International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 08 Issue: 04 | April - 2024 SJIF Rating: 8.448 ISSN: 2582-3930

E-BANKING, ITS GROWTH & FUTUREIN INDIA

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EXECUTIVE SUMMARY

Businesses make investments in e-business and the technology that supports it. Applications for e-business, like supply chain management and customer relationship management, boost innovative product and service offers, strong customer relationships, and transaction efficiency and scope economies. Companies find it challenging to turn these advantages into revenues or economic value, though. Many enterprises that have started online have failed to generate profits. According to a2001 AMR Research Inc. survey, businesses would continue to spend more on e- business even in a recession. At best, though, these investments have yielded amediocre return.

Conventional Banking

To conduct standard banking functions including cash withdrawals, fund transfers, and account inquiries, clients must physically visit the bank's branch. However, clients using e-banking can complete these transactions 24/7 from the comfort of their homes or workplaces using desktops or laptops and electronic media. We call this banking—anytime, anyplace. Consumers don't need to wait in line, deal with tellers, deal with constrained banking hours—all they need to do is visit the bank's

website to examine their account details and do transactions as needed.

The Banking System in India

Scheduled and non-scheduled banks were distinguished under the Reserve Bank of India Act, 1934. The Second Schedule of the RBI Act, 1934 lists scheduled banks, which include state co-ops, regional rural banks, and commercial banks (both foreign and Indian). The banks not listed in this schedule are considered non-scheduled.

Three types of banks comprise India's organized banking system: co-ops, regional rural banks, and commercial banks. The Reserve Bank of India, the nation's highest monetary and financial body, is in charge of managing the banking sector. Banks for commerce, which have been in place for many years encourage urban savings and
make them available to trading and industrial organizations for working capital needs. Commercial banks were divided into public sector banks, sometimes known as nationalized banks, and private sector banks after 1969.

Prior to nationalization, the Indian banking system had shortcomings.

Commercial banks with a narrow focus that were privately owned on a regional or sectarian basis initially established on an ethnic and provincial basis. These organizations failed to contribute appropriately to the nation's intended development. Due to recurrent bank failures, deposit mobilization was sluggish and public confidence in banks was diminished. Savings were frequently allocated to more secure ventures, such as the postal service. Money was mostly handed to traders, which made agricultural products appear artificially scarce. To solve this issue, the Reserve Bank of India intervened by imposing selective credit limitations on a number of commodities.

Banking's Development Since Nationalization

Indian banking was primarily in the private sector following independence. In order to create the State Bank of India, the government started nationalizing banks in 1955, starting with the Imperial Bank of India. The largest nationalization took place in 1969 with the nationalization of fourteen significant commercial banks. In 1980, the government took control of 80% of the banking industry through another round of nationalization that placed a strong emphasis on social banking.

India's Banking Development Since 1969

Since nationalization, there has been a noticeable increase in bank branches and deposits. The percentage of rural branches has gone up, which has improved the mobilization of rural savings. Credit to the priority sector has also grown significantly. Regional differences have decreased, and there is currently less banking industry specialization.

With the advent of services like cash dispensers, 24-hour cash withdrawal, quick account details, and money transmission over computer networks, banking has seen significant technical advancements in recent years. Consumers now bank from the comfort of their own homes, and financial institutions are launching credit, debit, and ATM cards with the goal of completely revolutionizing the industry.

INTRODUCTION

The automated provision of both new and old banking products and services to clients directly via electronic, interactive communication channels is known as internet banking, or e-banking. Through public or private networks, such as the Internet, it makes financial institution clients, individuals, or enterprises able to access accounts, conduct business, or get information on financial products and services. To access e- banking services, customers use intelligent electronic devices such as Touch Tone telephones, automated teller machines (ATMs), personal digital assistants (PDAs), PCs, and kiosks. Because the Internet is a publicly available network, this talk will concentrate on Internet-based services even if the dangers and restrictions apply to different e-banking access channels in a similar way.

The banking industry has changed due to competition and ongoing changes in lifestyles and technology. Nowadays, banks look for new methods to offer and set themselves apart from their competitors. Corporate and retail customers alike no longer want to stand in line at banks or wait on the phone for basic services. They anticipate being able to conduct business wherever they like, at their convenience. The best approach for banks to satisfy customer expectations as the number of computers rises is through the electronic delivery of financial services. Customers can use telephone cables to connect to the bank's computer and access banking services from their personal computers through online banking, also known as e-banking. Withbanks utilizing a variety of terms including PC banking, home banking, electronic banking, or Internet banking, technological improvements continue to make

online banking easier for customers.

Cash management, wire transfers, automated clearinghouse (ACH) transactions, bill presentation and payment, and wire transfers are a few instances of wholesale products and services offered by online banks. Balance enquiries, fund transfers, transaction information downloads, bill presentation and payment, loan applications, investment activities, and other value-added services are examples of retail and fiduciary goods and services. Furthermore, offering Internet access as an Internet service provider (ISP) is another aspect of online banking services.

In the past, banks processed items, processed transactions, and used management information systems using information systems technology. In order for banks to reach clients nowadays, websites, email, and electronic bill presentation and payment methods are essential. For years, national banks have been experimenting with online banking; at first, they used closed systems that could only be accessed via cable TV ordial-up connections.

The global availability of banking products and services, however, has eliminated geographical and proprietary system obstacles and increased the market for banks due to the broad proliferation of the Internet.

ADVANTAGES OF E-BANKING

Benefits for Clients

- Customers can access services from home or any location with computer access byusing their computers and telephone modems.

Services are conducted and confirmed nearly quickly, and are available around-the-clock.

- There is a wide range of procedures available, ranging from applying for a mortgageto checking account balances.
- Convenient and time-saving.Benefits for Companies

- Expand the range of services and enhance client access.
- Boost satisfaction, draw in new business, and strengthen customer loyalty.

- Cut expenses by lowering the requirement for personnel and physical branches.
- Offer clients round-the-clock assistance and guarantee prompt, transparentresolution.

Get rid of the need to enter data because account statements would automaticallyreflect transactions.

OTHER ADVANTAGES OF INTERNET BANKING

(i) Banking around the clock

Customers can carry out routine financial operations around the world, around-the-clock, with e-banking. For e-banking, there are no set office hours.

(ii) Easy Access to Banking

Consumers no longer need to physically visit the branch to do ordinary banking tasks because they can use a PC or laptop to complete basic transactions from their home orplace of business.

(iii) Inexpensive Banking

Adoption of technology has decreased operating expenses. Compared to traditional methods, online banking transactions are far less expensive. Banks may access a larger pool of prospective consumers without incurring the commitment costs associated with physical branches, which also results in savings on infrastructure expenditures. Furthermore, banks require fewer employees.

(iv) Banking at a Profit

Enhancing customer satisfaction and drawing in new business can be achieved through quicker response times to consumer requests.

(v) High-quality banking

Customers can get a greater variety and higher quality of services with internetbanking.

(vi) Quick Banking

More customer satisfaction and quicker transaction processing are the results of the quicker reaction to client needs. Better customer retention is facilitated and customer convenience is increased as a result.

(vii) Financial Services

Instant credit, one-day credit, instant utility bill payment, and instant fund transfers via Internet banking are just a few of the cash management tools that banks can provide (E-banking).

SERVICES PROVIDED BY E BANKING

Services	Description
Funds Transfer	You can move money between accounts under the same customer ID (i.e., inside the same branch) thanks to the funds transfer option.
New FD/RD Request	To request a Fixed Deposit or Recurring Deposit, complete the online form and send it to the bank. Within a day, your branch will process the request; you can check on the status of your request by getting in touch with your branch.
Bill payment	accessible to all clients who have set up an online banking account. Customers can receive, check, and pay their bills online via ePay. EBPP, or Electronic Bill Presentment and Payment, is the foundation of ePay.

Demand Draft/PayOrder	To obtain a Demand Draft, complete the online form and the bankwill save it. You can call your branch to find out the status of yourrequest, and it will be processed by your branch within a day.
Pay Order Request	Send in your online request for a pay order, and the bank will keep a copy of it. The request will be processed by your branch within a day, and you may follow its progress via getting in touch with your branch.
Flexi FD Details	Check up your flexi FD's details online.
TDS Inquiry	View your A/C deposits' Tax Deducted at Source data.
Link to Flexi FD	To link your FD with a Flexi FD that will be kept on file with the bank, submit your request online. Within a day, your branch will process the request; you can check on the status of your request by getting in touch with your branch.
Pending Request	See the requests you've submitted and those that are still awaiting processing. You can also withdraw a previously submitted request.
ChequeBook Request	To obtain a Cheque Book, complete the online form and it will be kept in the bank's database.After your branch processes the request, you can pick up your check book there, via courier, or at the addressyou have on file with the bank. The request will be processed withina day.

Account Summary	View the summary of balance in your account, click on A/cDetails to view details of your highlighted account.
AccountDetails	View the detailed description of your account, based on three criteria month range, date range, and all the transactions. Onecan also take print of that.
Standing Instructions	Submit your request electronically for Standing Instructions

DANGER IN INTERNET BANKING (E-BANKING)

There are security and customer trust concerns when using the internet for banking. The possible dangers of offering retail banking services through electronic channels are examined in this investigation. It gives a summary of the current situation and talks about these hazards and the ways in which they can be mitigated. The intentionis to provide you a clear understanding of rival tactics and an educated viewpoint on the e-risk industry so that you may make decisions with confidence regarding this important topic.

The goal of Dangers in E-Banking is to reduce risks as much as possible while maintaining your company's competitiveness in luring in new and existing electronic clients. It makes this happen in three key ways:

Making educated selections is made possible by identifying the main dangers that have been encountered thus far and highlighting regions that could eventually pose serious risks to e-bankers.

- Enabling the analysis of best practices and lessons learned by disclosing howforward-thinking banks have handled risk challenges and what risk measurement and management strategies have been implemented.
- Examining the variety of risk mitigation techniques and instruments that are already available, such as insurance market solutions and business continuity management,

and gazing forward to ensure that future strategies may be developed while keepingan eye on what is currently achievable in terms of risk prevention.

Dangers in E-Banking provides helpful guidance that is based on current research, analysis, and instructive case studies. It is an essential guide for management within retail banks and other financial institutions.

This document is meant to serve as a strategy guide for senior management at building societies and retail banks that offer financial services and information via email and websites. Directors with international responsibility, consultants, business development directors, compliance officers, strategic planners, risk managers, IT managers, marketing managers, chief executives, sales directors, finance directors, and managers in charge of new product development, e-commerce, and research and development will find it especially helpful.

In conclusion, Dangers in E-Banking offers a list of current and future e-risks as well as useful advice on how to set up your company to reduce these risks. It also provides instances of how businesses are now handling e-risks and insights into the current status of internet law. If the technology in your banking institution is internet based, ensure you are making informed decisions by ordering your copy of Dangers in E- Banking today.

COMPANY PROFILE

One of the biggest banks in India, ICICI Bank has more than 1,000 ATMs and a network of about 540 branches and offices. This commercial bank operates in the private sector and provides a broad variety of banking products and financial services via a number of specialized subsidiaries and delivery channels.

The bank's treasury operations, retail banking, and corporate banking are its main operations. In order to boost its non-interest revenue, ICICI Bank offers fee-based corporate services and products in the corporate banking space, including standby letters of credit, cash management services, documentary credits, and treasury-based derivative products.

Payroll accounts, online bill payment, remittance services, credit cards, debit cards, smart cards, depository share accounts, retail loans against time deposits, and loans against shares for initial public offerings (IPO) are just a few of the retail goods and services that ICICI Bank provides.

The Treasury Division's primary business in terms of gross loans is corporate banking, although it also engages in foreign exchange and local currency activities.

By acquiring the Bank of Madura, ICICI Bank improved its standing in the financial sector. The combined company gained a number of benefits from this acquisition, including a bigger balance sheet, greater geographic reach through branch networks, a larger customer base with potential for cross-selling, a foothold in the small and medium-sized enterprise (SME) sector, and chances to grow microcredit and agrobusiness.

E-finance activities utilized as a competitive edge are being driven by cautious optimism, a click-and-mortar approach, natural momentum from non-banks (e- commerce sites), and corporates embracing e-supply chain interfaces.

The growth of online bill payment, online trading, RBI's ECS/EFT (e-Cheques), and e-commerce payment systems has led to an increasing adoption of e-finance.

From loans to logistics and travel services, SMEs need a wide range of financial and non-financial services. Through specially designed portal interfaces, portals must replicate current local bank relationships and link to channel partners providing a broad range of goods and services. Should parent corporate clients implement e- supply chain interfaces, SMEs will adjust to e-Finance links.

LITRATURE REVIEW

Prior Research

1. The 2010 Banking Industry Vision

By: Indian Overseas Bank Managing Director and Chairman of the IBA Committee,

S.C. Gupta

The goal of the study is to develop a robust, sound, and globally competitive financial system that offers integrated services to clients in every market sector. It emphasizes on making the most of human and technological resources, implementing ethical and best practices in accounting, and meeting corporate and social obligations to allstakeholders.

2. E-Banking: A Developing View of the Tax and Regulation Concerns By: Madhu Vij from Delhi University

This study looks at how technological advancements, especially in the field of information technology, have changed the needs of businesses. It talks about how important IT is to new business models and how financial services are getting better.

3. Internet banking systems that offer "Anywhere Money"

The report examines the unpredictable expansion and advancement of Internet banking in the upcoming years due to the rapid advancements in digital technology and telecommunication networks. It highlights how the growing number of computers has led to an increase in the acceptance of electronic service delivery in the banking industry. Multinational banks and the private sector are leading the way in using Internet technology for customer service; significant public sectors and countless cooperative units are following suit gradually.

4. Rolta's RFIO solutions and smart cards

The present study underscores the necessity of implementing secure protocols to ascertain and validate users who are gaining access to data and information within their physical and IT infrastructure in the digital realm.

5. Electronic governance in the new millennium

This paper addresses the necessity of adopting new technologies and defines the notion of e-Government. It describes actual government services while examining the consequences of e-Government.

6. E-Learning in Banking: Views and ProposalsWritten by: M.V. Sivakumaran and V.P. Gulati
This study shows how the idea of distant learning has been transformed by the internet. It draws attention to elements that set superior and superior initiatives in the banking sector apart from mediocre ones.

PROBLEM OF THE STUDY

- Banks encounter new difficulties with any new technology, one of which is customer service. In order to guarantee that consumers receive timely support, banks must set up a dedicated customer relations department. A bank's reputation can be swiftly harmed by significant issues or catastrophes. Gaining the trust of customers requires proving that online banking is dependable. The software used to support the network is another significant problem in banking, especially with regard to laws and regulations. Businesses must make sure that their software is capable of identifying transstate legal infractions.

OBJECTIVES & SCOPE OF THE STUDY

Objectives

The following are the report's objectives:

- To investigate how information technology functions in contemporary banking systems, namely in determining client needs and providing specialized solutions to address them.
- To research how banking changed both before and after liberalization, and toexamine how e-banking is structured.
- to look into the ways that IP-based networks and core banking applications can be used to automate processes and centralize operations, greatly increasing productivity and efficiency. Furthermore, investigate how banks might save money by providing a variety of services over the same network thanks to IP-based networks.
- to investigate security techniques to reduce the dangers connected with onlinebanking and to assess the risks involved.

Scope of E-Banking

- Having access to transaction histories and account balances, including year-to-date data.
- Transferring money across accounts.
- Transfers that are scheduled.

Examine past transactions, inquiries, pictures, withdrawals, reorders, and paymentstops.

- Imaging credit cards and statements.
- Online loan applications and payments.
- PIN changes.

Importance of Online Banking

Competition: The main factor influencing the growing adoption of Internet banking technologies is competitive pressure. Online banking is seen by banks as a way to draw in new clients while retaining current ones.

Cost-Efficiencies: Compared to traditional branches, national banks can offer banking services online for substantially less money each transaction. For instance, delivering physical transactions at a branch usually cost more than $1 as of mid-1999, whereas delivering transactions online only cost pennies. This trend of declining costs isexpected to continue.

Geographical Reach: By using more affordable distribution methods and a wider geographic reach, online banking enables greater client interaction. While some banks only conduct business online, others use it as a backup delivery method.

Branding: By making a wide range of goods and services easily accessible, internet banking gives national banks the chance to establish and nurture enduringrelationships with their clientele.

Customer demographics: A wide range of customers, both early adopters of new technology and those who prefer traditional branch banking, are served via online banking. National banks must comprehend its clientele and provide the appropriate range of channels for distribution in order to satisfy the demands of diverse market niches.

ISSUE IN INTERNET BANKING

To improve the security of electronic commerce, financial institutions, card associations, and vendors are working together to build an Internet payment infrastructure. It is anticipated that the number of people using the Internet to buy products and services will increase significantly, yet trust between businesses and customers depends on security.

1. Safety

One major concern with Internet banking systems is security. Banks need to put in place physical and logical security measures that fit their risk tolerance and the sensitivity of the information. Network connectivity via the Internet and direct dial-in are both susceptible to manipulation and interception. To guard against security lapses and guarantee the integrity of the network and the data it manages, banks require strong internal controls.

2. Verification

Ensuring transaction security is crucial for maintaining public trust in online banking. Technologies for symmetric and asymmetric encryption are frequently employed for party authentication and communication security. By using public and private keys, asymmetric cryptography makes sure that messages can only be decrypted by the intended receiver. Like an online notary, certificate authority are essential to the process of identity verification in cyberspace.

3. Have faith

Systems for online banking depend on trust. Certificate authorities function as reliable intermediaries to authenticate parties involved in transactions, akin to banks in conventional credit letters. They provide identity verification online and, in exchange for a fee, enable safe transactions.

4. The absence of rejection

Unquestionable evidence of the sender and recipient's involvement in a transaction is guaranteed by nonrepudiation. Technologies using public key encryption guard against sender or recipient rejection or repudiation. State laws' applicability to digital signatures and electronic authentication is still developing, nevertheless.

5. Confidentiality

Customers are becoming more concerned about privacy. To keep the public's trust, banks need to take proactive measures to resolve privacy concerns. As electronic commerce and the Internet proliferate, public concerns about the appropriate use of personal information are certain to rise.

6. Accessibility

For the general public to remain confident in a network environment, availability is essential. Customers need to be able to access and use a network around-the-clock. Toensure system availability, capacity, redundancy, performance monitoring, and business resumption are important factors to take into account. Ensuring a high degree of availability for Internet banking systems requires regular monitoring of capacity, downtime, and performance.

RESEARCH METHODOLOGY

The procedures a researcher uses to carry out research activities are included in research methodology. The following research methodologies will be used:

1) Investigative Studies

Our goals in exploratory inquiry are:

i. To increase comprehension of the conundrum or issue.

ii. To compile background data on the subject in order to focus the research problem.

iii. To locate references and sample questions that could be applied as assessmentquestions.

The literature search that starts the exploratory phase include reviewing books, journal articles, or scholarly material that is relevant to our problem. The online catalog of thelibrary as well as one or more bibliographic databases or indexes are used in this

search. Finding important publications and eminent authors can be accomplished by consulting handbooks or specialized encyclopedias. You can also create a list of important terms, persons, or events influencing our issue. As needed, the study plan will include additional reference resources. Expert opinions and self-analysis serve as the foundation for analysis and data interpretation.

Data Source

The following kinds of secondary data will be used in the study:

- Magazines - Business World - India Today - Business Today

E-Banking Constituencies

The configuration of e-banking systems can differ greatly based on a number of criteria. Four criteria should guide financial institutions in selecting their e-banking system configuration, including outsourcing partnerships:

1. E-banking strategy goals;
2. Equipment, systems, and activity scope, scale, and complexity;
3. Technology know-how; and
4. Security and internal control requirements.

Financial institutions have the option of outsourcing any component of their e- banking systems to outside parties or maintaining their e-banking services in-house. Financial institutions may receive e-banking-related services from or through the following organizations:

Other financial institution; Managed Security Service Provider; Bill Payment Provider; Credit Bureau; Credit Scoring Company; Internet Service Provider; Internet Banking Software Vendor or Processor; Managed Security Service Provider;

E-banking systems depend on a number of standard parts or procedures, such as:

- Creating and hosting websites
- Configuring and managing firewalls
- Intrusion detection system, also known as host- and network-based IDS.
- Network configuration - Security oversight
- A server for online banking
- Applications for e-commerce (such as lending, brokerage, and bill payment)
- Servers on internal networks
- Core processing system
- Programming support
- Automated decision support systems

These components work together to deliver e-banking services.

Types of Internet Banking

Comprehending the diverse categories of online banking offerings will facilitate the evaluation of associated hazards. At now, the market is using the following three fundamental types of Internet banking:

1. Informational: In this rudimentary type of online banking, the bank uses a standalone server to offer marketing data about its goods and services. Appropriate safeguards must be in place to stop unwanted changes to the bank's server or website, even though the danger is minimal.

2. Communicative: This kind of online banking system enables communication between the client and the bank's systems. Email, account inquiries, loan applications, and updates to static files are a few examples of the possible interactions. Proper controls are required because these servers might have access to the bank's internal networks prevent unauthorized access.

3. Transnational: With this degree of online banking, users can check their accounts, make bill payments, and transfer money. This architecture carries the most risk and

necessitates the strictest restrictions because there is usually a conduit connecting the server to the bank's internal network.

Porter’s 5-Forces in E-Banking

Porter distinguished five competing pressures that often reduce an industry's profitability, and they are as follows:

- Threat of substitutes; - Entry barriers; - Suppliers' and purchasers' bargaining power;
- Threat of rivals

The banking sector has reached the mature stage of its lifecycle, according to the application of Porter's Model. The financial sector is one that benefits greatly from the trend toward electronic product and service delivery, which is fueled in part by customer demand and in part by the level of competition. Electronic banking was first implemented by large corporations to streamline their payroll and salary processing procedures.

Porter's Five Forces Model Extended Application to the Banking Sector

1. Entry Barriers: There are no longer any entry barriers in the banking sector. Any industry can have competitors who aim to "disintermediate" banks. Banks find it difficult to differentiate their goods since most retail banking offerings are limited by laws or industry standards.

2. Bargaining Power of Suppliers: Given the small number of relatively major participants in this business, suppliers should potentially have strong bargaining power. The growth of internet banks and other financial intermediaries has, however, reduced suppliers' negotiating leverage.

3. Consumer Bargaining Power: Customers have more and more clout when it comes to negotiating. With the growth of Internet banking, switching costs are decreasing, making it more difficult to keep customers loyal.

4. Threat of Substitutes: The non-banking financial sector is becoming a biggercompetitor. Businesses like Sony and Microsoft, one of the biggest software companies, are trying to take the role of banks as middlemen.

The Benefits of Online Banking

- Competition: In order to stay ahead of the competition and attract new business, banks must provide e-banking services.
- New Markets: Creating a presence in new and developing markets may be done affordably with the help of the Internet.
- Customer service: By gathering and organizing data about their clients' preferences, e-banking enables banks to provide better customer service.
- Revenue Potential: By providing extra services like purchasing insurance or business travel services, e-banking gives banks the chance to increase their revenue.
- Cost Reduction: As the demand for physical branches declines, e-banking assists banks in cutting back on overhead expenses. Banks save money because Internet banking has far lower operating costs than traditional banking. For instance, in India, a transaction using net banking only costs INR 2, as opposed to INR 43 when bankingat a branch.

Case Study – ICICI

One of India's top private sector banks, ICICI is renowned for its inventiveness and all-encompassing, change-embracing culture. Following a formal merger with ICICI Bank on March 31, 2002, ICICI became the first Universal Bank in India. The retail distribution network of ICICI Bank is still growing, with 1,066 ATMs spread over roughly 240 sites, 409 branches, and extension counters. Building a diversified portfolio with a focus on project finance and utilizing the potential in retail lending was the post-merger strategy. In order to facilitate trade, investment, cross-border business, treasury, and foreign currency services, ICICI Bank provides a broad range of domestic and international banking services. The bank soon recognized that the distribution of banking products and services through e-banking had moved from an experimental to a mainstream model. Basic online banking services moved from being differentiators in the market to being essentials. Through partnerships, ICICI Bank leveraged a range of technologies for its products and services, such as Pay Sys's Vision Plus for credit card operations, Infosys' Infinity for Internet banking, and internal WAP technology for WAP services. For B to C solutions, the bank also collaborated with top corporations including BPL, Rediff.com, Usha Martin, and Tata Communications. In order to provide B2B and B2C e-commerce payment gateway solutions in India, ICICI also joined a consortium headed by Compaq. ICICI Bank was the pioneer in India to introduce Internet Banking under the moniker Infinity, providing both corporate and retail clients with a wide range of online banking options. For enhanced security, Corporate Infinity offered several authentication tiers. In addition, ICICI concentrated on pioneering financial engineering research and offered solutions that were specifically designed by utilizing the capabilities of the organization. By taking a "virtual integration" approach, ICICI decreased expenses while enhancing customer support. Fund transfers to India were made easier by the bank's 1488 Money2India project, which also included extra features like gifting and reminders to improve client relations.

An analysis of ICICI's SWOT

Strengths: - Cutting edge technology - Offering creative goods and services

Utilizing technology to meet the needs of customers
- Increasing shareholder value

Drawbacks: - Excessive number of subsidiaries - Elevated funding costsPossibilities include: - A larger

capital base
- Advantages of being first

Risks: - Rivals in the business such as HDFC - Worries about non-performing assets (NPAs) even with adequate provisioning

In summary

E-banking has transformed the global banking sector and is now a vital survival tool. With just a mouse click, banking services are now more affordable, giving clients previously unheard-of flexibility in selecting suppliers. In this context, banks have to innovate continuously to stay competitive. The emergence of E-banking is changing the nature of commercial partnerships, and the banks that build stronger customer ties will be the most prosperous. The global reach of electronic banking offers novel avenues for expansion, but banks need to manage legal and tax implications to guarantee a smooth integration. With both public and private sector banks using the Internet for customer service, the Indian e-banking experience is progressively catching up with global norms. The adoption of e-banking in India would be further accelerated by policy backing and security guarantee.

E-Banking in India

In India, the industry for online banking is still in its early phases. There are now just 51 banks that provide any kind of online banking services. Of them, 55% are regarded as "Entry Level" websites that offer standard marketing collateral and corporate details. Merely 8% provide "advanced" transactional services, including as cash management and internet fund transfers.

When it comes to both the quantity of locations and the degree of development, foreign and private banks greatly outnumber public sector or cooperative banks. Even with the RBI's comprehensive standards, several Indian banks that provide Internet banking services are not entirely compliant. The RBI-mandated IT security strategy is missing from all Indian banks that offer online banking, according to experts at Global E-Secure Limited, a security solutions provider. Even though banks are required to provide monthly reports demonstrating compliance, the majority find it difficult to meet the security policy requirements.

The RBI stresses that in order to inform banks about the impact that IT security has on entire company, a written document signed by the Board of Directors is essential. Despite having security safeguards in place, some banks do not offer straight-through processing, which presents a security risk, and there is no comprehensive security strategy in place. The RBI has the authority to check if the policy is being followed.

Categorization of Existing Online Banking Websites

- Entry Level: Basically a glorified brochure with no interactive features, this page provides basic information about the organization.
- Basic Level: Enhanced features include some origination possibilities and fundamental interactive tools.
- Intermediate Level: Provides access to accounts, tracking, and viewing together with the essential functionalities of a full-featured online bank.
- Advanced Level: Full-featured online bank with complete security and functionality that lets users transfer money online safely.

Estimated Count of Online Banking Websites

It is anticipated that a sizable, intricate, and fiercely competitive Internet banking business will emerge. This increase will be fueled by a number of causes, such as the rise in Internet usage, the development of open standards for banking functions, the increasing awareness and need for transparency among customers, and the involvement of multinational players.

The Indian Scenario

- Citibank: Offers bill payment, transaction details, account information, and otherservices that are current.
- ICICI Bank: Provides fund transfers, bill payment, account information, check bookrequests, and customized content updates.
- HDFC Bank: Offers email correspondence, bill payment, money transfers, openingfixed deposits, and account information in real time.
- Global Trust Bank: Provides account details, money transfers, requests for checkbooks, setting term deposit accounts, and email inquiries.

International E-Banking Customs

- Make product deposits online - Earn airline miles by banking with specific banks
- Access financial planning tools for loan payments and tax burden computation; - Download account information to personal finance management software; - Receive and pay electronic invoices online.

Analysis

Security Concerns

Security concerns with online banking are critical for both consumers and businesses. It seems sense that customers are hesitant to provide account numbers and personal information online. Banks and customers take proactive steps to establish security measures by being vigilant.

Transaction Security: It is extremely unlikely that hackers will be able to get past the security measures in place because the bank and client exchange encrypted data via secure servers protected by firewalls and 40/128 bit SSL encryption.

Access Security: A user ID and password are typically used to provide two levels of security for client access. A third level of authentication, such as requesting the user's birthdate, may be offered by certain banks.

Account Holder Vigilance: Even with strong bank security measures, clients still need to be cautious. For example, they shouldn't give their password or pin number to any third party.

Internet Banking Risks

Online banking carries a number of hazards, such as:

When an obligor doesn't follow the terms of the contract, credit risk arises. The geographic reach of banks is increased by internet banking, which makes it more difficult to validate the identity and collateral of consumers.

Interest Rate Risk: With online deposit and loan collection in particular, banks must control how changes in interest rates affect their assets, obligations, and income.

Liquidity Risk: If clients are drawn to banks primarily by their rates or conditions, there may be higher deposit volatility, making it difficult for banks to satisfy obligations when they become due.

Price Risk: Variations in the value of traded financial instrument portfolios are a risk, especially if banks participate in online banking operations such as loan sales or deposit brokering.

Banks may be exposed to currency-related risks in the event that they accept deposits or make accounts denominated in currencies different from their home currency.

Transaction Risk: Occurs when there is fraud, an error, or a breakdown in the delivery of goods or services. To keep customers' trust, banks that provide online banking must guarantee accurate, quick, and dependable services.

Risk associated with compliance: Occurs when laws, rules, or regulations are broken. In order to prevent financial penalties or harm to their reputation, banks must make sure that their online banking operations adhere to all regulatory standards.

Reputation Risk: Capital and earnings may be impacted by unfavorable public perception. It is imperative for banks to uphold their reputation by offering precise and dependable services via Internet banking.

Hazard Assessment

For the purpose of identifying, measuring, monitoring, and controlling technology- related risks related to Internet banking, banks need to have a strong risk management approach. This covers risk assessment, planning, and execution.

Categories of Cyberattacks

Banks and service providers must take precautions against a variety of internet threats, such as social engineering, password guessing, brute force assaults, sniffers, random

dialing, and hijacking. The objective of these assaults is to obtain unauthorized accessor information by taking advantage of weaknesses in systems and networks.

Through the implementation of strong security protocols and efficient risk management procedures, financial institutions can reduce the potential hazards linked to online banking while offering their clientele secure services.

IDBI Bank

In order to protect themselves from various online dangers like social engineering, password guessing, brute force attacks, sniffers, random dialing, and hijacking, banks and service providers need to implement security measures. These attacks aim to exploit vulnerabilities in networks and systems in order to get unwanted access or information.

Financial institutions can lessen the possible risks associated with online banking while providing their customers with secure services by putting in place robust security processes and effective risk management practices discover that the procedure is easier. He suggests that Internet banking be handled cautiously and as a cross-functional effort.

Bhai claims that a lot of banks make the error of assuming that all of their clients will be interested in online banking and hence enable the service for everyone. But in practice, the majority of these "enabled" users never make use of the service, which results in needless system loads and high postage costs for PIN mailers.

He underlines that consistent work is necessary for Internet banking, just like it is for any other good or service. In order to realize cost savings, banks must actively encourage their clients to utilize the service. Banks could improve their services by adding more payment tie-ups to provide customers more options, as not all customers use Internet banking. To do this, data security needs to be comprehensive and comprehensive.

Findings & Conclusion

Top 10 Banks

1. HDFC Bank
2. Citi Bank
3. ABN AMRO Bank
4. State Bank of Patiala
5. Oriental Bank of Commerce
6. Corporation Bank
7. Hongkong & Shanghai Banking Corp.
8. Kotak Mahindra Bank
9. Standard Chartered Bank
10. Jammu & Kashmir Bank

1. Technological Advancements: Thanks to technology, internal procedures and customer service are being improved, radically altering the banking industry. With the rise in cross-border banking, banks must completely reengineer their business processes in order to take full advantage of the benefits of technology.

2. The impact of ATMs: Customers may now perform routine banking operations without physically visiting bank branches thanks to the advent of ATMs, which have completely changed front offices at bank branches. Internet and e-banking have greatly decreased transaction costs while increasing convenience.

4. Better Decision Making: Technology solutions speed up the analytical and decision-making processes by facilitating the flow of accurate and timely information. As a result, transaction costs are decreased and credit management is improved.

5. Initial Investments: Although technology might eventually save banks' operational expenses, there are significant upfront charges. At the moment, Indian banks invest about 1% of their income in IT, but as technology becomes more widely used, this amount should climb dramatically.

5. Facility Sharing: By pooling their facilities, banks can save money on technologicalinvestments. The sharing of ATM networks is a clear example of this trend, which is anticipated to spread to other domains such as data warehousing, back-office processing, and payment and settlement.

6. Payment and Settlement Systems: A financial market cannot function properly without payment and settlement systems. To comply with international standards, current systems will be significantly improved with an emphasis on efficiency and security.

7. Efficiency, Cost Reduction, and Improved Services: Through innovation, improvedrisk management, and increased security, technology boosts efficiency, lowers costs, and improves financial services, increasing operations' competitiveness.

E-banking's future

The future of banking is internet banking, which provides users with a variety of services via computer access. It makes it possible to pay bills, transfer money, and make purchases with credit cards or other traditional or electronic payment methods like e-cash. Even though there are now only few banks that are entirely online, internet banking will inevitably grow.

Important Advances in Online Banking:

- MICR Technology Expansion: In order to speed up the processing of checks, the Reserve Bank is extending the reach of MICR-based clearing systems.

- Imaging and Cheque Truncation: To speed up checks, imaging-based cheque truncation is being used processing and credit.

-National EFT: To improve electronic fund transfers, a National Electronic Funds Transfer system utilizing SFMS will be implemented.

- E-Cheque: This secure and rapid payment method combines the speed of electronic transactions with the infrastructure of traditional checks.

- Point of Sale Transactions: By allowing merchants to confirm the availability of funds prior to closing sales, online POS terminals lower the risk associated with creditand cash handling.

- Smart Cards: A variety of transactions, such as financial transactions and national identification, are being designed for multi-application smart cards.

Security and Standardization: Standardization facilitates interoperability between goods and services from many suppliers, which is essential for effective electronic payment systems. To protect transactions, security features like SSL, encryption,digital signatures, and data integrity are crucial.

In summary

Technology has been adopted by the banking industry in an effort to save expenses, increase operational efficiency, and improve customer service. The Reserve Bank of India is essential to the advancement of e-commerce and payment system improvements.

Electronic payment systems are widely used by Indian banks and the financial services sector because they provide quick, affordable, and convenient transaction processing. Banks must adopt e-payments in the current competitive landscape in order to preserve a competitive edge through economical delivery methods.

Recommendations & Suggestions

Ideas

1. Security of ATMs and Debit Cards: - Always monitor your ATM or debit card andreport any loss right away.

- Select a PIN that is difficult to figure out, such your birthdate or address.
- To find any mistakes or unlawful transfers, keep track of and contrast the receiptsfor every electronic fund transfer activity with your statements.
- Use caution when pre-authorizing debits and disclosing bank account details tobusinesses.

2. Tighten Security Measures: - Strengthen security protocols to fend offcybercriminals and sniffers.

- Assure the hiring of qualified and experienced staff to ensure appropriate systemauthorization.

3. User-Friendly Internet Applications: To guarantee accessibility for all users, makeinternet banking applications simple to use.

4. Instruction on ATM Usage: - Showcase how to use ATMs since many individualsare still unfamiliar with online banking.

5. Constant Legal research: - To stay abreast of the swift advancements and changesin technology, research current laws and banking procedures pertaining to e-banking on a regular basis.

In summary

In the current banking business, banking has grown essential since it gives clients more financial service provider choice and reduced costs. To stay competitive in the global market, banks must constantly innovate and offer specialized services. Even if

e-banking has many advantages, there are still regulatory and taxes concerns that need to be resolved internationally. Private and public sector banks in India are gradually moving towards e-banking by implementing internet technologies for customer service. Policy support and security assurance are crucial to further encourage e- banking adoption.

APPENDIX

Questionnaire

Name:

Gender: ()male ()female

Age: ()Below 25 ()26-35 ()36-45 ()46-55 ()Above56

1.Are you aware of Online Banking ?a.Yes
b.No

2.What is your Qualification ?a.Upto 12
b.Diploma c.Graduationd.Masters

3.Your level of computer literacy?a.Expert
b.Advancedc.Beginners
d.Don't know to operate

4.Preferred method of Banking ?a.ATM
b.Visit Bank c.Telephone Bankingd.Online Banking

5. Please kindly rate the below factors of Online banking in following table (1-strongly disagree to 5- strongly agree)

	1	2	3	4	5
Internet banking does not insure privacy of my account					
Only authorized person can access own account.					
Banks will never misuse my financial information.					

Online banking provides simple operational procedure					
Banks website is secure for the fund transfer					
I trust my online banking websites.					
I expect my use of online banking will increase in future					
Banks are providing useful tips for use to operate online banking					
Online banking website provides problem solution menu.					
I will recommend to other that they use online banking					
Banks are conducting seminar to educate about online banking					
Online banking website design is very efficient.					
Online banking provides clear and easy to follow instructions					
Banks increase the awareness about security of the data					
Banks always encourage me to transfer the fund through online					

BIBLIOGRAPHY / REFRENCES

[1]V. Radha, V. P. Gulati and K. R. Ganapathy "Technology Based Distance Learning – New Vistas for Banks", IDRBT Working Paper No. 1 (1999).

[2]Cohen, Stephen S., J Bradford DeLong & John Zysman. (2000). Tools for Thought: What is New and Important about the E-economy? BRID working Paper # 138, Berkely, CA.

[3]Committee of Fiscal Affairs. (1998) Electronic Commerce: Taxation Frame work Conditions. Paris: OECD, Directorate for Financial, Fiscal and Enterprise Affairs, October 8.

[4]Cornin, Mary J (1998) Defining Net Impact: The Realignment of banking and Finance on the Web, Banking and Finance on the Internet, John Wiley and Sons, NewYork.

[5]David Carse (1999) The regulatory Framework of E-banking Available (online) http;//wow-banking.

[6]David LT (Interview) in 'The Future of Banking' by Anglers, H and Essinger, J. Reuters Ltd. 2000.

[7]Davies, Howard. The uncertain but exciting future for banking, Vol. 8, No.6, Balance Sheet: pages 11-16.

[8]Denny, Stephanie (2000) The Electronic Commerce Challenge, Journal of Internet Banking and Commerce, November, vol .3 no.3

[9]E-business, June 2007.

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