

A PROJECT REPORT ON
“ONLINE BANKING”

A Project Submitted to

University of Mumbai for Partial Completion of the Degree
of Bachelor in Commerce (banking and insurance)

Under the Faculty of Commerce

By

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Mohanlal Raichand Mehta College of Commerce

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Dr. R.T. Doshi College of Computer Science

NAAC Re-Accredited Grade 'A+' (CGPA : 3.31) (3rd Cycle)

Sector-19, Airoli, Navi Mumbai, Maharashtra 400708



FEBRUARY, 2024



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CERTIFICATE

This is to certify that **MS.PRERNA PRADEEP SATAM** has worked and duly completed his Project work for the degree of Bachelor in Commerce (Accounting and Finance) under the Faculty of Commerce in the subject of **Management control** and his project is entitled, “-”. Under my supervision.

I further certify that the entire work has been done by the learner under my guidance and that no part of it has been submitted previously for any Degree or Diploma of any University.

It is his own work and fact reported by her personal finding and investigations.

Guiding Teacher,

ASST. PROF. DR. KISHOR CHAUHAN.

Date of submission:

DECLARATION

I the undersigned **MS.PRERNA PRADEEP SATAM** here by, declare that the work embodied in this project work titled “”, forms my own contribution to the research work carried out by me under the guidance of **ASST. PROF. DR. KISHOR CHAUHAN** is a result of my own research work and has been previously submitted to any other University for any other Degree/ Diploma to this or any other University.

Wherever reference has been made to previous works of others, it has been clearly indicated as such and included in the bibliography.

I, here by further declare that all information of this document has been obtained and presented in accordance with academic rules and ethical conduct.

(PRERNA PRADEEP SATAM)

Certified by:

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ACKNOWLEDGEMENT

To list who all have helped me is difficult because they are so numerous and the depth is so enormous.

I would like to acknowledge the following as being idealistic channels and fresh dimensions in the completion of this project.

I take this opportunity to thank the **University of Mumbai** for giving me chance to do this project.

I would like to thank my I/C **Principal, Dr.B.R.Deshpande Sir** for providing the necessary facilities required for completion of this project.

I take this opportunity to thank our **Coordinator** for their moral support and guidance.

I would also like to express my sincere gratitude towards my project guide **Asst. Prof. DR. Kishor Chauhan** whose guidance and care made the project successful.

I would like to thank my **College Library**, for having provided various reference books and magazines related to my project.

Lastly, I would like to thank each and every person who directly or indirectly helped me in the completion of the project especially **my Parents and Peers** who supported me throughout my project.

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EXECUTIVE SUMMARY

Due to recent advances and developments in electronic banking, the physical location of a bank has become less important since transactions can now be completed in cyberspace. In recent years, banks have increasingly adopted internet-based systems to transact banking operations with other businesses, private consumers, and government departments/agencies. The banking industry is continuously enhancing and augmenting services on the internet, including bill payment, electronic checking, tracking of expenditures and credit cards, monitoring transaction history, transferring money between bank accounts, investment tracking, analyzing securities, etc. In this paper, consumer opinion towards online banking is examined. The empirical study findings indicate that online bank marketing will gain importance and its use will accelerate at a faster rate in the coming years. More hybrid bank marketing as well will gain popularity across different population strata.

The study helps in knowing how far the modern banking services are used by the customers. The study further extends and helps to develop an increasing association with the customers through modern services. Today the customer demands the banking services for 24 hours. In the modern age, the entire banking structure has been changed due to widespread internet technology. Now all the aspects of economy such as commerce, trade, import, export, purchase and sale of goods is relying upon electronic banking services. Online Banking has opened the doors for all the customers, to operate beyond boundaries. Future research can be done in analyzing the comparative performance of Online Banking services provided by private sector as well as public sector banks. The study has been done on the usage of these services by the customers.

Chapter 1- Introduction to online banking

Introduction

Online Banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. In India, since 1997, when the ICICI Bank first offered Online Banking services, today, most new-generation banks offer the same to their customers. All major banks provide Online Banking services to their customers. Online Banking includes the systems that enable financial institution customers, individuals, or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet. Customers access Online Banking services using an intelligent electronic device, such as a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM), kiosk, or touch-tone telephone. While the risks and controls are similar for the various Online Banking access channels, this booklet focuses specifically on Internet-based services due to the Internet's widely accessible public network. Accordingly, this booklet begins with a discussion of the two primary types of Internet websites: informational and transactional Online Banking can be offered in two main ways. First, an existing bank with physical offices can also establish an online site and offer Online Banking services to its customers in addition to the regular channel. For example, Citibank is a leader in Online Banking, offering walk-in, face-to-face banking at its branches throughout many parts of the world as well as Online Banking services through the World Wide Web. Citibank customers can access their bank accounts through the Internet, and in addition to the core Online Banking services such as account balance inquiry, funds transfer, and electronic bill payment, Citibank also provides premium services including financial calculators, online stock quotes, brokerage services, and insurance. Use of computers and telecommunications to enable banking transactions to be done by telephone or computer rather than through human interaction. Its features include electronic funds transfer for retail purchases, automatic teller machines (ATMs), and automatic payroll deposits and bill payments. Some banks offer home banking, whereby a person with a personal computer can make transactions, either via a direct connection or by accessing a Web site. Electronic banking has vastly reduced the physical transfer of

paper money and coinage from one place to another or even from one person to another. The banking industry has seen many technological changes in the last few years which has shaped it from a manually intensive industry into one that is technologically dependent. Alternatives to traditional branch banking have attracted increasing attention as Internet usage started to spread over the markets. Banks started to use the Internet to provide new services to their customers.

Online banking system allows individuals to perform banking activities at home via the Internet. Most of the internet banks are traditional banks that also offer online banking while others are online only and have no physical offices.

Online Banking transaction states that customers use the internet to get access to their personal or business bank accounts online anytime and to undertake banking transactions through the use of the bank's website without inconvenience. Online banking allows customers to do their banking transactions anytime and provides continuous control over their accounts.

Mu Yibin (2003) defined three functional types of Online Banking. These are informational, transactional, and communicative Online Banking. Transactional Online Banking is the most popular type and it offers all of the benefits of a 2 traditional brick-and-mortar institution. It includes full control over customer accounts such as deposits, withdrawals, transfers, online payments, and updates. Communicative Online Banking allows interaction between the bank system and customers. The communication is restricted to e-mail accounts, inquiry loan applications, and static file updates names, and addresses. However, fund transfer is not included in this type of Online Banking. Informational Online Banking simply means that the banks provide the main information about the bank's products and services such as a brochure for marketing. In addition, there is no connection to the bank's system for informational Online Banking.

Information technologies have affected the banking and finance sector substantially. This development increased the number of financial products and services offered by the banks. Nowadays, online banking plays an important strategic role in the marketing of industrial banking.

According to research conducted in 2012, Turkey ranked fifth among all European countries in internet usage (www.internetworldstats.com). Therefore, online banking is

very important for the development of the banking sector and the success of the marketing departments of banks.

Online banking has attracted the attention of banks, securities trading firms, brokerage houses, insurance companies, regulators, and lawmakers in developing nations since the late 1990s. With the rapid and significant growth in electronic commerce, it is obvious that electronic (Internet) banking and payments are likely to advance. Researches show that the impact of online banking on cost savings, revenue growth, and increased customer satisfaction in the Industry is tremendous and can be a potential tool for building a sound strategy. However, it has raised many public policy issues before the banking regulators and government agencies. Interestingly, reliable and systematic information on the scope of Online Banking in the Indian context is still not sufficient, particularly what it means to the consumers and the bankers. The paper fills significant gaps in knowledge about the consumer's perspective of Online Banking, traces its present growth, and projects the likely scenario.

Online banking was first started in the 80's. The term online became famous in the late '80s. Online banking during the formative years included the usage of a terminal, keyboard, and TV (or monitor) to approach the banking system using a phone line. Online services started in New York in 1981 when four of the city's major banks (Citibank, Chase Manhattan, Chemical and Manufacturers Hanover) offered home banking services using the videotext system. Later on, the concept of videotext became popular in France. In the UK, the first home online banking services were set up by the Nottingham Building Society (NBS) in the year 1983. It was based on the UK's Prestel system and used a computer, such as the BBC Micro, or keyboard (Tandata) connected to the telephone system and television set. It provided customers an option to make bill payments for gas, electricity, and telephone companies and accounts with other banks. It was Stanford Federal Credit Union which offered online Online Banking services to all of its customers

In India, the Reserve Bank of India outlined the mission to ensure that payment and settlement systems are safe, efficient, interoperable, authorized, accessible, inclusive, and compliant with international standards. The Vision is to proactively encourage electronic payment systems to usher in a less-cash society in India [29]. Regulation is keen to promote

innovation and competition to help payment systems achieve international standards. Various initiatives by the Reserve Bank of India, in the mid-eighties and

Advantages of Internet Banking

Both the provider and the consumer benefit from Internet banking. Online banking is considered to be the most important way to decrease costs and enhance or maintain services for consumers (Hua, 2009). From the banks' perspective, it is the cheapest banking products delivery channel (Pikkarainen et al, 2004). Together with saving time and money, this service minimizes the possibility of bank tellers committing mistakes (Jayawardhena & Foley, 2000). Less staff is required since the customers serve themselves in cyberspace. Karjaluoto et al (2002, p.261) argued that time and location were no longer limiting factors in banking as all over the world, customers can now easily access their accounts 24/7.

The Internet makes transactions efficiently and expertly at an unmatched speed. Internet banking offers the possibility to manage several bank accounts on one site and these sites are compatible with software such as Microsoft Money.

With increasing competitive pressures from existing firms and new blood on the market, competition is an important logic to be considered. Using Internet banking as an alternate channel has allowed banks to target various demographic segments more efficiently, thus retaining existing customers and attracting new ones. While supplying Internet banking services, banks establish and extend their customer relationship (Robinson, 2000).

The concept of online banking is an uprising in the field of banking and finance as the account holder does not have to visit the bank and queue to perform the basic transactions like balance inquiry, recent transactions record, transfer funds to employees' accounts in the form of salary, bill payments and phone account top up. On top of this, the interest rates are higher for online banking than for traditional banking (3.4% to 4%).

Many people like internet banking as there is no credit check. If someone has a bad banking history of financial problems, at a traditional bank, their application to open a bank account would be turned down. This is not the case with internet banking. Some banks offer the facility of online loaning where an instant loan is provided by only filling out a form. Internet banking websites are highly performing systems, easy to understand and navigate, with simple instructions designed to answer all banking queries. Customers also have a

wide range of opportunities to invest such as stock quotations and news updates (Lee, 2009).

Qureshi et al (2008) stated that it is essential to extend Internet banking to customers to maximize the advantages for both the service providers and the customers. The navigability of the site is a very vital part of Internet banking as it can become one of the biggest competitive advantages of a financial body (Ortega et al, 2007). The banking sector's performance increases every day due to the rise in technology usage. Online banking is time-saving (Qureshi et al, 2008).

E-banking is now less vulnerable to safety and security-related issues. Secure Socket Layer (SSL), Password-Based Encryption (PBE), and electronic signatures have increased the level of security. If any inconsistency occurs in an account, it can be traced easily, making internet banking more trustworthy. Avinandan & Prithwiraj, 2003; Urban, Sultan, and Qualls, 2000 have identified trust to be an important factor for financial online services. Furthermore, an empirical study has shown that consumers make online decisions based only on trust. In developing countries, trust plays a crucial role for customers to accept and use online banking (Benamati and Serva, 2007). Belanger, Hiller, and Smith (2002) defined privacy as being “the ability to control and manage information about oneself”.

Some banks offer real-time customer assistance to customers who have trouble finding their way through the website or the proceedings of the Internet banking registration through instant messaging, email, or even the telephone

Disadvantages of Internet Banking

Indisputably since the emergence of internet banking, it has been playing an important role for both the service providers and the consumers. Nevertheless, this phenomenon is observed differently among customers who either accept it heartily or reject it. Those who accept it, as proposed by Clark and Mills (1993), prefer impersonal relationships, that is, “exchange-oriented customers”. They like the 24-hour availability of services, the simplicity of the transactions, the no-queuing factor, and no fixed branch-operating hours (Al-Somali et al,2009) while those who reject it look for the human touch and social benefits of traditional banking. These are known as the “communally oriented customers” (Clark and Mills, 1993).

Those who reject Internet banking are wary of the risks involved in it. Featherman and Pavlou (2003) defined perceived risk as the “potential for loss in the pursuit of a desired outcome of using an e-service”. The risks perceived are;

Financial risk

it is the constant anxiety of transaction faults causing a monetary loss suffered by customers who perform online transactions. Internet banking lacks the assurance provided in traditional banking (Lee et al., 2009, p.2) and this is because online banking is considered an innovation that is incompatible with consumers’ habits (Kuisma et al., 2007, p.77).

Performance risk

This risk is innate from the consumers’ fright of losses incurred by failures of online banking websites. Customers are often troubled that a disconnection from the Internet might occur while performing electronic transactions which might lead to “huge” unexpected losses (Kuisma et al., 2007). This was confirmed by Sathye (1999) who claimed that Internet access is a decisive variable on which the adoption of online banking depends and by Almogbil (2005) who succeeded in showing that a significant relationship exists between the speed of Internet access and the acceptance of electronic banking.

Social risk

It stems from the fear of being seen negatively by others (Kuisma et al., 2007, p.77) or causing the disapproval of one’s friends/family/workgroup by adopting online banking (Agarwal et al., 2009, p.4). Venkatesh and Morris (2000) approve that social influence plays a central role in determining the approval of new information technologies. Nonetheless, it is commendable to note that others’ opinions are particularly informative in the early stages of experience (Hartwick and Barki, 1994) when potential information technology adopters are not sufficiently informed.

Privacy risk

It refers to the possible loss due to fraud or a hacker, putting at risk the security of an online customer (Lee et al., 2009, p.2). This risk is emphasized since the appearance of phishers whose hobby consists of attempting to deceptively collect personal information, such as usernames, passwords, and credit card details. They not only lead to users’ monetary loss but also violate users’ privacy (Entrust, 2008). Suh and Han (2002) point out that, unlike in offline banking, that is traditional banking, trust is a pressing need in Internet banking.

Time risk

It is the time lost and the lateness in receiving the payment or the difficulty of navigation (Lee et al., 2009, p.2). This can be due to a disorganized Website, slow-downloadable pages, to the long time needed to be a PC-literate.

Apart from this, the credulity of an institution must be verified before opening an account in an internet bank and entrusting the life-savings of an individual. The institution must be legitimate and must be checked against the listing of the FDIC.

A major disadvantage would be that when several failed attempts have been made to log in to the account, after having given the wrong password, the account becomes inactive. The customer will have to go through a lengthy procedure to get it reactivated again. Weeldreyer (2002) claims that Internet banking is not living up to the hype.

Another problem would be the downtime of the internet, where no customer will be able to access his/her bank account because there is no internet connection for hours probably. The connection could also be unstable during bad climatic conditions such as heavy rain.

Scope of online banking

1. Mobile Banking

Mobile banking apps have become increasingly popular, allowing users to access their accounts, make transactions, and manage finances directly from their smartphones or tablets. These apps often offer features such as fingerprint or facial recognition for secure login, mobile check deposit, and real-time alerts.

2. Personal Finance Management (PFM) Tool

Many online banking platforms provide PFM tools that help users track spending, set budgets, analyze trends, and plan for financial goals. These tools may categorize transactions, provide insights into spending habits, and offer suggestions for improving financial health.

3. Peer-to-Peer (P2P) Payments

P2P payment services enable users to transfer funds directly to friends, family, or businesses using their online banking accounts. Popular P2P payment apps include Venmo, PayPal, and Zelle, which integrate seamlessly with online banking platforms.

4. Digital Wallets

Digital wallets allow users to store payment card information securely on their devices and make contactless payments in-store or online. Examples of digital wallets include Apple Pay, Google Pay, and Samsung Pay, which can be linked to online banking accounts for added convenience.

5. Credit Monitoring and Identity Theft Protection

Some online banking platforms offer credit monitoring services and identity theft protection to help users safeguard their financial information. These services may include credit score monitoring, identity theft alerts, and assistance with resolving fraudulent activity.

6. International Banking Services

Online banking has made it easier for users to manage international transactions, including foreign currency exchange, international wire transfers, and overseas bill payments. Some banks offer multi-currency accounts and tailored services for expatriates and travelers.

7. Accessibility Features

Online banking platforms strive to be inclusive and accessible to users with disabilities by offering features such as screen reader compatibility, keyboard shortcuts, and customizable font sizes and colors. Accessibility compliance ensures that all users can access and use online banking services effectively.

8. Data Analytics and Personalization

Banks leverage data analytics and machine learning algorithms to analyze customer behavior, preferences, and financial patterns. This data-driven approach enables banks to offer personalized product recommendations, targeted marketing campaigns, and tailored financial advice to users.

9. Social Media Integration

Some online banking platforms integrate with social media channels to enhance customer engagement and communication. Banks may use social media platforms for customer support, community forums, product announcements, and financial education initiatives.

10. Collaboration with Fintech Partners

Banks often collaborate with fintech companies to innovate and enhance their online banking offerings. Fintech partnerships can lead to the development of new features, services, and technologies that improve the overall banking experience for users

Importance of online banking

1. Convenience

Online banking provides convenience to customers by allowing them to access their accounts, make transactions, and manage finances anytime, anywhere, without the need to visit physical bank branches. This is especially beneficial in a vast country like India, where traveling to a bank branch may be time-consuming for many people.

2. Financial Inclusion

Online banking contributes to financial inclusion by providing access to banking services for people in remote areas where traditional bank branches may be scarce. With the widespread availability of internet connectivity and the proliferation of smartphones, online banking bridges the gap and enables underserved populations to participate in the formal financial system.

3. Cost-Effectiveness

Online banking is cost-effective for both customers and banks. It reduces the need for physical infrastructure, such as bank branches and ATMs, thereby lowering operational costs for banks. Additionally, customers save time and money by conducting transactions online instead of visiting branches or using other modes of payment.

4. Efficiency and Speed

Online banking transactions are processed faster compared to traditional methods. Fund transfers, bill payments, and other transactions can be completed instantly or within a few hours, improving efficiency and reducing processing times.

5. Security and Fraud Prevention

Despite security concerns, online banking platforms in India implement robust security measures, including encryption, multi-factor authentication, and fraud detection systems, to protect customers' financial information and prevent unauthorized access and fraudulent activities.

6. Government Initiatives

The Indian government has been actively promoting digital financial services and initiatives such as Digital India, Jan Dhan Yojana, and Aadhaar-based authentication to

increase financial inclusion and drive the adoption of online banking services across the country.

7. Contribution to Digital Economy

Online banking contributes to the growth of the digital economy in India by facilitating e-commerce transactions, online payments, and digital lending. It enables businesses to accept payments electronically and empowers individuals to participate in online shopping, bill payments, and digital transactions.

8. Access to Financial Products and Services

Online banking provides access to a wide range of financial products and services, including savings accounts, loans, insurance, investments, and wealth management solutions. Customers can compare products, apply for loans, and invest in financial instruments online, enhancing their financial well-being and wealth management capabilities.

History of online banking

The precursor to modern online banking services was distance banking electronically and by telephone since the early 1980s. The term 'online' became popular in the late 1980s and referred to the use of a terminal, keyboard, and TV or monitor to access the banking system using a phone line. 'Home banking' can also refer to the use of a numeric keypad to send tones down a phone line with instructions to the bank.

The first home banking service was offered to consumers in December 1980 by United American Bank, a community bank with headquarters in Knoxville, Tennessee. United Americans partnered with Radio Shack to produce a secure custom modem for its TRS- 80 computer that allowed bank customers to access their account information securely. Services available in its first years included bill pay, account balance checks, and loan applications, as well as game access, budget and tax calculators, and daily newspapers. Thousands of customers paid \$25–30 per month for the service.

Large banks, many working on parallel tracks to United America, followed in 1981 when four of New York's major banks (Citibank, Chase Manhattan, Chemical Bank, and Manufacturers Hanover) offered home banking services,^{[2][3]} using the videotex system. Because of the commercial failure of videotex, these banking services

never became popular except in France (where millions of videotex terminals (Minitel) were given out by the telecom provider) and the UK, where the Prestel system was used. The first videotext banking service in France was launched on December 20, 1983, by CCF Bank (now part of HSBC). Videotext online Banking services eventually reached 19% market share by 1991

The developers of United American Bank's first-to-market computer banking system aimed to license it nationally, but they were overtaken by competitors when United American failed in 1983 as a result of loan fraud on the part of bank owner Jake Butcher, the 1978 Tennessee Democratic nominee for governor and promoter of the 1982 Knoxville World's Fair. First Tennessee Bank, which purchased the failed bank, did not attempt to develop or commercialize the computer banking platform. In 1998, ICICI Bank introduced Internet banking to its customers.

ICICI bank was incorporated as a commercial banking company, by the Industrial Credit and Investment Corporation of India (ICICI)^[1], in May 1994. The first ICICI branch was started in June 1994 in Chennai. The bank provides an array of domestic and international banking services to enable national and international trade and business, investment and foreign exchange, and treasury services. Right from its inception the bank focused more on incorporating advanced technology. The bank operated the largest chain of ATMs in the country, which amounted to more than 450 in 2000. All the bank's branches were fully computerized and networked through V-SAT^[2] technology. By 1999, the number of branches increased to 65 and the bank plans to have over 200 branches by the end of 2002. In April 2000, ICICI became the first Indian bank to be listed on the New York Stock Exchange

ICICI was always regarded as one of the best private banks to foster advanced technologies in the banking sector. As part of its technology drive, in 1997, ICICI launched 'Infinity,' the first Indian Internet banking service. The service was launched to reduce transaction costs and offer convenient banking to customers. This meant enabling the customers to access their bank account and make transactions at any time. ICICI realized that to make Infinity a success, it would have to invest heavily in sound Internet banking e-commerce technology. During 1995-99, ICICI invested Rs 50 million in online banking technology solutions. In 1997, ICICI bought the 'Bank Away'^[3] software from Infosys. Bank Away

was an e-commerce solution that provided the bank with a platform to offer an integrated financial services portal to customers. It offered access to account information, bill payment, cash management, trade finance, and online shopping. Infinity was initially targeted at non-resident Indians (NRIs) to enable them to manage their bank accounts in India through the Internet. According to the bank's sources, Infinity helped to increase the business generated from NRI customers from Rs 300 million in 1997 to Rs 1.4 billion in 1998. The service was also aimed at individuals in the age group of 30 to 50 years working in the corporate sector and proficient in using technology. However, over the next few years, the bank enhanced its services to attract other customers as well. As a result, by early 2000, ICICI had over 110,000 Internet banking customers. In the first half of 2000, ICICI's Internet banking customer base touched 275,000.

On account of the growing competition in the Internet banking sector, ICICI focused on enhancing and extending its business-to-business (B2B) and B2C services through tie-ups and acquisitions. The bank entered into a 50-50 joint venture with Satyam Infoway in December 1999 to offer retail banking products and services on the Internet. R. Ramraj, Managing Director, Satyam Infoway, said, "ICICI bank has many corporate clients and the idea is to develop e-commerce on a B2B platform where payments will be facilitated through ICICI. The alliance is going to give a big fillip to B2B."

Infinity's services included account information, funds transfer, bill payments, online Real-Time e-shopping payments; communication with bank managers, and various customized services. The products were targeted at two different customers: individuals small businesses, and corporates having an annual turnover of over Rs 500 million. In the first half of 2000, ICICI introduced new Internet banking products for school and college students. Kid-e-bank was introduced to help children between 5-12 years to open an account and check the account balance on the Internet. Bank campus was a service for students to enable services like ATMs, Smart Card, educational loans, etc. As part of its B2C programs, ICICI tied up with 10 shopping malls all over India. This allowed customers to shop and pay bills online from their accounts. It also tied up with 24 billing companies across 11 cities, including Bharat Sanchar Nigam Ltd. (BSNL) for bill payment. The bank also offered mutual funds-related services to its customers. It also tied up with automobile major Ford, for local delivery of its car 'Ikon'

In 2000, ICICI Bank acquired the Bank of Madura. Bank of Madura (BoM). BoM was amalgamated with ICICI bank on March 10, 2001, as a part of which, ICICI acquired BoM's customer base of 1.2 million. However, analysts felt the biggest gain was BoM's IT-savvy employees. By 2001, ICICI Bank had emerged as one of the leading providers of Internet banking services in India. The bank was reportedly moving towards becoming a full-fledged e-commerce company in a couple of years. Nachiket Mor, Head of ICICI Treasury said, "The Seven-Eleven supermarket chain in Japan has recently applied for a banking license. This is the way the world is moving. If supermarkets get into banking, then it is also time for banks to get into the selling of consumer durables."

Hurdles face by ICICI bank in India for online banking

- ICICI is a leading financial services company, established by the Government of India, in 1955, to promote industrial development in the country. A Very Small Aperture Terminal (VSAT) refers to an earthbound station used in satellite communications of data, voice, and video signals. A VSAT consisted of a transceiver that was placed outdoors in direct line of sight to the satellite and a device that was placed indoors to interface the transceiver with the end user's communications device such as a PC.
- Bank Away was the first Internet banking solution in India and was installed at four out of the six leading banks in the country offering Internet banking services. It was featured in a study, 'Ranking of International Internet Banking Solutions' by Meridien Research, USA. Bank Away was the only solution from Asia Pacific to be featured in the report.
- Satyam Infoway or Sify was a Chennai-based subsidiary of Satyam Computer Services. Sify focuses on providing Internet solutions like ISP operations, cybercafes, and e-commerce consultancy.

Chapter 2-Evaluation

INDIAN VIEW OF ONLINE BANKING

Advantages previously held by large financial institutions have shrunk considerably. The internet has leveled the playing field and afforded open access to customers in the global marketplace. Internet banking is a cost-effective delivery channel for financial institutions. Customers are embracing many benefits of Internet banking. Access to one's accounts at any time and from any location via the World Wide Web is a convenience unknown a short time ago. Thus, a bank's internet presence transforms from brochureware 'status to 'Internet Banking status once the bank goes through a technology integration effort to enable the customers to access information about his or her specific account relationship.

In India, online banking is viewed as a transformative force in the financial sector, revolutionizing the way people manage their money and conduct transactions. Here are some key aspects of the Indian perspective on online banking:

1. Convenience and Accessibility

Online banking is widely appreciated for its convenience and accessibility. Indians, especially in urban areas, value the ability to perform banking tasks from the comfort of their homes or on the go using smartphones. This accessibility has become increasingly important, especially during the COVID-19 pandemic, as it minimizes the need for physical visits to bank branches.

2. Financial Inclusion

Online banking has played a significant role in advancing financial inclusion in India. It has provided access to banking services for millions of people who were previously underserved or excluded from the formal financial system. Initiatives like the Jan Dhan Yojana, Aadhaar-based authentication, and mobile banking have helped bring banking services to remote and rural areas, empowering individuals with access to financial products and services.

3. Trust and Security

Trust and security are paramount considerations for Indian consumers when it comes to online banking. Banks and financial institutions have invested heavily in implementing robust security measures to safeguard customer data and transactions. Features such as

multi-factor authentication, biometric authentication, and encryption are widely employed to ensure the security and integrity of online banking platforms.

4. Digital Payments Revolution

India has witnessed a digital payments revolution driven by online banking and mobile payment apps. Initiatives like the Unified Payments Interface (UPI) have transformed the way people transfer money, pay bills, and make purchases. UPI has gained widespread acceptance and usage across various segments of society, from urban professionals to rural farmers, contributing to India's journey towards a less-cash economy.

5. Economic Empowerment

Online banking has empowered individuals and businesses by providing access to a wide range of financial products and services. Indians can now easily open savings accounts, apply for loans, invest in mutual funds, and purchase insurance policies online. This democratization of financial services has helped individuals manage their finances better, plan for the future, and achieve their financial goals.

6. Challenges and Opportunities

While online banking has brought numerous benefits, it also presents challenges such as cybersecurity threats, digital literacy barriers, and concerns about data privacy. Addressing these challenges requires collaboration between banks, regulators, and technology providers to enhance security measures, promote digital literacy, and build trust among users.

Overall, online banking is viewed as a transformative and empowering force in India, driving financial inclusion, fostering economic growth, and shaping the future of banking in the country. As technology continues to evolve, online banking is expected to play an even more significant role in India's journey towards a digitally empowered economy

GLOBAL -VIEW ON ONLINE BANKING

Since its inception, Internet banking has experienced strong and sustained growth. The World Bank report on leapfrogging in e-finance pointed out that the three countries with impressive progress in information technology in this sense are Estonia, the Republic of Korea, and Brazil. The creation of the world's leading electronic banking system has been done at a remarkably low cost compared to other world-class Internet banks. In the European Union, 60 million people, representing 18 percent of the adult population use

online banking in France, the number of online banking accounts is recording an annual growth rate of 75 percent. However, Estonia is the country that has become a leader in Internet Banking not only among Eastern European countries, but also in the world ranking, through a combination of easy-to-use software, free-of-charge transactions, and behaviour changes resulting from the influence of the Nordic country's IT culture on Estonia. The global impact of online banking has been profound, shaping the way individuals and businesses manage their finances worldwide. Here are some key aspects of its impact

1. Financial Inclusion

Online banking has played a significant role in promoting financial inclusion by providing access to banking services for underserved populations, including those in remote areas or with limited mobility. It has enabled individuals to open accounts, conduct transactions, and access financial services without the need for physical bank branches.

2. Convenience and Accessibility

Online banking offers unparalleled convenience and accessibility, allowing users to manage their finances anytime, anywhere. This accessibility has empowered individuals to take control of their financial lives and conduct transactions seamlessly across borders.

3. Cost Savings

Online banking has reduced operational costs for banks by enabling automation and streamlining processes. This, in turn, has led to cost savings for both financial institutions and customers, as fewer resources are required for tasks such as paper-based transactions and in-person banking.

4. Efficiency and Productivity

The efficiency of online banking has improved productivity for individuals and businesses alike. Tasks that once required a visit to a physical bank branch can now be completed with a few clicks or taps, saving time and resources.

5. Globalization of Banking Services

Online banking has facilitated the globalization of banking services, allowing financial institutions to expand their reach beyond national borders. This has enabled individuals and businesses to access a wider range of financial products and services, including cross-border transactions, foreign exchange, and international investments.

6. Security Challenges

While online banking offers numerous benefits, it also presents security challenges, such as the risk of cyberattacks, fraud, and identity theft. Financial institutions and regulatory authorities have responded by implementing robust security measures and regulations to safeguard users' information and transactions.

7. Technological Innovation

The growth of online banking has driven technological innovation in the financial sector, leading to the development of new digital payment solutions, mobile banking apps, biometric authentication methods, and blockchain-based technologies. These innovations continue to shape the future of banking and financial services.

Overall, online banking has had a transformative impact on the global financial landscape, driving financial inclusion, efficiency, and innovation while presenting new challenges that require ongoing attention and adaptation.

Evolution of online banking

The evolution of online banking began with distance banking electronically and by telephone in the early 1980s. The term 'online' became popular in the late 1980s and referred to the use of a terminal, keyboard, and TV or monitor to access the banking system using a phone line.² Bill Gates once said that traditional banking will gradually disappear and electronic banking will replace it. The evolution of electronic banking started with Automatic teller machines (ATMs) and has passed through telephone banking, direct bill payment, electronic fund transfer, and the revolutionary online banking, which has been selected to be the future of financial electronic transactions.¹ Bank started using information technology initially with the introduction of standalone Personal Computers and migrated to Local Area Network connectivity. Then with further evolution, banks adopted the core banking platform, and branch banking was changed to bank banking.³ The first wave of online banks such as ING Direct and First Direct were introduced to the market in the 1990s, and the proliferation of smartphones enabled a new type of bank to emerge in the later part of the last decade: digital banks.

India and the government of India have taken various initiatives for the expansion and smooth functioning of Electronic banking in India.

From 1980 to the 1990s – The arrival of debit cards and credit card

From 1984 to 1988 – Banks started using computers, and MICR cheques were introduced.

- In 1987 – HSBC was the first bank to introduce the ATM concept in India
- In 1990 – ECS payment was introduced in India by the RBI
- In 1991 – India joined the Society for Worldwide Interbank Financial Telecommunication.
- In 1997 – A shared payment network system was set up
- In 1999 – A pilot project for Smart cards was conducted jointly by the Reserve Bank of India, IIT (Mumbai), and IDRBT, Hyderabad
- In 2000 – the Information Technology Act was passed,
- In 2002 – mobile banking was started in India by way of SMS banking
- In 2003 – The introduction of Special Electronic fund transfer
- In 2004 – The introduction of Real-time gross settlement
- In 2005 – overall, 11 Percent of branches of Public sector banks had been brought under Core banking solutions and the introduction of national electronic funds transfer.
- In 2007 – the Payment and Settlement System Act 2007 was passed
- In 2008 – The introduction of a Cheque truncation system and operative guidelines on mobile banking transactions were issued.
- In 2009 – Free cash withdrawal from ATMs.
- In 2010 – The introduction of an Immediate payment service
- In 2016- the Bharat bill payment system & Unified Payments Interface were started in banks across the country that started to upload their interface in August 2016.
- In 2016 – Bharat Interface for Money (BHIM), a mobile app developed by the National Payments Corporation of India (NPCI), based on the Unified Payment Interface (UPI).

Usage of online banking

1. Account Monitoring

Online banking allows users to monitor their accounts in real time, enabling them to track incoming and outgoing transactions instantly. This feature provides a level of transparency and control over finances that was not possible with traditional banking methods.

2. Electronic Statements

Many online banking platforms offer the option to receive electronic statements instead of paper statements through the mail. Electronic statements are not only environmentally friendly but also convenient, as users can access and download them at any time from their online banking portal.

3. Investment Management

Some online banking platforms integrate investment management features, allowing users to buy and sell stocks, bonds, mutual funds, and other investment products directly from their online banking accounts. This provides users with a comprehensive view of their financial portfolio and facilitates seamless investment management.

4. Loan Applications and Management

Online banking platforms often allow users to apply for loans, such as mortgages, personal loans, and auto loans, online. Users can also manage their existing loans, make payments, and view loan details through their online banking accounts.

5. International Banking

Online banking has facilitated international banking transactions by enabling users to conduct cross-border transfers, foreign currency exchanges, and international payments with ease. This has simplified global business operations and international trade, as well as made it easier for individuals to manage finances across different countries.

6. Financial Education and Resources

Many online banking platforms offer educational resources and tools to help users improve their financial literacy and make informed financial decisions. These resources may include articles, videos, calculators, and interactive tools covering topics such as budgeting, saving, investing, and retirement planning.

7. Customization and Personalization

Online banking platforms often allow users to customize their banking experience based on their individual preferences and needs. This may include setting up personalized account dashboards, organizing accounts into categories, and creating custom alerts and notifications.

8. Integration with Third-party Services

Some online banking platforms integrate with third-party financial services and applications, such as budgeting apps, expense trackers, and financial management software. This integration allows users to access a broader range of financial tools and services within their online banking ecosystem.

Overall, online banking has evolved into a comprehensive financial management solution, offering users a wide range of features and services to meet their banking and financial needs effectively. As technology continues to advance, online banking is likely to become even more integrated into everyday life, further transforming the way people manage their finances.

ONLINE BANKING HYPOTHESIS

The hypothesis regarding online banking typically revolves around the assumption that the adoption and usage of online banking services lead to various outcomes, both for consumers and financial institutions. This hypothesis can be approached from different angles, encompassing technological, behavioral, economic, and sociological aspects.

1. **Convenience and Accessibility:** Online banking provides customers with the convenience of accessing their accounts and conducting transactions anytime, anywhere, as long as they have an internet connection. This hypothesis suggests that this convenience factor will lead to increased adoption of online banking services among consumers.

2. **Cost Savings:** Financial institutions often argue that online banking reduces their operational costs compared to traditional brick-and-mortar branches. The hypothesis here is that these cost savings can be passed on to customers in the form of lower fees and better interest rates, thus incentivizing more people to use online banking.

3. **Security and Trust:** There is a hypothesis that the security measures implemented by banks for online transactions, such as encryption and multi-factor authentication, build trust among consumers. However, concerns about online security and privacy breaches may hinder the adoption of online banking.

4. **Financial Inclusion:** Online banking has the potential to increase financial inclusion by providing banking services to people in remote areas or those who may have difficulty accessing traditional banking services. This hypothesis suggests that online banking can bridge the gap between the banked and unbanked populations.

5. **Behavioral Changes:** The hypothesis posits that the availability of online banking may change consumer behavior, leading to increased savings, more frequent monitoring of accounts, and better financial management practices.

6. **Digital Divide:** Some argue that the widespread adoption of online banking may exacerbate the digital divide, as certain demographics, such as the elderly or those with limited access to technology, may be left behind. This hypothesis raises concerns about equity and access to financial services.



7. **Impact on Traditional Banking:** The hypothesis that online banking could potentially disrupt traditional banking models is also significant. It suggests that the rise of online banking may lead to the decline of physical bank branches and a shift towards digital-only banking services.

8. **Regulatory Implications:** The hypothesis also considers the regulatory challenges associated with online banking, including issues related to data protection, cybersecurity, and compliance with anti-money laundering (AML) and know your customer (KYC) regulations.

Overall, the hypothesis surrounding online banking is multifaceted and involves considerations of technological advancement, consumer behavior, economic implications, regulatory frameworks, and societal impacts. Studies and research in this field seek to validate or refute these hypotheses, providing insights into the evolving landscape of banking in the digital age.

The hypothesis regarding online banking suggests that the adoption and use of online banking services lead to various outcomes, including increased convenience, cost savings for financial institutions, improved security measures, potential for financial inclusion, changes in consumer behavior, impact on traditional banking models, and regulatory implications. This hypothesis is supported by factors such as accessibility, cost-effectiveness, security measures, and technological advancements. However, it also raises concerns about the digital divide, regulatory challenges, and potential disruptions to traditional banking models. Overall, it encompasses various technological, behavioral, economic, and sociological aspects of online banking.

Chapter 3- Types

Types of Online Banking

1. Informational Internet Banking

This type of e-banking service is the basic level of Internet banking. This provides access to all the general information of the bank through a website. This includes details about the bank's products and services like accounts, deposits, and loans available to different customers. It provides details about the features of the products, benefits, eligibility criteria, and how to apply for them. It also has information about the bank branches and ATM locations. If there is any other information required, then you can reach the bank via email.

Services Offered

Internet banking platforms typically offer a wide range of services, including:

Account balance inquiries

Transaction history

Fund transfers between accounts (within the same bank or to other banks)

Bill payments (utilities, credit cards, loans, etc.)

Mobile recharges

Online loan applications

Account statements and document downloads

Investment management

Foreign exchange services

Stop payment requests

Account management and customization options

2. Access Channels

Internet banking can be accessed through various channels, including:

Web browsers: Users access the bank's website through a desktop or laptop computer.

Mobile apps: Many banks offer dedicated mobile applications for smartphones and tablets, providing a more convenient and user-friendly interface for accessing banking services on the go.

SMS banking: Some banks offer basic banking services through text messaging, allowing users to perform transactions and receive account updates via SMS.

3. Security Measures

Internet banking platforms implement robust security measures to protect users' sensitive information and prevent unauthorized access. Common security features include:

Encryption: All data transmitted between the user's device and the bank's servers is encrypted to prevent interception by unauthorized parties.

Secure login: Users are required to authenticate themselves using credentials such as usernames, passwords, and in some cases, additional authentication methods like one-time passwords (OTPs), security tokens, or biometric authentication (fingerprint or facial recognition).

Multi-factor authentication (MFA): Banks often require users to provide multiple forms of authentication to access sensitive services or perform high-risk transactions.

Fraud monitoring: Banks employ advanced fraud detection systems to monitor account activity and detect suspicious transactions or unauthorized access attempts.

4. Benefits

Internet banking offers several benefits to both banks and customers, including:

Convenience: Users can access banking services anytime, anywhere, without visiting a physical bank branch.

Efficiency: Transactions are processed quickly and securely, reducing the time and effort required for banking activities.

Cost savings: Internet banking reduces the need for physical infrastructure and staff, resulting in cost savings for banks and potentially lower fees or charges for customers.

Accessibility: Internet banking improves access to banking services for individuals in remote or underserved areas, as well as those with mobility limitations.

5. Regulatory Compliance

Internet banking operations are subject to regulatory requirements and standards to ensure the security, integrity, and confidentiality of financial transactions and customer information. Banks must comply with relevant regulations and guidelines issued by regulatory authorities in the jurisdictions where they operate.

Overall, internet banking has revolutionized the way people conduct banking transactions, offering greater convenience, accessibility, and efficiency while prioritizing security and regulatory compliance. As technology continues to evolve, internet banking is expected to become even more sophisticated, with enhanced features and functionalities to meet the evolving needs of customers.

FEATURES OF INFORMATION INTERNET BANKING

1. . Credit Score Monitoring

Some internet banking platforms offer credit score monitoring services, allowing users to track their credit scores and receive alerts about changes or potential issues affecting their credit.

2. Financial Planning Tools

Advanced Internet banking platforms may provide financial planning tools and calculators to help users with retirement planning, investment strategies, debt management, and other financial goals.

3. Customer Rewards and Loyalty Programs

Certain banks integrate customer rewards and loyalty programs into their Internet banking platforms, offering incentives such as cashback rewards, airline miles, or discounts on banking products and services.

4. . Integration with Third-Party Services

Internet banking platforms may integrate with third-party financial management apps, accounting software, or budgeting tools to provide users with a more comprehensive financial management experience.

5. . Business Banking Features

For business customers, internet banking platforms offer additional features tailored to the needs of businesses, such as payroll processing, invoicing, cash management, merchant services, and business loan applications.

6. . Remote Account Opening

Some banks allow users to open new accounts online, including checking accounts, savings accounts, and certificates of deposit (CDs), without the need to visit a physical branch.

7. . Travel and Emergency Assistance

Certain Internet banking platforms provide travel and emergency assistance services, such as travel insurance, emergency cash disbursement, and roadside assistance, for customers traveling domestically or internationally.

8. . Virtual Wallets and Prepaid Cards

Banks may offer virtual wallet services or prepaid cards linked to users' accounts, allowing for convenient and secure online purchases and transactions.

9. Voice Banking and Virtual Assistants

With the rise of voice technology, some Internet banking platforms support voice banking features, enabling users to perform banking tasks using voice commands or interact with virtual assistants for account inquiries and transactions.

10. Educational Resources

Internet banking platforms may offer educational resources, articles, webinars, or financial literacy programs to help users improve their financial knowledge and make informed decisions about their finances.

11. Social Media Integration

Integration with social media platforms allows users to access banking services or receive notifications through social media channels, enhancing convenience and accessibility for digitally savvy customers.

These additional features enhance the functionality and user experience of Internet banking platforms, providing users with a comprehensive suite of tools and services to manage their finances effectively and securely. As technology continues to evolve, internet banking is expected to incorporate even more advanced features and innovations to meet the changing needs and preferences of users.

Objective

The objective of Internet banking, also known as online banking, is to provide customers with convenient, secure, and efficient access to a wide range of banking services and information through online channels. Here are the key objectives of Internet banking:

1. Convenience

Enable customers to perform banking transactions and access account information conveniently from anywhere with internet access, reducing the need to visit physical bank branches.

2. Accessibility:

Ensure that banking services are accessible to customers at any time, regardless of their location or time zone, allowing for flexibility and convenience in managing finances

3. Efficiency

Streamline banking processes and transactions by automating routine tasks such as fund transfers, bill payments, and account inquiries, reducing processing times and administrative burdens for both customers and banks.

4. Security

Implement robust security measures to protect customers' sensitive information and transactions from unauthorized access, fraud, and cyber threats, ensuring the integrity and confidentiality of online banking activities.

5. Cost-effectiveness

Reduce operational costs for banks by shifting transactions and customer interactions to online channels, potentially leading to cost savings that can be passed on to customers or reinvested in improving banking services.

6. Enhanced Customer Experience

Improve the overall customer experience by providing user-friendly interfaces, personalized services, and responsive customer support, enhancing satisfaction and loyalty among online banking users.

7. Financial Inclusion

Promote financial inclusion by extending access to banking services to underserved populations, including those in rural or remote areas, individuals with disabilities, and those who may face barriers to accessing traditional banking services.

8. Innovation

Drive innovation in the banking industry by leveraging technology advancements to introduce new features, services, and digital solutions that enhance the value proposition of Internet banking for customers and contribute to the evolution of the banking sector.

Overall, the objective of Internet banking is to empower customers with convenient, secure, and efficient tools and resources for managing their finances online, while also enabling banks to streamline operations, reduce costs, and deliver a superior banking experience to their customers.

2. Transactional Internet Banking

Transactional Internet Banking is the type of Internet banking service that deals with all money-based or payment transaction services. You typically need an active Internet banking account and password to conduct money-based transactions like fund transfers, credit card bill payments, utility bill payments, creating term deposits, and investing in market securities. Transactional Internet banking has streamlined fund transfers in India by introducing facilities like NEFT, RTGS, and IMPS. These fund transfer channels enable instant fund transfers with varying minimum and maximum transaction limits. Let us understand them briefly.

National Electronic Fund Transfer (NEFT): NEFT is a widely used centralized payment system backed by the Reserve Bank of India (RBI). You can use your internet banking platforms to send money to different bank accounts via NEFT. There is no minimum or maximum transfer amount, and funds settlement takes place in batches of half-hourly intervals. The NEFT facility is available round-the-clock.

Real-Time Gross Settlement (RTGS): You can use RTGS when you wish to initiate high-value transfers. The minimum transfer limit for RTGS is INR 2 Lakh. The bank transfers the funds to the beneficiary account in real time. You can avail of the RTGS facility through your internet banking platforms. The RBI has waived the inward transaction charges while capping all other transaction fees.

Immediate Payment Service (IMPS): IMPS is a real-time fund transfer facility owned by the National Payments Corporation of India. Banks credit the beneficiary account instantly but charge a nominal fee for IMPS instant transactions. There is no lower limit for the funds you can transfer through IMPS. However, the upper limit is capped at INR 5 Lakhs. IMPS, too, is available 24x7, and you can initiate fund transfers via mobile or Internet banking.

Features of transactional Internet banking

The features of transactional Internet banking encompass a wide range of capabilities that empower users to conduct financial activities securely and efficiently online. Here are some key features:

Fund Transfers

Users can transfer money between their accounts, to other accounts within the same bank, or accounts at other financial institutions. This includes one-time transfers, scheduled transfers, and recurring transfers.

1. Bill Payments

Users can pay bills electronically, including utilities, credit card bills, loan payments, rent, and other expenses. Many internet banking platforms allow users to schedule recurring payments for regular bills.

2. Mobile Deposits

Some banks offer mobile deposit services, allowing users to deposit checks remotely by taking photos of the front and back of the check using their smartphone or tablet. The deposited funds are typically credited to the user's account after verification.

3. Wire Transfers

Users can initiate domestic or international wire transfers to send money to recipients at other banks, either within the same country or overseas.

4. Loan Payments

Users can make payments toward their loans, such as mortgages, car loans, or personal loans, directly through the Internet banking platform.

5. Investment Transactions

Users with investment accounts linked to their online banking profile may be able to buy or sell stocks, bonds, mutual funds, or other investment products through the Internet banking platform.

6. Transaction History

Users can view a detailed history of their transactions, including deposits, withdrawals, transfers, payments, and purchases, to track their spending and account activity over time.

7. Account Management

Users can update their account information, such as contact details, email preferences, and security settings, directly through the internet banking platform.

8. Alerts and Notifications

Users can set up alerts and notifications to receive real-time updates about account activity, such as low balance alerts, large transactions, or upcoming bill due dates.

9. Transaction Limits and Controls

Users may have the ability to set transaction limits and controls to manage and monitor their spending and account activity, providing an added layer of security and control.

10. Multi-factor Authentication

Many internet banking platforms employ multi-factor authentication (MFA) to verify the identity of users before allowing access to sensitive transactions, enhancing security.

11. Transaction Status Tracking

Users can track the status of their transactions, including pending transactions, completed transactions, and transaction processing times, to stay informed about the progress of their financial activities.

These features collectively enable users to manage their finances effectively and securely, conducting a wide range of transactions conveniently from their computers or mobile devices through Internet banking platforms.

Functions

The functions of transactional Internet banking encompass a wide range of capabilities that enable users to conduct financial transactions securely and efficiently online. Here are the key functions:

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3. Communicative Internet Banking

In this type of Internet service, banks allow you to perform simple, communicative functions such as applying for various services like loans and raising queries regarding your account balances. Communication between the bank and the customer takes place via virtual chatbots. These chatbots are equipped to provide you with general information and redirect you to the customer care department if needed. You can make general inquiries about minimum balance requirements, fund transfers, types of bank accounts and cards provided, etc.

Advantages:

1. Convenience

Communicative Internet banking allows customers to communicate with their banks anytime, anywhere, without the need to visit a physical branch. This enhances convenience and accessibility for users.

2. Efficiency

Customers can quickly resolve inquiries, issues, or requests through online communication channels, reducing the time and effort required for traditional in-person or phone-based interactions.

3. Real-time Assistance

Live chat and instant messaging features provide customers with immediate assistance from bank representatives or customer service agents, leading to faster problem resolution and improved customer satisfaction.

4. Accessibility

Communicative Internet banking makes banking services accessible to customers with mobility limitations, disabilities, or those residing in remote or underserved areas where physical bank branches may be scarce.

5. Enhanced Customer Experience

Effective communication channels, personalized support, and timely updates contribute to a positive customer experience, fostering stronger relationships between customers and their banks.

6. Cost Savings

Banks can reduce operational costs associated with customer service and support by leveraging digital communication channels, potentially leading to cost savings that can be passed on to customers.

Disadvantages

1. Security Risks:

Communicative Internet banking introduces security risks such as phishing scams, fraudulent emails, and malware attacks targeting sensitive customer information. Customers need to be vigilant and cautious when communicating online to avoid falling victim to cyber threats.

2. Limited Personalization

Automated responses and standardized communication templates may limit the level of personalization and individualized support provided to customers, leading to a less personalized experience compared to face-to-face interactions

3. Technical Issues

Technical glitches, system outages, or connectivity issues can disrupt online communication channels, hindering customers' ability to access support or assistance when needed.

4. Dependency on Technology

Reliance on digital communication channels leaves customers vulnerable to disruptions caused by technological failures, cyberattacks, or system malfunctions, potentially impacting their ability to communicate with their banks.

5. Privacy Concerns

Customers may have concerns about the privacy and confidentiality of their communications when engaging in online banking interactions, especially when sharing sensitive financial information or personal details.

6. Lack of Human Touch

Some customers may prefer traditional face-to-face interactions with bank staff, feeling more comfortable and reassured by the human touch, empathy, and interpersonal connection offered by in-person interactions.

Overall, while communicative Internet banking offers numerous advantages in terms of convenience, efficiency, and accessibility, it also poses certain risks and challenges related to security, privacy, and customer experience that need to be carefully managed by banks and customers alike.

SWOT Analysis of Online Banking

SWOT analysis is a way to know the enterprise strategy. It analyses the inner and fixed conditions of the enterprise. The destination is to find the core competitive power. Among the analysis S is for Strength, W is for Weakness, O is for Opportunity and T is for Threat. Internet banking is also an enterprise for pursuing profits. Its counterparts are financial institutions, for example, the banks, including the non-financial institutions that provide Internet banking. At the same time, foreign Internet banks enter China. Considering the geographical scope they decide to use internet banking for the competence. As a result, internet banking has become more critical. The banks have better find effective ways. Through SWOT analysis we can know the strengths and weaknesses in the inner conditions. Furthermore, we can find the opportunity and threat. So long as Internet banking sees the core power it will grasp the global situations and gain success.

Strength Analysis

Internet banking can trade between banks and does not consider limits about the time and domain in contrast to traditional banking. Internet banking supports many bank functions including account inquiries, transfers, and automatic payment. It provides comprehensive and diverse services. In addition, it reduces the cost of the banks and clients. This high technology achieves a win-win situation. Internet banking shares the information between banks and clients. Bank management has become more scientific and modern

Competitive advantage for economies of scale

With the rapid development of the Internet and e-commerce, Internet bank's competitive advantage is increasingly prominent, in particular the economies of scale. Internet banking has been popular in China. More Internet users are willing to adopt online banking. Banks also break geographical restrictions and can provide banking services at the global level to facilitate customer needs. Through Bank operations, such as the expansion of the number of personnel to reduce unit costs, banks can achieve economies of scale. The emergence of Internet Banking can support more competitive advantages of economies of scale. First of all, compared with the traditional bank branches, the expansion of Internet banking would contribute to lower bank costs. Banks do not have to use land resources. This model can decrease the number of staff, save costs on management, and reduce business risks. Secondly, in the case that computer technology development matures, Internet banking consolidates a complex business and reduces transaction costs for both parties. More front desk business can also be placed in the background operation. Efficient data handling programs and speedy online service features not only speed up the efficiency of operations but reduce costs and achieve economies of scale

Rich customer resource

Internet banking in China is not a pure Internet bank on the whole. It's based on a traditional bank. Some clients come from customers who are from the original extension of a traditional bank. So it's convenient for banks to select high-quality clients. In addition to this audit and management for the clients will also be more convenient. At the same time, internet banking has few barriers to entry for smaller banks. The Internet promotes the exchange between banks and their clients easily. It will be much easier to find and develop potential clients. It will be an advantage for Internet banking. According to China 2011Q3 Internet Banking Markets quarterly monitoring report (iResearch) the market turnover of China's internet banking was 212.2 trillion yuan in the third quarter, the sequential rate increased by 6%, and year one-year growth rate grew by 43.7% (2011). Internet banking has more than 400 million registered users in the third quarter, up by 42.3%. The above data shows that China's banks have abundant clients' resources. So it provides greater benefits for the development of Internet banking

Weakness Analysis

Compound talent shortage

Under the background of rapid development in the era of the Internet, enterprises tend to achieve efficient management through the Internet. So the introduction of patents for enterprises is critical. The operation of Internet banking can't lose the personnel management. In terms of talent, internet banking has access to improve from the availability of talent perspective. Different from traditional banks, internet banks need talents who are familiar with both the banking business and a good network. At present the banks lack those compound talents. Many of them have just a little knowledge about the internet, although they may be proficient in the bank business. Meanwhile, referring to the recruitment of bank staff, there is no expansion to the conditions of the profession

Poor CRM

CRM is referred to the Customer Relationship Management. It's based on information technologies as a means of customer information for the collection, analysis, and data processing, a smart system to provide customers with a comprehensive service. At the mentioned of CRM in China, "customer-centric" management is still lacking. The business philosophy of Internet banking remains product-centered, rather than customer-centric. The promotional idea is more embedded in product features but does not emphasize the customer's individual needs. Besides internet banking lacks CRM software development capabilities. Domestic software manufacturers have a hard step to provide banks with an easy understanding of CRM software, which leads to inefficiency in Internet banking for data management and influences the further development of Internet banking.

Lack of security

From the customer's perspective, the issue of security is one of the important factors that affect customers using Internet banking. And from the bank's point of view, Internet banks also need to assume parts of the risk. Those sectors will affect the use of internet banking. Some banks have adopted many ways to increase security (see Table 1). It is shown there are some questions, especially security, to be solved. Theft of account information such as virus attacks and activities, failed to reassure customers who use

Internet banking. Inadequate prevention in security technologies has also affected the usage of Internet banking

Opportunity Analysis

Loan solution for small and medium enterprise

The problem with SME loans has been attracting attention. The loan crisis in Wenzhou that happened in 2011 got a greater Wenzhou's private lending scale in August last year shrank around response. 30%. This phenomenon is even more detrimental to the development of SMEs. If SMEs cannot raise more money, will it impede business expansion and economic promotion. In this circumstance, internet banking could seize this opportunity to loan to SMEs. On one hand, the bank supports the expansion of SMEs. On the other hand internet banking reaches a higher level Increased demand for financial products

In the wake of the domestic economy, there is growing interest in pursuing more wealth for people. So demand for banking financial products also shows unprecedented levels in providing adequate service for customers. Customers can choose any product according to their financial needs in line with their conditions. If the customer is risk-averse, he can choose financial products such as bonds. But if the customer has a risk preference, he can select high-risk, high-reward financial products such as stocks. By opening this financing channel on the Internet, banks can narrow the distance between the customer and the bank. It is a favorable choice to communicate between banks and their customers. Internet banking will provide better services

Threat Analysis

Law is relatively not sufficient

Internet banking involves a lot of legal issues. Its rapid development also calls for legal updates timely. The practical application of Internet banking in China lacks supporting laws. The relative law is not complete. Compared with the process of Internet banking such a law is lagging and it will affect the expansion of Internet banking. In the process of using online payment if customer financial losses occur who will compensate for damages? But the law has not ruled the undertaker. In practice due to the information asymmetry prone to leaks and customer information, this state will affect the customer's normal life. While the law does not think of measures relating to governance.

Foreign banks

With the development of economic globalization, more foreign banks will be focusing on other countries across geographical restrictions and providing global finance services to people. Foreign banks' access to domestic financial markets poses inevitable threats to domestic banks, especially in terms of Internet banking. Firstly, on the technical level, foreign banks have more robust operating systems and a full range of security features. Although risks foreign banks in addressing network risks are more complete. Secondly, remain, at the management level, foreign banks aim to cultivate compound talents with generous remuneration and more display space to attract more financial professionals. Thus they have created a brain drain of Internet banking in China and threaten domestic Internet banking talent. Finally, at the service level, foreign banks are focusing on product innovation based on Internet banking according to the customer's needs. They can provide more attractive products personalized services, adding to threats to Internet banking in China and Online Banking Products and services

Digital banks offer most, if not all, the products and services a traditional bank offers. These products and services include:

1. Savings Accounts

Digital banks offer Savings Accounts for easy access to banking services and to preserve your money's purchasing power with interest.

2. Cash Withdrawals and Deposits

Digital banking allows users to withdraw from or deposit cash into these accounts.

3. Fund Transfers

Through digital banking, users can transfer money between bank accounts, e-commerce services, or other business transactions. There are three main ways to transfer funds online.

4. Bill Payments

Digital banking services allow you to pay your utility bills through them. In well-designed mobile applications, these digital banks also offer reminders for when these bill payments are due so you do not forget.

5. Current account

Type of fund transfer	Immediate payment service (IMPS)	National electronic funds transfer (NEFT)	Real-time gross settlement (RTGS)
The period for settlement	Immediately	2 hours	Immediately
Minimum transfer limit	₹1	₹1	₹ 2,00,000
Maximum transfer limit	₹2,00,000	Decided by bank	N/ A
Service availability	24 x 7	24 x 7	Decided by bank
Transfer fee	Decided by bank	Decided by bank	Decided by bank

Businesses use Current Accounts as they usually need to make multiple transactions daily. Unlike Savings Accounts, these accounts aren't charged any fees after a certain number of transactions.

6. Bank Statements

Through digital banking, you can generate bank statements online using the bank's mobile application or website. These statements can be beneficial to users to reflect on how they have been spending their money.

7. Loans

Certain banks give loans to their users through digital means only. However, not all online banks can lend money to their users.

This is not an exhaustive list of all the products and services offered by a digital bank. Other specific services are also provided depending on the requirements and capabilities of digital banks.

Chapter 4-Online application

Risk In Online Banking

We now rely even more on the internet as technology develops. Everything we do, including work, leisure, shopping, and banking, can be done online. Daily duties are now much simpler thanks to the internet.

However, technology has also played a role in the significant rise in cybercrime that has occurred globally. There are noticeably more instances of online banking fraud in India as more Indians increasingly conduct transactions online.

You can conduct financial transactions with Internet banking. Online banking is sometimes referred to as web banking or Internet banking.

Online banking provides users with nearly all of the services that are typically provided by a neighborhood branch, including deposits, transfers, and online bill-paying.



Even before the pandemic, banks had already drawn several consumers to their digital platforms. This revolutionary process was, however, being hampered by client reluctance and worries about the hazards associated with digital banking. Digitech's uptake was increased by COVID-19. Both the payment and lending sectors of banking are currently thriving with digital products and services. On the one hand, we observe adoption openness; on the other hand, as growth accelerates, more systems and technological advancements proliferate and risk enters the picture.

What Are the Major Types of Banking Risks?

Let's first clarify what threatens digital banking before moving on. Data security risk and cyber security risk are the two categories into which banking hazards in the digital sphere can be divided. Data security and cyber security are intertwined since they both guard against data breaches. We might put it this way: Data is protected from outside intrusion by cyber security. Cyberattacks involving fraud and cybercrimes are kept out of safe banking cyberspace. Professionals keep an eye on the internet so they can respond quickly to active dangers and Advanced Persistent dangers (APT). Data security entails preventing unauthorized users from accessing, changing, or removing the information provided by the client, such as the date of birth or KYC detail

Here are online banking's specific risks in more detail.

Operational Risk

The most typical kind of risk in e-banking is operation or transactional risk. It consists of bad transaction handling

Data compromises in terms of confidentiality, privacy, and integrity
unapproved use of the bank's systems
contract non-enforceability, etc.

Human issues such as negligence (by customers or staff), employee fraud, hackers, etc. are another possible source of operational risk for e-banking, in addition to technological failures.

Effective policies, processes, and management of new risk exposures can help to eliminate this form of risk. Additionally, it involves balancing information security controls by implementing new processes, tools, knowledge, and testing.

Security Hazard

The security of the transaction is of the utmost importance when discussing banking transactions. Every consumer wants the privacy of their transactions.

However, since everything is available online, there is always a danger that someone could get the data and use it inappropriately. Threats of hacking and unauthorized access to the bank's systems are additional sources of e-banking security risk.

Regulatory Risk

Any company's reputation is extremely important. When it comes to electronic banking, a bank runs the danger of losing its reputation if it doesn't carry out essential tasks or operates inconsistently with consumer expectations. This eventually results in a reduction in funds or clients.

A system or product not performing as expected, serious flaws in the system, security breaches (internal or external), misleading customers about the procedures and policies of using e-banking, certain communication problems that prevent the customer from accessing his account, etc. are a few causes for this risk.

Legal Risk

If laws, regulations, or accepted practices are broken, there is a legal risk. There is also a legal risk when the rights and obligations of each party to a transaction are not apparent. Many laws and regulations are unclear because e-banking is still a relatively new profession. As a result, the legal risk is increased.

Risk of Money Laundering

Every transaction that occurs through the e-banking channel is done so online. Because of this, it is difficult for banks to use traditional methods to find and stop illegal behavior. Although there are certain anti-money laundering laws in effect, it is questionable whether they apply to electronic transfers. Banks are therefore vulnerable to money laundering.

Other Risk

Other dangers of e-banking include credit risk, liquidity risk, interest rate risk, market risk, etc., much like traditional banking. However, because e-banking uses electronic channels and has no physical borders, these risks are heightened.

All the problems listed above may be brought on by design faults, inadequate technology, careless staff members, and unauthorized system access (whether deliberate or not). As a result, banks must use the appropriate technology, processes, and access controls to create a secure environment for conducting business.

Theft of Physical Data

Although physical data theft is a possibility, the majority of dangers to e-businesses arise from the Internet itself. Hard discs or Web servers are examples of physical hardware that

businesses need to conduct business, and if they are stolen, a criminal could be able to recover sensitive data. Since there are many potential ways for e-businesses to lose crucial data, it is crucial to regularly create backup copies of data and make sure that physical facilities are safe.

Active Threats from Evil

Malware can silently infect computers, but third parties can also actively target websites. Users can typically engage with an e-business's website by creating an account and submitting different forms to the web server. An expert computer user may be able to "hack" into data that they are not supposed to be able to access by taking advantage of flaws in a website. Customers' names, credit card details, and passwords are all possible targets for hackers, who may also introduce malicious code into a website that results in data theft. For instance, a significant hacking operation that targeted Sony's PlayStation Network in 2011 led to the loss of millions of customers' data.

Simple Guidance For Safe Online Banking

Whether it is bill payments, funds transfers, or the creation of a fixed deposit, internet banking allows you to do it in a fast and convenient way. Instead of going to the bank and waiting in an unending queue, internet banking has made all banking functions accessible through a few clicks. However, this facility needs to be used very carefully due to the risk of phishing – fraudulent means of attaining your confidential banking information.



7 Tips for Safe Online Banking

Selecting a strong password. ...

Never share your password. ...

Avoid phishing e-mails. ...

Use your computer/laptop. ...

Use licensed Anti-Virus software. ...

Register for account notifications.

Type the URL of your bank

1. Selecting a strong password

Your online banking password should be alphanumeric and a combination of uppercase and lowercase letters. Add some special characters to it, and you will have a password that would be almost impossible to crack.

Never use common phrases or words as your password. This means that your name, pet name, or date of birth should be avoided. Also, change the password regularly for better safety.

2. Never share your password

A strong password is only useful as long as no one gets access to it. So, make sure that you never share your banking password with anyone. Also, many people have a habit of storing their password in their computer/laptop or mobile phone.

If all your computer/laptop is hacked or your mobile is stolen, someone can easily get access to your online banking password. So, make sure that you remember your password and never write it down anywhere.

3. Avoid phishing e-mails

Phishing is now one of the most popular types of online banking fraud. Fraudsters send you an e-mail that appears to have come from your bank or other reputed websites. These e-mails generally have a link that you are asked to follow. Once you click on the link, you will be redirected to a page where you will be asked to enter your banking details.

Know that no bank will ever send such e-mails where they will ask you to provide your banking details. Avoid such e-mails as you can be an easy victim of a phishing scam.

4. Use your computer/laptop

For online banking security, make sure that you always use your PC/laptop for online transactions. Public computers are not safe and can provide someone access to your online banking account.

Similarly, use a trusted internet connection for such transactions. Public Wi-Fi and hotspots are prone to hacking and should be avoided for banking transactions.

5. Use licensed Anti-Virus software

To protect your PC from virus attacks, it is also vital to invest in licensed anti-virus software. Free antivirus software is not as powerful and cannot protect your computer from newer viruses.

You should keep your operating system up-to-date to prevent hacking and other

6. Register for account notifications

Most of the banks now offer account notifications through e-mail and SMS. Register for this service to receive alerts for every debit and credit transaction. This will make it easier for you to monitor the transactions.

If all your account details are compromised, the notification will alert you if there has been any unauthorized transaction. You can then instantly get in touch with your bank to get the account blocked.

7. Type the URL of your bank

Rather than following any links for online transactions, prefer typing the bank URL in the address bar of the browser.

Once you reach the online banking page of your bank, check whether it has an "https" prefix in the URL. The prefix indicates that the communication between the website and the browser is encrypted and secure. Genuine sites feature this pr

CHAPTER 5-Online application

Apps For Online Banking

ICICI iMobile Application

ICICI Bank's iMobile application provides a comprehensive and secure platform for users with over 250 financial as well as non-financial services. This app functions to take care of the daily banking requirements from the smartphone.

ICICI iMobile app is available on both Android and iOS. As compared to other mobile banking apps, iMobile has the highest rating on Google Play Store which makes it the top-rated mobile banking app.

Google Play Store Rating: 4.4 stars with more than 10 million downloads

Key Services offered by iMobile App

- Easy bill payment and recharge
- Quick fund transfers with NEFT/RTGS/IMPS
- One-stop smart shopping platform
- Manage all your invests and deposits
- Instant personal loan
- Instant credit card
- Start a savings account
- Open/close fixed deposits
- Scan to pay
- Instant purchase/sale of gold
- Real-time analyses with consolidated statements of transactions
- Start Mutual Fund SIP
- Make travel and stay bookings
- Buy life insurance

HDFC Mobile Banking App

HDFC Bank Mobile Banking Application offers an easy, secure, and convenient platform for over 120+ banking transactions from anywhere and anytime. The app is equipped with advanced encryption and security to keep your account safe.

You can also recharge your mobile, make DTH payments, and pay bills and credit card dues with the HDFC Mobile Banking App. Instant money transfers, Demat portfolio management, and UPI payments can also be catered with mobile banking.

Google Play Store Rating: 4.1 stars out of 5 with more than 10 million downloads

Key services offered by HDFC Mobile Banking App

- Quick and secure login
- Instant fund transfer using RTGS/NEFT/IMPS
- Pay all your utility bills
- Automatic bill payment for recurring payments
- Manage your Demat account and start investing
- Update Aadhaar details
- Download e-TDS certificate
- View account balance, statements, etc.
- Apply for loans
- Apply for a new savings account
- Buy e-gift cards and Forex cards

State Bank of India YONO App

SBI YONO (You Only Need One App) fulfills all the banking, insurance, investment, and daily shopping requirements of its users. With this one app, users can bank, shop, travel, pay bills, recharge, invest, etc. conveniently. It also allows users to apply for SBI cards, make card payments, view transaction history, and is suitable for international usage as well.

Google Play Store Rating: 3.9-star rating with more than 50 million downloads.

Key Features of the SBI YONO App:

- Instant account opening in less than 5 minutes with personalized Platinum Debit Card and concession on banking services
- Availability of exclusive discounts and offers for SBI customers
- An interface that is easy to understand with intuitive navigation
- Quick fund transfers with UPI-enabled payments
- Link and view all State Bank group relationships in one app

- Intelligent classification and categorization of transactions
- Avail overdraft against Fixed Deposits
- Request chequebooks and ATM cards
- Get pre-approved personal loans of max. 1 lakh without any documentation

HDFC PayZapp

HDFC PayZapp is a payment application using which one can send money, pay for shopping with a click, transfer funds, make bill payments, etc. The best part about PayZapp is that it offers rewards, coupons, and discounts on online shopping websites and a lot more. Using this payment app by HDFC, you can shop on your mobile at partner apps, buy movie tickets, and groceries, compare and book flight tickets and hotels, shop online, and get great discounts at Smart Buy. HDFC account holders can link their debit/credit cards with Pay Zapp for a convenient experience.

Google Play Store Rating: 3.9 stars with more than 10 million downloads

Key Services available on HDFC Pay Zapp Mobile App:

- Mobile recharge/utility bill payment
- Add/send funds
- Book movie tickets
- Make travel bookings and payments
- Order and pay for dining/fast food
- Online shopping
- Buy gift cards
- Online grocery shopping

Bank of Baroda M-Connect Plus

M-Connect Plus App by Bank of Baroda is a feature-loaded mobile banking app where users can access a wide range of banking products from balance inquiry to cardless cash withdrawals. All the services provided by the app are free of charge. A one-time SMS charge is applied at the time of activation. A fund transfer facility is also provided under this app using IMPS/NEFT.

It has a simple and easy-to-use interface and activation process. Users can auto-link all their savings, current, CC, OD, Loan, and PPF accounts with one customer ID.

Google Play Store Ratings: 4.2 stars out of 5 with more than 10 million downloads

Key Services offered by Bank of Baroda M-Connect Plus:

- Quick fund transfer with BOB, to other banks via NEFT/IMPS
- Mobile/DTH recharges
- Utility bill payments
- Chequebook request
- View account balance
- Update Aadhaar
- Change MPIN, De-link accounts
- Scan to pay

Axis Mobile App

Axis Bank's Axis Mobile App is a safe and secure mobile banking platform that offers more than 100 services to its users for almost all banking requirements. It is one of the most popular and efficient mobile banking applications with convenient access to bank accounts, fund transfers, bill payments, UPI payments, and a lot more.

Google Play Store Ratings: 4.6 stars with more than 10 million downloads

Key features of Axis Mobile App:

- Easy access to all your Axis Bank accounts
- Personalized menu
- One-stop-shop for retail and business loans
- Get pre-approved credit cards
- Process UPI payments
- Scan and Pay
- View account summary, account statements, and transaction details
- View and pay the latest, unbilled, and past statements of your credit cards
- Open FD or RD instantly

- Access your Deposit, Loan, Forex, Demat, and Mutual Fund details
- Schedule/ Pay/ Auto-Pay your utility bills for more than 200 billers
- Recharge your Prepaid Mobile, Data Card, and DTH connection instantly
- Make quick fund transfers to the same bank or other bank customers using IMPS or NEFT

Kotak- 811 & Mobile Banking App

Kotak Bank has released its upgraded version of mobile banking in the form of Kotak- 811 & Mobile Banking App. Using this app, Kotak account holders can open a new zero balance 811 savings account in just 5 minutes. Besides this, the app provides almost all banking services including transfer and payments, account balance checks, bill payments and recharges, investments, credit card issuance, Demat account access, and much more.

Google Play Store Ratings: 4.5 stars with more than 10 million downloads

Key Services offered by Kotak- 811 & Mobile Banking App:

- Manage financial transactions
- Send and receive money via NEFT, RTGS and IMPS
- Apply for loans, insurance, etc.
- Regulated UPI payments
- Make travel bookings
- One-stop shopping on e-commerce websites
- Pay mobile bills, utility bills and recharge
- Instant update of profile details
- Hot listing debit and credit card
- Purchase and redeem Mutual Funds and keep track of your investments
- Apply for a Kotak Credit Card and make credit card payments
- Regenerate your Debit and Credit card PINs

IDBI Go Mobile+ App

IDBI Go Mobile+ App enhances the consumer's banking experience with a simple, customizable interface providing a wide range of features and services. Mobile banking allows users to access several banking services anytime and anywhere. IDBI customers can register and log in to the IDBI Go Mobile+ app and view account statements, and

remittances, transfer funds, make bill payments, etc. Moreover, one can also make utility bill payments or recharge prepaid mobile using this app.

The bank has equipped the app with sophisticated encryption technology to secure data transfer from your mobile phone to the Bank's mobile banking server.

Google Play Store Ratings: 4.3 stars with more than 1 million downloads

Key Services offered by IDBI Go Mobile+ App:

- View account balance, details, mini statement, and account statement
- Access Demat holdings and transaction details
- Calculate finances to make investment decisions
- Make bill payments, add billers, schedule auto-pay
- Transfer funds to self and third-party a/c holders
- Make visa card payments
- Get an IDBI credit card, make credit card payments
- Manage credit cards
- Hotlist debit/credit cards
- Set International or Domestic usage on your card
- Recharge your prepaid mobile number
- Make DTH recharge
- Make a chequebook request
- Link and Update Aadhaar
- Register for email account statement
- Apply for loans and more

CANDI- Mobile Banking App

Canara Bank's CANDI- Mobile Banking App is launched by the bank with the bigger objective of implementing 'One Bank, One App'. It is a multi-channel application that supports most of the banking services including fund transfer, opening a fixed deposit or recurring deposit, EMI payments, loan payments, and a lot more.

Google Play Store Ratings: 4 stars with more than 1 million downloads

Key Services offered by the CANDI App:

- Touch and pay with RTGS/NEFT

- Start FD or RD
- Invest in mutual funds
- Schedule automatic recurring payments
- View balance and download bank statements
- Transfer funds using NEFT/RTGS/IMPS
- Scan & Pay QR codes using Bharat QR
- Request for Cheque book
- View and track the history of transactions

PNB ONE Mobile Banking App

PNB ONE is a unified mobile banking app stacked with several banking products and services. It enables the PNB account holders to perform major banking transactions anytime and anywhere without having to visit the branch. The bank has used biometric authentication along with MPIN to secure the application.

Google Play Store Ranking: 3.4 stars with more than 1 million downloads

Key services offered by PNB ONE Mobile Banking App:

- View all accounts easily
- View details of bank account, account statement, etc.
- Transfer funds to self, within PNB accounts, or to other bank accounts via NEFT/IMPS/RTGS
- Open a term deposit or recurring deposit
- Start investments in mutual funds or insurance
- View recent transactions
- Apply for new cards, hotlist debit cards
- Schedule auto-pay, link/delink credit cards
- Regulated UPI payments
- Scan and pay facility
- Request for chequebooks
- PAN/Aadhaar registration
- Link the PPF account and the transfer amount
- View & Download E- Interest Certificate for loan & Deposit account

Step By Step Creating Online Banking Account

1. Choose the account

Before you start the application, you have two key decisions to make:

What type of bank account do you want? Checking and savings accounts are the most common pair to open at a bank, but you don't have to have them in the same place. Having accounts at multiple banks can mean getting different benefits. Checking accounts give access to multiple payment and withdrawal options, such as debit cards, bill pay, and ATMs, while savings accounts focus on storing funds and earning interest. Look for checking accounts with no monthly fees or easy ways to avoid them, and consider savings accounts with high rates.

Do you want to open a single or joint account? With a single account, you're the sole owner. A joint account is one you co-own with another person, generally a family member or significant other.

2. Gather personal documents and information

Here's the documentation you'll need to open a bank account online. You'll also need this information for anyone who will be a joint account owner.

Social Security number or, for noncitizens, another identification number.

Valid driver's license or other government-issued ID.

If your new account requires an initial deposit, you'll often need debit card information, or routing and account numbers, for another bank account you own. You can find these numbers on a check or by logging in to your existing account's online dashboard.

3. Fill out the application

To open a bank account online, you'll need to provide some information about yourself. Using a secure home internet connection or another trustworthy network, fill out the application with your details, which will likely include:

Information from the items you previously gathered, including Social Security number, ID, and debit card or bank account information.

Name.

Date of birth.

Address.

Contact information.

In most situations, you can send this information online, but some banks may ask you to fax or email additional documents — such as a copy of your driver’s license — to help verify your identity. In the case of some brick-and-mortar banks, you might need to visit a branch to provide these documents, especially if the bank can’t confirm your identity you’ve had a history of checking account issues or you have a limited work or credit history.

You might also have to sign and mail in a signature card or form so your bank can verify your signature or so you can agree to receive statements and other messages online. If you’re not a legal adult, you’ll need a parent co-signer information as well, and you may need to visit a branch to complete your application.

4. Fund your new account

When you open an account online, you’ll need to make an initial deposit or add money to the account. This step usually involves making a transfer from an existing account, but other options may include mailing a check or money order. And if your bank has local branches, you can visit one to deposit cash.

When you enter details for a transfer, choose an amount that satisfies any minimum balance or opening deposit requirement. The funds generally take a few days to process, and then you can start managing your new account.

Chapter 6 – Review of literature

A feature of the banking industry across the globe has been that it is increasingly becoming turbulent and competitive, characterized by an increasing trend towards internationalization, mergers, takeovers, and consolidation of the banking industry. Moreover, several nonbanking companies are entering the banking industry by offering financial products and services (e.g., Toyota's credit card, GM's auto financing, Merrill Lynch investments). This has given a myriad of options to customers in choosing banking services. Online Banking has attracted the attention of banks, securities trading firms, brokerage houses, insurance companies, regulators, and lawmakers in developing nations since the late 1990s. With the rapid and significant growth in electronic commerce, it is obvious that electronic (Internet) banking and payments are likely to advance. This study attempts to explore a literature review on online banking and gives a conclusion based on past studies.

Online banking is an innovation when new information technologies merge into traditional banking services. Operating cost minimization and revenue maximization are the major drivers that boost online banking services (Sannes, 2001; Reibstein, 2002). Online banking service is a self-service by customers, so, for banks, it requires fewer resources and lower transaction and production costs (Southard and Siau, 2004; Witman and Poust, 2008). A study of online banking from 1999–2006 shows that the application of online banking can improve banks' performance in terms of growth in assets, reduction in operating expenses, and portfolio enhancement (Dandapani et al., 2008). Even in the 1990s, Sraeel (1996) emphasized that creating virtual banking would not only create a new service delivery channel but also lead to value creation for both banks and customers (Hwang et al., 2007; Murphy, 2007). Amato McCoy (2005) further argues that customers will be attracted to online banking when advanced Online Banking services like e-transfer and e-bill options are available. Through interviewing banks on a small island and examining their online banking websites from 2004 to 2006, Jenkins (2007) indicates that those banks were using online banking as an assurance to their customers to maintain a competitive quality of service. To continually improve the performance of Online Banking services, several core capacities are critical:

Planning new IT infrastructure

Enhancing transaction security

Providing value-added content

Delivering differentiated services

Managing customer relationships

The retention and expansion of relationships with relative older and lower IT awareness customers (Wu et al., 2006).

In this field, few studies were conducted in India. The researcher reviewed many research conducted in India and abroad to find out the correct area to carry out the research work, which will be fruitful for the professionals and the country.

Rangan, V. Kasturi and Lee, Katharine L., (2012), "Mobile Banking for the Unbanked

The case describes in detail the workings of two mobile banking operators in Africa WIZZIT in South Africa and M-PESA in Kenya. It explores the dimensions of strategy that make for success in the market for the unbanked. It raises questions regarding the portability of the model to other countries and settings

V. Raja, Joe A. (2012), "Global Online Banking Scenario and Challenges in the banking system",

This paper is an attempt to explore the various levels of Online Banking services provided by banks using secondary data. It also compares the traditional banking systems with net banking. It lists the various advantages of Online Banking and the successful security measures adopted by different banks for secured banking transactions. It also analyzes how Online Banking can be useful for the banking industry during this global financial meltdown.

Van B., Paul, Veloso, Francisco M. and Oliveira, P., (2012), "Innovation by Users in Emerging Economies: Evidence from Mobile Banking Services",

This paper examined the extent to which users in emerging economies innovate, and whether these innovations are meaningful on a global stage. To study this issue, the researcher conducted an empirical investigation into the origin and types of innovations in financial services offered via mobile phones, a global, multi-billion-dollar industry where emerging economies play an important role. The researcher used the complete list of mobile financial services, as reported by the GSM Association (GSMA), and

collected detailed histories of the development of the services and their innovation process. Analysis of this study shows that 85% of the innovations in this field originated in emerging markets. The researcher also concludes that at least 50% of all mobile financial services were pioneered by users, approximately 45% by producers, and 5% jointly by users and producers. Additionally, services developed by users diffused at more than double the rate of producer innovations. Finally, the researcher observed that three-quarters of the innovations that originated in emerging markets have already diffused to OECD countries and that the (user) innovations are therefore globally meaningful.

Nel J., Boshoff C., Raleting T., (2012), "Exploiting the technology cluster effect to enhance the adoption of WIG mobile banking among low-income earners"

This study investigated the attitude formation of low-income, non-users of Wireless Internet Gateway (WIG) mobile banking, by including the use of Short Message Services (SMS) as a moderator of attitude formation. A non-probability sample of 465 South African non-users of mobile banking were drawn and clustered into High users and Low users of the SMS, based on the average number of text messages sent in a week. The moderating effect of "use of the SMS" was investigated using a structural equation modeling multi-group analysis. The findings revealed that the influence of Ease of use on Attitude and of Self-efficacy on Ease of use were stronger for High users and significantly different for Low users, while the opposite was true for the influence of Facilitating conditions on Usefulness.

Oliveira P., Eric V. H., (2011), "Users as service innovators: The case of banking services" Found that 55% of today's computerized commercial banking services were first developed and implemented by non-bank firms for their use, and 44% of today's computerized retail banking services were first developed and implemented by individual service users rather than by commercial financial service providers. Manual precursors to these services – manual procedures that carried out functions similar to computerized services in our sample – were almost always developed by users as self-services.

Mas I., Dan R., (2011), "Scaling Mobile Money",

Retail payment systems require scale to get off the ground and struggle to grow incrementally. This is due to three factors: (i) Network effects: when it comes to payment systems, the value of joining a network is directly proportional to the number of people

already on it; (ii) Chicken-and-egg trap: to grow, these systems must aggressively attract both customers and cash-in/cash-out merchants in tandem, otherwise, merchants will stop offering the service due to low transaction revenue and customers will not join the system because they cannot access a convenient outlet; (iii) Trust: customers have to become comfortable going to non-bank retail outlets to meet their cash-in/out needs and initiating transactions through their mobile phones. Until a deployment serves a large number of customers, people will lack trust in the new system, because they know few who can vouch for it. To overcome these barriers, mobile money deployments need to reach a critical mass of customers as quickly as possible, lest they get stuck in the ‘sub-scale trap’. To do this, they need to get three things right. First, they must create enough urgency in customers’ minds to learn about, try, and use the service. Second, they must invest heavily in above and below-the-line marketing to establish top-of-mind awareness of (and trust in) the service among a large segment of the population. And, third, they must incur considerable customer acquisition costs (beyond marketing and promotion) to ensure that their cash-in/out merchants are adequately incentivized to promote the service.

Traynor P., Amrutkar C., Rao V., Jaeger T., McDaniel P., Porta T. L., (2011), “From mobile phones to responsible devices”

Mobile phones have evolved from simple voice terminals into highly- capable, general-purpose computing platforms. While people are becoming increasingly dependent on such devices to perform sensitive operations, protect secret data, and be available for emergency use, it is clear that phone operating systems are not ready to become mission-critical systems. Through a pair of vulnerabilities and a simulated attack on a cellular network, we demonstrate that there is a myriad of unmanaged mechanisms on mobile phones and that control of these mechanisms is vital to achieving reliable use. Through such vectors, mobile phones introduce a variety of new threats to their applications and the telecommunications infrastructure itself. In this paper, we examine the requirements for providing effective mediation and access control for mobile phones. We then discuss the convergence of cellular networks with the Internet and its impact on effective resource management and quality of service. Based on these results, we argue for user devices that enable predictable behavior in a network—where their trusted computing bases can protect key applications and create predictable network impact.

Ahmed S. M, Shah J. R., Md. A. I., Samina M., (2011), “Problems and prospects of mobile banking in Bangladesh”

This study revealed that 61 % of respondents think it saves time than traditional banking, the highest number of respondents use mobile banking for “Air-time top-up” service, that is 21%, out of 120 respondents 56% replied it is less costly than traditional banking, 100% respondents did agree that it is speedy, and 38% respondents are upper class. Although this concept is new in Bangladesh its potentiality is high. From this research, other researchers and policymakers will get an insight into the problems and prospects of mobile banking in Bangladesh.

Lin H. F. (2011), “An empirical investigation of mobile banking adoption: The effect of innovation attributes and knowledge-based trust”,

This study developed a research model to examine the effect of innovation attributes (perceived relative advantage, ease of use, and compatibility) and knowledge-based trust (perceived competence, benevolence, and integrity) on attitude and behavioral intention about adopting (or continuing to use)

mobile banking across potential and repeat customers. Based on a survey of 368 participants (177 for potential customers and 191 for repeat customers), this study uses a structural equation modeling approach to investigate the research model. The results indicate that perceived relative advantage, ease of use, compatibility, competence, and integrity significantly influence attitude, which in turn leads to behavioral intention to adopt (or continue- to use) mobile banking. Additionally, by using multi-group analysis with t- t-statistics, the results found that the antecedents of attitude toward mobile banking differ between potential and repeat customers.

Mas I., (2011), “Capturing the Potential of M-Payments for the,,Unbanked”,

This article discusses the potential of using mobile phones to greatly increase access to financial services in developing countries and reviews the main success factors in a mobile banking project.

Dube T., Kosmas N., Collins M., Lloyd C., (2011), “Adoption And Use of SMS/Mobile Banking Services in Zimbabwe: An Exploratory Study”

The findings showed that although SMS banking was first launched in 2004, the service was still in its infancy. Evidence showed that accessibility and affordability were the major

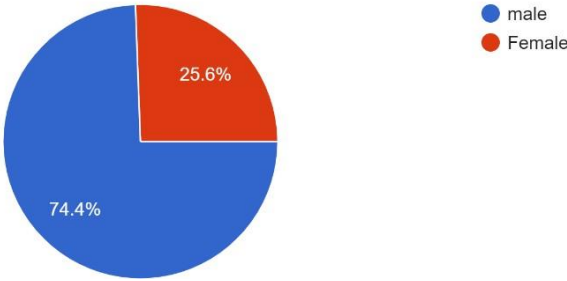
drivers of the adoption of SMS banking. The research confirmed the assertion that the appeal is more about accessibility and affordability in developing countries. This has been exacerbated by the lack of regulation for electronic banking in Zimbabwe. the study recommended an increased awareness campaign by banks and the development of policy and regulation for electronic banking in Zimbabwe.

Sudhakar A. M., Suryanarayana, (2011), “Emerging mobile banking scenario and its adoption in India: a study”,

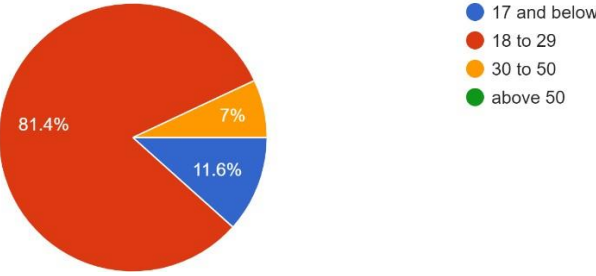
With broadband communication technological developments and mobile phone penetration (481 million by June 2009) into the common man's life have triggered a major thrust in the Banking service sector of India. Mobile Banking- a revolutionary approach to banking transactions has created strong connectivity between customers and the banks as both will transact with minimum cost and in minimum time. It is timely and its cost-services can deliver mobile money to non-banked poor people and will induce economic growth in the country. This article discusses the status of Mobile Banking in India and other countries with an emphasis on data security and standards and their implications on the banking sector.

Chapter 7 - Analysis and interpretation of data

gender
43 responses

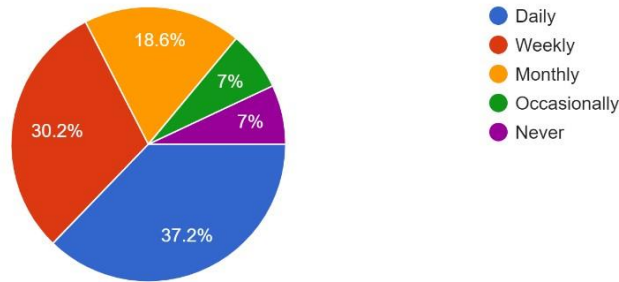


age goup
43 responses



How frequently do you use online banking services?

43 responses

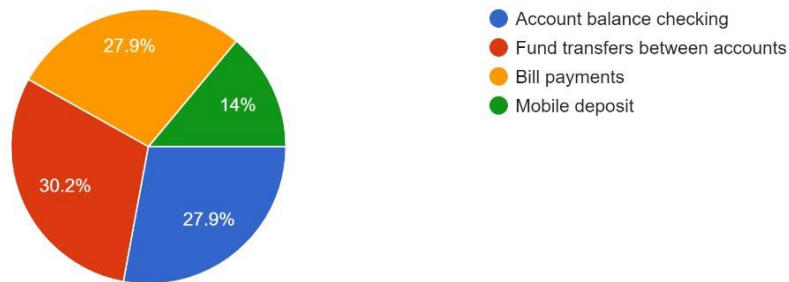


INTERPRETATION:

From the above response, we can interpret that 37.2% use online services daily, 30.2% use online services weekly, 18.6% use online services monthly, 7% use online services occasionally, and 7% use online services never.

What features do you find most useful in an online banking platform?

43 responses

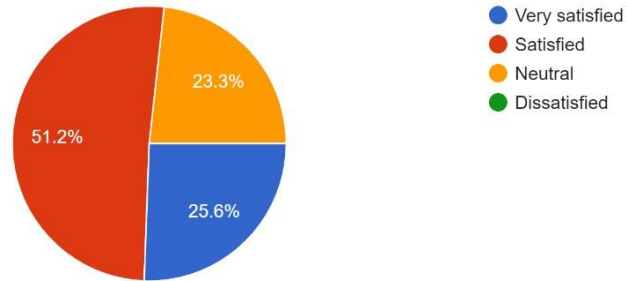


INTERPRETATION:

From the above response, we can interpret that 27.9% of people found account S checking and bill payment the most useful features in online banking platforms 30.2% of people found funds transfers between accounts, and 40% found mobile deposit.

How satisfied are you with the user interface and experience of your current online banking platform

43 responses

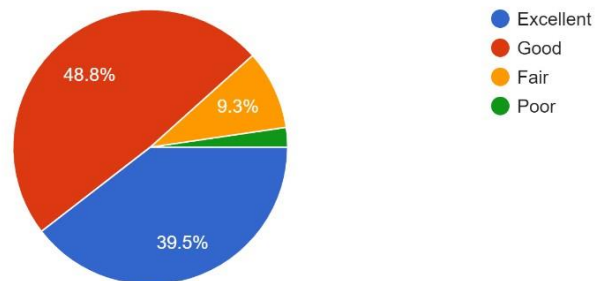


INTERPRETATION:

From the above response, we can interpret that 51.2% of people are satisfied, 23.3% are neutral and 25.6% people are very satisfied.

How would you rate the reliability and uptime of your current online banking platform

43 responses

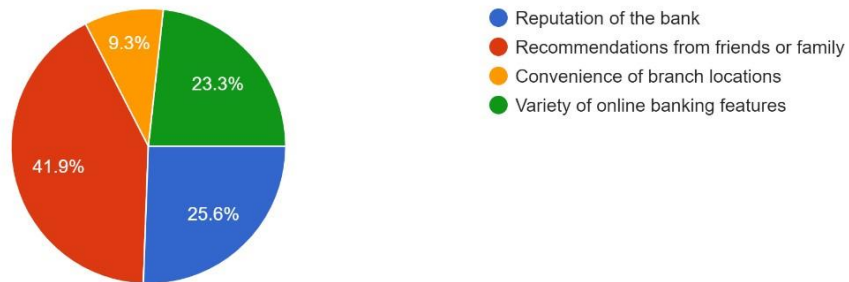


INTERPRETATION:

From the above response, we can interpret that 39.5% of people found reliability and uptime excellent online banking platforms, 48.8% found good in online banking platforms, 9.3% found fair and 2.4% found poor in online banking platforms.

What factors influenced your decision to choose your current online banking provider

43 responses

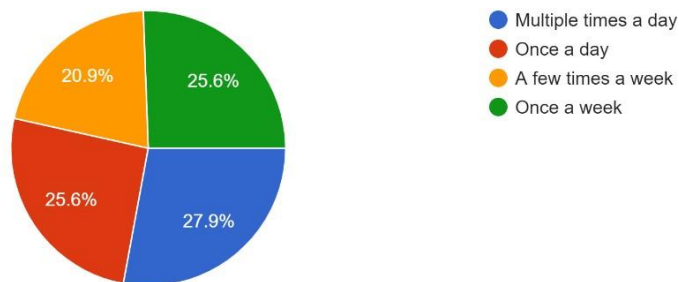


INTERPRETATION:

From the above response, we can interpret that 25.6% of people choose their online banking provider for the reputation of the bank, 41.9% of people choose their recommendations from friends or family, 9.3% of people choose their online banking provider for the convenience of branch locations and other 23.3% decided to choose a variety of online banking features.

How often do you check your account balances and transactions through online banking?

43 responses

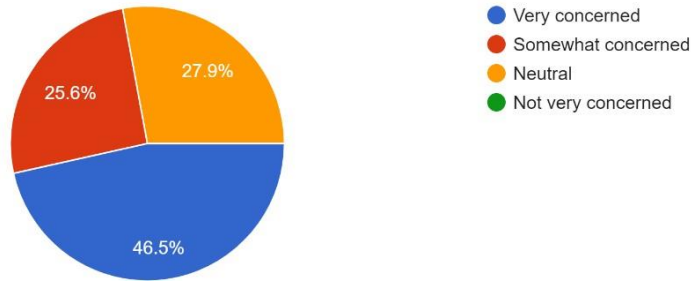


INTERPRETATION:

From the above response, we can interpret that 27.9% of people check account balances and transactions multiple times a day through online banking, 25.6% check once a day, 20.9% people check a few times a week, and 25.6% people check account balances, and transactions once a week.

How concerned are you about the privacy of your personal and financial information when using online banking?

43 responses

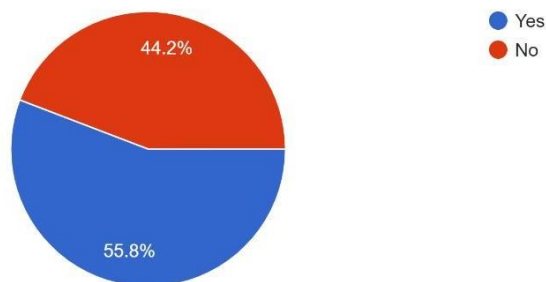


INTERPRETATION:

From the above response, we can interpret that 46.5% of people are very concerned when they use online banking, 25.6% people are somewhat concerned about the privacy of their personal and financial information when they use online banking, and 27.9% are neutral about personal and financial information when using online banking.

Have you ever encountered any issues or concerns while using online banking

43 responses



INTERPRETATION:

From the above response, we can interpret that 44.2% of people are encountered with Online banking issues.

Chapter 8- Conclusion and suggestion

Conclusion

This study thus discussed major findings concerning the objectives of the study. It also presented an understanding of the concept of Online Banking and its importance, about the role of electronic banking as compared with traditional banking systems with an emphasis on cost, efficiency, time secrecy, and quality of data.

The study identified the benefits and problems of online Banking from the consumer's point of view, and also the quality of online banking as the last part of the findings, it presents the impact of Online Banking products on consumer behavior.

This study attempts to identify key reasons behind people using online Banking services. The findings of this study show that despite of many advantages of online banking. People still consider it as an alternative for analyzing their bank records. Although every bank today provides the facility of online banking most people use it only once a week. This reason is that in the case of Online Banking interpersonal interaction with customers is seldom possible. Identification & measurement of customer's expectations of Online Banking services provide a frame of reference & their related quality dimension. The main factors that persuade people to use online banking are comfort & convenience & the facilities that attract them most are the quality & quantity of information. Therefore, the implementation of quality initiatives should begin with defining customer's needs & preferences & their related quality dimensions There is still a lot needed for the banking system to make reforms and train their customers to use the Internet for their banking accounts. Going through the survey the main problem lies that still customers have a fear of hacking accounts and thus do not go on for Online Banking. Banks are trying their level best by providing the best security options to the customers but then to there are a lot of factors that prevent a customer from opening an Internet bank account. Banks are providing free Online Banking services also so that the customers can be attracted. By asking the bank employees we came to know that the maximum number of Internet bank account holders are youth and business man.

Online Banking is an innovative tool that is fast becoming a necessity. It is a successful strategy for banks to remain profitable in the volatile and competitive marketplace of today.

If proper training is given to customers by the bank employees to open an account will be beneficial secondly the website should be made friendlier so that first-time customers can directly make and access their accounts. In the future, the availability of technology to ensure the safety and privacy of e-transactions and the RBI guidelines on various aspects of Online Banking will help in the rapid growth of Online Banking in India.

SUGGESTION

As per the findings of the current research, it is understood that Online Banking in India is characterized by several limitations:

Security issues and concerns are the main issues dealt with in the process of generalization of Electronic Banking. Despite cybersecurity-related regulatory laws as well as the IT Act (2013) which gives special attention to providing the criteria for securing Online Banking customers, still, the lack of relevant regulations is still felt and observed. Media as well as Bankers carry the main responsibility towards changing the general perception of the customers.

By generalizing the result of the current study, it can be understood that the majority of the population in India is still not familiar with the concept of e-banking. As a result, among a majority of Indian society, Online Banking can be termed as a new concept. Hence it is necessary to train the young and younger generation about the importance, advantages, and significations of E Banking. Organizing presentations and lectures in the schools, Institutes, and universities as well as including the related topics to the syllabus of schools as well as colleges, can be called an important step. 5. Infrastructural facilities are the preliminary needs of promoting electronic banking. It should be always remembered that cost reduction as well as time-saving characteristics motivate bankers and governors to maximize their target market.

Rapid Growth of Media and advertising tools should be more applied for the promotion of Online Banking. Since house-to-house publicity would help in the promotion of Online Banking and because TV/RADIO ads and shows are still the main effective Media, which can help in creating image and positions in the consumer minds, maximum utilization of such resources should be prioritized. If bankers wish to promote Online Banking effectively, an increase in the use of such Media is unavoidable. Bankers must use innovative ideas to popularize Online Banking.

There is a lack of awareness about Online Banking usage among rural people. Banks should take necessary steps to create awareness among them about the various services of Online Banking that are available and also the advantages of using such services. Demonstration of Online Banking should be provided to the customers to promote electronic banking. The banks should focus on the security issues regarding confidential credentials which are at risk of hacking in the cyber world. The cost involved in using the Online Banking services can be minimized to increase the number of users of Online Banking. The Online Banking system should be enhanced to make online inquiry and online payment much easier for customers.

We can see that times are changing and with the passage of time people are accepting technology there is still a lot of perceptual blocking which hampers growth it's the normal tendency of a human not to have changes work on the old track, that's also one of the reasons for the slow acceptance of Online Banking accounts.

Give proper training to customers for using e-banking

Create trust in the minds of customers toward the security of their accounts

Provide a platform from where the customers can access different accounts at a single time without extra charge.

Make their sites more user-friendly.

Customers should be motivated to use I banking facilities more.

Bibliography

www.shodhganga.com

www.wikipedia.com

www.investopedia.com

www.yourarticleslibrary.com

Thefinancialbrand.com

www.downtoearth.com

www.figrow.com

<https://core.ac.uk/reader/234646410>

<http://hdl.handle.net/10603/234557>

<https://corporatefinanceinstitute.com/resources/knowledge/economics/government/>

<https://www.inspirajournals.com>

<https://financialservices.gov.in>

<https://www.thebalance.com>