networks. For more information on e-business platforms from Net4India please write in to:

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