



## EFFECTS OF INFORMATION TECHNOLOGY IN BANKING SECTOR

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### Abstract

The technological developments experienced in the banking sector during the 1990s revolutionized the way business is done. IT has brought new business models and is increasingly important in enhancing services in the banking sector. The purpose of this study is to investigate several key and popular IT-enabled banking services, their benefits, and current difficulties. The current state of information technology development has resulted in considerable changes in the commercial sector, including the e-commerce system. However, this technological advancement introduces new risks, specifically threats to information security in banking systems. As a result, e-commerce businesses must establish an efficient information security system in order to reduce security risks and increase service quality. The purpose of this research is to investigate the impact of information security systems on service quality in e-commerce systems. The findings indicate that an effective information security system has a substantial impact on the quality of service in e-commerce systems. Users of e-commerce systems have higher trust in systems that have solid information security measures, which increase data integrity and limit the chance of errors or failures. Furthermore, management that is actively involved in monitoring information security systems will demonstrate concern for the security of user data and increase user trust in the e-commerce system being used. To earn consumer trust and loyalty, banks must prioritize building and consistently enhancing their information security processes, as well as ensuring management engagement in data security. This, in turn, can improve service quality and have a favourable influence on future growth.

**Key words:** Information technology, banking sector, e-banking.

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## Introduction

The development of information technology has had a huge influence on the banking sector, modernising transaction processing, obtaining and storing client data, and enabling a variety of new goods and services. The banking business has grown more efficient, convenient, and customized with the introduction of internet banking, mobile banking, and electronic payment systems. This greater use of technology has resulted in the development of new employment and the expansion of banking options beyond traditional brick-and-mortar establishments. The purpose of this study is to investigate the implications of information technology on the banking sector, including the advantages, dangers, and issues that the business faces. The Internet and information technology have profoundly altered many aspects of human existence, including banking services, trade and commerce. E-commerce, or electronic commerce, is becoming a more common way for customers to do purchases without having to visit a physical store. As a result, e-business is expanding, and more companies are shifting to online business strategies. One of the most important components of e-commerce is the quality of services provided to customers. The quality of service is an important component in determining the success of an e-commerce firm. All of the needs of modern living bring to light the reality that knowledge is a resource as valuable as land, labour, and capital for modern organizations. It is an extremely valuable and priceless resource. It is no longer news that we have entered the information era, which is defined by an ever-changing information technology revolution and an information superhighway on which every business organization and profession must rely increasingly if they are to thrive in the twenty-first century. The financial system has been the most severely impacted by information technology innovations. Because its absence could lead to poor decisions and, ultimately, business failure, information technology has become a critical business resource. For the banking sector, technology has created new markets, new products, new services, and efficient delivery routes. Just a few examples include online electronics banking, mobile banking, and internet banking. Information technology has also given the banking industry the tools it needs to face the problems of the new economy. Recent financial sector changes aimed at boosting the speed and reliability of financial activities, as well as attempts to enhance the banking industry, have relied heavily on information technology. The IT revolution has set the environment for an

unparalleled surge in global financial activity. The advancement of technology and the establishment of global networks have considerably lowered the cost of global payments transmission. The Government of India has certified the Institute for Development and Research in Banking Technology as a Certification Authority for digital signatures in order to improve network information security. The security of electronic financial transfers is being improved through the use of digital signatures and the certifying authority's services. Recognizing the need for technology-based payment products, the Ministry of Communications and Information Technology of the Government of India has launched a pilot project for multi-application smart cards in collaboration with a few banks.

## Literature review

According to Awasthi and Sharma [2,] technological advancements are expected to reshape the face of the banking industry. Banks' retail banking delivery methods have been revolutionized by technology. The research also looked at the issues that financial institutions and their regulators confront.

Janki [3] investigated how technology affects staff productivity. There is little doubt that technology has altered operational efficiency and customer service. The emphasis on technology will result in more new goods, improved risk management, and so on. The investigation found that technology is the only way to attain their objectives.

Rao [5] investigated the influence of modern technologies on the banking industry. Technology is altering the way businesses are conducted and opening up new avenues for performing the same tasks in a more cost-effective manner. Tele banking and internet banking are making inroads to the point that branch banking may give way to home banking.

Bhasin [4] investigated the influence of information technology on the banking industry. It has changed repetitious and overlapping processes and procedures into simple single key pressing technologies, leading in faster, more accurate, and efficient company operations and the ability to engage in new activities.

## Impact of Information technology

The impact of information technology on the banking sector has been significant in recent years, and there is a growing body of research on the topic. Information technology has had a profound effect on the way banks operate, from

customer service to back-office operations. This research paper aims to provide an overview of the effect of information technology on the banking sector. One of the most significant impacts of information technology on the banking sector has been the introduction of online banking and mobile banking. These technologies have allowed customers to access their accounts and conduct transactions from anywhere at any time.

Online banking has also provided banks with an opportunity to reduce costs by reducing the number of branches required to serve customers. Another impact of information technology on the banking sector has been the development of new products and services such as internet banking, mobile banking, and online trading. These products and services have enabled banks to attract new customers and increase revenue streams. Additionally, the use of information technology has made it easier for banks to offer personalized services to customers based on their individual needs and preferences.

The use of information technology in the banking sector has also had a significant impact on risk management. Banks are now able to use sophisticated software systems to monitor and manage risks associated with lending, investing, and other financial activities. These systems have allowed banks to identify potential risks and take proactive measures to mitigate them before they become significant issues.

Information technology has also had a significant impact on the way banks interact with their customers. Banks are now able to use social media and other online platforms to engage with customers and provide them with personalized services. This has helped to improve customer satisfaction and loyalty.

### **Banking sector and Information Technology**

The Indian Banking Industry is at an intermediate stage as it transitions from the older social banking period to the newly envisaged technology-based customer-centric and competitive banking. Banks' operations have expanded in multi-directional and multi-dimensional ways. During transition, all known parameters of the previous regime change in real time. Virtual financial services are broadly classified as follows:

#### **1. Automated Teller Machines (ATMs)**

- Withdrawals of cash
- Account balance information for the most recent period
- Statement in a nutshell

- Statement ordering service
- Deposit option Third-party payments.

#### **2. Services for Remote Banking**

- Balance investigation
- Statement authorizing the transfer of funds (payment) to third parties
- Transfer of funds across client accounts
- Traveller's checks and other financial instruments can be ordered.

#### **3. Smart Cards**

- Stored value cards
- As a substitute for all forms of magnetic stripe cards such as ATM Cards, Debit Cards, Charge Cards, and so on.
- All these functions performed by single smart card.
- One smart card can incorporate the capabilities of multiple distinct types of cards issued by several banks while operating on various networks.
- A smart card is a genuinely powerful financial token that grants the user access.
- STM Debit Service Charge Stations Credit options
- National and international electronic purse facilities.

#### **4. Electronic Banking**

Internet banking is the most recent IT trend. It is becoming clear that the Internet has sparked a revolution that is influencing every aspect of life. The Internet is a global network of computer communication networks that spans all geographical borders. The Internet has changed means of communication, employment, study, education contact, health, trade, and business in every field. The Internet is altering everything, from how we do business to how we communicate information. The internet, as an interactive two-way medium, allows individuals to participate in B2B and B2C commerce, trips to shopping malls, book stores, entertainment sides, and so on.

#### **5. Interbank mobile payment system**

PMC is a mobile phone-based instant internet electronic fund transfer service. Customers can utilize mobile phone devices to access their bank accounts, send monies from their accounts, and make payments at stores and business locations. This is envisioned as a safe, secure, and convenient payment system for Indian domestic transactions available 24 hours a day, seven days a week. The consumer who is a remitter should sign up for Mobile Banking with the bank where he or

she has an account. The bank issues the customer a Mobile Money Identifier (MMID) and a Mobile Banking Personal Identification Number (MPIN). The consumer must download and activate the mobile banking application on their phone, or utilize the bank's SMS or Unstructured Supplementary Service Data (USSD)-based application. MMID is a seven-digit random number assigned by the bank to each account of mobile phone banking users. IPMC transactions can be sent and received at any time and on any day of the year. There are no time limits or holidays for IMPS remittances. Within 30 seconds of initiating the transaction, the funds are credited to the beneficiary account. If the IMPS transaction is not completed for any technical reason, the money will be reversed immediately. If the status of the transaction cannot be verified promptly, monies will be reversed the next working day. The limit is set by the RBI in the Mobile Payment Guidelines for Banks. This limit is established at Rs. 50,000 per client for all IMPS transactions.

#### Updating in e-banking services

1. Mobile banking: The advent of smartphones and the internet has popularized the use of mobile banking services. Banks are updating their mobile applications to provide customers with a seamless experience while accessing their accounts, transferring funds, and making payments.
2. Security: With the increasing use of e-banking services, the need for tighter security measures is also paramount. Banks are updating their security systems to prevent unauthorized access and fraudulent actions.
3. Personalization: Banks are using AI and data analytics to offer personalized banking options to customers. By analysing the customer's financial behaviour, the bank can offer services tailored to their needs.
4. Chabot's: Many banks are updating their services to include chat boats, which enable customers to interact with the bank through messaging platforms such as Facebook Messenger or What's app. This provides customers with easy access to information and assistance.
5. Block chain: Banks are implementing block chain technology to offer secure, faster, and cost-effective transactions. With block chain, banks can reduce the risk of fraudulent activities and simplify cross-border transactions.
6. Digital Payment Platforms: Many banks are integrating with digital payment platforms to offer their customers a range of payment

options. These include mobile wallets, peer-to-peer payments, and e-wallets.

#### Significance of information technology in banking sector

- Anytime banking- e banking provides consumers with cash withdrawal services 24 hours a day, seven days a week from any branch.
- Anywhere banking- regardless of where the customer is in the world, online banking is used to obtain services.
- Cards can be used to make online purchases of products and services as well as payments for a variety of purposes.
- Customers can also do some approved transactions through mobile phone from their office, home, or while traveling.
- Customers may get relevant and thorough information in seconds, not days or weeks.
- Assured immediate settlement system for trader's numerous transactions.
- Provide a variety of services to company owners that meet international standards while maintaining a reasonable transaction cost.
- Avoid all of the costs and risks associated with dealing with cash, which are quite high in commercial transactions.
- With the advancement of IT in banking, the creation of a worldwide and local client base is conceivable.
- Other advantages include a better image, better customer service, and the elimination of paper, lower waiting costs, and increased flexibility.
- E-banking gives banks a competitive edge by providing an endless network.
- Online banking is an excellent medium for promoting the bank's numerous programmes, and it also serves as a marketing tool.
- By integrating ATM and PO terminals, the risk of cash overdraft is minimized in the event of ATM credit and debit cards.
- E-banking may efficiently facilitate trade globalization.
- With the advancement of e-banking, it is now possible to provide global market products and services to local products and services.
- E-banking encourages greater exports, which enhances the flow of foreign exchange. E-banking increases openness in corporate transactions and fosters excellent international ties.
- E-banking enabled more people to work from home and drive less for banking, resulting in

reduced traffic on the roads and lower air pollution levels.

### Conclusion

Finally, the influence of information technology on the banking sector has been significant. It has helped banks to improve their services and efficiency while also adding convenience for clients via online banking and mobile applications. Technology has also assisted banks in mitigating risks, lowering operating costs, and speeding up operations. In conclusion, information technology has had a significant impact on the banking sector, from improving customer service to reducing costs and managing risk. As technology continues to evolve, it is likely that the impact on the banking sector will continue to grow and change. It is essential for banks to continue to invest in new technologies to remain competitive and meet the evolving needs of their customers. However, the use of technology brings with it a number of challenges, including cyber security threats, data breaches, and the need for on-going staff training. Overall, information technology has had an overwhelmingly positive impact on the banking sector, and it will continue to shape the future of banking as we know it. The banking sector has used information technology to improve several areas such as customer service and CRM, operations management, housekeeping, monitoring and controlling, risk management, human resource management, and so on. Customers benefit from the transformation of banking services by having anytime, everywhere access to their accounts as well as the ability to administer their accounts. Although the change is positive, banks in India must still address critical issues in order to reap the full benefits of information technology implementation.

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