BANKING

COURSE CODE: B21CM01GE
Generic Elective Course
For Undergraduate Programmes
Self Learning Material

SREENARAYANAGURU
OPEN UNIVERSITY

SREENARAYANAGURU OPEN UNIVERSITY

The State University for Education, Training and Research in Blended Format, Kerala

SREENARAYANAGURU OPEN UNIVERSITY

Vision

To increase access of potential learners of all categories to higher education, research and training, and ensure equity through delivery of high quality processes and outcomes fostering inclusive educational empowerment for social advancement.

Mission

To be benchmarked as a model for conservation and dissemination of knowledge and skill on blended and virtual mode in education, training and research for normal, continuing, and adult learners.

Pathway

Access and Quality define Equity.

Banking

Course Code: B21CM01GE

Semester - VI

Generic Elective Course
For Undergraduate Programmes
Self Learning Material
(Model Question Paper Sets)

SREENARAYANAGURU
OPEN UNIVERSITY

SREENARAYANAGURU OPEN UNIVERSITY

The State University for Education, Training and Research in Blended Format, Kerala

SREENARAYANAGURU
OPEN UNIVERSITY

BANKING

Course Code: B21CM01GE
Semester- VI
Generic Elective Course
For Undergraduate Programmes

Scan this QR Code for reading the SLM on a digital device.

Edition
May 2025

ISBN 978-81-986991-6-9

9 788198 699169

www.sgou.ac.in

Visit and Subscribe our Social Media Platforms

MESSAGE FROM VICE CHANCELLOR

Dear learner,

I extend my heartfelt greetings and profound enthusiasm as I warmly welcome you to Sreenarayanaguru Open University. Established in September 2020 as a state-led endeavour to promote higher education through open and distance learning modes, our institution was shaped by the guiding principle that access and quality are the cornerstones of equity. We have firmly resolved to uphold the highest standards of education, setting the benchmark and charting the course.

The courses offered by the Sreenarayanaguru Open University aim to strike a quality balance, ensuring students are equipped for both personal growth and professional excellence. The University embraces the widely acclaimed "blended format," a practical framework that harmoniously integrates Self-Learning Materials, Classroom Counseling, and Virtual modes, fostering a dynamic and enriching experience for both learners and instructors.

The University aims to offer you an engaging and thought-provoking educational journey. The undergraduate programme includes Skill Enhancement Courses to introduce learners to specific skills or areas related to their field of study. This is an important part of the university's plan to give learners new experiences with relevant subject content. The Skill Enhancement Courses have been designed to match those offered by other premier institutions that provide skill training. The Self-Learning Material has been meticulously crafted, incorporating relevant examples to facilitate better comprehension. The Self-Learning Material has been meticulously crafted, incorporating relevant examples to facilitate better comprehension.

Rest assured, the university's student support services will be at your disposal throughout your academic journey, readily available to address any concerns or grievances you may encounter. We encourage you to reach out to us freely regarding any matter about your academic programme. It is our sincere wish that you achieve the utmost success.

Warm regards.
Dr. Jagathy Raj V.P.

01-05-2025

Contents

BLOCK
01

Banking Theory

Unit 1

Introduction to Banking

Learning Outcomes

After completing this unit, the learner will be able to:

- get an awareness of how banks have evolved
- learn the meaning of banks
- get an idea of the importance of banking

Prerequisites

Can you imagine a world without banks? Do you think that would affect the state of affairs of a nation? Well, it might feel strange for us to picture such a situation; there was a period when there were no banks. However, there existed some individuals, associations and chambers, which performed some basic banking functions such as accepting deposits. Though these institutions do not come under the definition of banks as we know it now, most of the banking functions have evolved over time through these institutions. If you check the history of banking, it can be seen that banks played a crucial role in channeling funds for various activities of national interest. Thus, banking is not just accepting deposits and lending money. It goes beyond that and acts as an intermediary, mobilising idle money into productive avenues. For instance, the money you earn remains idle in your hands, whereas when you deposit the money in a bank, a portion of your deposit will be used by banks to invest in productive avenues. Thus, banks and other financial institutions can mobilise idle money, which is crucial for economic prosperity. In this unit, we will look into how banks have evolved over the years and their significance.

Keywords

Evolution of banks, banking, modern banking, banker, customer

Discussion

1.1.1 Evolution of banks

One would think of banking as a declining industry, looking at the traditional bank products and performance measures. However, such a focus would miss out on most of the innovations in banking that have been taking place in recent years. A broader perspective shows banks evolving in ways that enable them to provide the same basic functions as before, but in new, more efficient ways (James & Houston, 1996).

Earlier, only city dwellers were able to avail banking services, whereas today, these services are being offered to the common man, and banking activities extend beyond areas untill untouched. In addition to their traditional banking functions, they now fulfil national responsibilities too. They accelerate the economic growth of a country and steer the economy towards its goals of "self-reliance in all fields". It naturally instigates our interest in knowing more about the 'bank' and the various activities connected with it.

1.1.1.1 History of banks

1. **Bank of Venice, Genoa, and Barcelona :** The first regular institution resembling what we call a Bank was established in Venice nearly seven hundred years ago, in the form of the chamber of loans(Hildreth, 2001). Initially, it had nothing to do with the business of banking but possessed traits of modern banking functions. It introduced the concepts of discounting, deposits, and money circulation.

2. **Banks of Amsterdam and Hamburg :** The Bank of Amsterdam was established to counter the market distortions and inefficiencies in the Dutch Republic during the 17th century, where Amsterdam, a global trade hub back then, faced issues due to a flood of worn and debased foreign coins. The introduction of the Bank of Amsterdam provides a historical context for many of the money and banking concepts such as:

    - Currency depreciation
    - Debasement and clipping
    - Uniform currency
    - Bank money

- Restricted convertibility
- Non-lending model
- Profits from services
- Reserve system
- Limited transparency
- Centralised clearing

3. **Bank of England :** The Bank of England, which was established in the year 1694, is the prototype and grand exemplar of all our modern banks (Hildreth, 2001). The bank was primarily established for the purchase and sale of bills of exchange. They invented banknotes, which were issued against the bills they discounted.

4. **Private banks :** As wealth and commerce increased, private bankers established themselves in all principalities and towns of Europe. The functions performed by these bankers included:

   - Accepting deposits
   - Managing money affairs of state and individuals
   - Lending money.
   - Buying and selling of bills of exchange, bullion, and coin.

5. **Scotch banks :** Two banks were established in Scotland by a charter from the king. One was named the 'Bank of Scotland', which was established in 1695, and the other was named 'Royal Bank of Scotland', which was established in 1727. They faced tough competition from private banks, as they were never able to obtain any exclusive privileges. This led to the introduction of a new type of bank loan in the Scottish banking system, wherein they opened cash accounts upon the credit of a bond, in addition to the discounting of mercantile paper.

1.1.1.2 Modern banking

The rise of modern banking can be traced back to the goldsmiths of 17th-century London, who evolved from the business of dealing in gold and silver, through which they discovered the principle of fractional reserve banking (Lewis, 1992). Other paths to banking included merchants and other professions like tax collectors and industrialists. This highlights how banking evolved through specialisation in financial dealings. Modern banking is characterised by the following:

1. **Social accountants :** In modern-day banking, the focus has shifted from banks' liabilities to their assets, particularly their roles as "social accountants" and "delegated monitors".

2. **Managing information :** Banks have a unique role in managing information, producing liquidity, and ensuring financial transactions.

3. **Liquidity insurers :** They act as liquidity insurers for depositors uncertain about future consumption, addressing information asymmetries, search costs, and verification challenges inherent in financial transactions.

4. **Cost and lending challenges :** The modern-day banks face challenges in terms of costs like monitoring, enforcement, and risk management. Furthermore, setbacks in lending and contract design, such as adverse selection and moral hazard, also challenge modern banking systems.

5. **Information producers :** Banks leverage informational economies of scope, acting as credit risk assessors and identifiers of suspicious loans.

6. **Contracts and risk management :** Banks design contracts with covenants and collateral to mitigate risk. Monitoring these contracts and agreements is crucial for banks in managing risk.

1.1.2 Meaning

Banking means an activity or business that involves the acceptance, protection, and lending of money. Banks accept money through deposits, which ensure protection, and they lend money through loans and advances, which ensure a constant flow of credit to the needy.

1.1.2.1 Bank

A bank is a financial institution that is involved in the activity of accepting and lending money. When compared with other financial institutions, a bank is also involved in the process of creating credit.

Definitions

"Bank is a financial intermediary institution which deals in loans and advances." Cairn Cross

"Bank is such a financial institution which collects money in current savings or fixed deposit accounts, collects cheques as deposits, and pays money from the depositors' account through cheques." Sir John Pagatte.

According to the Banking Regulation Act, 1949, *"Banking means accepting, for the purpose of lending or investment, deposits of money from the public, repayable on demand or otherwise, and withdrawable by cheque, draft, order or otherwise."*

1.1.3 Features of banking

1. **Dealing money :** Every bank is a financial institution that deals with money as it accepts deposits from the public and advances loans to its clients.

2. **Deposits must be withdrawable :** Since accepting deposits is one of the key functions of banking, it is important that they are withdrawable by way of cheques, drafts, or otherwise, i.e., the bank issues and pays cheques. Every deposit made with the bank is usually withdrawable on demand, except in the case of term deposits.

3. **Giving advances :** Another characteristic of banking is lending. Banks or any other financial institutions can lend money to their customers.

4. **Dealing with credit :** The banks are the institutions that can create credit. Creation of credit means the creation of additional money for lending. Credit creation is a unique characteristic of banking.

5. **Commercial in nature :** A bank is considered a commercial institution by nature because most of the banking functions are carried on with the aim of making a profit.

6. **Nature of agent :** In addition to the primary services rendered by banks, agency functions such as safekeeping of valuables are also provided by banks. Thus, a bank possesses the character of an agent to its customers.

    - Debit/credit cards:With the advent of technology, the characteristics of banking activities have transformed. One such transformation is the use of debit/credit cards. Debit and credit cards are used for cashless transactions. A debit card deducts money directly from your bank account, while a credit card lets you borrow funds up to a limit. Both offer convenience, security, and are widely accepted.

    - Net banking: Another feature of the modern banking system is the facility of net banking. Net banking, or online banking, is a digital service provided by banks that allows customers to manage their accounts, transfer funds, pay bills, check balances, and perform various financial transactions securely through the internet, anytime and anywhere.

    - Notifications:Banks provide regular updates on the activities regarding the accounts of the customers through email or text. They also use this facility to alert the customers regarding spam or any such fraudulent practices that can mislead them.

    - ATM and CDM:Another feature of banking nowadays is the availability of automated teller machines (ATMs) and cash deposit machines (CDMs), which facilitate the customers to withdraw and deposit money without visiting a bank branch.

1.1.4 Importance of Banking

Banks play an important role in mobilising idle money by channeling funds collected by way of deposits from customers into productive avenues. They facilitate trade and commerce through various platforms and provide credit to individuals and businesses. Thus, banks play a significant role in economic prosperity as described below:

1. **Financial security :** Banks offer financial security by ensuring safekeeping and growth for your money, thus protecting it from loss or theft. In addition, they allow you to monitor spending, making it easier to plan, save, and track expenses. In short, banks help in enhancing financial responsibility by helping you to save money for emergencies and achieve your long-term financial goals.

2. **Access to credit :** Banks make credit available to individuals. Credit can take various forms, including loans, credit cards, and lines of credit, allowing individuals

to finance purchases and invest in business opportunities. Good credit is essential for securing reasonable loan terms and interest rates. Accessing credit involves a lender assessing your ability to repay them, which is typically done by studying your financial history. Without a bank account, a credit lender does not have a way to verify your financial trustworthiness.

3. **Money management :** Another purpose of banking is to facilitate financial transactions, which makes it easy to manage money. Services such as deposits, bill payments, and money transfers allow you to send and receive funds quickly and securely. With tools like debit and credit cards, you can make purchases even if you don't have cash on hand. Banks prioritise security, protecting your information and funds through advanced technology.

4. **Savings Accounts :** Savings accounts provide a safe place to store money, protecting it from loss or theft while earning interest over time. They can be used to build an emergency fund for potential unexpected expenses, save for big purchases such as a home down payment, and more. They are accessible for withdrawals while still encouraging long-term saving. Some savings accounts grow your money more than others, so check the interest rate you will earn and be sure to look into options for a high-yield savings account.

5. **Investment Opportunities :** Another benefit of having a bank account is easier access to investment opportunities. An established relationship with a bank often includes personalised investment advice and tailored financial products. With funds readily available, you can easily transfer money to investment accounts or purchase stocks and mutual funds. Many banks also offer integrated investment services, allowing you to manage your investments alongside your savings.

6. **Financial Advice :** Many banks have staff financial advisors who are available to meet with account holders. Financial advisors can help you budget, plan for the future, hit your savings goals, pay off debt, and more. No matter your current financial situation, the staff at your bank can offer helpful advice to get you where you want to be.

7. **Convenient Online Banking :** A final advantage of holding a bank account is the option to manage and monitor your funds digitally. You can conveniently check account balances, transfer funds, pay bills, and view transactions from your phone or computer. Online banking offers budgeting tools and automated services like scheduled bill payments and account alerts, helping you stay organised and avoid missed payments.

1.1.5 Relationship between banker and customer

The relationship between a banker and his customer depends upon the nature of service provided by a banker. Accepting deposits and lending and/or investing are the core banking businesses of a bank. However, in addition to its primary functions, it deals with various customers by providing other services like safe custody services, safe deposit lockers, and assisting the clients by collecting their cheques and other instruments as an agent and trustee for them.

1.1.5.1 Customer

A person having an account in a bank is considered a customer. According to Sir John Paget, *"to constitute a customer, there must be some recognisable course or habit of dealing in the nature of regular banking business."* Thus, a person does not become a customer of the banker just by opening an account; rather, he must have been accustomed to dealing with the banker before. Dr. Hart defines *"a customer is one who has an account with a banker or for whom a banker habitually undertakes to act as such."*

In short, a customer is someone who has the habit of resorting to the same place or person for doing business. So far as banking transactions are concerned, he is a person whose money has been accepted on the belief that the banker will honour up to the amount standing to his credit, irrespective of his connection being of short or long standing.

1.1.5.2 Types of banker-customer relationship

Banker as debtor and creditor

While opening an account, the banker becomes the debtor because the money deposited by a customer with the bank, in legal terms, is lent by the customer to the banker. The banker makes use of the same according to his discretion. Here, the creditor, i.e., the customer, has the right to demand his money back from the banker, and the banker is obliged to repay the debt as and when demanded. Though the relationship between a banker and his customer is mainly that of a debtor and a creditor, this relationship differs from similar relationships arising out of ordinary commercial debts in the following respects:

1. The creditor must demand payment.
2. The demand by the creditor must be made at the proper place and time as prescribed by a bank.
3. Demand must be made properly.

Example: When Ravi deposits ₹50,000 in the bank, the banker becomes a debtor as it owes him that amount; but when Riya takes a loan of ₹1,00,000, the banker acts as a creditor, expecting repayment from her.

Banker as trustee

Though a banker is a debtor to the customer, under certain situations, he acts as a trustee. As a trustee, the bank holds money or assets and performs certain functions for the benefit of the customer. For example, if the customer deposits securities or other valuables with the banker for safe custody, the latter acts as a trustee of his customer. The customer continues to be the owner of the valuables deposited with the banker. The legal position of the banker as a trustee, therefore, differs from that of a debtor of his customer. In the former case, the money or documents held by him are not treated as his own and are not available for distribution amongst his general creditors in case of liquidation. The relationship between the banker and his customer as a trustee and beneficiary depends upon the specific instructions given by the latter to the former regarding the purpose of using the money or documents entrusted to the banker. If no specific instructions are given at the time of payment or thereafter, the bank does not thereby become a trustee for the amount paid.

Banker as bailor or bailee

A bailment is the delivery of goods by one person to another for some purpose upon a contract. As per the contract, the goods should, when the purpose is accomplished, be returned or disposed of as per the directions of the person delivering the goods. The person delivering the goods is called the bailor, and the person to whom the goods are delivered is called the bailee.

Banks secure their loans and advances by obtaining tangible securities. In certain cases, banks hold the physical possession of secured goods (pledge) – cash credit against inventories; valuables – gold jewels (gold loans); bonds and shares (loans against shares and financial instruments). In such loans and advances, the collateral securities are held by banks, and the relationship between banks and customers is that of bailee (bank) and bailor (borrowing customer).

Banker as lessor/lessee

In the case of safe deposit locker accounts, the banker and customer relationship of lesser/lessee is applicable. Banks lease the safe deposit lockers (bank's immovable property) to the clients on a hire basis. Banks allow their locker account holders the right to enjoy (make use of) the property for a specific period against payment of rent.

Banker as agent

A banker acts as an agent of his customer and performs a number of agency functions for the convenience of his customers. For example, he buys or sells securities on behalf of his customer, collects cheques on his behalf, and makes payment of various dues of his customers, e.g., insurance premium, etc. The range of such agency functions has become much wider, and the banks are now rendering a large number of agency services of diverse nature. For example, some banks have established Tax Services Departments to take up the tax problems of their customers.

Recap

- The first regular institution resembling what we call a Bank was established in Venice nearly seven hundred years ago, in the form of the chamber of loans.
- Bankis a financial institution that deals with accepting deposits and providing loans and advances.
- The primary purpose of a bank is dealing with money.
- A person or institution engaged in carrying out the banking function is known as the banker.
- Persons or institutions availing banking services are known as customers.

- As a trustee, a banker holds the assets or money of customers and performs certain functions for the benefit of the customer.
- A banker acts as a bailorto the customer while holding valuables against loans advanced by them.
- As an agent, a banker accepts payments and makes payments on behalf of the customer.

Objective Questions

1. Where was the first regular banking institution situated?
2. What is the primary function of a bank?
3. Which act provides the definition of banking in India?
4. A person who maintains an account with the bank is known as?
5. Which type of relationship exists when a customer deposits money in a savings account?
6. The relationship between a banker and customer in locker services is known as?
7. What is the role of a banker when a customer keeps valuable items in a bank locker?
8. Who is considered the lessor in a bank locker agreement?

Answers

1. Venice
2. Accepting deposits and lending money.
3. Banking Regulation Act, 1949.
4. Customer.
5. Debtor-creditor.
6. Bailor-bailee.

7. Bailee
8. Banker

Assignments

1. What do you mean by the term banking?
2. Briefly describe the evolution of banking.
3. Define bank as per the Banking Regulation Act, 1949.
4. How does the bank act as a trustee?
5. Who is known as the customer of a bank?
6. Describe the important features of a bank.
7. Explain the different types of relationships between a banker and a customer.
8. Trace the historical evolution of banks from ancient times to the modern digital banking era. Prepare a brief timeline with key events.
9. Visit any commercial or cooperative bank in your locality and analyse how it manages customer relationships and services.

Reference

1. *Banking Class XI*. (n.d.). BSE Institution Ltd.
2. *Banking Law and Practice*. (2014). The Institute of Companies Secretaries of India.
3. *Banking Standard XII*. (n.d.). BSE Institute Ltd.
4. Gordon, E., & Natarajan, K. (2008). *Banking Theory, Law and Practice* (Revised). Himalaya Publishing House.

5. Hildreth, R. (2001). *The History of Banks: To Which Is Added, A Demonstration of the Advantages and Necessity of Free Competition in the Business of Banking*. Batoche Books Limited.

6. James, C., & Houston, J. (1996). EVOLUTION OR EXTINCTION: WHERE ARE BANKS HEADED? *Journal of Applied Corporate Finance*, 9(2), 8–23. https://doi.org/10.1111/j.1745-6622.1996.tb00112.x

7. Lewis, M. K. (1992). Modern Banking in Theory and Practice. *Revue Économique*, 43(2), 203. https://doi.org/10.2307/3501990

Unit 2

Types of Banks and Banking

Learning Outcomes

After completing this unit, the learner will be able to:

- identify the different types of banking
- learn the benefits and limitations of different forms of banking
- identify different types of banks

Prerequisites

In the previous unit, we have discussed how banking has evolved over the years. We have seen that banking is important to society. We know that banking creates a habit of saving among individuals and provides a sense of financial security for them. Also, it ensures accountability of all the financial transactions and helps in achieving the goal of financial inclusion. Compared to the older generation of banking, modern banking is more inclusive, which provides banking services even to the most vulnerable sections of society. In addition, we have seen the relationship between banker and customer, and it was observed that their relationship is dynamic depending upon the types of services provided. Now that we know what banking is and how it has evolved over the years, we need to have an understanding of the different types of banking and banks. Thus, in this unit, we will be discussing the types of banks and banking.

Keywords

Commercial banks, unit banking, branch banking, group banking, central banks

Discussion

The banking institutions are an essential part of a modern developing society because they perform various functions that cater to the different sections of society. Based on the functions performed, the banks can be classified as commercial, industrial, exchange, savings, and central banks, which we will be discussing in 1.2.1.

1.2.1 Types of banks

1.2.1.1 Commercial Banks

Commercial banks are financial institutions that accept deposits from people and businesses and provide loans to earn profit. Commercial banks accept deposits from the public, businesses, and government, providing loans to individuals and companies. They offer services like savings accounts, fixed deposits, credit cards, and short- to medium-term loans. Regulated by the Reserve Bank of India (RBI), they follow conservative lending to manage risk. Commercial banks mobilize deposits repayable on demand or short notice and provide working capital to businesses through overdrafts and cash credit. Besides lending, they offer agency services such as collecting cheques and bills, discounting bills of exchange, safekeeping valuables, issuing letters of credit, and remitting funds. Their services continually expand to meet society's changing needs. Commercial banks aim to earn profit while supporting economic growth by financing individuals, companies, and government bodies.

Examples: State Bank of India (SBI), HDFC Bank, ICICI Bank, Axis Bank

1.2.1.2 Investment Banks

Investment banks are financial institutions that help companies, governments, and organizations raise capital by underwriting and issuing securities such as stocks and bonds. They also offer advisory services for mergers, acquisitions, and other major financial transactions. Unlike commercial banks, investment banks do not accept deposits from the public. Their main role is to assist clients in managing complex financial needs and investments.These banks focus on raising capital for corporations, governments, and institutions, providing services like underwriting securities, facilitating mergers and acquisitions, and trading securities. Investment banks typically provide long-term financing

for large projects, are regulated by securities market authorities like SEBI, and often take on higher risks due to their involvement in capital markets and investment securities.

Examples: SBI Capital Markets, ICICI Securities, Kotak Investment Banking, JM Financial.

1.2.1.3 Exchange Banks

An exchange bank is a type of bank that deals mainly with foreign exchange. It helps in buying and selling foreign currencies, remitting money abroad, and financing foreign trade. They supply the necessary foreign exchange required for the settlement of transactions in foreign trade. The exchange banks discount foreign bills of exchange. Nowadays, commercial banks themselves undertake foreign exchange business. So, there is no separate bank called a foreign exchange bank.

Example: HSBC India, Standard Chartered Bank, Citi Bank India.

1.2.1.4 Savings Banks

Savings banks are specialised institutions to collect savings from the poor and middle-income people of society. These banks are primarily intended to encourage habits of thrift and saving among people with small incomes. The depositors are allowed to withdraw the amount in times of need. But there are restrictions on the number of withdrawals to be made in a month. Separate savings banks are organised in various countries. In India, the Government runs savings banks. In most countries, including India, commercial banks perform the function of savings banks and encourage people to open savings accounts with them.

Examples: India Post Payments Bank (IPPB), State Bank of India (SBI). Punjab National Bank (PNB), HDFC Bank.

1.2.1.5 Central Bank

A central bank is the top financial institution in a country that manages the money supply, issues currency, and controls interest rates. It also regulates and supervises other banks and ensures financial stability.

Every country generally has one central bank. The central bank acts as the leader of the money market, supervising, controlling, and regulating the activities of commercial banks and other financial institutions. It enforces monetary discipline in the country's economy. It seeks to manage the issue and circulation of currency and control the creation of bank deposits with a view to safeguarding financial stability in the country. The central bank functions in close touch with the government and assists in the implementation of its economic policies. It serves as banker, agent, and adviser to the government. Thus, the central bank is the apex bank of the country in maintaining monetary and economic stability.

Example: Reserve Bank of India

1.2.2 Types of banking

There has been a rapid development in the banking institutions in various countries in the past few decades. With the development of banking institutions, various banking systems have come into existence. Banks can be classified based on the volume of operations, business pattern, and area of operation. The following are the common systems of banking:

1. Branch Banking
2. Unit Banking
3. Correspondent Banking
4. Group Banking
5. Chain Banking
6. Deposit Banking
7. Investment Banking
8. Mixed Banking
9. Narrow Banking
10. Universal Banking
11. Local Area Banks

1.2.2.1 Branch Banking

Branch banking is a system where the banking activity is carried on by a single bank with a network of branches throughout the length and breadth of the country. The bank will have a head office in one town and branches in different parts of the country. The affairs of the branch are directed by the branch manager in accordance with the regulations and policies of the head office. Each bank is a single entity owned by a group of shareholders and controlled by a group of directors.

Advantages of Branch Banking

1. **Large-scale operation :** The branch banking system possesses the advantages of large-scale operation such as division of labour and specialisation, because the entire working of the banks will be divided into different sections. For each section, specialised staff can be appointed.

2. **Reserve :** Branch banking ensures an economy of cash reserve. Each bank is dependent not only on its reserve but also on the total of all branches; hence, in times of need, one branch can draw upon the resources of the other branches.

3. **Diversification of risk :** In the branch banking system, each bank has a group of branches scattered far and wide, and each branch has its deposits and assets. By diversifying resources, they invest in different kinds of assets in different industries in

several places. So, in times of crisis in one place, the other branches are not affected much, and the profits of one branch can neutralise the loss of the other branch.

4. **Remittance :** Remittance of funds from one place to another can be provided at a cheaper rate under the branch banking system. This is possible because inter-branch indebtedness can be more easily adjusted than inter-bank indebtedness.

5. **Reducing disparities in interest rate :** The branch banks increase the mobility of funds between various regions and bring about uniformity in the rate of interest over a wide area. Funds are transferred from the region where they are plentiful and demand for them is low to the regions where they are scarce and the demand is high. In both areas, money supply is brought to equilibrium, and so the interest rate tends to be uniform.

6. **Stability :** The branches command great financial resources. They can meet the financial needs of a large number of customers. Besides, they can meet an emergency.

7. **Profitability :** People in an area may demand in excess of the deposits of the branch. This excess demand could be met by transferring money from other branches. This free movement of funds among branches will add to the profitability of the banking operation.

8. **Quick expansion of branches :** Under the unit banking system, starting a new bank requires much time and resources. But a branch bank can organise its new branches more quickly and economically.

9. **Clearing of cheques made easy :** Clearing of cheques is comparatively easy. Cheques deposited at a branch can be sent to the office in the city where there is a clearing house and cleared in a customary way.

Disadvantages of Branch Banking

1. **Lack of effective control :** There is an optimum limit for the expansion of any business enterprise, and banks are no exception to this rule. Once the optimum limit is exceeded, proper supervision and control become impossible.

2. **Lack of personal knowledge :** The branch managers lack close contact and personal knowledge of the financial position and character of their customers. The frequent transfers make them unfamiliar with local conditions, which is essential for the success of the business.

3. **Delay and red tape :** The branch managers have to refer each loan application to the head office. They have no freedom of action, and they have to seek the advice and guidance of the head office on several matters. So, delay and red tape are but natural.

4. **Neglect of a particular locality :** The funds of a particular locality received by the branch bank as deposits are sent to big financial centres for investment and so are not devoted to local economic development.

5. **Effect of bank failure on the economy :** In the case of a branch banking system, a weak branch may be permitted to continue for a long time with possible deleterious

effects on the bank as a whole. Moreover, in the case of a bank failure, the economy may be affected to a greater extent because of the liquidation of so many branches spread all over the country.

6. **Creates monopoly power :** As the entire credit facilities of a country would be placed in the hands of a few powerful bankers, the country's future economic development would depend upon a handful of bankers. This will lead to the development of monopoly power.

1.2.2.2 Unit Banking

Unit banking refers to the system of banking wherein the banking operations are carried out through a single office confined to a particular area. These banks are usually small in size, with limited capital and no branches. However, in some exceptional cases, the banks are allowed to have branches within a limited area. The USA is home to unit banking, where one-third of the banks are unit banks.

Advantages of Unit Banking

1. **Economy of small-scale operation :** The small size of the unit banks makes supervision easier and management more efficient. Chances of fraud or irregularities are minimised.

2. **Personal contact :** A manager of a unit bank can have first-hand knowledge of the locality and can establish personal contact with the people of that area. So he is able to evaluate the creditworthiness of the borrowers and meet their specific requirements.

3. **Quick decision :** The manager of a bank can take quick decisions regarding the sanctioning of loans, and this removes delay and red tape.

Disadvantages of Unit Banking

1. **Limited financial resources :** The financial resources of the unit banks are limited as they operate in a small area. This restricts them from providing finance to large-scale businesses and also serving a larger group of customers.

2. **Vulnerable to economic change :** Changing economic conditions have an immediate impact on the unit banks. They prosper when the economy is healthy and vice versa. Economic events such as business depression can cause the immediate failure of the unit banks.

Branch Banking vs. Unit Banking

According to Sayers, "a comparison between branch banking and unit banking is essentially a comparison between a large-scale operation and a small-scale operation." Branch banks enjoy all the advantages of large-scale operation, and unit banks get the advantage of small-scale operation.

1.2.2.3 Group Banking and Chain Banking

Group banking is a system of banking where banks are brought under the control of a holding company, which controls the affairs of all units in the group. However, each

bank in the group maintains its separate identity. The group banking systems have the following advantages:

1. **Unified management :** The main aim of the group banking system is to unify the management of banks to achieve economies of large-scale operation and gain more power.
2. **Lower reserve requirements :** The primary advantage of this system is that banks need not carry a large cash reserve; instead, one or a few member banks of the group maintain the reserves, which can be used to help smaller banks during a period of crisis.
3. **Economies of large-scale operations :** Group banking helps achieve the economies of large-scale operations by cutting down operating costs, purchasing supplies in bulk, and improving the efficiency of management.

However, the group banking system is prone to the following limitations:

1. **Lock-up fund :** Under a group banking system, both banking and non-banking companies may become subsidiaries of a holding company. A holding company, in order to make quick profits, may lock up the funds of the banking company in the operations of the non-banking company and endanger the position of the latter.
2. **Monopoly :** Group banking may lead to a monopoly and thereby restrict healthy competition among banks, which is necessary for the growth of sound banking.

Example: ICICI Group

- ICICI Bank (commercial banking)
- ICICI Securities (investment banking and stockbroking)
- ICICI Prudential Life Insurance
- ICICI Lombard General Insurance
- ICICI Venture (private equity)

Chain banking refers to the system of banking where two or more banking companies are controlled by one or a few individuals or by the same group of persons through the purchase of shares of such banks.

Difference between Group Banking and Chain Banking

The main difference between the two systems is that in the case of group banking, the affairs of the group are controlled by the holding company, whereas in the case of chain banking there is no such intervention by a central organisation. The chain banking system has more or less the same advantages and disadvantages as the group banking system.

1.2.2.4 Deposit Banking

Deposit banking is a system of banking where the bank only receives deposits and makes advances for a short period. The underlying principle of this system is that banks

cannot lock up their deposits in long-term investments, as the deposits are repayable on demand.

Mixed Banking

Mixed banking is a system where banks perform both commercial and investment banking functions. They accept public deposits and also invest in long-term industrial or corporate projects. This model allows banks to support both short-term and long-term financial needs, offering a wider range of services under one roof.

Narrow Banking

Narrow banking is a banking model where banks invest mainly in safe, liquid government securities instead of giving loans. It is used to reduce the risk of bad loans and protect depositor money. This system is often adopted in times of banking crisis or in weak banks.

Universal Banking

Universal banking means a single bank offers a wide variety of financial services—like commercial banking, investment banking, insurance, and asset management—under one roof. It provides convenience to customers and helps banks grow by diversifying their income sources. Large private and public banks often follow this model.

Recap

- Banking institutions are vital to modern economies, as they serve various sectors by offering financial servicesand performing economicfunctions.
- Commercial banks mobilise short-term public deposits, provide working capital, and offer agency and subsidiary services.
- Industrial banks offer medium-to-long-term finance for industrial expansion and modernisation.
- Exchange banksfacilitate foreign trade by supplying foreign exchange and discounting foreign bills of exchange.
- Savings banks encourage saving habits among the poor and middle class.
- Branch bankingis a type of banking where banks operate through a wide network of branches.
- Unit bankingis the type of banking which operates through a single office in a limited area.
- Group bankingis the type of banking where multiple banks operate under a holding company.
- Several banks controlled by individuals or a group through shareholding are known as chain banking.

Objective Questions

1. Which type of bank provides working capital to businesses in the form of overdrafts and cash credit?
2. Which bank functions as the apex authority in a country's financial system?
3. Which is the bank that primarily deals with foreign trade finance?
4. Which banking system is known for quick decision-making due to localized operations?
5. Central banks function independently of the government and do not assist in policy implementation. State whether true or false.
6. Which banking system involves banks controlled by a holding company?
7. In which banking system do multiple banks operate under common ownership but remain legally separate.
8. Which type of bank focuses only on accepting deposits and making short term loans?

Answers

1. Commercial bank.
2. Central bank.
3. Exchange banks.
4. Unit banking.
5. False.
6. Group banking.
7. Group banking.
8. Deposit banks.

Assignments

1. What are the primary functions of commercial banks?
2. How do investment banks differ from commercial banks in terms of services and customers?
3. Describe the role of exchange banks in foreign trade.
4. What is the significance of savings banks in a developing economy?
5. Explain the role and importance of the central bank in an economy.
6. What are the major advantages of branch banking?
7. How does unit banking support personalized banking services?
8. What are the drawbacks of group banking?
9. Suppose you are advising a new industrial startup. Based on your understanding, which type of bank would be best for their long-term financial requirements and why?

Reference

1. *Banking Class XI*. (n.d.). BSE Institution Ltd.
2. *Banking Law and Practice*. (2014). The Institute of Companies Secretaries of India.
3. *Banking Standard XII*. (n.d.). BSE Institute Ltd.
4. Gordon, E., & Natarajan, K. (2008). *Banking Theory, Law and Practice* (Revised). Himalaya Publishing House.
5. Hildreth, R. (2001). *The History of Banks: To Which Is Added, A Demonstration of the Advantages and Necessity of Free Competition in the Business of Banking*. Batoche Books Limited.
6. James, C., & Houston, J. (1996). EVOLUTION OR EXTINCTION: WHERE ARE BANKS HEADED? *Journal of Applied Corporate Finance*, 9(2), 8–23. https://doi.org/10.1111/j.1745-6622.1996.tb00112.x

7. Lewis, M. K. (1992). Modern Banking in Theory and Practice. *Revue Économique*, 43(2), 203. https://doi.org/10.2307/3501990

Unit 3

Indian Banking System

Learning Outcomes

After completing this unit, the learner will be able to:

- get an idea of the Indian banking system
- differentiate between organised and unorganised banks
- define commercial banks and their functions
- differentiate commercial banks from other forms of banks in India

Prerequisites

So far, we have discussed banking and its types. Now you know how banking and banks have evolved over the years, the meaning of banks, and the different forms of banks and banking. However, so far we have been discussing banks and banking in a broader context. In this unit, we will be focusing on the banking system in India, because as citizens of India, we must have some basic understanding of the banking system in our country. We avail various banking services in one way or another. We know that banks play an important role in our daily lives and in the growth of an economy. Because they help individuals and businesses save money, get credit, and transfer funds without any difficulties. But how is the system functioning in our country? In India, the banking system comprises different types of banks, broadly classified as organised and unorganised banks, which work together to serve the financial requirements of the public. In this unit, we will discuss in detail the different types of banks and learn more about commercial banks, which are the banks that we come across in our daily lives. Furthermore, we will also discuss the types of commercial banks, the role of cooperative banks, and the functions of banks. Finally, we will have a look at mergers between banks and how they affect customers and the financial system.

Keywords

Organised banks, unorganised banks, commercial banks, public sector banks, private sector banks, mergers

Discussion

The Indian banking system has evolved during the past two centuries. Earlier, an indigenous banking system was carried out by businessmen called Sharoffs, Seths, Sahukars, Mahajans, and Chettiyars in India. They performed the usual functions of lending money; however, they failed to develop considerably in obtaining deposits from the public, which today is an important function of a bank. Modern banking in India originated in the last decades of the 18th century. The first banks were the General Bank of India, which started in 1786, and the Bank of Hindustan.

1.3.1 Organised and unorganised banks

Banks can be classified into scheduled and non-scheduled banks based on certain factors. The scheduled banks are also known as organised banks, and the non-scheduled banks are termed unorganised banks.

1.3.1.1 Organised/Scheduled Banks

Organised banks refers to banks that are regulated by the RBI. Organised banks in India are those which are listed in the Second Schedule of the Reserve Bank of India Act 1934. They enjoy several privileges compared to non-scheduled banks, receiving refinance facilities from the Reserve Bank of India, currency chest facilities, and membership to the clearing house. Besides commercial banks, cooperative banks may also become scheduled banks if they fulfil the criteria stipulated by the RBI.

Example: SBI, HDFC, ICICI Bank

1.3.1.2 Unorganised/Non-Scheduled Banks

Unorganised banks refer to informal banking entities that operate without regulation from RBI. These are those banks which are not included in the Second Schedule of the Reserve Bank of India. Usually, those banks which do not conform to the norms of the Reserve Bank of India within the meaning of the RBI Act or according to specific functions, etc., or according to the judgement of the Reserve Bank, are not capable of serving and protecting the interest of depositors, and are classified as non-scheduled banks.

Example: Moneylenders, Chitfunds, Indegenous bankers.

1.3.2 Commercial Banks

A commercial bank is an institution that accepts deposits, provides loans and advances, and other related services. They are aimed at catering to the financial requirements of individuals, industries and various sectors like agriculture, rural development, etc. It is a profit-making institution owned by the government, private entities, or both. Commercial banks include public sector, private sector, foreign banks, and regional rural banks:

1.3.2.1 Public Sector Banks

Public Sector Banks (PSBs) are banks where more than 50% of the shareholding belongs to the Government of India. The shares of these banks are listed on stock exchanges. There were only 8 public sector banks until 1969; however, with the nationalisation of 14 banks in 1969, the Government of India took over 100% ownership of these banks. Furthermore, six private banks were nationalised in 1980, and today there is a total of 12 PSBs in India. Apart from the nationalised banks, the State Bank of India and its associate banks, IDBI Bank and Regional Rural Banks, are also included in the category of public sector banks.

Nationalisation of Banks

1. **Phase 1:** In 1921, the Presidency Banks of Bengal, Bombay, and Madras, with their 70 branches, were merged to form the Imperial Bank of India, which later became the State Bank of India in 1955. In 1959, eight state banks that belonged to the princely states became subsidiaries of SBI through the State Bank of India (Subsidiary Banks) Act. Later, in 1969, the seven other state banks became subsidiaries of the new bank when nationalised.

2. **Phase 2 :** Major nationalisation of banks took place in 1969 when the Government of India, under Prime Minister Indira Gandhi, nationalised 14 major banks. The total deposits in each of the banks nationalised in 1969 were more than Rs. 50 crores. This move increased the presence of nationalised banks in India, with 84% of the total branches coming under Government control.

3. **Phase 3 :** The next round of nationalisation took place in April 1980. The Government nationalised six more banks. The total deposits of each of these banks exceeded Rs. 200 crores. This move led to a further increase in the number of branches of the nationalised banks, increasing to 91% of the total branch network of the country.

4. **Phase 4 :** In 2008, the Government of India acquired the Reserve Bank of India's stake in SBI to remove any conflict of interest because the RBI is the country's banking regulatory authority.

The objectives behind nationalisation were:

1. To break the ownership and control of banks by a few business families.
2. To prevent the concentration of wealth and economic power.

3. To mobilise savings from the masses from all parts of the country.

4. To cater to the needs of the priority sectors.

1.3.2.2 Private Sector Banks

Private sector banks are those banks in which the majority of shares are held by private individuals or institutions, not by the government. These banks operate under the regulation of the Reserve Bank of India (RBI) and offer a wide range of banking and financial services.

When banks were nationalised, not all banks were included, and these banks are classified as Old Generation Private Sector Banks, which include The Jammu & Kashmir Bank Ltd, The Federal Bank, The Laxmi Vilas Bank, etc. In July 1993, as part of banking sector reforms, the Reserve Bank of India allowed many new banks to start banking operations. Some of the leading banks included UTI Bank (presently called Axis Bank), ICICI Bank, HDFC Bank, Kotak Mahindra Bank, Yes Bank, etc., which are recognised as New Generation Private Sector Banks. The majority of the shares of these private sector banks are held by individuals and corporates.

New Private Sector Banks

HDFC Bank, ICICI Bank, Axis Bank, etc., opened after 1991 due to the opening up of the economy by the Government of India. The focus of new generation banks has been centred around the customer, understanding their needs and providing them with a wide portfolio of products and services.

ESAF Small Finance Bank, headquartered in Thrissur, Kerala, began as the Evangelical Social Action Forum in 1992, focusing on community development and microfinance. It transitioned into a Non-Banking Financial Company (NBFC) and, in 2017, received a banking licence from the Reserve Bank of India, becoming a scheduled bank in 2018. With over 750 branches across 21 states and union territories, ESAF serves more than 7 million customers, emphasising financial inclusion for underserved rural and semi-urban populations.

Some of the key characteristics of these new generation banks include:

1. In a short span of time, these banks gained considerable customer confidence and have shown impressive growth rates.

2. Most of the banks have concentrated on high-growth urban areas.

3. They cater to fewer high-net-worth companies and individuals than to the mass market.

4. The private banks are pioneers in information technology investment and introducing new concepts like Sunday banking, anytime banking, and flexi banking.

1.3.2.3 Foreign Banks

Foreign banks are banks that are incorporated outside India but have branches or offices operating within India. These banks bring international banking practices and

services into the Indian market and are regulated by the Reserve Bank of India (RBI) under specific conditions. The majority of the foreign banks are multinational companies operating mainly in big trading centres and cater to the needs of large customers who can provide them with significant business opportunities. The profitability of these banks is usually higher than that of Indian banks. The key characteristics of foreign banks include:

1. Foreign banks have their registered offices outside India; they operate through their branches.
2. Foreign banks are allowed on a reciprocal basis. They are allowed to operate through branches or wholly owned subsidiaries.
3. These foreign banks are very active in Treasury (forex), Trade Finance, and Corporate Banking activities.
4. These banks assist their clients in raising External Commercial Borrowings through their branches outside India or foreign correspondents.
5. They are active in loan syndication as well.
6. Foreign banks have to adhere to all local laws as well as guidelines and directives of Indian regulators such as the Reserve Bank of India, Insurance Regulatory and Development Authority, and Securities Exchange Board of India.
7. The foreign banks have to comply with the requirements of the Reserve Bank of India concerning Priority Sector lending, Capital Adequacy ratio, and other norms.

As of 2023–24, 44 foreign banks operate in India. Major players include Standard Chartered, HSBC, and DBS. These banks primarily offer wholesale, trade finance, and corporate banking services, focusing on urban centres and high-net-worth clientele.

1.3.2.4 Regional Rural Banks

Regional Rural Banks (RRBs) are government-owned scheduled commercial banks that operate at the regional level in different states of India. They were established under the RRB Act, 1976 to provide banking services in rural areas, especially to farmers, agricultural labourers, artisans, and small entrepreneurs.

These are state-sponsored regional banks focusing on the rural sector. The main objective of RRBs is to develop the rural economy by providing credit for agricultural and rural development. As they operate in rural sectors, their borrowers include small and marginal farmers, agricultural labourers, and artisans. The apex body that governs these RRBs is NABARD. Together, these RRBs are owned by the Government of India (50%), one of the Public Sector Banks (35%), and the Government of the State in which the RRB is situated (15%). RRBs facilitate the availability of banking services to the rural community.

Example: Kerala Gramin Bank

1.3.2.5 Co-operative Banks

Co-operative banks are financial institutions owned and operated by their members, who are also the customers of the bank. These banks work on the principle of co-operation,

mutual help, and democratic decision-making. Their main objective is not to earn profits but to provide affordable banking services to their members, especially in rural and semi-urban areas.Co-operative banks play a crucial role in offering credit and banking facilities to farmers, small traders, and rural industries. They provide services like savings accounts, fixed deposits, loans for agriculture and small businesses, and sometimes housing and education loans. These banks are registered under the Co-operative Societies Act and are regulated by both the Reserve Bank of India (RBI) and the respective State Governments.

Example: Primary co-operative societies

Regulatory Framework

The cooperative banks are regulated as per the state and central Cooperative Societies Act, and various other regulatory provisions and Acts governing money and banking in India. The regulatory framework of cooperative banks is explained below:

1. If a cooperative bank is operating in more than one State, the Central Cooperative Societies Act is applicable. In other cases, the State laws will be applicable.
2. Other laws that govern the banking activities of cooperative banks are:
    - Banking Laws (Application to Co-operative Societies) Act, 1965
    - Banking Regulation (Amendment) and Miscellaneous Provisions Act, 2004
    - RBI Act, 1934
    - Banking Regulations Act, 1949.

Types of Co-operative Banks in India

Primary Agricultural Credit Societies (PACS)

These are the smallest units of the co-operative credit structure and operate at the village level. PACS provide short-term and medium-term credit to farmers for agricultural activities, purchase of seeds, fertilizers, etc. They are the first point of contact for rural borrowers.

District Central Co-operative Banks (DCCBs)

These banks operate at the district level and are federations of PACS. They provide loans to PACS and also accept deposits from them. DCCBs play a key role in channelling credit from state co-operative banks to village-level societies.

State Co-operative Banks (SCBs)

These are apex banks at the state level and act as a link between the RBI and the DCCBs. They provide finance to DCCBs and also formulate credit policies for co-operative banks in the state. SCBs help in planning and managing rural credit in a structured way.

Urban Co-operative Banks (UCBs)

These banks function in urban and semi-urban areas. Unlike rural co-operative banks, they cater to small businesses, professionals, and salaried employees. UCBs provide all

basic banking services like savings, fixed deposits, and loans. They are further divided into:

Land Development Banks (LDBs)

These banks specialize in providing long-term credit for agricultural development, such as land improvement, irrigation systems, and farm infrastructure. They are organized into primary and central land development banks.

1.3.3 Functions of commercial banks

Commercial banks are financial institutions that accept deposits from people and businesses and provide loans to earn profit. Functions of commercial banks are following.

1.3.3.1 Accepting deposits

One of the primary functions of a bank is to accept deposits. By accepting deposits, banks are actually buying credit from the public in return for a nominal rate of interest, and it also ensures security for the money deposited. Banks accept such deposits through i) Term Deposits and ii) Demand Deposits.

1. **Term deposits :** Term deposits are accepted by banks for a fixed period of time. Such deposits cannot be withdrawn until maturity. Considering the fixed nature of such deposits, they are also termed as fixed deposits.

2. **Semi-term deposits :** Banks also accept term deposits in such a way that only a portion of the money remains fixed throughout the period of maturity. Such deposits are known as savings deposits.

3. **Demand deposits :** Demand deposits are those which can be withdrawn by the customer as and when demanded. Such deposits are also known as current deposits.

1.3.3.2 Lending Money

The primary functions of a bank involve lending money or issuing or selling credit, for which the banks receive interest. Lending money is the primary source of income for a bank. How banks lend money is explained below:

1. **Loans :** Banks lend money in the form of loans, wherein a fixed amount of money will be given as credit to the customer for a purpose. A loan is extended to the customer by transferring a lump sum of money in the name of the customer by creating a loan account. The money thus credited can be used only for the purpose for which the loan is created. The customer is liable to repay the amount along with interest. The interest is charged on the entire loan amount.

2. **Advances :** Advances are also a way of lending money, wherein a certain amount of money will be credited to the customer, but not for any specific purpose. The customer can make use of such advances for any purpose. The customer is liable to repay the amount along with interest. The interest will be calculated on the entire loan amount.

3. **Cash credit :** Cash credit is another form of loans and advances, wherein a certain amount will be credited to the customer, but the customer can withdraw the amount

as and when required. The customer is required to pay interest only on the amount thus withdrawn.

4. **Bank overdraft :** A bank overdraft is a facility provided by a bank to the customer wherein the customer is allowed to overdraw from his or her account up to a certain limit. The customer is liable to repay the amount thus overdrawn.

5. **Call Money :** Call money is minimum short-term finance repayable on demand, with a maturity period of one to fourteen days or overnight to a fortnight.

6. **Bill Discounting :** Bill discounting is another facility provided by banks wherein the customer is allowed to get cash as and when required by presenting a bill of exchange. However, the customer will not be able to cash the entire bill amount as the bank deducts a fixed percentage before making the payment. This process is known as bill discounting.

1.3.3.3 Agency functions

Apart from the primary functions discussed in the previous section, the banks also perform certain functions on behalf of the customers known as agency functions:

1. **Collection of bill of exchange :** Banks collect money due against any bill of exchange on behalf of the customer.

2. **Collecting dividends or interests :** Banks collect dividends and interest payable on behalf of the customer.

3. **Remittances :** Banks make payments or remittances on behalf of the customer.

4. **Buy or sell securities :** Banks also act as a broker by buying or selling securities on behalf of the customer.

5. **Safe keeping of valuables :** Banks provide locker facilities for the safe keeping of valuables, like gold, silver, etc.

6. **Trustee :** Banks also act as trustees for the customer.

1.3.3.4 Credit creation

Credit creation is one of the most important functions performed by a bank. Banks contribute towards the money supply through the creation of credit. It is the special function that distinguishes banks from other financial institutions. Banks create credit with the help of:

1. **Primary Deposits :** Money deposited with the bank by a customer.

2. **Derivative deposits :** Derivative deposits are a type of financial product offered by banks where the return is linked to the performance of an underlying asset or index, such as stock markets, interest rates, foreign exchange rates, or commodities.

Process of credit creation

Credit creation is the process by which commercial banks create additional money to the existing supply of money through derivative depositsderived using primary deposits

received by the banks. Primary depositis the initial deposit made by a customer. The process of credit creation can be explained in the light of two different situations, i.e., a) Credit Creation by a single bank, and b) Credit creation by multiple banks.

1. **Credit creation by a single bank :** When a primary depositis received by a bank from its customer, it sets aside a fixed percentage (10%) known as reserve. The balance amount will be loaned out by the bank to another customer. This loan amount will be re-deposited by the customer, thus creating derivative deposits. The bank can further set aside cash reserves from such deposits and advance loans. The maximum amount that can be created from the initial derivative deposit equals the product of derivative deposits and credit multiplier. Credit multiplier = 1÷ Reserve requirement.

2. **Credit creation by multiple banks :** Similar to credit creation by a single bank, here again banks create credit from primary deposits by creating derivative depositsby way of issuing loans. However, the derivative deposits derived from the primary deposits of one bank are deposited in another bank. The maximum amount that can be created from the initial derivative deposits equals the product of derivative deposits and credit multiplier.

1.3.4 Mergers in banks

The Merger of Public Sector Banks (PSBs) in India, also known as the Consolidation of Public Sector Banks in India, refers to the process of combining smaller and weaker banks with larger and stronger ones to create more robust, efficient, and competitive banking entities. It aims to consolidate the banking sector so as to enhance the overall stability and performance of the banking system, ensuring it can effectively support the country's economic growth and development.

1.3.4.1 Need for mergers

1. **Fragmented Banking Structure in India :** In comparison to other major economies, the Indian banking sector is highly fragmented. The merger of Public Sector Banks (PSBs) will do away with this lacuna.

2. **Distorted Competition :** Most of the PSBs in India are competing among themselves; most of them have the same business models and compete in the same segments as well as the same geographies.

3. **Build Capacity to Meet Credit Demand :** India needs to have globally sized banks that can support the investment needs of the economy and sustain economic growth. The consolidation of Public Sector Banks into 4 or 5 banks would create larger banks with the capacity to fund larger-sized projects of economic importance.

4. **Need for Larger Capital Base to Manage NPAs :** The Public Sector Banks (PSBs), which form approximately 72% of the Indian banking system, are among the most affected by the high non-performing asset (NPA) problem. The consolidation of Public Sector Banks (PSBs) would lead to a larger capital base to manage the NPAs. The merger of weak banks with strong banks would prevent the failure of weak banks.

5. **Benefits for the Government :** The merger of Public Sector Banks will reduce the financial burden on the Government of undertaking frequent recapitalisation of the Public Sector Banks. It would also help the Government in meeting the stringent capital requirements stipulated under the BASEL III Norms.

6. **Significant Cost Benefits from Synergies :** The larger distribution network of the amalgamated bank will reduce operating and distribution costs with benefits for its customers and their subsidiaries. All merged banks in a particular bucket share a common Core Banking Solutions (CBS) platform, synergising them technologically.

1.3.4.2 Risk and challenges of bank mergers

1. **Systemic Risk :** The 2008 crisis highlighted that the presence of large financial institutions poses systemic risk to the economy, and such institutions are "too big to fail". Further, in the event of any such crisis in the future, the onus would lie on the government to bail out the institutions, thus posing a moral hazard.

2. **Human Resource Integration :** Many employees would fear job loss and disparities in the form of regional allegiances, benefits, reduced promotional avenues, new culture, etc.

3. **Affect Financial Inclusion :** The merger of Public Sector Banks (PSBs) may lead to the shutting down of overlapping branches of the entities being merged.

4. **Technological Challenges :** Various banks are currently operating on different technology platforms.

5. **Adverse Impact on Big Banks :** Forced mergers of weaker banks with stronger banks would adversely affect the operations of the strong banks.

6. **Customer Retention :** SBI's recent merger with its associate banks saw customers of associate banks opting to move their business to rival lenders.

7. **Low Positive Correlation between Size and Efficiency :** The merger of Public Sector Banks (PSBs) is undertaken on the assumption that a large-sized bank would be more efficient than a small-sized bank. In the case of India, some of the small-sized banks are considered to be much more efficient than the large-sized Public Sector Banks.

The merger of public sector banks (PSBs) in India marks a significant shift towards creating a more resilient and competitive banking sector. While the process involves navigating various challenges, the long-term benefits of enhanced financial stability, operational efficiency, and global competitiveness are expected to outweigh the short-term disruptions.

1.3.4.3 Recent mergers of PSBs in India

A total of 10 public sector banks have been merged into 4 big banks, making a total of 12 PSBs (down from 27).

Table 1.3.1 Recent mergers of PSBs in India

Anchor bank	Amalgamated bank	PSB Bank by Size
Punjab National Bank	Oriental Bank of Commerce and United Bank	2nd
Canara Bank	Syndicate Bank	4th
Union Bank	Andhra Bank & Corporation Bank	5th
Indian Bank	Allahabad Bank	7th

SBI & its subsidiaries – State Bank of Bikaner and Jaipur (SBBJ), State Bank of Hyderabad (SBH), State Bank of Mysore (SBM), State Bank of Patiala (SBP) and State Bank of Travancore (SBT) Bank of Baroda, Dena Bank, and Vijaya Bank – (3rd largest bank by loans), Anchor Bank – Bank of Baroda.

Recap

- Modern banking began in the late 18th century with the General Bank of India (1786)and Bank of Hindustan.
- Organised banksare those which are listed in the Second Scheduleof the RBI Act, 1934.
- Commercial banksare those which accept deposits, lend money, and aim to earn profits.
- Banks incorporated in other countries that operate through their branches or subsidiaries in India are known as foreign banks.
- Banks that focus on rural and agricultural credit are known as Regional Rural Banks (RRBs).
- Cooperative banksare those that are governed by state or central cooperative laws.

Objective Questions

1. Which is the first bank established in India?
2. Scheduled banks are listed as per which schedule of the RBI Act 1934?
3. NABARD is the regulatory authority of which type of banks?

4. Issuing currency notes is a function of commercial banks. State true or false.
5. In which year did the nationalisation of 14 banks occur?
6. What is the primary source of income for banks?
7. What type of loan facility allows a business to borrow against its inventory or receivables and pay interest only on the amount used?
8. Which facility allows a customer to withdraw more money than the available balance in their account, up to a certain limit?

Answers

1. General Bank of India.
2. Second Schedule.
3. Regional Rural Banks.
4. False.
5. 1969.
6. Lending money.
7. Cash Credit
8. Bank Overdraft

Assignments

1. Explain the difference between scheduled and non-scheduled banks in India.
2. What are the main objectives behind the nationalisation of banks in India?
3. Describe the main features of new generation private sector banks.
4. How do Regional Rural Banks support rural development?
5. What is the role of cooperative banks in the Indian banking system?

6. How does a bank earn revenue through the lending process?
7. What are the agency functions performed by a bank on behalf of its customers?
8. Visit the website of a public sector bank and prepare a report on its lending schemes for agriculture.
9. Analyse the impact of bank mergers on customer service quality in India with examples.
10. Conduct a comparative study on scheduled and non-scheduled banks in your locality and prepare a report.

Reference

1. *Banking Class XI*. (n.d.). BSE Institution Ltd.
2. *Banking Law and Practice*. (2014). The Institute of Companies Secretaries of India.
3. *Banking Standard XII*. (n.d.). BSE Institute Ltd.
4. Gordon, E., & Natarajan, K. (2008). *Banking Theory, Law and Practice* (Revised). Himalaya Publishing House.
5. Hildreth, R. (2001). *The History of Banks: To Which Is Added, A Demonstration of the Advantages and Necessity of Free Competition in the Business of Banking*. Batoche Books Limited.
6. James, C., & Houston, J. (1996). EVOLUTION OR EXTINCTION: WHERE ARE BANKS HEADED? *Journal of Applied Corporate Finance*, 9(2), 8–23. https://doi.org/10.1111/j.1745-6622.1996.tb00112.x
7. Lewis, M. K. (1992). Modern Banking in Theory and Practice. *Revue Économique,* 43(2), 203. https://doi.org/10.2307/3501990

Unit 4

Development Banks

Learning Outcomes

After completing this unit, the learner will be able to:

- know the meaning of development banks
- identify the different types of development banks
- explain the role of development banks

Prerequisites

Before we begin learning about development banks, let us imagine a newly independent country with big dreams but many challenges. The economy is weak, industries are limited, and rural areas lack proper infrastructure like roads, electricity, and schools. There are farmers who want to improve their methods and small business owners with ideas but no money to grow. While regular banks are present, they usually provide short term loans and are not willing to take risks on large or long term projects. This is where development banks come into the picture. They are special financial institutions created to support projects that help the country grow over time. Their aim is not just to earn profits but to promote economic development, create jobs, and support sectors like agriculture, industry, and infrastructure. In India, several development banks such as the Industrial Development Bank of India, National Bank for Agriculture and Rural Development, and Small Industries Development Bank of India were formed to meet these needs. They provide long term loans, technical assistance, and guidance to projects that benefit the public and boost national growth.

Keywords

Development banks, IDBI, IFCI, SIDBI, SIDCO, EXIM, NABARD, IRBI, ICICI

Discussion

The history of development banking in India can be traced back to the establishment of the Industrial Finance Corporation of India in 1948. Subsequently, several State Financial Corporations (SFCs) were established since the passing of the State Financial Corporation Act, 1951. Development banking has witnessed several changes since the introduction of financial sector reforms. Let us have a look at the various development banks in India and their operations.

1.4.1 Industrial Development Bank of India (IDBI)

The Industrial Development Bank of India (IDBI) was established on 1 July 1964 under the Industrial Development Bank of India Act, 1964, as a wholly owned subsidiary of the Reserve Bank of India. Later, on 16 February 1976, the ownership was transferred to the central government as per the terms of the Public Financial Institutions Laws (Amendment) Act, 1975. The IDBI is designated as the principal institution for coordinating the activities of the institutions engaged in financing, promoting, or developing industry.

1.4.1.1 Eligibility for assistance

IDBI provides finance to all types of industrial concerns engaged in the manufacturing, processing or preserving of goods, mining, shipping, transport, hotel, generation or distribution of power, fishing or providing coastal facilities for fishing, maintenance, repairs, testing or servicing of machinery or vehicles, or vessels, and in setting up of industrial estates. The bank also assists industrial concerns engaged in the research and development of any process or product or in providing special or technical knowledge or other services for the promotion of industrial growth.

1.4.1.2 Forms of assistance

The financial and promotional assistance provided by IDBI includes:

1. Term loans in Indian rupees and foreign currency.
2. Underwriting and subscription of shares and debentures.
3. Financial guarantees for deferred credits and loans raised from other sources.

4. Soft loans assistance for modernization.

5. Matching rupee resources as per the Technical Development Fund Scheme to industrial units with import licences as per the T.D.F. scheme of Government of India, by way of direct loans.

6. Loan assistance as per the Equipment Finance Scheme for the import of capital goods or equipment by existing industries against IDBI credit or for imports covered by T.D.F. licences.

7. The following assistance as per the Technical Assistance Fund Scheme:

    - Assistance for Entrepreneurship Development Programmes.
    - Assistance for Self-employment of the Blind and Handicapped.
    - Subsidy for turnkey arrangements entrusted to approved Technical Consultancy Organisations (TCOs).

8. Seed capital assistance, through SFCs and State Industrial Development Corporations (SIDCs), to new entrepreneurs who do not have adequate sources of their own for setting up industrial projects.

9. Refinance facilities to state-level financial institutions and banks for providing assistance to small and medium industrial projects.

10. 100 per cent refinance in respect of a composite term loan up to Rs. 25,000 sanctioned to artisans, village and cottage industries, and SSI units in the tiny sector and projects promoted by SC/ST and the physically handicapped.

11. Special scheme of concessional refinance assistance to small-scale units covered under the credit guarantee scheme.

12. Refinance against loans up to Rs. 2 lakhs granted to technical entrepreneurs by SFCs without insisting on the promoter's contribution and at concessional rates of interest.

13. Concessional finance for industries in the notified backward areas.

14. Assistance for modernization on concessional terms to spinning and composite textile and woollen mills as per the Textile Modernization Fund Scheme.

15. Financial assistance as per the Venture Capital Fund Scheme, for projects involving the development and use of indigenous technology as well as for adaptation and use of imported technology.

16. Assistance for selected capital goods industries, as per the Technology Upgradation Scheme.

17. Scheme for providing Automatic Standby Credit for payment of enhanced customs duty on project imports.

1.4.2 Industrial Finance Corporation of India (IFCI)

The Industrial Finance Corporation of India (IFCI) was established in the year 1948 for making medium and long-term credits more readily available to industrial concerns in India, where normal banking accommodation was inappropriate or recourse to capital issue method was impracticable.

1.4.2.1 Eligibility for Assistance

Any limited company or co-operative society incorporated and registered in India engaged in the manufacture, preservation or processing of goods, shipping, mining, hotel industry, generation and distribution of electricity, or any other form of power is eligible for financial assistance from the IFCI. Now, public sector undertakings incorporated as public limited companies and private limited companies are also eligible to get assistance from the Corporation.

1.4.2.2 Forms of Assistance

The assistance from the IFCI is available for setting up new industrial projects and also for the expansion, diversification, renovation or modernization of existing units. The financial assistance takes the form of:

1. Rupee loans,
2. Sub-loans in foreign currencies,
3. Guaranteeing of:
    - deferred payments for machinery imported from abroad or purchased within the country,
    - foreign currency loans raised from foreign institutions,
    - rupee loans raised from banks or state co-operative banks or the market, and
4. Underwriting of and/or direct subscription to the shares and debentures of public limited companies.

1.4.3 Industrial Credit and Investment Corporation of India (ICICI)

The Industrial Credit and Investment Corporation of India (ICICI) was established in the year 1955, for the development of large and medium industries in the private sector. It was an initiative of the World Bank, and the objectives of the corporation included:

1. Providing assistance in the creation, expansion and modernization of industrial enterprises,
2. Encouraging and promoting the participation of private capital, both internal and external, in such enterprises, and
3. Encouraging and promoting industrial investment and the expansion of investment markets.

1.4.3.1 Forms of assistance

ICICI provides financial assistance for promoting industrial development:

1. Underwriting of public and private issues and offers of sale of industrial securities - ordinary shares, preference shares, bonds, and debenture stock,
2. Direct subscription to such securities,
3. Securing loans in rupees, repayable over periods of up to 15 years,
4. Providing similar loans in foreign currencies for payment for imported capital equipment and technical services,
5. Guaranteeing payments for credits made by others,
6. Providing credit facilities to manufacturers for promoting the sale of industrial equipment on deferred payment terms.

Financial assistance is generally provided for non-traditional industries such as engineering, chemicals, machinery, textiles, and transport equipment, etc. Also, ICICI had started a Merchant Banking Division in 1973 for advising clients on a selective basis and set up a Housing Development Finance Corporation in 1977 to provide long-term loans on reasonable terms for the lower- and middle-income group. In addition, for the development of broad-based technology development-oriented activities, the corporation promoted the Technology Development and Information Company of India Limited.

1.4.4 Export Import Bank (EXIM BANK)

Export-Import Bank of India, known as the EXIM Bank, was set up in the year 1982 by an Act of Parliament with the aim of financing, facilitating and promoting India's foreign trade. It is the apex institution in the country for coordinating the working of institutions engaged in financing exports and imports. Exim Bank is fully owned by the Government of India, and the Bank's authorised and paid-up capital are '10,000 crore and '2,300 crore respectively. Exim Bank lays special emphasis on the extension of Lines of Credit (LOCs) to overseas entities, national governments, regional financial institutions and commercial banks.

1.4.4.1 Forms of Assistance

EXIM Bank provides the following forms of assistance:

1. Extends Buyer's credit and Supplier's credit to finance and promote the country's exports.
2. Provides financial assistance to export-oriented Indian companies by way of term loans in Indian rupees or foreign currencies for:
    - Setting up new production facilities,
    - Expansion or modernisation of existing facilities, and
    - Acquisition of production equipment or technology.

In addition, it helps Indian companies in their globalisation efforts through a wide range of products and services offered at different stages of the business cycle. The Bank also introduced a new lending programme for financing research and development activities of export-oriented companies. This is in the form of a term loan of up to 80 per cent of the R&D cost. Furthermore, to assist in the creation and enhancement of export capabilities and international competitiveness of Indian companies, the Bank has put in place an Export Marketing Services (EMS) programme.

1.4.5 Small Industries Development Bank of India (SIDBI)

Small Industries Development Bank of India (SIDBI) was established in October 1989 and commenced its operations from April 1990, with its head office at Lucknow, as a development bank. It is the apex institution for the promotion, financing and development of the Micro, Small and Medium Enterprise (MSME) sector and for coordinating the functions of institutions engaged in similar activities.

1.4.5.1 Functions

Over the years, SIDBI has enhanced the scope of its promotional and developmental activities to include several new activities. It performs a series of functions in collaboration with voluntary organisations, nongovernmental organisations, consultancy firms and multinational agencies to improve the overall performance of small industries. The important functions of SIDBI are discussed below:

1. Initiates steps for technology adoption, technology exchange, transfer and modernisation of existing units.
2. Participates in:
    - The equity type of loans on soft terms,
    - Term loans,
    - Working capital both in rupees and foreign currencies,
    - Venture capital support, and
    - Different forms of resource support to banks and other institutions.
3. Facilitates timely flow of credit for both term loans and working capital to MSMEs in collaboration with commercial banks.
4. Enhances the marketing capabilities of the products of MSMEs in both domestic and international markets.
5. Directly discounts and rediscounts bills with a view to encourage a bills culture and help the SSI units to realise their sale proceeds.
6. Promotes employment-oriented industries, especially in semi-urban areas, to create more employment opportunities so that rural-urban migration of people can be checked.

1.4.6 National Bank for Agricultural and Rural Development (NABARD)

National Bank for Agriculture and Rural Development (NABARD) was established in July 1982 by an Act of Parliament. It is the apex institution concerned with the policy, planning and operations in the field of agriculture and other rural economic activities. NABARD has introduced several refinance and promotional schemes over the years, with the objectives mentioned below:

1. Supplementing the resources of the cooperative banks and RRBs for meeting the credit needs of its clientele, and
2. Setting up a sound, efficient, effective and viable cooperative credit structure and RRBs for purveying credit.

In addition, NABARD undertakes a number of interrelated activities that fall under three broad categories:

1. **Credit Dispensation** : NABARD prepares for each district annually a potential linked credit plan which forms the basis for district credit plans.
2. **Developmental & Promotional** : The developmental role of NABARD can be broadly classified as:
    - Nurturing and strengthening the Rural Financial Institutions through various institutional strengthening initiatives.
    - Fostering the growth of the SHG Bank linkage programme and extending essential support to SHPIs, NGOs, VAs, Development Agencies and client banks.
    - Development and promotional initiatives in the farm and non-farm sectors.
    - Extending assistance for Research and Development.
    - Acting as a catalyst for agriculture and rural development in rural areas.
3. **Supervisory Activities :** As the Apex Development Bank, NABARD shares with the Central Bank of the country (Reserve Bank of India) some of the supervisory functions in respect of Cooperative Banks and RRBs.

1.4.7 Industrial Reconstruction Bank of India (IRBI)

In 1971, the Government of India established the Industrial Reconstruction Corporation of India (IRCI) with the objective of reconstruction and rehabilitation of sick industrial undertakings. It was registered under the Indian Companies Act, with a share capital of Rs. 10 crores. It was converted into a statutory corporation in March 1985 and renamed the Industrial Reconstruction Bank of India (IRBI). The IRBI acts as the apex credit and reconstruction agency for industrial revival, assisting and promoting industrial development and rehabilitating industrial concerns.

1.4.7.1 Forms of Assistance

The assistance provided by IRBI includes:

1. Gives loans for modernisation, diversification, expansion and renovation, as well as for meeting supplementary needs such as bridging liquidity gaps and working capital requirements.
2. The other forms of assistance include:
    - Lines of credit,
    - Equipment leasing,
    - Hire purchase.

The bank extends assistance to sick small-scale units under its line of credit scheme, which is operated through different state-level agencies. On 27th March 1997, IRBI was converted into a company and renamed the Industrial Investment Bank of India Ltd (IIBI).

1.4.8 Development Finance Institution (DFI)

Development Finance Institutions (DFIs) are specialised financial institutions that provide access to growth capital for developmental projects. The key role of DFIs is to promote economic and social development. They play an important role in financing economic development. These specialised financial bodies address market gaps and provide long-term financing options that commercial banks are not able to provide. Furthermore, they focus on funding developmental projects in sectors neglected by mainstream financial institutions and fill crucial financing gaps. Thus, they help to catalyse private capital for social and economic progress.

1.4.8.1 DFI in India

The earliest development finance institutions in India were set up in the 1950s and 1960s. These DFIs provided long-term financing for industrial development. As commercial banks did not lend much to businesses during the licence raj era, DFIs played an important role in funding the industry. In the 1990s, economic reforms and foreign investment were allowed, and many new private-sector DFIs were set up, which funded emerging opportunities in industry and infrastructure.

1.4.8.2 Need for DFI

The fund requirement for infrastructure and developmental projects in India is so large that it cannot be met by commercial banks alone. Most infrastructure projects face difficulties in accessing long-term debt financing due to their long gestation periods and risks. Whereas, DFIs are able to provide flexible funding options by taking larger risks initially. They facilitate crowdfunding of private investment for such projects. Setting up DFIs helps channel funds for developmental priorities and mission-mode projects. In addition, these specialised financial institutions help in filling larger financing gaps in sectors such as affordable housing and MSMEs. Thus, DFIs ensure the availability of adequate capital for developmental activities and help boost the country's long-term economic competitiveness.

1.4.8.3 Objectives

1. The primary goal of DFIs is to support the country's economic development through financing infrastructure projects. These organisations
2. Give long-term financial and technical assistance to a variety of industries.
3. Offer technical help such as project reports, feasibility studies, and consulting services.
4. Offer a guarantee to banks on behalf of corporations, as well as subscriptions to shares, debentures, and other securities.
5. DFIs help to improve loan flows towards infrastructure projects by providing credit enhancement for infrastructure and housing projects.

It has to be noted that individual deposits are not accepted by DFIs; instead, they borrow from governments, insurance companies, pension funds, and sovereign wealth funds.

1.4.8.4 Classification of DFI

Development Finance Institutions (DFIs) play a crucial role in the economic development of a country. They provide long-term financing to sectors that are important for development but may not receive adequate funds from commercial banks. DFIs can be classified based on various criteria, including their function, ownership, and target sectors.

By Function

1. **Industrial Development Banks :** These institutions focus on providing financial assistance for industrial development. Examples include the Industrial Development Bank of India (IDBI) and the Industrial Finance Corporation of India (IFCI).
2. **Agricultural Development Banks :** These banks provide financial support for agricultural and rural development. Examples include the National Bank for Agriculture and Rural Development (NABARD).
3. **Export-Import Banks :** These DFIs facilitate international trade by providing finance for export and import activities. An example is the Export-Import Bank of India (EXIM Bank).
4. **Housing Finance Institutions :** These institutions provide long-term finance for housing projects. An example is the National Housing Bank (NHB).
5. **Microfinance Institutions :** These DFIs focus on providing financial services to small businesses and low-income groups. Examples include various regional rural banks and microfinance institutions.

By Ownership

1. **Government-Owned DFIs :** These are DFIs fully or majority-owned by the government, such as SIDBI and NABARD.
2. **Private Sector DFIs :** These DFIs are owned by private entities and provide development finance. Examples include certain microfinance institutions.

3. **Joint Sector DFIs :** These DFIs are a collaboration between the government and private sector entities, sharing ownership and management responsibilities.

By Target Sector

1. **Sector-Specific DFIs :** These DFIs target specific sectors like infrastructure, agriculture, small and medium enterprises (SMEs), etc.

2. **Broad-Based DFIs :** These DFIs cater to a wide range of sectors without focusing on any particular one.

1.4.9 Small Industries Development Corporation (SIDCO)

Small Industries Development Corporations are state-owned companies in the states of India which were established for the promotion of small-scale industries.

Objectives of SIDCO

The objectives of SIDCO include:

1. To provide infrastructure facilities like roads, drainage, electricity, water supply, etc.
2. To stimulate the growth of industries in the small-scale sectors.
3. To promote industrial estates which will provide industrial sheds of different sizes with all basic infrastructure facilities.
4. To promote skilled labour through the setting up of industrial training institutes and to provide technical assistance to entrepreneurs through training facilities.

Functions of SIDCO

1. **Promoting women entrepreneurs :** To promote women entrepreneurs, a separate industrial estate for women has been set up at Timullaivoyal, near Chennai, where women entrepreneurs are trained in various fields of small-scale industries.

2. **Promoting skill development centres :** In an effort to supply skilled labour to various small-scale industries, skill development centres are being set up in various industrial estates which will be training workers in varied industrial activities, and they will be trained in modern skills.

3. **Set up captive power plants :** In order to provide uninterrupted and good quality power supply, SIDCO has taken up a plan to set up captive power plants in major industrial estates. It is now planning to set up these plants in 10 industrial estates.

4. **Providing export marketing assistance :** To promote export marketing among the small-scale industries, SIDCO has developed websites because of which it is able to display the products of the small-scale industries in foreign markets and obtain export orders. Once an export order is obtained, the common export manager of SIDCO will make arrangements for extending various services for the export of the product.

5. **Assisting in bill discounting :** When small-scale units supply goods to government departments, there is a delay in receiving payments. In such a situation, the bills drawn on government departments will be discounted by SIDCO and up to 80% of the bill value is given to the supplier. This helps the SSI units in solving their working capital crisis.

6. **Providing marketing assistance :** In order to provide efficient marketing support to small-scale industries, the corporation has taken up various schemes. In fact, the corporation participates in the tenders floated by the state government departments and also with the DGS (Director General of Supplies and Disposal). SIDCO makes advance payments for obtaining orders and distributes them among the various small-scale units.

Recap

- Development banking in India began with the establishment of the Industrial Finance Corporation of India (IFCI)in 1948.
- The State Financial Corporations Act, 1951led to the creation of several State Financial Corporations (SFCs).
- Financial reformshave expanded the role and number of development banks in India, which is now more than 60institutions.
- Industrial Development Bank of India (IDBI)is the principal institution for financing, promoting, and developing industry.
- Industrial Finance Corporation of India (IFCI) provides medium- and long-term credit to industrial concerns.
- Industrial Credit and Investment Corporation of India (ICICI)was established in the year 1955 as a World Bank initiative to focus on large and medium private industries.
- Development Finance Institutions (DFIs)provide long-term finance for development projects not served by commercial banks.

Objective Questions

1. In which year was the Industrial Finance Corporation of India (IFCI) established?
2. Export credit is not a form of assistance provided by IDBI. State true or false.

3. Which development bank started a Merchant Banking Division in 1973?
4. Which bank is responsible for preparing the Potential Linked Credit Plan (PLP)?
5. What is the main aim of the Industrial Reconstruction Bank of India (IRBI)?
6. What are the financial institutions that provide access to growth capital for developmental projects?
7. When was SIDBI established
8. When was ICICI established

Answers

1. 1948.
2. True.
3. ICICI.
4. NABARD.
5. Rehabilitate sick industries.
6. Develop Financial Institution
7. October 1989
8. 1955

Assignments

1. Briefly explain the role of IDBI as a principal financial institution.
2. List any five types of assistance provided by IDBI.
3. What is the importance of IFCI in India's industrial financial system?
4. Describe the key objectives of ICICI when it was established.
5. How does EXIM Bank support Indian companies in their global efforts?
6. Explain the developmental and supervisory roles played by NABARD.

7. How do DFIs differ from commercial banks in terms of their operations and funding?
8. Analyse how EXIM Bank helps reduce India's trade deficit through its various schemes.
9. Identify any ongoing rural development programme supported by NABARD and evaluate its outcomes.

Reference

1. *Banking Class XI*. (n.d.). BSE Institution Ltd.
2. *Banking Law and Practice*. (2014). The Institute of Companies Secretaries of India.
3. *Banking Standard XII*. (n.d.). BSE Institute Ltd.
4. Gordon, E., & Natarajan, K. (2008). *Banking Theory, Law and Practice* (Revised). Himalaya Publishing House.
5. Hildreth, R. (2001). *The History of Banks: To Which Is Added, A Demonstration of the Advantages and Necessity of Free Competition in the Business of Banking*. Batoche Books Limited.
6. James, C., & Houston, J. (1996). EVOLUTION OR EXTINCTION: WHERE ARE BANKS HEADED? *Journal of Applied Corporate Finance*, 9(2), 8–23. https://doi.org/10.1111/j.1745-6622.1996.tb00112.x
7. Lewis, M. K. (1992). Modern Banking in Theory and Practice. *Revue Économique*, 43(2), 203. https://doi.org/10.2307/3501990

Unit 5

Central Banks

Learning Outcomes

After completing this unit, the learner will be able to:

- describe the meaning of central banks
- explain the role and significance of central banks
- get an idea on the central banking system and its functions in India

Prerequisites

Recollecting what you have learnt so far, we know that the banking system in India is complex and dynamic. It is not just the case for India; be it any country, the banking system comprises different forms of financial institutions that cater to the monetary requirements of individuals and businesses. But are these financial institutions autonomous? Do they set their own rules and regulations? Can they decide on the volume of credit supply on their own? The answer is no. They cannot accept deposits and supply credit by advancing loans at their will. This will lead to excess supply of money in the economy and end up in a situation where there is no value for the money we use. So how do we control credit and maintain the value of money under the radar? The answer is through central banks. Central banks are apex banks in a country which control all the money and banking activities in a country. They put forward norms regarding the do's and don'ts of banking and make use of different tools to control money supply in the country. In India, the Reserve Bank of India serves as the central bank. In this unit, we will discuss in detail the central banking system and the RBI.

Keywords

Central banks, credit control, monetary policy, RBI, money supply

Discussion

The central bank is one of the most powerful economic institutions that has been developed to help society manage its collective financial affairs. The activities of the central bank are regarded as essential for the proper functioning of the economy and indispensable for the fiscal operations of the government.

1.5.1 Central banks of different countries

Every country has its own central bank, which monitors and controls its banking activities. Thus it acts as an apex institution that governs the money and banking activities of a country. The central banks of different countries are listed in Table 1.5.1.

Table 1.5.1 Central banks of different countries

Country	Bank
India	Reserve Bank of India
USA	Federal Reserve
Australia	Reserve Bank of Australia
UK	Bank of England
Switzerland	Swiss National Bank
Iran	Central Bank of Islamic Republic of Iran
Bangladesh	Central Bank of Bangladesh
Indonesia	Bank Indonesia
UAE	Central Bank of the United Arab Emirates
Canada	Bank of Canada
Sri Lanka	Central Bank of Sri Lanka
China	People's Bank of China
Brazil	Central Bank of Brazil

1.5.2 Nature of central banks

Most of the central banks we know today started their operations as privately owned banks concerned about their profits and competed with commercial banks. Today these

central banks have transformed into a separate entity of their own. By nature, they act as:

1. The apex banking institution
2. Lender of last resort
3. Banker's bank
4. Custodian of currency and note issue
5. Controller of credit

1.5.2.2 Definition

There are various definitions for central banking, some of which are mentioned below:

Vera Smith says the primary definition of central banking is *"a banking system in which a single bank has either a complete or a residual monopoly in the note issue."*

Shaw defines a central bank as *"a bank which controls credit."*

Hawtrey holds that the central bank is *"the lender of last resort." Sayers refers to the nature of the central bank as the government's* bank.

Kish and Elkim claim that the essential function of a central bank is *"the maintenance of stability of monetary standards. All these definitions refer to only one particular function of the central bank."*

1.5.3 Central bank of India

Warren Hastings, Governor of Bengal, recommended the establishment of a 'Central Bank of Bengal and Bihar' in 1773, realising the need for a central bank in India back then. Though the bank came into existence, it could survive only for a brief period. Several other suggestions were also made but the proposal assumed a definite shape during the twentieth century. For instance, in 1921, three Presidency Banks were amalgamated to form the Imperial Bank of India. Though it was primarily a commercial bank, it also discharged certain central banking functions, such as banker to the government. However, the issue of notes continued to be the direct responsibility of the British Government.

1.5.3.1 Reserve Bank of India

In 1926, 'The Commission on Indian Currency and Finance,' also known as the 'Hilton Young Commission,' suggested the establishment of the Reserve Bank of India. Following its recommendations, a bill was introduced in the Indian Legislative Assembly of 1927; however, the bill was dropped on constitutional grounds. Nevertheless, the question of a central bank gained importance when the Central Banking Enquiry Committee recommended setting up a central bank immediately. In 1933, a white paper on Indian Constitutional Reforms was published, which contained a provision that before the federal constitution's operation, a Reserve Bank free from political influences should be established. As a result, the Reserve Bank of India (RBI) was established on April 1, 1935, under the RBI Act, 1934. It supervises the operations of all the banking institutions in India.

1.5.3.2 General policies of RBI

The Reserve Bank of India (RBI) employs various general policies to manage the Indian economy, with the primary focus of maintaining price stability, in addition to promoting economic growth and financial stability. These policies aim to control the money supply, credit availability, and overall economic activity.

Monetary Policy

This is the most important tool used by the RBI to control the money supply and credit conditions in the economy.

Objectives: The primary objective of monetary policy is to maintain price stability by ensuring that inflation remains within the ideal range (2-6%). Other objectives include:

1. Promoting economic growth,
2. Ensuring financial stability, and
3. Managing the exchange rate of the Indian Rupee.

Tools: The RBI implements monetary policy by employing the following tools:

1. **CRR (Cash Reserve Ratio) :** The percentage of a bank's deposit that is to be maintained with the RBI.
2. **SLR (Statutory Liquidity Ratio) :** The percentage of a bank's assets that is to be maintained in liquid forms.
3. **Repo Rate :** The rate at which the RBI lends money to banks against government security.
4. **Reverse Repo Rate :** The rate at which the RBI borrows money from commercial banks.
5. **Bank Rate :** The interest rate at which the RBI lends money to commercial banks without any security or collateral.
6. **Open Market Operations (OMOs) :** Buying and selling government securities to influence the money supply.

Financial Stability

The RBI plays an important role in ensuring the stability of the Indian financial system. It regulates and supervises banks, financial institutions, and payment systems to prevent systemic risks. In addition to this, it conducts stress tests on banks to assess their ability to withstand shocks and maintain financial soundness.

Currency and Credit System

The RBI is responsible for regulating the issuance of currency, maintaining the currency and credit system of the country, and ensuring a smooth flow of credit to various sectors of the economy. However, it must be noted that the authority to issue one-rupee notes and all other coins is entrusted to the Ministry of Finance, Government of India.

Other Policies

In addition to the policies mentioned so far, the RBI also implements various other policies related to:

1. Commercial banking functions
2. Foreign exchange
3. Net banking
4. Mobile banking
5. Online transactions
6. Retail banking products

Impact of RBI Policies

The RBI's policies have the following implications for the Indian economy:

1. **Inflation :** Monetary policy tools are used to control inflation by managing the money supply and credit availability.
2. **Economic Growth :** By ensuring adequate credit flow to productive sectors, the RBI supports economic growth.
3. **Financial Stability :** The RBI's regulatory and supervisory functions help maintain the stability of the financial system, preventing financial crises.
4. **Employment :** The policies aimed at channeling credit to productive avenues indirectly lead to employment generation.

1.5.4 Role of RBI

According to the preamble to the Reserve Bank of India Act, the primary function of the RBI is to regulate the issue of bank notes and the maintenance of reserves with a view to securing financial stability in India and generally to operate the currency and credit system of the country to its advantage. The rapid economic development during the 1950s widened its functions and undertook a variety of developmental and promotional activities. The institutionalisation of savings through the promotion of the banking habit, the extension of the banking system, and the promotion of new specialised financing agencies are some of its additional responsibilities. Under the Banking Regulation Act, 1949, additional powers were conferred upon the RBI. Furthermore, the Act was amended in 1963 and in 1964 to provide more powers to control the affairs of commercial banks.

1.5.4.1 Management

The management of the Reserve Bank of India is vested in the Central Board of Directors, which comprises 20 members. The Board consists of the following members:

1. One Governor and four Deputy Governors appointed by the Central Government.
2. Four Directors each from the local board nominated by the Central Government.

3. Ten directors nominated by the Central Government.
4. One Government Official nominated by the Central Government.

The Central Board must meet at least six times a year and not less than once a quarter.

Tenure of office

The tenure of different members of the managing board of the RBI is as follows:

1. The Governor and Deputy Governors hold office for five years and are eligible for reappointment. They are full-time officers of the Bank.
2. The ten directors nominated by the Central Government hold office for four years.
3. The term of four directors appointed from Local Boards is related to their membership in the Local Board.

Powers of Chief Executive

The Governor is the Chief Executive of the Bank and the chairman of the Board of Directors, who has the powers of general superintendent to direct the affairs and business of the Bank, subject to the regulations made by the Central Board. In the absence of the Governor, the Deputy Governor nominated by him can exercise his powers.

1.5.4.2 Objectives of RBI

Primary objective

Prior to the establishment of the RBI, the Indian financial system was totally inadequate due to the inherent weakness of the dual control of currency by the Central Government and of credit by the Imperial Bank of India. The Hilton-Young Commission, therefore, recommended the division of functions and responsibility for the control of currency and credit and the divergent policies by setting up a central bank called the RBI – which would regulate financial policy and develop banking facilities throughout the country. Hence, the RBI was established with the following primary objectives in view:

1. To regulate the issue of banknotes,
2. To maintain reserves with a view to securing monetary stability,
3. To operate the credit and currency system of the country to its advantage,
4. To maintain price stability while keeping in mind the objective of growth.

Remain free from political influence

Another objective of the RBI has been to remain free from political influence and to be in successful operation for maintaining financial stability and credit. Political interventions might restrict the apex bank from accomplishing its primary objectives. For instance, the decision regarding bank rate, repo rate, etc. must be regularly monitored and updated based on the changing financial conditions of the economy. Political interventions must not influence such policy decisions by the bank.

Fundamental objects

The fundamental object of the RBI is to discharge purely central banking functions in the Indian money market such as:

1. To act as the note-issuing authority,
2. To act as Bankers' bank,
3. To act as the Banker to government.

Promote the growth of the economy

Factors like money supply, credit distribution, price stability, etc. are significant in terms of economic growth. The RBI aims to promote the growth of the economy within the framework of the general economic policy of the Government, consistent with the need for the maintenance of price stability.

Development of Indian Economy

A significant object of the RBI has also been to assist the planned process of development of the Indian economy. Besides the traditional central banking functions, with the launching of the five-year plans in the country, the RBI has been moving ahead in performing a host of developmental and promotional functions, which are normally beyond the purview of a traditional central bank.

1.5.4.3 Functions of RBI

Monopoly of note issue

The Reserve Bank of India is the only authority having the right to issue currency notes in the country. Under Section 22 of the Reserve Bank of India Act, the Reserve Bank has the monopoly right to issue currency notes, except one rupee and coins, which is the responsibility of the Central Government. This function of note issue is maintained through two departments, namely:

1. Issue Department, and
2. Banking Department.

The Issue Department holds assets such as gold bullions, foreign reserves, and bills of exchange, against which currency can be issued. Whereas, the issue of currency into circulation and withdrawal from circulation are regulated by the Banking Department. The RBI maintains 18 Issue offices and a network of 4,301 currency chests and 4,027 small coin deposits for performing the functions of issue and currency management.

Principle of note issue : For the first 20 years, the note issue was based on the principle of proportional reserve system. According to this, of the total assets, not less than 40% was to consist of coins, bullions, and sterling securities. With the amendment of the Act in 1957, the proportional reserve system was substituted by a minimum reserve system. This system envisages that the bank should have a total of Rs.515 crore assets, of which Rs. 400 crores should be in foreign securities and Rs. 115 crores should be in gold coins

and bullions. The Act was further amended in 1957, which prescribed that the aggregate value of gold coins, gold bullions, and foreign securities held in the Issue Department should not be less than Rs. 200 crores, of which the value of gold should not be less than Rs.115 crore. The amendment Act empowered the Bank to reduce the holding to any lesser amount. But it must have gold equivalent to Rs.115 crore at all times.

Banker to Government

The Reserve Bank transacts the banking business of the Central and State Governments. Sections 20, 21, and 21A of the Reserve Bank of India Act make this function obligatory on the part of the RBI. Thus, it undertakes to accept money, make payments, and also carry out their exchange remittance and other banking operations, including the management of public debt. For discharging this function, the Bank has entered into separate agreements with the governments. The Bank is not entitled to any remuneration for the conduct of ordinary banking business. The Bank is required to keep such books of accounts as the governments direct.

The discharge of the Bank's function as banker to the government involves the receipt and payment on behalf of various Government businesses, which are attended to by the Public Accounts Department of the Banks at Bangalore, Chennai, Nagpur, Mumbai, Byculla, New Delhi, Patna, Kolkata, and Kanpur. Now the State Bank of India acts as the sole agent of the Reserve Bank, where the Bank has no branch.

Issue of New Loans and Treasury Bills : The Reserve Bank is entrusted with the management of the public debt and the issue of new loans and treasury bills on behalf of the Central and State Governments. The issue is sanctioned through the Public Debt Offices of the Bank. The Bank sells treasury bills whenever necessary to provide short-term finance to the government and to help absorb any excess cash in the money market.

Ways and Means of Advances : Section 17(5) of the Reserve Bank of India Act authorises the Bank to make ways and means of advances to the Central and State Governments. These advances are repayable not later than three months from the date of issue and are granted without any collateral securities. Besides, special ways and means advances are sanctioned to State Governments against the Central Government securities. It also acts as the agent of the government in its transactions with LM.F. and LB.R.D.

Adviser to the Government

The Bank advises the government on a wide range of economic issues. The range of advisory functions of the RBI is much wider than that of any other central bank in developed or underdeveloped countries. It includes banking and financial matters, resource mobilisation, planning, etc. The Reserve Bank's advice was sought on certain aspects of the formulation of five-year plans. It also guides the government in connection with the flotation of new loans, small savings proposals, agricultural credit, industrial finance, and international finance. The Bank renders advice on various matters of international finance. The Bank has built up a fairly large research and statistical organisation for delivering this function.

Controller of Credit

As the monetary authority of the country, the Bank has the responsibility to regulate the money supply and to formulate and administer monetary policy. In a developing economy, money supply has to be expanded sufficiently to match the growth of real national income. In India, the rate of increase in money supply has been far in excess of the rate of growth of real national income. Government budgetary deficits for financing a part of investment outlays and the expansion of credit by commercial banks are the two reasons behind the expansion of money supply. In this context, the Reserve Bank has shouldered a positive responsibility for regulating the money supply.

Recap

- Central banksare primary institutions that manage a nation's monetary and banking systems.
- The idea of a central bank in India dates back to 1773with the proposal of the Central Bank of Bengaland Bihar.
- The Reserve Bank of Indiawas established on April 1, 1935, following the recommendations of the Hilton Young Commission.
- RBI regulates currency issuanceand ensures monetary and financial stability.
- Monetary Policyis a tool used by RBI to manage inflation, economic growth, and exchange rate stability.
- Lender of last resort - central bank
- CRR - Cash Reserve Ratio

Objective Questions

1. Which is the central bank of the USA?
2. Which bank operates as the central bank in India?
3. Who appoints the Governor of the Reserve Bank of India?
4. Which department of RBI handles currency issuance?
5. In which year was the minimum reserve system adopted by RBI?

6. The percentage of bank's deposit that is to be maintained with R.B.T.
7. The percentage of a bank's asset that is to be maintained in liquid form.
8. The rate at which the RBI borrows money from commercial banks.

Answers

1. Federal Reserve.
2. Reserve Bank of India.
3. Central Government.
4. Issue department.
5. 1957.
6. Cash Reserve Ratio
7. Statutory Liquidity Ratio
8. Reverse Repo Rate

Assignments

1. What are the key functions of a central bank in a country?
2. How does the Reserve Bank of India contribute to the financial stability of the country?
3. Explain the role of the RBI as the "lender of last resort".
4. What are the primary objectives of RBI's monetary policy?
5. Describe the organisational structure and management of RBI.
6. How does RBI manage its advisory role to the government of India?
7. Analyse the evolution of RBI's note issuing system from the Proportional Reserve System to the Minimum Reserve System.

Reference

1. *Banking Class XI*. (n.d.). BSE Institution Ltd.
2. *Banking Law and Practice*. (2014). The Institute of Companies Secretaries of India.
3. *Banking Standard XII*. (n.d.). BSE Institute Ltd.
4. Gordon, E., & Natarajan, K. (2008). *Banking Theory, Law and Practice* (Revised). Himalaya Publishing House.
5. Hildreth, R. (2001). *The History of Banks: To Which Is Added, A Demonstration of the Advantages and Necessity of Free Competition in the Business of Banking*. Batoche Books Limited.
6. James, C., & Houston, J. (1996). EVOLUTION OR EXTINCTION: WHERE ARE BANKS HEADED? *Journal of Applied Corporate Finance*, 9(2), 8–23. https://doi.org/10.1111/j.1745-6622.1996.tb00112.x
7. Lewis, M. K. (1992). Modern Banking in Theory and Practice. *Revue Économique*, 43(2), 203. https://doi.org/10.2307/3501990

BLOCK
02

E-Banking

Unit 1

Introduction to E-Banking

Learning Outcomes

On completion of this unit, the learner will be able to:

- describe the meaning of e-banking
- identify the features and challenges of e-banking
- differentiate between traditional and e-banking
- explain the impact of IT in banking.

Prerequisites

In the previous block, we have covered the basic concepts of banking and banks. The discussion was primarily focused on the traditional banking system that we used to follow before the advent of information technology. Today, with the increased use of IT and the introduction of innovative technology like AI and machine learning, traditional banking has evolved. Today, banking services are not something that we can avail ourselves of only by visiting a bank branch. Rather, we are able to avail ourselves of all the banking services through our computers, laptops, or even mobile phones. This is made possible through technology, and this new phase of banking is what we call E-banking. It provides us with numerous features, which facilitate us to avail ourselves of most of the banking services at the comfort of our homes we rarely need to step out of our homes to carry out banking transactions except for depositing money banking has become significantly more convenient. Even for deposits, we no longer have to wait in long queues at bank branches; instead, we can use a deposit machine, which is one of the innovations of e-banking. Thus, it is clear that technology has transformed banking to a large extent. In this unit, we begin by exploring the basic concepts of e-banking, its impact, and the regulatory framework governing it.

Keywords

E-banking, Information technology, IT, RBI, RBI guidelines, traditional banking.

Discussion

Information technology has revolutionised various aspects of our lives. It has facilitated the emergence of E-commerce, which is the paperless exchange of business information spread through computer devices. Thus, E-commerce, in today's context, is a commercial transaction routed through the Internet. When business and commerce tend to be in electronic modes, banking can never remain isolated. Thus, banking services are also now available through electronic devices, which is known as e-banking. E-banking implies performing basic banking transactions by customers round the clock globally through electronic media.

2.1.1 Features of E-Banking

2.1.1.1 Convenience

A working parent, balancing household responsibilities and a full-time job, logs into their mobile banking app during a short break to transfer funds and check account activity. Without needing to visit a branch, they complete essential banking tasks swiftly, highlighting the everyday convenience electronic banking provides.

Electronic banking offers convenience by permitting customers to access their accounts, make transactions, and manage finances from anywhere at any time using devices like computers, smartphones, or ATMs. It means that customers no longer need to physically visit a bank branch to carry out basic banking tasks, saving them valuable time and effort.

2.1.1.2 Cost-Effectiveness

A university student managing a limited budget completes multiple transactions through an online banking portal without incurring travel expenses or taking time off from studies. This routine highlights how e-banking promotes cost-effectiveness by reducing the financial and logistical burdens of traditional banking.

E-banking reduces costs per transaction for customers by eliminating the need to visit physical bank branches frequently, saving time and money. By conducting transactions online or through ATMs, customers can avoid transportation costs and other expenses associated with in-person banking, making banking more affordable and accessible.

2.1.1.3 Accessibility

While attending a conference abroad, a small business owner effortlessly approves payments and checks account balances using a mobile banking app. This scenario reflects how e-banking enhances accessibility, enabling users to manage finances regardless of location or time zone.

Customers can access their accounts and conduct banking activities remotely without being limited by geographical barriers, enhancing accessibility and flexibility in managing finances. Whether they are at home, work, or travelling, customers can conveniently check their account balances, transfer funds, and pay bills online or through mobile banking apps.

2.1.1.4 Efficiency

A freelance professional sets up scheduled payments for monthly bills and client subscriptions through their online banking dashboard. This efficient use of automation ensures timely transactions, reduces manual effort, and allows greater focus on core activities.

Electronic banking improves efficiency by automating regular payments, fund transfers, and other banking activities, streamlining financial transactions for both individuals and businesses. With features like scheduled payments and recurring transfers, customers can set up automated processes to handle routine tasks, saving time and ensuring payments are made on time.

2.1.1.5 Security

After receiving a transaction alert, a customer promptly verifies their activity through multi-factor authentication and confirms the security of their account. This real-time monitoring and layered protection exemplify how e-banking platforms uphold strong security standards to maintain user trust and data safety.

E-banking platforms prioritise security measures to protect customer data and transactions, ensuring a safe and secure environment for online banking activities. Advanced encryption techniques, multi-factor authentication, and real-time fraud monitoring help safeguard customer information and prevent unauthorised access to accounts.

2.1.1.6 Enhanced Services

A young professional uses their bank's digital platform to pay utility bills, apply for a personal loan, and invest in a fixed deposit—all within minutes and from a single interface. This integrated access to multiple services demonstrates how e-banking empowers users with comprehensive financial control and convenience.

Electronic banking offers a wide range of services beyond traditional banking, including bill payments, online account management, loan applications, fund transfers, and investment services, catering to diverse customer needs. These additional services provide customers with greater control over their finances and enable them to conveniently access various banking products and services in one place.

2.1.1.7 Reduced Errors and Fraud

A salaried employee receives an instant alert about an unusual transaction and promptly reports it through the bank's mobile app. The system's accuracy and built-in monitoring not only prevent potential fraud but also reduce manual errors, reinforcing confidence in digital financial management.

E-banking minimises errors in financial transactions by providing accurate and automated processes, reducing the risk of human errors that can lead to costly mistakes. Additionally, the digital footprint in electronic banking helps in detecting and preventing fraudulent activities. With features like transaction alerts and activity monitoring, customers can quickly identify and report any suspicious transactions, enhancing overall security and peace of mind.

2.1.2 Challenges of E-Banking

2.1.2.1 No Personal Relationships

Online banking lacks the personal touch of traditional banks, where customers can build relationships with staff for personalised services. The absence of face-to-face interactions in electronic banking can lead to a sense of detachment and may limit opportunities for personalised financial advice and assistance.

2.1.2.2 Less Flexibility with Transactions

Some transactions and issues may require in-person assistance, which can be limited to online-only banking. While electronic banking offers convenience for routine transactions, certain complex or sensitive matters may necessitate physical interaction with bank staff, posing challenges for customers who rely solely on digital channels.

2.1.2.3 Tech-Related Service Disruptions

Electronic banking may face technical issues or service disruptions that can hinder access to accounts temporarily. Factors such as system maintenance, cyberattacks, or internet outages can disrupt online banking services, causing inconvenience and frustration for customers who rely heavily on digital banking platforms.

2.1.2.4 Concerns about Identity Theft and Security

Security risks exist with online banking, including identity theft and cyber threats that may compromise sensitive information. Despite security measures implemented by banks, customers may still be vulnerable to phishing scams, malware attacks, or data breaches, raising concerns about the safety of their personal and financial data when conducting transactions online.

2.1.3 Traditional Banking vs E-Banking

In traditional banking, the customer has to visit the branch of the bank in person to perform basic banking operations. Whereas, e-banking enables customers to perform basic banking transactions by sitting at their office or at home through PCs or laptops. With e-banking, the brick-and-mortar structure of traditional banking is transformed into a click-and-portal model.

A brick-and-mortar business is one that has a real, physical place like a shop, office, bank branch, or school building. A click-and-portal model refers to a business operating through the internet — using websites, apps, or online platforms (the "click") instead of, or in addition to, physical locations.

Thus, today's banking is no longer confined to branches; rather, customers are being provided with additional delivery channels that are more convenient for them and are cost-effective for the banks. These delivery channels include ATMs, Tete Banking, Internet Banking, Mobile Banking, Home Banking, etc. Furthermore, e-banking facilitates banking transactions for customers round the clock globally.

2.1.4 Impact of IT in Banks

2.1.4.1 IT and Communication Systems

The integration of computers and communication techniques has opened opportunities for banks to provide various innovative and customer-friendly products/services and also to redesign their internal control systems. The data communication network systems play an important role in the interface and interconnectivity of banks. With the fast-changing technologically supported world, banks in India have come a long way. Over the years, different methods have been used to transmit data from computer to computer. The data is transmitted by means of data communication media like terrestrial cables, microwaves, and satellites.

2.1.4.2 Communication Networks in the Banking System

As per the recommendations of the Saraf Committee, the Reserve Bank of India has set up a countrywide data communication network for banks linking major centres of the country, known as INFINET (Indian Financial Network), and this network uses satellite communication with very small aperture terminals (VSATs) as earth stations. The VSAT network is a single closed user group network for the exclusive use of banks and other financial institutions. The VSATs are owned by individual banks and the RBI. The hub is owned by the RBI and the Institute for Development and Research in Banking Technology (IDRBT). Satellite services based on VSAT technology can establish reliable links to all sites. The central hub monitors and controls the flow of network traffic.

2.1.4.3 Internet of Things and World Wide Web

The internet is a global network of networks. Computers with internet links can allow users to exchange data, information, messages, files, etc., with other computers across the globe through internet connectivity. Some of the important services available on the internet are: E-mail: Most popular and widely used application. Messages can be sent and received to/from any place in very quick time. It is user-friendly and cost-effective as well. This facility collates internet-related resources and makes available the information. The access to this site assists users to source out a large variety of information. Banks use the internet and websites (banks' own websites) to market their products and services. These platforms Lesson 11 Electronic Banking and IT in Banks 279 also allow banks to offer online banking facilities and can be used for posting their financial results and information to customers.

2.1.4.4 SWIFT

Society for Worldwide Inter-bank Financial Telecommunications (SWIFT) is a co-operative non-profit-making organisation established under Belgian law with its headquarters in Brussels. SWIFT is wholly owned by its member banks. SWIFT is a paperless message transmission system which operates on a 24x7 basis throughout the year. SWIFT has become an integral part of the banking system, as it assists member banks in transmitting authenticated financial and non-financial messages. Banks use the SWIFT platform for the transmission of financial and non-financial messages covering international finance and international trade.

2.1.5 RBI Guidelines

2.1.5.1 Technology and Security Standards

1. Cooperative banks should have an appropriate Information Security policy duly approved by the Board of Directors.
2. The banks should designate a Network and Database Administrator with clearly defined roles as per the IS Audit policy duly approved by their Board.
3. Logical access controls to data, systems, application software, utilities, telecommunication lines, libraries, system software, etc., should be in place.
4. The banks should ensure that there is no direct connection between the Internet and the bank's system.
5. The banks should have effective safeguards to prevent intrusions into the systems/ network.
6. All unnecessary services on the Application Server such as File Transfer Protocol (FTP) and Telnet should be disabled. The Application Server should be isolated from the e-mail server.
7. All computer accesses, including messages received, should be logged.
8. Security violations (suspected or attempted) should be recorded and follow-up action taken.
9. Banks should acquire tools for monitoring systems and networks against intrusions and attacks. These tools should be used regularly to avoid security breaches.
10. The banks should review their security infrastructure and security policies regularly and optimise them in the light of their own experiences and changing technologies.
11. The Information Security officer and the Information System auditor should conduct periodic penetration tests of the system, which should include:
    - ♦ Attempting to guess passwords using password-cracking tools.
    - ♦ Searching for back door traps in the programmes.
    - ♦ Attempting to overload the system using Distributed Denial of Service (DDoS) and Denial of Service (DoS) attacks.

- Checking if commonly known holes in the software, especially the browser and the e-mail software, exist.
- The penetration testing may also be carried out by engaging outside experts (often called 'Ethical Hackers').

12. Physical access controls should be strictly enforced.
13. All applications should have proper record-keeping facilities for legal purposes. It shall be necessary to keep all received and sent messages both in encrypted and decrypted form.
14. The banks shall obtain an application integrity statement from the vendor/service provider before implementing the internet banking software.
15. Security infrastructure should be properly tested before using the systems and applications for normal operations. Banks should periodically upgrade the systems to newer versions which give better security and control.
16. The guidelines issued by RBI on 'Risks and Controls in Computers and Telecommunications' advising banks to comply with the same will equally apply to internet banking.
17. In the case of state and national credit cooperatives, guidelines on 'Introduction of IS Audit Policy' in NABARD will also apply.

2.1.5.2 Legal Issues

A customer receives a fraudulent call from someone claiming to be a bank representative. Believing it to be genuine, the customer unknowingly shares sensitive information like their UPI PIN. Soon after, unauthorized transactions are made from their bank account. The customer immediately reports the incident to the bank, but the bank initially denies the refund. According to the Reserve Bank of India's guidelines on digital fraud liability, if the customer reports the fraud within three working days and there is no negligence on their part, the bank is liable to refund the amount lost. This rule provides strong legal protection for customers. The RBI issues several guidelines to prevent unfair practices in the banking sector.

1. Banks may provide Internet Banking facility to a customer only at his/her option based on a specific written or authenticated electronic requisition along with a positive acknowledgement.
2. Considering the prevailing legal position, there is an obligation on the part of banks to make enquiries about the integrity and reputation of the customer opting for internet banking. Therefore, even though a request for opening an account may be accepted over the Internet, accounts should be opened only after verification of the identity of the customer and adherence to KYC guidelines.
3. From a legal perspective, the security procedures adopted by banks for authenticating a user need to be recognised by law as a substitute for a signature. The provisions of the Information Technology Act, 2000, and other legal requirements need to be scrupulously adhered to while offering internet banking.

4. Under the present regime, there is an obligation on banks to maintain the secrecy and confidentiality of customers' accounts or information. The banks should, therefore, have in place adequate risk control measures to manage risks relating to the privacy of customer information.

2.1.5.3 Internal Control System

The banks should develop sound internal control systems before offering internet banking. This would include internal inspection or audit of systems and procedures related to internet banking as well as ensuring that adequate safeguards are in place to protect the integrity of data, customer confidentiality, and security of data. Banks may also consider prescribing suitable monetary limits for internet transactions. The internal control system should cover the following:

1. **Role and Responsibilities or Organisational Structure:** The Board of Directors and senior management are responsible for ensuring that the internal control system operates effectively. The Audit Committee of the Board should have a designated member with requisite knowledge of Information Systems, related controls, and audit issues.
2. **Audit Policy to Include IS Audit:** Internal System (IS) audit should be an integral part of the internal audit of banks. The banks should put in place a system to ensure that a robust audit trail is generated to facilitate the conduct of audits, serving as forensic evidence when required and assisting in dispute resolution.
3. **Reporting and Follow-up:** This involves having a system of reporting by the functionaries to the higher authorities. Any breach or failure of security systems and procedures will be reported to the next higher authority and to the Audit Committee. IS Auditors will prepare an audit summary memorandum providing an overview of the entire audit process from planning to audit findings, discuss the findings with the auditee, and obtain responses. The cooperative banks should have a time-bound follow-up policy for compliance with audit findings. The Board of Directors needs to be kept informed of serious lapses in security and procedures. Banks may have a communication plan for escalating/reporting to the Board/Senior Management/RBI/NABARD to proactively notify major cybersecurity incidents.

2.1.5.4 Other Issues and Disclosures

The existing regulatory framework over banks will be extended to Internet Banking also. In this regard, it is advised that:

1. The products under internet banking should be restricted to account holders only.
2. The services should include only local currency products.
3. Cooperative banks should make disclosures of risks, responsibilities, and liabilities of customers in doing banking through the internet.
4. The banks need to adhere to the KYC guidelines / AML standards and the provisions and directions issued under the PMLA 2002 while offering internet banking.

Recap

- Information technology has transformed modern life, enabling e-commerce and thereby revolutionising banking through e-banking.
- E-bankingrefers to conducting basic banking transactions using electronic devices.
- E-banking is cost-effective and reduces errorsand fraud.
- Indian Financial Networkby RBI enables nationwide connectivity through VSATtechnology.
- Banks use the internetfor communication, marketing, and delivering online services.
- SWIFT is a global message transmission system for financial communication between banks, which is available 24/7.
- FTP - (Fire Transfer Protocol)
- Ethical Hackers - Legally break into Computer System

Objective Questions

1. What does SWIFT stand for?
2. Which RBI-recommended security measure helps to prevent unauthorised system access?
3. Which communication technology supports INFINET connectivity?
4. Which act provides legal recognition to digital signatures and procedures in India?
5. Where is the head quarters of SWIFT located ?
6. What is the primary purpose of INFINET ?
7. What does VSAT stand for in banking communication systems ?
8. Who operate the VSAT network for Indian banks ?

Answers

1. Society for Worldwide Inter-bank Financial Telecommunications.
2. Logical access controls.
3. Satellite with VSAT.
4. Information Technology Act, 2000.
5. Brussels
6. To facililate inter bank electronic communication and fund transfer
7. Very small Aperture Terminal
8. Institute for Development and Research in Banking Technology

Assignments

1. How has e-banking transformed the conventional approach to banking operations?
2. What do you understand by the term "click and portal model" in the context of banking?
3. What are some challenges of e-banking that still need to be addressed?
4. Why is it important for banks to have internal control systems in place before offering e-banking?
5. What role does the Information Security Officer play in a cooperative bank?
6. Describe how the RBI guidelines aim to ensure the security of e-banking platforms.
7. How do the internet and websites enhance banking services and customer outreach?
8. What are the legal responsibilities of banks before granting internet banking facilities to a customer?Prepare a case study comparing the customer experience between the traditional banking system and e-banking platforms.

Reference

1. *Banking Class XI*. (n.d.). BSE Institution Ltd.
2. *Banking Law and Practice*. (2014). The Institute of Companies Secretaries of India.
3. *Banking Standard XII*. (n.d.). BSE Institute Ltd.
4. Gordon, E., & Natarajan, K. (2008). *Banking Theory, Law and Practice* (Revised). Himalaya Publishing House.
5. Hildreth, R. (2001). *The History of Banks: To Which Is Added, A Demonstration of the Advantages and Necessity of Free Competition in the Business of Banking*. Batoche Books Limited.
6. James, C., & Houston, J. (1996). EVOLUTION OR EXTINCTION: WHERE ARE BANKS HEADED? *Journal of Applied Corporate Finance*, *9*(2), 8–23. https://doi.org/10.1111/j.1745-6622.1996.tb00112.x
7. Lewis, M. K. (1992). Modern Banking in Theory and Practice. *Revue Économique*, *43*(2), 203. https://doi.org/10.2307/3501990

Unit 2

E-Banking Services

Learning Outcomes

On completion of this unit, the learner will be able to:

- get an idea on different e-banking services
- know the meaning and usage of different e-banking products
- gather information from the CIBIL report

Prerequisites

We have seen that technology has made banking easier and faster. We no longer need to stand in long queues at bank branches to avail banking services. With the help of e-banking services, many banking activities can now be done from the comfort of our homes. This is made possible through different types of e-banking products or services. In this unit, you will learn about the different services of e-banking such as ATM, credit cards, debit cards, and smart cards. These tools help us to make transactions more easily, with security. Also, we look into the electronic clearing services, which help us to make monthly payments such as bills and EMIs. In addition, we discuss e-cheques, the CIBIL score, and introduce CORE banking. The CIBIL scores provide a rating that helps banks and other financial institutions to rank an individual based on his capacity to repay debts.

Keywords

ATM, debit card, credit card, SMART card, e-cheque, ECS.

2.2.1 Meaning

E-Banking simply means electronic banking, which is a facility provided by the bank to its customers to make banking transactions electronically. Various e-banking services are provided by banks to their customers, which will be discussed in detail in this unit.

2.2.2 Automated Teller Machines (ATM)

An Automated Teller Machine (ATM) is a computerized device that allows bank customers to perform transactions like cash withdrawals, deposits, balance inquiries, and fund transfers without needing assistance from bank staff. The first ATM in the world was installed by Barclays Bank in London in 1967. In India, the first ATM was set up by HSBC in Mumbai in 1987. Since then, ATMs have become an essential part of convenient and accessible banking services nationwide.

2.2.2.1 Use of ATM

ATM as an e-banking service has the following uses:

1. ATMs are used as a channel for cash management of individual customers, which can be accessed by ATM card, debit or credit cards using their Personal Identification Number (PIN) issued by their banker and access password.

2. They can be used for payment of utility bills and funds transfer. Thus, ATMs serve as a channel for electronic funds management.

3. Requests for a new cheque book and statement of accounts can be made through ATMs.

4. Customers of any bank will be able to withdraw money, take out statements, change PIN, etc., from white label ATMs. These WLAs will not display the logo of any bank.

ATMs have become an essential and routine part of modern banking.They are user-friendly and have mass acceptability, reaching out to a large customer base at low cost. At present, banks have started outsourcing and sharing ATM services to reduce costs.

2.2.3 Debit cards

A debit card is a payment card issued in the name of a bank account holder who can make withdrawals, fund transfers, and remittances electronically using the card. The debit card uses funds that are already in your bank account and allows you to buy products and services. The CVV number, also known as the security code, is a three- or four-digit number that's usually located on the back of a credit card, which acts as an authorisation

or signature when you make online purchases. In short, it helps to ensure that you are the cardholder and not someone else pretending to be you.

There are several advantages associated with using a debit card:

1. As long as you have enough money in your account, using a debit card is safer than carrying cash and is easy since there are no receipts or cheques to manage.
2. If you have an emergency where you need cash immediately, your savings aren't subject to fees.
3. There are no interest requirements for debit cards. Once you make a purchase, that amount of money is automatically deducted from your account.

Debit cards come in many forms, and each type of card is suited for different purposes:

1. A standard debit card that you use at point-of-sale (POS) devices and ATMs to pay for items that have been charged to your account.
2. Debit cards with cheque capabilities allow you access to your checking account funds.

2.2.4 Credit cards

A credit card is a payment card issued by the bank to the customer who can avail loans and make payments electronically using the card. It comes with the stipulation that the borrowed money, in addition to any relevant interest, as well as any additional charges that were agreed upon, must be paid back. The credit card issuer may also grant cardholders a separate cash line of credit (LOC), in addition to the standard credit line, which gives cardholders the ability to borrow money in the form of cash advances. This can be accessed through bank tellers, ATMs, or credit card convenience checks. In addition, cardholders are eligible for the standard credit line.

2.2.4.1 Different kinds of credit cards

The difference between a debit card and a credit card:

Table 2.2.1 Difference Between Credit Card and Debit Card

Aspect	Credit Card	Debit Card
Source of Funds	Borrowed money from the bank/credit issuer	Directly linked to the user's bank account
Payment Timing	Payment made later, usually monthly billing	Payment deducted immediately at transaction
Interest Charges	Interest charged if balance not paid in full	No interest, as funds are already in account
Credit Limit	Has a preset credit limit	Limited by the available balance in account

2.2.5 SMART CARDS

Smart card technology is also widely used by bankers to market their products. A smart card, a chip-based card, is a kind of electronic purse wherein a microchip is embedded, which stores a monetary value. When a transaction is made using the card, the value is debited, and the balance comes down automatically. Once the monetary value comes down to zero, the balance must be restored again so that the card becomes operational as before.

It is more secure than ATM, debit, and credit cards because card-related frauds and crimes cannot take place with a smart card. It provides communication security as it verifies whether the signature is genuine or not. The card also recognises different voices and compares them with the recorded original voice. It is used for making purchases without the necessity of requiring the authorisation of a Personal Identification Number, as in a debit card. It eliminates all problems associated with traditional currency. A smart card is a truly powerful token that carries out all the functions of magnetic stripe cards, like ATM cards, credit, and debit cards.

2.2.6 Cash Deposit Machine (CDM)

A person needed urgent cash late at night for a medical emergency, but the bank was closed and no cash was available. This situation highlighted the limitation of traditional banking hours. The inability to access funds during non-working hours created a strong need for a 24x7 self-service facility. This event emphasized the importance of installing Automated Teller Machines (ATMs) to provide round-the-clock access to cash, ensuring customer convenience and meeting emergency financial needs at any time.

In today's fast-paced world, everyone is looking for a hassle-free and time-saving way to complete their banking transactions. A Cash Deposit Machine (CDM) is one such innovation that allows customers to deposit cash quickly and efficiently without the need to stand in long queues.

2.2.6.1 Meaning

A cash deposit machine is an automated machine that allows customers to deposit cash into their bank accounts without the need for filling out deposit slips or standing in long queues at the bank. It is similar to an ATM, but instead of dispensing cash, it accepts cash deposits.

2.2.6.2 Operating a CDM

A cash deposit machine uses advanced technology to count and verify the cash deposited by the customer. It has a slot where the customer inserts the cash, and the machine counts and verifies the notes using sensors. Once the cash is verified, it is credited to the customer's bank account.

Depositing cash in CDM without card

To deposit cash in a CDM machine without a card, follow these steps:

1. Locate the nearest cash deposit machine.
2. Enter your bank account number in the machine.
3. Select the language of your choice.
4. Enter your mobile number and confirm it.
5. Select the option "Deposit Cash."
6. Insert the cash into the machine's designated slot.
7. The machine will count and verify the cash.
8. Once the cash is verified, the machine will display the deposited amount.
9. Confirm the deposited amount and complete the transaction.

2.2.6.3 Benefits of using CDM

There are several benefits to using a CDM:

- ♦ It saves time by eliminating the need to stand in long queues.
  - It is a secure and convenient way to deposit cash.
  - It is available 24/7, making it easy for customers to deposit cash at any time.
  - It provides instant credit to the customer's bank account.
  - It eliminates the need for deposit slips, making the process more straightforward and hassle-free.

In short, a cash deposit machine is an excellent way to save time and make banking transactions more convenient. It is a secure and easy-to-use option that eliminates the need for standing in long queues or filling out deposit slips.

2.2.7 Point of Sale

Point of Sale (POS) is where a customer completes the purchase of goods or services. These transactions at the cash register in physical stores are crucial for the banking and retail industries. In banking, it is the moment when a customer initiates a transaction using their debit or credit card during physical shopping.

2.2.7.1 Steps in POS

Point-of-sale transactions are the secret to making payments go as smoothly as possible. They make the process of exchanging goods and services faster and more efficient. The following are the steps in POS:

1. **Selection of Items:** The process starts with the customer picking out what they want to purchase.
2. **Scanning or Manual Entry:** The items are scanned with barcode scanners, or the information is entered manually.

3. **Payment Processing:** Customers pay with their debit or credit card, mobile wallet, or cash.
4. **Authorisation:** The transaction data is then shared with the bank to ensure the money is safe.
5. **Receipt Generation:** A receipt is generated for the customer to show the successful transaction.

2.2.7.2 Types of POS transactions

Understanding the different POS transaction types is essential for businesses and customers. There are different POS transaction types, including:

1. **Contactless Payments (NFC):** NFC or Near Field Communication technology lets customers make contactless payments by touching their tap cards or mobile devices.
2. **Mobile Wallet Transactions:** Mobile wallets like Apple Pay, Google Pay, and Samsung Pay are popular. NFC technology is used to complete these transactions.

2.2.7.3 Advantages of POS Systems

POS systems offer the following benefits to users:

1. **Speed:** POS transactions are processed quickly, reducing the total wait times for customers.
2. **Accuracy:** Automated calculations minimise errors in pricing and change.
3. **Collect Sales Data:** POS transaction data is recorded for easy access and analysis, aiding decision-making.

2.2.7.4 Disadvantages of POS Systems

1. **Initial Costs:** Installing a POS system can be expensive, including costs such as hardware devices, software systems, and employee training.
2. **Technical Issues:** Like any other technology, POS systems tend to encounter glitches or downtime, which may disrupt business operations occasionally.

2.2.8 Tele-banking

Tele-banking is increasingly used as a delivery channel for marketing banking services. A customer can do the entire non-cash-related banking over the phone anywhere and at any time. Automatic Voice Recorders (AVR) or 10 numbers are used for rendering tele-banking services, which have added convenience for customers.

2.2.9 E-cheque

The Negotiable Instruments Amendment Act has introduced another new concept called "electronic cheque" to facilitate e-banking. It is defined under Section 6 (a) of the Negotiable Instruments Act as: "A cheque in electronic form means a cheque which contains the exact mirror image of a paper cheque and is generated, written, and signed in a signature (with or without a biometric signature) and asymmetric crypto system."

2.2.9.1 Features of e-cheque

As per Section 6 (a) of the Negotiable Instruments Act, an e-cheque has the following features:

1. It is the exact mirror image of a paper cheque. In other words, it is the electronic image of a paper cheque.
2. It is generated, written, and signed in a secure manner using a digital signature that has been legally recognised.
3. It may or may not have a biometric signature.
4. The digital signature of the drawer is compulsory.
5. There should be minimum safety standards like the asymmetric crypto system.

2.2.9.2 E-Cheque vs Truncated Cheque

Table 2.2.2 Difference Between Truncated cheque and E-Cheque

Basis of difference	Truncated cheque	E-Cheque
Definition	A truncated cheque refers to a physical cheque that has been converted into an electronic format during the clearing process. The original paper cheque is not returned to the payee but is instead retained by the bank.	An electronic cheque (often referred to as an e-cheque or electronic cheque) is a digital version of a cheque that can be created, signed, and transmitted electronically without the need for a paper counterpart.
Process	A truncated cheque is processed; the bank captures the necessary information (such as the cheque number, amount, and signatures) and stores it electronically. The physical cheque may be destroyed or retained according to the bank's policies.	E-cheques are typically created using banking software or applications and are sent directly from the payer's account to the payee's account electronically. The transaction can be processed through payment systems that support electronic funds transfer.
Advantages	Truncation speeds up the clearing process, reduces the need for physical transportation of cheques, and minimises the risk of loss or theft of the paper cheque.	E-cheques facilitate faster payments, reduce paper usage, and can often be more secure due to encryption and digital signature technologies.

Both methods aim to enhance efficiency and security in cheque processing, but they operate in slightly different contexts within the banking system.

2.2.10 Electronic Clearing System (ECS)

The Electronic Clearing System (ECS) is defined as an electronic means for the transfer of funds introduced by the Reserve Bank of India to reduce the transit time of funds mobilisation so that repetitive and recurring payments can be processed easily and electronically without any manual intervention. This payment mode also ensures that paper transactions are minimised. ECS is mainly used for bulk transfers and is useful for catering to periodic or recurring transactions that happen in day-to-day business.

2.2.10.1 Objectives of ECS

1. **Make Bulk Transactions** : The Electronic Credit System is extremely useful in making bulk transactions for the distribution of salaries, subsidies, pensions, and other transactions. It can also be used for payment transactions such as utility bills, phone bills, water bills, electricity bills, premium payments, mutual fund payments, etc.

    - **Reduced Operational Time** : The Electronic Credit System has been implemented to replace the old manual system that was in use by the banking sector, but manual systems had their own demerits and cons, and one of the leading issues was that it was not as fast as it should have been. ECS, a web-based solution, has overcome this major concern and reduces operational time, which contributes towards faster mobilisation of funds.

    - **Provide Low-Cost Structure :** The Electronic Credit System avoids processing charges associated with paper-based transactions, which leads to a significant decline in cost for banks and financial institutions. Moreover, the Electronic Credit System has nominal charges, which makes it preferred by stakeholders nationwide.

    - **Automation** : It was the need of the hour to bring in cutting-edge technology, which can be helpful for stakeholders to deal with huge volumes of transactions. A robust, secure, and scalable web-based system was needed to provide a faster and safer transaction platform to participants.

2.2.10.2 Types of ECS

1. **ECS Debit** : It is used to raise debit requests to numerous bank accounts for a single credit to the user's bank account. It helps the user to collect payments from various customers, which are periodic or recurring, and helps to minimise the operational time and cost.

2. **ECS Credit** : It is used to credit the amount to several bank accounts by a single debit to the user's bank account. It helps make payments such as interest, salary, dividends, etc. It helps an organisation to transfer funds to several bank accounts at a single time to multiple beneficiaries, which again helps to minimise the operational time and cost.

3. **Local ECS** : ECS is operational in 81 different locations across the country. At each of these ECS centres, the branch coverage is only restricted to the geographical coverage of the clearing house, generally covering one city and/or satellite towns and suburbs that are adjoining the city.

4. **Regional ECS** : This is operating at 9 locations around various parts of the country. RECS facilitates the covering of all core-banking-enabled branches in a particular State or group of States. RECS takes advantage of the core banking system in banks. Accordingly, even though the inter-bank settlement takes place centrally at one location in the particular State, the actual customers under the Scheme may have their accounts at any other bank branches across the geographical dimension of the State/group of States.

5. **National ECS** : It is the centralised version of ECS Credit which was launched in October 2008. The Scheme is operated in Mumbai, the National Centre, and facilitates the coverage of all core-banking-enabled branches that can be located anywhere in the country. This system also takes advantage of the core banking system in banks. Banks are free to add any of their branches that have core-banking-enabled in NECS irrespective of their location.

2.2.10.3 Advantages of ECS

1. **Handle High Volume of Transactions**: ECS can handle a large volume of transactions at a time, making it suitable for businesses that have a high volume of transactions that are recurring and regular.

2. **Convenient**: ECS has eliminated the need for physical cheques or cash transactions. Recurring payments are automatically debited from the payer's account and credited to the payee's account automatically using electronic means of funds transfer, making the process convenient and hassle-free.

3. **Automation**: ECS operates on the pre-established framework, ensuring that payments are made on time without manual intervention. This is particularly beneficial for all those users who incur regular payments like loan EMIs, insurance premiums, and utility bills.

4. **Eliminates Manual Effort**: Both payers and payees benefit from the reduced manual effort. Payers don't need to remember due dates or write down cheques, and payees don't need to process physical paper-based payments. This saves both time and money for both the user and the institutions and hence, is highly preferred.

5. **Cost-Effective**: ECS is extremely cost-effective compared to other payment methods, such as issuing and processing physical paperwork, drafts, and cheques. This results in cost savings for both businesses and consumers.

2.2.10.4 Disadvantages of ECS

1. **Lack of Control**: While ECS offers electronic means of funds transfer, it also means that the payer loses some control over individual payments, as once the declaration is submitted for ECS debit, it is tedious to overturn the command and involves a lot of paperwork. If there is an error or dispute, resolving it consumes a lot of time and effort.

2. **Account Sufficiency**: For the Electronic Clearing System to work smoothly, the payer's account must have sufficient funds in their bank account at the time of payment. In the case of insufficient funds, the payment mandate will fail, and additional charges will be levied by the bank/institution, and in some cases, it could lead to legal action.

3. **Cancellations and Modifications**: Making any sort of changes in ECS or cancelling ECS instructions might involve a lot of paperwork and coordination between the payer, payee, and the bank. This can be inconvenient and time-consuming, as there is no web-based facility for grievance redressal.

4. **Dependency on Banking System**: ECS transactions are subject to the banking system's working hours; this can also cause further delays due to maintenance halts as well. Transactions are not processed on weekends and bank holidays, which delays the transaction, whereas other payment methods even provide 24x7 funds transfer.

5. **Initial Setup**: Setting up ECS mandates involves a lot of paperwork and coordination with both the payee and the bank. This setup process is time-consuming and requires accurate information for such cases; otherwise, they can lead to cancellation of funds transfer and can result in penalties and additional charges.

2.2.11 Credit Information Bureau (India) Limited Score (CIBIL Score)

The CIBIL score is a three-digit summary of your credit history, derived using details found in the 'Accounts' and 'Enquiries' sections of your CIBIL Report and ranges from 300 to 900. The closer your score is to 900, the higher the chances of your loan application getting approved. Your CIBIL score is one of the most important parameters considered by lenders before approving your loan application.

2.2.11.1 How to Read Your CIBIL Score

Your CIBIL Report is a record of your credit payment history compiled from information received from banks and financial institutions. The purpose is to help loan providers make informed decisions based on your credit history, quickly and objectively. A healthy credit report can get your loan approved faster and often, at better terms. However, you need to have a thorough understanding of different sections of the report to get meaningful information.

CIBIL Score

This section of the report reflects your CIBIL Score, which is widely used by loan providers to evaluate loan applications. An individual's CIBIL Score ranges between 300-900 and is calculated based on the information in the "Accounts" and "Enquiry" sections of the credit report. The closer the score is to 900, the more confidence the loan provider will have in your ability to repay the loan, and hence, the better the chances of your application getting approved.

Account Information

This is the most important segment of your CIBIL Report, which contains details of all your loan and credit card accounts. It displays the names of the lenders, the types of credit facilities (home loan, auto loan, credit card, etc.), the account numbers, whether single or jointly held, when each account was opened, the date of the last payment, loan amount, current balance, amount overdue (if any), and most importantly, a month-on-month record of up to 36 months of your payments. A yellow box above the Account Details indicates that the section is under dispute and will be removed when the dispute is closed. However, upon closure, the disputed information may or may not be changed as per confirmation received from the lender.

Profile Information

This section contains your personal details like Name, Date of Birth, and Gender, as reported to CIBIL by various members. The Identification type section contains details like your Permanent Account Number(PAN) Card, Passport Number, Driver's License, and Voter ID information reported by lenders. The address category also explains whether the address is a residential address, official address, permanent address, or temporary address. Up to 4 addresses and email addresses are provided in this section.

Contact Details

Your addresses, telephone, mobile numbers, and email addresses, as reported by lenders, appear in this section of the report.

Employment Details

This section provides information on your occupation and income (at the time of opening a credit facility) as reported by the lender for a particular credit account.

Enquiry Information

This section provides details of all the enquiries made by the lender for your various credit applications and includes the name of the lender, date of the application, the type of loan and its size.

2.2.12 CORE Banking

2.2.12.1 Meaning

Core banking is a back-end system that connects various branches of an individual bank to deliver operations like loan management, withdrawals, deposits and payments in real-time. The term CORE stands for Centralized Online Real-time Environment. It helps customers to manage their accounts from any location irrespective of the location of their respective branch.

2.2.12.2 CORE Banking solutions

The following CORE banking solutions make banking easier for the customers:

1. **Internet Banking :** Internet banking is an e-payment system that enables the customer of a bank to make banking transactions through the bank's website. It is also known as online banking or virtual banking.
2. **Phone Banking:**Phone banking involves:
   - *Telephone banking:*Telephone banking allows the customer to manage their accounts using the telephone. Banking services like balance enquiries, payments and transfer of funds can be performed with the help of telephone banking.
   - *Mobile banking:*Mobile banking is more advanced, wherein the customers can perform a range of banking transactions using a mobile phone.

Phone banking is useful especially for those customers who reside in rural areas, as their bank would probably be located at a distant location.

1. **Automated Teller Machines :** An Automated Teller Machine is a computer which helps the customer to perform banking transactions without visiting a bank branch or bank representative.
2. **Immediate and remote fund transfer :** Immediate and remote fund transfer is facilitated through facilities like Real Time Gross Settlement (RTGS), National Electronic Fund Transfer (NEFT), Immediate Payment System (IMPS), etc.
3. **Point of Sale systems:**Point of Sale systems help customers to make payments at the point of sale using their debit/credit card, thus reducing the burden of carrying liquid money.

Recap

- E-bankingis the electronic delivery of banking services, enabling customers to conduct transactions digitally without visiting a bank.
- Automated Teller Machine (ATM)dispenses cash and provides services like balance enquiries.
- Debit cardsare linked to the user's account, allowing direct electronic payments.
- Credit cardsallow electronic payments with borrowed funds to be repaid with interest.
- Smart cardsare chip-based cards storing monetary value.
- Cash deposit machines (CDMs)are self-service machines for depositing cash without the help of bank staff.
- Point of sale (POS)refers to the location where retail transactions are completed.
- E-chequeis a digital version of a paper cheque as per the Negotiable Instruments Act.

Objective Questions

1. Which banking service allows customers to withdraw money without visiting a bank branch?
2. Which card requires the customer to have sufficient funds in their bank account for making a purchase?
3. Which card stores monetary value in a microchip embedded within it?
4. What is the full form of CDM?
5. Which type of ECS is used to make payments like salaries, interest and dividends?
6. What is the primary purpose of the CVV number on a debit or credit card ?
7. What does the term Point of Sale (POS) refer to in banking and retail ?
8. Which electronic system in primarily used in India for handling repetitive and bulk payments ?

Answers

1. ATM
2. Debit card
3. Smart card
4. Cash Deposit Machine
5. ECS credit
6. To provide an extra layer of security during online transaction
7. The location where a customer completes a purchase
8. ECS

Assignments

1. What is the main difference between a debit card and a credit card in terms of fund usage?
2. Explain how a customer can deposit cash using a CDM without a debit card.
3. What are the advantages and disadvantages of POS systems in the context of banking?
4. Describe how a smart card is more secure than traditional debit or credit cards.
5. How does ECS contribute to automation and reduction in operational time?
6. What are the major steps involved in making a purchase using a POS system?
7. Discuss the benefits of using a *white label ATM* over a traditional bank ATM.
8. How is an e-cheque different from a truncated cheque?
9. Prepare a detailed report comparing the operational process of depositing cash through a CDM with and without using a card.
10. Analyse the potential cost savings for a business using ECS instead of issuing paper cheques for salary disbursement.
11. Identify and explain at least three security concerns associated with credit card usage and how banks mitigate them.

Reference

1. *Banking Class XI*. (n.d.). BSE Institution Ltd.
2. *Banking Law and Practice*. (2014). The Institute of Companies Secretaries of India.
3. *Banking Standard XII*. (n.d.). BSE Institute Ltd.
4. Gordon, E., & Natarajan, K. (2008). *Banking Theory, Law and Practice* (Revised). Himalaya Publishing House.

5. Hildreth, R. (2001). *The History of Banks: To Which Is Added, A Demonstration of the Advantages and Necessity of Free Competition in the Business of Banking*. Batoche Books Limited.

6. James, C., & Houston, J. (1996). EVOLUTION OR EXTINCTION: WHERE ARE BANKS HEADED? *Journal of Applied Corporate Finance*, *9*(2), 8–23. https://doi.org/10.1111/j.1745-6622.1996.tb00112.x

7. Lewis, M. K. (1992). Modern Banking in Theory and Practice. *Revue Économique*, *43*(2), 203. https://doi.org/10.2307/3501990

Unit 3

CORE Banking

Learning Outcomes

On completion of this unit, the learner will be able to:

- define CORE banking
- identify the different CORE banking solutions
- explain the benefits of different CORE banking solutions

Prerequisites

In the previous unit, we have introduced the concept of CORE banking and in this unit, we will discuss the same in detail. Before that, you need to have an understanding of what it means. Assume that Ravi was a young professional who had just moved to a new city in Kerala. One day, he needed to send some money to his parents for an emergency. Instead of visiting a bank, he opened a mobile app, entered some details, and transferred the money within seconds using UPI. His parents received the money instantly. Curious, Ravi began to explore more about how banking had changed over the years. He learned that all branches of a bank are now connected through CORE banking. This means you can perform banking transactions from any branch, ATM, or even from your phone or computer. He discovered different ways to send money, such as EFT, NEFT, and RTGS, which are used for different types of money transfers. Ravi also came across the IFSC code which helps to identify the bank branch during online transfers. As he shopped online, he noticed an option to pay using an e-purse. He also read about virtual banking, where banks operate without physical branches, and SWIFT, a system used for international money transfers. With the advent of mobile banking and internet banking, Ravi could check his account balance, pay bills, and transfer money anytime, anywhere. Banking had truly become smarter and more convenient. Through Ravi's journey, you will now learn more about these modern banking tools in this unit.

Keywords

EFT, NEFT, RTGS, mobile banking, internet banking, virtual banking, SWIFT

Discussion

Core banking is a back-end system that connects various branches of an individual bank to deliver operations like loan management, withdrawals, deposits and payments in real-time. The term CORE stands for Centralized Online Real-time Environment. It helps customers to manage their accounts from any location irrespective of the location of their respective branch.

2.3.1 Electronic Fund Transfer (EFT)

Electronic Fund Transfer, or EFT, is the electronic transfer of money between different bank accounts with no paper form like cheques or cash involved. It uses computer and electronic systems for transmitting funds in a secure and convenient manner.

2.3.1.1 Types of Electronic Fund Transfer (EFT)

1. **National Electronic Funds Transfer, or NEFT:** An India-wide system of payments, enabling individuals and companies to shift funds from bank to bank on a batch basis.
2. **Real-Time Gross Settlement (RTGS):** Used for high-value transactions, where the funds are settled in real-time and on a gross basis (not bundling).
3. **Immediate Payment Service (IMPS):** Facilitates instant, 24x7 fund transfers through mobile or internet banking, appropriate for medium and large transfers.
4. **Unified Payments Interface (UPI)**: A mobile platform which facilitates instant transfers through a virtual payment address, UPI ID, or QR code.
5. **Debit and Credit Card Transactions**: Involves electronic movement of funds while making purchases or cash withdrawals.
6. **Wire Transfers**: Electronic money transfers made internationally by banks or money transfer services such as SWIFT.
7. **Direct Deposit/Direct Debit**: Directly deposits wages or debits payments (such as bills) into/from the customer's bank account.

2.3.1.2 Benefits of EFT

EFT offers several benefits for its users as described below:

1. **Speed and Convenience**: EFT helps in avoiding long queues and procedural delays customers have to endure while making fund transfers, as the customers are not required to visit banks while transferring funds electronically. Thus, with EFT, the funds are transferred quickly without the necessity of visiting a bank.
2. **24/7 Availability**: Another benefit of EFT is that these services are available anytime. With the advent of technology we have today, several EFT options such as UPI and IMPS are accessible anytime, anywhere.
3. **Security**: With cryptography and blockchain technologies in place, EFT transactions are encrypted and controlled, allowing secure transfers of funds. Thus, the customers will not have to worry much about security like earlier.
4. **Less Paperwork**: As the customers are not required to physically visit banks, fill in cheques and forms for making fund transfers in EFT, it removes the necessity of cheques and other paper documents. In short, EFT enables paperless money transfer.
5. **Economical**: EFT is more economical than the traditional fund transfer services offered by banks as the transaction cost is lower compared to traditional methods.
6. **Error Reduction**: Since the processing of transactions is done by computers, the chances of human error are minimal. With the advent of machine learning and AI, the automated fund transfer through EFT is more error-free.

2.3.2 Real-Time Gross Settlement (RTGS)

One of the important IT revolutions in the Indian banking scenario was the implementation of the Real-Time Gross Settlement (RTGS) system by the Reserve Bank of India. As banking transformed from manual to electronic, banks started to use faster, safer, and more efficient methods to transfer funds. RTGS is an electronic payment system, where payment instructions are processed on a 'continuous' or 'REAL TIME' basis and settled on a 'GROSS' or 'individual' basis without netting the debits against credits.

2.3.2.1 Special Features

1. The real-time gross settlement system has the following features:
2. It helps banks to settle interbank and forex settlements.
3. It helps banks in handling big-ticket funds transfers.
4. Since RTGS is routed through the RBI platform, the credit risk is minimised.
5. Unlike in the case of cheque clearance, the drawer of the cheque cannot enjoy the float time, i.e., the date of issuance of the cheque and the date on which it is received in inward clearing and debited by his banker. However, in the case of RTGS, the remitter's account is debited first, and then only are the funds transferred.

6. If all relevant details such as the beneficiary's name, account number, IFSC code of the receiving branch, name of the beneficiary bank, etc., are correctly furnished, it would assist the remitting bank to affect the transfer quickly.

7. As the name RTGS suggests, the transfer mechanism works in real-time and, therefore, the beneficiary branch/bank should receive the funds immediately. The beneficiary's branch or bank should give credit to the beneficiary's account immediately or at the latest within 2 hours of receiving the funds transfer message.

However, in case the funds cannot be credited for any reason, such funds should be returned to the originating branch within two hours. In such a situation, as soon as the money is returned, the remitting bank should reverse the original debit entry in the client's (remitter's) account. This system is applicable between banks or branches that use Core Banking Solutions (CBS).

2.3.3 National Electronic Fund Transfer (NEFT)

NEFT is a system similar to RTGS, but it handles smaller size transactions, whereas RTGS handles big-ticket transactions. Most branches are using this facility to transfer funds in an efficient manner. Once the customer accurately furnishes the necessary details for the transfer, funds can be transferred to the beneficiary's account by the remitting bank. Transfer of funds through NEFT is safe, quick, reduces the paperwork, and is cost-effective.

2.3.3.1 Features

1. NEFT is a funds transfer system which enables a customer of a bank to transfer funds to another customer of another bank having an account with any participating bank.

2. NEFT allows both intra and inter-bank funds transfer within a city and across cities.

3. Since it is in the form of e-transfer, without any physical movement of instruments, funds can be transferred quickly.

4. The beneficiary customer gets funds in his account on the same day or, at the earliest, on the next day depending upon the time of settlement.

5. Both the originating and destination bank branches should be on the NEFT platform.

6. The correct details of IFSC, beneficiary's name, account numbers, etc., should be furnished to the originating bank.

7. The originating bank branch can keep track of the status of the NEFT transaction.

8. In case, for any reason, the destination branch is not able to afford credit to the beneficiary's account, the destination branch or bank has to return the funds to the originating bank within two hours of completion of the batch through which the transaction was processed.

9. It is not only an easy method of transfer of funds but also enables the remitters to have user-friendly and cost-effective transfer of funds.

2.3.4 Indian Financial System Code (IFSC)

IFSC is an alpha-numeric code that identifies a bank branch participating in the RTGS or NEFT system. It is an 11-digit code and the first four alpha characters represent the bank, the 5th character is 0 (zero), which is reserved for future use, and the last six digits are numeric characters representing the branch. The correct IFSC code is essential for identifying the beneficiary's branch and bank as the destination during fund transfers. E.g. South Indian Bank, Kottiyam SIBL0000451.

2.3.5 E-purse

An electronic purse or e-purse is a type of smart card, with an embedded microchip, which provides multiple options such as payment by debit card or credit card. It is a state-of-the-art cash-on-card which facilitates the purchase of goods and services.

2.3.5.1 Features of e-purse

1. It is issued by banks to their customers.
2. Money is transferred from the customer's bank account to the e-purse using a load device.
3. The transactions made using the e-purse are protected by PIN.
4. Payment of the e-purse may be online or offline. For instance, the e-purse can be used for purchasing a phone from Amazon as well as from a mobile retail store near you.
5. The money in the e-purse can be used by the cardholder for making payments, such as electricity bills, mobile bills, DTH bills, etc. It can also be used to make payments to your friends and peers.

2.3.5.2 Advantages

1. Bankers can reduce cash and cheque handling costs.
2. As cash is stored in the microchip, customers need not keep cash to make payments.
3. It offers privacy as these transactions are encrypted and protected using PIN.
4. It is more flexible and more accessible compared to other modes of fund transfer as it can be accessed anytime, anywhere.
5. It is more useful than debit and credit cards.

2.3.5.3 Disadvantages

1. The banker may charge for using e-purse; merchants do not favour this form of payment.
2. There are certain technical limitations such as security issues, reliance on devices, and network connectivity.

3. It may be misused. There are instances where fraudsters send mail or messages as if it is from your e-purse provider to get your e-wallet data.

2.3.6 Virtual Banking

Virtual Banking is a digital way of accessing banking services online, without the need to visit a physical branch. It allows customers to open virtual bank accounts, make transactions, pay bills, and access loans through websites or mobile apps. Virtual banks in India and globally operate online, offering a range of financial services.

For example, you can transfer money, check account balances, or even convert currency without visiting a bank branch. Virtual banking provides a secure, paperless experience that makes managing finances faster and easier. Virtual Banking allows customers to manage their finances completely online, offering a seamless and efficient alternative to traditional banking.

2.3.6.1 How Virtual Banking Works?

1. Account Creation : To start using a virtual bank, you need to open a virtual bank account. This involves filling out an online application and making an initial deposit. You can usually transfer money electronically, or even mail in a cheque if needed.

Funds : Once your account is open, you can deposit money in various ways:

1. Direct Deposit : Your paycheck can be directly deposited into your virtual bank account.
2. Bank Transfers : You can transfer funds from other banks or services like PayPal.
3. Mailing Deposits : Some virtual banks allow you to send cheques by mail or take pictures of cheques via mobile apps.

- **Withdrawing Funds and Transactions:** Virtual banks offer tools to manage your money:

1. Debit Cards: Virtual banks issue debit cards for online purchases and ATM withdrawals at other banks.
2. Bill Payments: You can pay bills directly from your account online.

- **Accessing Your Account :** You can access your virtual bank account through a mobile app or website. This allows you to view balances, make transactions, and contact customer support-just like a traditional bank.
- **Virtual Bank Accounts :** Virtual bank accounts function similarly to regular accounts but operate entirely online. They don't hold a balance themselves but link to your main bank account. You can make payments quickly by selecting the virtual account as your payment method and completing transactions with minimal manual input.
- **Security and Currency Conversion :** Virtual banking platforms use advanced cybersecurity measures to protect your account. Additionally, many virtual banks

in India and globally offer tools for currency conversion, making international transactions easier.

Moreover, with virtual banking, managing your finances has never been more convenient or secure.

2.3.6.2 Benefits of Virtual Banking

Virtual Banking offers many advantages, making it a popular choice for both individuals and businesses, which are described below:

1. **Convenience and 24/7 Access:** With virtual banking, you can control your finances at any time and from anywhere. Whether you're at home or travelling, you have full access to your virtual bank accounts through mobile apps or websites. For example_,_ you can transfer funds or check balances while on the go, without visiting a physical branch.

2. **Lower Costs and Better Rates:** Virtual banks often have lower operating costs since they don't require physical branches. This means they can offer better interest rates and lower fees than traditional banks. For instance_,_ you might get better savings rates or fewer transaction fees when using virtual banks in India or globally.

3. **Enhanced Security:** Security is a top priority in Virtual Banking. Virtual banks use encryption technology, multi-factor authentication, and biometric login features to keep your data safe. This ensures that your transactions and personal information are protected from fraud and hackers.

4. **Faster Transactions:** Transactions through virtual bank accounts are processed much faster than traditional banking. For *example_,_* with virtual accounts, you can make instant transfers or same-day payments, saving you time and hassle compared to waiting for bank hours or clearance.

5. **Easy Management and Control:** Virtual Banking gives you full control over your accounts. You can easily budget, track your spending, and monitor your transactions in real time. This simplifies financial planning and helps you avoid unexpected surprises. Virtual bank accounts also let you automate payments and track your income and expenses effortlessly.

6. **Global Access and Multi-Currency Support:** Virtual bank accounts are ideal for international transactions. They allow you to receive and send money in different currencies, all within the same account. *For example,* if you're a business owner in India, you can accept payments from customers in the US without the need for a separate foreign bank account.

7. **Simplified Payment and Reconciliation:** For businesses, virtual bank accounts offer automatic transaction recording, making it easier to reconcile payments. Each customer can have their unique virtual account number, helping businesses track transactions accurately. This reduces manual work and errors in financial reporting.

8. **No Hidden Fees:**Unlike traditional banks that may have hidden charges, virtual banks often operate with transparent fee structures. You're only charged for basic services, and in many cases, there are no minimum deposit requirements, making them cost-effective for customers and businesses alike.

9. **Accessibility and Ease of Use:**Virtual Banking eliminates the need for physical visits to a bank. Whether you're at home or on a business trip, you can manage all your banking needs from your phone or computer. This ease of access is particularly beneficial for busy individuals and businesses.

10. **Environmental and Time Savings:**By eliminating the need for physical paperwork, virtual banking also helps reduce environmental impact. You can receive and send documents, sign forms, and complete transactions online, saving both time and paper.

2.3.7 SWIFT

Society for Worldwide Inter-bank Financial Telecommunications (SWIFT) is a co-operative non-profit making organisation established under Belgian law with its headquarters in Brussels. SWIFT is wholly owned by its member banks, which is a paperless message transmission system. Some of the important features of SWIFT include:

1. Operates 24/7 as messages are transmitted to any part of the world immediately.
2. Message formats are standardised, as the information is confidential and is protected against unauthorised disclosure.
3. SWIFT assumes financial responsibility for the accuracy and timely delivery.

SWIFT has become an integral part of the banking system, and it offers the following use to banks. It transmits authenticated financial and non-financial messages of banks. With its well-standardised and structured message formats, it has been offering a reliable system of message transmission. Banks often use the SWIFT platform for the transmission of financial and non-financial messages covering international finance (settlement of forex deals), international trade (advising of LCs, amendments to LCs etc.)

2.3.8 Unified Payment Interface (UPI)

Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing, and merchant payments into one hood. It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience.

With the above context in mind, NPCI conducted a pilot launch with 21 member banks. The pilot launch was on 11th April 2016 by Dr. Raghuram G Rajan, Governor, RBI in Mumbai. Banks have started to upload their UPI enabled apps on the Google Play store from 25th August 2016 onwards.

2.3.8.1 Features of UPI

1. Immediate money transfer through mobile device round the clock 24/7 and 365 days.
2. Single mobile application for accessing and making payments using different bank accounts.
3. Single click two-factor authentication, a feature that protects the users from any unauthorised transactions. Aligned with the regulatory guidelines, yet provides for a very strong feature of seamless single click payment.
4. Virtual address of the customer for 'Pull & Push' provides for incremental security with the customer not required to enter the details such as card number, account number, IFSC etc.
5. Best answer to cash on delivery hassle, running to an ATM or rendering exact amount.
6. Merchant payment with a single application or in-app payments.
7. Utility bill payments, over-the-counter payments, QR code (Scan and Pay) based payments.

2.3.8.2 Benefits of using UPI

Benefits to banks

1. Single click two-factor authentication.
2. Universal application for transactions.
3. Leveraging existing infrastructure.
4. Safer, secure, and innovative.
5. Payment basis single/unique identifier.
6. Enable seamless merchant transactions.

Benefits to customers

1. Round the clock availability.
2. Single application for accessing different bank accounts.
3. Use of virtual ID is more secure, no credential sharing.
4. Single click authentication.
5. Raise complaints from the mobile app directly.

Benefits for merchants

1. Seamless fund collection from customers – single identifiers.

2. No risk of storing customer's virtual address like in cards.
3. Tap customers not having credit/debit cards.
4. Suitable for e-commerce and m-commerce transactions.
5. Resolves the cash on delivery collection problem.
6. In-app payments.

2.3.9 Mobile banking

Mobile banking refers to the use of a mobile device to carry out financial transactions. The service is provided by some financial institutions, especially banks. Mobile banking enables clients and users to carry out various transactions, which may vary depending on the institution. Currently, mobile banking has become easier with the development of cellular mobile applications. Clients are now able to check their balances, view their bank statements online, make transfers, and even carry out prepaid service purchases.

SMS banking and mobile web were the most popular mobile banking products before 2010. With the development of smartphones with iOS or Android operating systems, mobile banking applications (apps) began to evolve. Clients were able to download the banking apps onto their smartphones with more sophisticated interfaces and improved transactional abilities.

2.3.9.1 Types of Mobile Banking Services

Mobile banking services can be categorized into the following:

1. **Account information access:**Account information access allows clients to view their account balances and statements by requesting a mini account statement, reviewing transactional and account history, keeping track of their term deposits, reviewing and viewing loan or card statements, accessing investment statements (equity or mutual funds), and for some institutions, management of insurance policies.
2. **Transactions:**Transactional services enable clients to transfer funds to accounts at the same institution or other institutions, perform self-account transfers, pay third parties (such as bill payments), and make purchases in collaboration with other applications or prepaid service providers.
3. **Investments:** Investment management services enable clients to manage their portfolios or get a real-time view of their investment portfolios (term deposits, etc.)
4. **Support services:**Support services enable clients to check on the status of their requests for loan or credit facilities, follow up on their card requests, and locate ATMs.
5. **Content and news:**Content services provide news related to finance and the latest offers by the bank or institution.

2.3.9.2 Challenges Associated with Mobile Banking

Though mobile banking is convenient and beneficial for both customers and banks, it faces certain challenges. Some of the challenges associated with mobile banking include:

1. Accessibility based on the type of handset being used.
2. Security concerns.
3. Reliability and scalability.
4. Personalisation ability.
5. Application distribution.
6. Upgrade synchronisation abilities.

2.3.9.3 The Importance of Mobile Banking

Mobile banking allows consumers to access banking services from anywhere. Businesses and business owners are now able to save time by making use of mobile applications to process their payments or even receive funds from clients directly to their phone numbers. It is particularly popular among small to medium-sized enterprises (SMEs). With mobile technology, banks are able to cut down on operational costs while still maintaining client satisfaction. The fact that any client of a bank can make use of their app to request a service, such as opening an account or even scheduling debit orders or other payments from an application, allows for larger transactional volumes, eventually driving business growth.

2.3.10 Internet banking

The internet has enabled banking at the click of a mouse. It is a platform for the electronic delivery of banking services to customers. In internet banking, a customer of a bank with a PC and a browser can have access to his bank's website, and thereafter avail various banking services, from anywhere and at any time. With the drastic fall in cell phone tariffs and the emergence of seamless connectivity between fixed and mobile lines, tele banking or mobile banking has also emerged as one of the cost-effective delivery channels of banking. The call-free number has gained popularity as an important delivery channel. The successful adoption of wireless technology helps banks to offer not only anytime, anywhere banking, but also any device banking.

Recap

- CORE bankingallows real-time banking services like deposits, withdrawals, and loans across branches.
- Electronic Fund Transfer(EFT) is the electronic movement of money between bank accounts.

- Real Time Gross Settlement (RTGS)is used for high-value transactions.
- IFSC codeis an 11-character alphanumeric code used to identify bank branches in NEFT or RTGS.
- E-purseis a microchip-based card used for storing and making payments.
- Virtual bankingrefers to availing entire banking services without visiting branches.
- Unified Payment Interface (UPI)combines multiple bank accounts in one mobile app.

Objective Questions

1. What does CORE in CORE banking stand for?
2. What is the primary difference between NEFT and RTGS?
3. Which payment system operates in real-time and on a gross basis without netting?
4. What is the role of the Indian Financial System Code (IFSC)?
5. Which technology is used by SWIFT to protect transmitted messages?
6. Which fund transfer system in India in used for small the medium sized transactions and operates in batches rather than real line ?
7. What is the main function of an Electronic Purse (E-purse) in digital payments?
8. Which digital payment system in India allows users to link multiple bank accounts and perform instant money transfers through a single mobile application?

Answers

1. Centralised Online Real Time Environment
2. NEFT is for small transactions and RTGS is for large transactions.
3. RTGS
4. It helps to identify a branch participating in NEFT or RTGS.
5. Encryption and standardised message formats.
6. NEFT
7. To enable electronic payments using a smart card with an embedded microchip
8. UPI

Assignments

1. Define CORE banking and explain its main advantages to customers.
2. What is the key difference between RTGS and NEFT in terms of fund settlement?
3. What information is essential for successful NEFT transactions?
4. Briefly explain the role of IFSC in fund transfers.
5. Mention any two limitations of using an e-purse.
6. How does virtual banking help in reducing the environmental impact?
7. What are the security features implemented in virtual banking?
8. What are the unique features of UPI that enhance its utility for peer-to-peer payments?
9. Compare RTGS, NEFT, and IMPS in terms of settlement time, transaction value limits, and availability.

Reference

1. *Banking Class XI*. (n.d.). BSE Institution Ltd.
2. *Banking Law and Practice*. (2014). The Institute of Companies Secretaries of India.
3. *Banking Standard XII*. (n.d.). BSE Institute Ltd.
4. Gordon, E., & Natarajan, K. (2008). *Banking Theory, Law and Practice* (Revised). Himalaya Publishing House.
5. Hildreth, R. (2001). *The History of Banks: To Which Is Added, A Demonstration of the Advantages and Necessity of Free Competition in the Business of Banking*. Batoche Books Limited.
6. James, C., & Houston, J. (1996). EVOLUTION OR EXTINCTION: WHERE ARE BANKS HEADED? *Journal of Applied Corporate Finance*, *9*(2), 8–23. https://doi.org/10.1111/j.1745-6622.1996.tb00112.x
7. Lewis, M. K. (1992). Modern Banking in Theory and Practice. *Revue Économique*, *43*(2), 203. https://doi.org/10.2307/3501990

Unit 4

E-Banking Security

Learning Outcomes

On completion of this unit, the learner will be able to:

- know the meaning of e-banking security
- get an idea on the need for e-banking security
- identify the solutions for e-banking security

Prerequisites

Mini was excited when she got her first job and opened an online bank account. She quickly got used to mobile banking and internet banking for checking balances, paying bills, and shopping online. One day, she received a message on her phone which seemed to be urgent. The message was "your bank account is blocked, click the link to verify your details." Without thinking about the authenticity of the message, she clicked the link and entered her bank information. The next morning, Mini was shocked to find that a large amount of money had been withdrawn from her account. She immediately contacted the bank, and they told her it was a phishing attack, which is a type of cyber-crime where attackers trick people into sharing personal information. Mini had learned a tough lesson that online banking is convenient, but it must be used carefully and securely. This incident made her curious about how banks protect customers online. She learned about e-banking security, which includes strong passwords, secure websites, OTPs, and software that guards against hackers. She also found out why security is so important in the digital world and how banks defend against security attacks like phishing, malware, and identity theft. In this unit, like Mini, you will discover the need for security, key security concepts, and how to stay safe while banking online.

Keywords

Security, malware, phishing, firewall, cyber crime.

Discussion

Security of e-banking is a serious concern among its users, and to ensure the confidence of their clients, banks implement numerous measures for securing e-banking. These preventative steps help them to protect all sensitive customer data because everyone involved is vulnerable to high risk such as data theft. Any hacks or leaks will damage a bank's reputation, but for customers, it could mean significant financial and social impacts. With this in mind, it becomes clear that the onus is on both banks and their customers to safeguard their online bank security.

2.4.1 Need for security in E-Banking

2.4.1.1 Security and privacy threats in ATMs

Security and Privacy Threats in ATM The Automatic Teller Machine (ATM) was first commercially introduced in the 1960s. The introduction of the ATM proved to be an important technological development that enabled financial institutions to provide services to their customers in a 24X7 environment. The ATM has enhanced the convenience of customers by enabling them to access their cash wherever required from the nearest ATM. However, as the banker and the customer are not face-to-face, there is the risk of fraud, which may affect the customers and also the bank's reputation. ATM fraud is not confined to particular regions of the world.

Currency and card frauds

Card and currency fraud may take place through both direct attacks to steal cash from the ATM and indirect attacks to steal a consumer's identity (in the form of consumer card data and PIN theft). The purpose of indirect attacks is to fraudulently use the consumer data to create counterfeit cards and obtain money from the consumer's account through fraudulent redemption. Some of the currency and card frauds include:

1. Skimming
2. Card trapping or phishing
3. Currency trapping or phishing

4. Logical or data attacks
5. Malware and hacking
6. Physical attacks

2.4.1.2 Security and privacy threats in internet banking

When the internet was developed, the founding fathers of the internet hardly had any inclination that the internet could also be misused for criminal activities. Since the beginning of the year 2004, reports of fraud cases have nearly exploded, especially in internet banking. Major internet banking threats have been discussed as under:

1. **Phishing attacks:**Phishing is an attempt by fraudsters to 'fish' for the banking details of customers. A phishing attempt usually is in the form of an e-mail that appears to be from the customer's bank. The e-mail usually encourages the customer to click a link in it that takes them to a fraudulent log-on page designed to capture authentication details such as password and Login ID. E-mail addresses can be obtained from publicly available sources or through randomly generated lists. Here is an example of phishing attack mail.

2. **Spoofing:**Website spoofing is the act of creating a website, as a hoax, with the intention of performing fraud. To make spoof sites seem legitimate, phishers use the names, logos, graphics, and even code of the actual website. They can even fake the URL that appears in the address field at the top of your browser window and the padlock icon that appears at the bottom right corner.

3. **Vishing:**Vishing is a combination of voice and phishing that uses Voice over Internet Protocol (VoIP) technology wherein fraudsters feigning to represent real companies such as banks attempt to trick unsuspecting customers into providing their personal and financial details over the phone. Further, malware, viruses, Trojans, keyloggers, spyware, etc., are common methods of identity theft used by fraudsters in the case of internet banking.

Almost similar techniques that are being used by fraudsters in internet banking are being used in mobile banking for identity theft.

2.4.1.3 Security and privacy threats in credit cards

Credit card frauds can be broadly classified into three categories, i.e., card-related frauds, merchant-related frauds, and internet frauds.

Card-related frauds

1. **Application fraud:**This type of fraud occurs when a person falsifies an application to acquire a credit card. Application fraud can be committed in three ways: Assumed identity, where an individual illegally obtains personal information of another individual and opens accounts in his or her name, using partially legitimate information; financial fraud, where an individual provides false information about his or her financial status to acquire credit; and not-received items (NRIs), also called postal intercepts, occur when a card is stolen from the postal service before it reaches its owner's destination.

2. **Lost/stolen cards:**A card is lost/stolen when a legitimate account holder receives a card and loses it, or someone steals the card for criminal purposes. This type of fraud is, in essence, the easiest way for a fraudster to get hold of another individual's credit cards without investment in technology.

3. **Counterfeit cards:**The creation of counterfeit cards, together with lost/stolen cards, poses the highest threat in credit card frauds. Some of the techniques used for creating false counterfeit cards include erasing the magnetic strip, creating a fake card, altering card details, skimming, and using white plastic.

Merchant-related frauds

Merchant-related frauds are initiated either by owners of the merchant establishment or their employees. The types of frauds initiated by merchants are described below:

1. **Merchant collusion:**This type of fraud occurs when merchant owners and/or their employees conspire to commit fraud using their customers' (cardholders') accounts and/or personal information.

2. **Triangulation:**The fraudster in this type of fraud operates from a fake website. Goods are offered at heavily discounted rates and are also shipped before payment. The customer, while placing orders online, provides information such as name, address, and valid credit card details to the site. Once fraudsters receive these details, they order goods from a legitimate site using stolen credit card details.

Internet-related frauds

The most commonly used techniques in internet fraud are described below:

1. **Site cloning:** Site cloning is where fraudsters clone an entire site or just the pages from which orders are placed. The consumer suspects nothing, whilst the fraudsters have all the details they need to commit credit card fraud.

2. **False merchant sites:**These sites often offer the customer an extremely cheap service. The site requests a customer's complete credit card details such as name and address in return for access to the content of the site. Most of these sites claim to be free but require a valid credit card number to verify an individual's age. These sites are set up to accumulate as many credit card numbers as possible. The sites themselves never charge individuals for the services they provide. The sites are usually part of a larger criminal network that either uses the details it collects to raise revenues or sells valid credit card details to small fraudsters.

3. **Credit card generators:**Credit card number generators are computer programs that generate valid credit card numbers and expiry dates. These generators work by generating lists of credit card account numbers from a single account number. The software works by using the mathematical Luhn algorithm that card issuers use to generate other valid card number combinations. The generators allow users to illegally generate as many numbers as the user desires, in the form of any of the credit card formats, whether it be Visa or MasterCard.

2.4.2 Security concepts

2.4.2.1 Authentication and authorisation

Security in e-banking involves protecting financial transactions and sensitive data using various measures to ensure a secure and reliable experience. Key concepts include confidentiality, integrity, and availability of information resources.

1. **Confidentiality:** Confidentiality focuses on limiting access to personal and financial data to authorised individuals only. For example, using encryption to secure data transmission during online banking transactions. Confidentiality is closely linked to information privacy, which restricts access to personal information.

2. **Integrity:**Integrity ensures that information resources are trustworthy and accurate. An example is the usage of digital signatures and hash functions to verify the authenticity and integrity of transactions.

3. **Availability:**Availability ensures that information resources are accessible when needed by authorised users. For example, implementing redundancy and failover mechanisms to ensure system uptime and prevent data loss.

2.4.2.2 Other Key Security Concepts

Other key security concepts include:

1. **Authentication:** Verifying the identity of users and devices accessing the system, often through usernames, passwords, and multi-factor authentication.

2. **Authorisation:** Determining what actions a user or device is permitted to perform within the system, based on their authenticated identity and role.

3. **Encryption:** Converting data into a secure code (ciphertext) to protect it from unauthorised access during transmission or storage.

   - **Firewalls:** Network security devices that control incoming and outgoing network traffic based on predefined security rules.
   - **Intrusion Detection and Prevention Systems (IDS/IPS):** Systems that monitor network and system activity for malicious behaviour and take action to prevent or mitigate attacks.
   - **Regular Security Audits:** Periodic checks of security controls and systems to identify vulnerabilities and ensure compliance with security policies.
   - **Safe Computing Practices:**
     - Never leave your computer unattended while logged into online banking.
     - Sign out, clear cache, and close the browser after transactions.
     - Keep passwords and card numbers secure and do not share them.
     - Avoid using public Wi-Fi for online banking.
     - Be cautious of unsolicited emails or phone calls requesting sensitive information.

- Ensure that your bank's website uses HTTPS for secure data transmission.
- Check your bank account transactions regularly for any discrepancies.
- Keep your browser updated and set to the highest security level.
- Use strong, unique passwords for online banking accounts.
- Use antivirus and anti-malware software to protect against threats.

4. Risks in E-banking

Risk in e-banking is caused by the threats in e-banking which we have discussed in 2.4.1, which necessitates security in e-banking. Risks in e-banking can be summarised as follows:

- **Phishing:** Malicious actors pretending to be legitimate banks to steal user credentials.
- **Spyware:** Software that secretly monitors user activity and keystrokes.
- **Malware:** Harmful software that can damage systems or steal data.
- **Insider Threats:** Security breaches caused by authorised users within the banking institution.
- **Network Security Breaches:** Hackers exploiting vulnerabilities in a bank's network infrastructure.

2.4.3 Security attacks

In 2018, a major e-banking security attack targeted a leading Indian bank's online platform. Cybercriminals used phishing emails to steal customer credentials, leading to unauthorized fund transfers via net banking and UPI apps. Several customers reported losses before the bank detected the breach. This incident exposed gaps in customer awareness and multi-factor authentication, prompting banks across India to strengthen their cybersecurity measures and educate users about phishing and online fraud risks.

E-banking security attacks encompass a variety of threats, including phishing, malware, ransomware, social engineering, and insider threats, all aiming to steal sensitive data or disrupt banking operations. Banks are increasingly vulnerable to these attacks due to the rise of digital banking and reliance on cloud-based services. Common e-banking security attacks include

- **Phishing:** Cybercriminals use deceptive emails or websites to trick users into revealing login credentials or other personal information.
- **Malware:** Malicious software can infiltrate systems, leading to unauthorised access, data theft, and operational disruptions.
- **Ransomware:** This type of attack encrypts data, making it inaccessible until a ransom is paid, potentially crippling banking operations.
- **Social Engineering:** Attackers manipulate individuals into revealing confidential information through deceptive tactics.

- **Insider Threats:** Employees or contractors with access to sensitive data may intentionally or unintentionally compromise security.
- **DDoS Attacks:** Distributed Denial of Service attacks overwhelm a bank's website with traffic, making it inaccessible to legitimate users.
- **Software Supply Chain Attacks:** Attackers compromise a bank's systems through vulnerabilities in its software or services from third-party vendors.
- **Cloud-based Attacks:** Cybercriminals target cloud storage and services used by banks to steal or disrupt data.
- **Account Takeover:** Attackers gain unauthorised access to a user's online banking account using stolen credentials or other means.

2.4.4 Cyber crimes

Cybercrimes in e-banking involve using computers and the internet to commit financial crimes against financial institutions and their customers. These crimes include hacking, data theft, malware attacks, and identity theft, with phishing and ransomware being common types of attacks. Consequences of cybercrimes in e-banking include:

- **Financial Losses:** Banks and customers can suffer significant financial losses from stolen money and fraudulent transactions.
- **Reputation Damage:** Cyberattacks can damage a bank's reputation and erode customer trust.
- **Disruption of Operations:** Cyberattacks can disrupt banking operations, leading to delays and inconvenience for customers.

Using strong passwords, multi-factor authentication features, antivirus software, and firewalls is essential to prevent such crimes. Also, the users must be aware of phishing and report any suspicious activity, if found.

Recap

- **Confidentiality**ensures that only authorised individuals can access sensitive information.
- **Integrity**ensures that the data is accurate and trustworthy.
- **Availability**ensures that authorised users can access information when needed.
- **Authentication**and **authorisation** mean verifying the identity of users and devices and ensuring they only perform permitted actions.
- **Encryption, firewalls,**and **intrusion detection** are crucial tools to protect data during transmission and to defend against attacks.
- E-banking risk arises from **phishing, spyware, malware, insider threats,**and **network breaches.**

Objective Questions

1. What is one of the primary concerns for banks regarding e-banking security?
2. What is phishing in the context of internet banking?
3. Which technique is used by fraudsters to create counterfeit cards?
4. What is an example of a "social engineering" attack?
5. What does the concept of 'availability' in e-banking security refer to?
6. Which cybercrime technique uses phone calls pretending to be from legitimate companies to steal personal and financial information?
7. What is the act of creating a fake website that looks like a real one to deceive users and commit fraud?
8. Which type of fraud involves a fake website offering goods at low prices, collecting customer details, and then using stolen credit card information to place orders on legitimate sites?

Answers

1. Data theft
2. Fraudulent attempt to acquire bank details through email.
3. Skimming.
4. Phishing.
5. Ensuring information is accessible when needed by authorised users.
6. Vishing
7. spoofing
8. Triangulation

Assignments

1. What are the key security threats that banks face in e-banking and how do they affect both banks and customers?
2. Explain the concept of phishing and how it is different from spoofing in internet banking.
3. What role does authentication and authorisation play in securing online banking systems? Provide examples.
4. Describe at least three types of credit frauds and how banks can mitigate these risks.
5. What measures should be taken by banks to protect sensitive customer data in e-banking systems?
6. What is the significance of encryption in e-banking and how does it impact both banks and customers?
7. In the context of credit card fraud, discuss how merchants can prevent triangulation fraud in their online stores. Provide a set of best practices for merchants.

Reference

1. Banking Class XI. (n.d.). BSE Institution Ltd.
2. Banking Law and Practice. (2014). The Institute of Companies Secretaries of India.
3. Banking Standard XII. (n.d.). BSE Institute Ltd.
4. Gordon, E., & Natarajan, K. (2008). Banking Theory, Law and Practice (Revised). Himalaya Publishing House.
5. Hildreth, R. (2001). The History of Banks: To Which Is Added, A Demonstration of the Advantages and Necessity of Free Competition in the Business of Banking. Batoche Books Limited.

6. James, C., & Houston, J. (1996). EVOLUTION OR EXTINCTION: WHERE ARE BANKS HEADED? Journal of Applied Corporate Finance, 9(2), 8–23. https://doi.org/10.1111/j.1745-6622.1996.tb00112.x

7. Lewis, M. K. (1992). Modern Banking in Theory and Practice. Revue Économique, 43(2), 203. https://doi.org/10.2307/3501990

8. Cyber Crime cell. (n.d.). https://cyber.delhipolice.gov.in/netbanking.html

9. Maharashtra, B. O. (2023, September 25). Why cyber security is important in banking | Bank of Maharashtra. Bank of Maharashtra. https://bankofmaharashtra.in/blogs/cyber-security-important-in-banking#:~:text=If%20you%20are%20a%20victim%20of%20cyber,on%20https://cybercrime.gov.in/%20and%20National%20Helpline%20Number%201930.

Unit 5

Electronic Signature

Learning Outcomes

On completion of this unit, the learner will be able to:

- know the meaning of e-signature
- define e-signature
- explain the uses and application of e-signature

Prerequisities

When Rajesh decided to open a bank account online, he was surprised to see that he could complete the entire process without visiting a branch, not even for signing the documents, which was done digitally with just a few clicks. This was his first experience with an electronic signature, a modern way to sign documents safely and quickly electronically. As he explored further, he discovered that e-signatures are not only used in banking but also in various online agreements, making these processes faster and paperless. However, he also learned that while e-signatures are convenient and widely accepted, they come with certain pros and cons, and differ from digital signatures, which offer a higher level of security. In this unit, you will explore what e-signatures are, how they work, and how they are used in the banking world to make transactions efficient and secure.

Keywords

E-signature, digital signature, authentication, private key, encryption.

Discussion

Electronic signature or e-signature is an electronic way of signing a document or data through electronic devices. This means that such a digital form of signing is also seen as legal and authentic like the conventional hand-written one, whereby the signatory has read all contents and accepted them. They are widely used and also recognised by law, which makes it easier to confirm documents and make transactions secure.

As per Section 2 (ta) of the Information Technology Act, 2000, "Electronic Signature means authentication of any electronic record by a subscriber by means of the electronic technique specified in the Second Schedule and includes digital signature."

2.5.1 Advantages of e-signature

E-signatures offer significant advantages over traditional wet ink signatures, including enhanced convenience, improved efficiency, cost savings, and increased security. They also contribute to a better customer experience and allow for more environmentally friendly practices. Some of the key benefits associated with e-signature are as follows:

1. **Speed and Efficiency :** E-signatures streamline the signing process, making it faster and more efficient, reducing the need for physical documents, mailing, and waiting periods. They also allow for remote signing, enabling parties to sign documents from anywhere in the world, saving time and effort.

2. **Cost Savings :** E-signatures eliminate the costs associated with printing, postage, and storage of physical documents, leading to significant cost savings. Reduced administrative tasks and streamlined workflows also contribute to cost reduction.

3. **Security and Compliance :** Electronic signatures offer enhanced security through digital encryption and identity verification methods, reducing the risk of fraud and forgery. They help ensure compliance with regulations and legal requirements, as they provide audit trails and verifiable records of signing events. E-signatures can also help businesses avoid fines or legal action by ensuring compliance with privacy laws and regulations.

4. **Enhanced Customer Experience :** E-signatures provide a seamless and convenient signing experience for customers, improving their satisfaction and building stronger relationships. The ability to sign documents online, anytime and anywhere, enhances accessibility and improves the overall customer experience.

5. **Environmental Benefits :** E-signatures significantly reduce paper usage and waste, contributing to a more environmentally friendly approach to document signing. They also eliminate the need for physical transportation of documents, reducing carbon emissions.

6. **Workflow Automation :** E-signatures can automate various aspects of the signing process, including document routing, approval workflows, and reminders, improving

efficiency and reducing errors. This automation can also help businesses track document progress and ensure timely completion of transactions.

2.5.2 Disadvantages of e-signature

Digital signatures, while beneficial, have drawbacks like potential reliance on technology, complexity in setup and usage, and resistance to change from some individuals. These challenges can hinder widespread adoption and create difficulties in certain contexts. As a result, e-signatures are subject to certain limitations as described below:

1. **Dependency on Technology :** Digital signatures rely on technology, making them vulnerable to hacking and cybercrimes. Thus, organizations need to ensure secure systems and have the latest security patches and upgrades. However, the lack of technology access in some regions can limit adoption.
2. **Complexity and Implementation :** Setting up and using digital signatures can be challenging, especially for those unfamiliar with the technology. Complex procedures can lead to errors and reduce efficiency. Also, issuing digital signatures to senior citizens can be particularly challenging.
3. **Limited Acceptance and Trust :** Digital signatures are not universally accepted, and some individuals might resist their use. Some people may lack trust in technology, preferring traditional signatures. Such resistance to change and a preference for established routines can also hinder the adoption of e-signature.
4. **Technical Requirements and Infrastructure :** Digital signatures require a certain level of technical infrastructure and expertise. As a result, organizations may need specialised skills to implement and manage digital signature systems. Not everyone has access to the necessary technology.
5. **Security Considerations :** Digital signatures can be vulnerable to spoofing attempts, where attackers impersonate legitimate signers. Malware can be hidden in digitally signed documents. Insecure channels for transmitting documents can compromise security.
6. **Key Management Challenges :** Lost or compromised private keys can render digital signatures useless. Organizations need to establish policies and procedures for key management, which can be complex.
7. **Legal and Compliance Issues :** Different jurisdictions have different standards for digital signatures. Organizations need to consult with legal experts to ensure compliance.
8. **Workflow and Process Issues :** Some e-signature software may have limitations on recipient and document parameters. Managing concurrent signing can be challenging in some cases. Paper processes may still be needed in certain situations, especially for sensitive documents or when a personal touch is desired.

2.5.3 Uses of E-signature

One of the most common uses of e-signatures is in business contracts. Companies use e-signatures to execute agreements quickly with clients, vendors, and partners. This is

especially useful in remote or international deals where physical presence is not possible. Instead of mailing documents back and forth, parties can sign them online, which speeds up the process and reduces costs.

In the banking and financial sector, e-signatures are used for opening bank accounts, applying for loans, and signing investment agreements. Customers no longer need to visit a branch or print and courier documents. This has improved customer convenience and helped banks digitize their services.

E-signatures are also widely used in government services. For example, in India, citizens can use e-signatures through Aadhaar-based authentication to file income tax returns, apply for government schemes, or digitally sign official forms and declarations.

Apart from this, e-signatures are used in insurance, e-commerce, HR onboarding, legal documents, and procurement processes. In HR, employees can sign employment letters, NDAs, and policies digitally. Legal professionals can sign affidavits and contracts without physical presence.e-signatures have made document handling faster, safer, and more convenient. They support paperless workflows, help reduce fraud through encryption and verification methods, and are legally recognized in many countries including India under the Information Technology Act, 2000.

2.5.4 Working of e-signature

When a person signs electronically, the system uses encryption technology to create a unique digital code linked to the signer's identity. This code is attached to the document and ensures the document has not been altered after signing. It verifies the signer's authenticity and keeps the signed document secure and tamper-proof.

1. Generating a Digital Signature:Generating an e-signature includes the following steps:
   - **Hash Creation :** A unique "hash" value (a fingerprint of the document) is created using a mathematical algorithm.
   - **Encryption with Private Key :** This hash is then encrypted using the sender's private key, a secret piece of information known only to them. This encrypted hash is the digital signature.
   - **Document and Signature Transmission :** The original document and the digital signature are sent to the recipient.
2. Verification by the Recipient:Verification of the digital signature by the recipient can be accomplished by:
   - **Hash Calculation :** The recipient calculates their own hash value of the received document.
   - **Decryption with Public Key :** They then decrypt the digital signature (the encrypted hash) using the sender's public key (which is publicly available).
   - **Comparison :** The recipient compares the hash they calculated with the decrypted hash from the digital signature.
   - **Verification :** If the two hash values match, it means the document hasn't been altered and the sender's identity is verified.

In short, e-signatures use digital signatures, which are mathematical proofs of authenticity and integrity. They leverage encryption and hashing algorithms to ensure the document's content and the sender's identity remain unchanged, says Proofpoint. This process ensures that e-signatures can be legally binding and replace handwritten signatures in many situations.

2.5.5 Application of e-signature in banks

E-signatures in banks streamline various processes by enabling secure and legally binding digital signing of documents, reducing paperwork and improving efficiency. They are particularly useful for KYC documents, loan applications, and account opening procedures. This reduces the need for physical visits to bank branches and allows for faster processing of transactions.

1. **Customer Onboarding and KYC :** Customers can electronically sign Know Your Customer (KYC) documents and identity verification forms, reducing the need for physical visits. This speeds up the onboarding process and provides a more convenient experience for customers.

2. **Loan Applications and Documentation** : Borrowers can electronically sign loan applications, promissory notes, and disclosure forms. This eliminates the need for physical signatures on loan documents, making the process more efficient.

3. **Account Opening :** E-signatures can be used to complete the entire account opening process digitally, from application to signing necessary documents. This can significantly reduce paperwork and improve the overall customer experience.

4. **Secure Document Storage and Audit Trails :** Banks can store signed documents securely in a digital format, reducing the risk of loss or damage. E-signatures also create a detailed audit trail, allowing banks to track the history of documents and transactions.

5. **Improved Efficiency and Reduced Costs :** E-signatures streamline workflows, reduce paperwork, and minimise the need for physical signatures. This can lead to significant cost savings for banks.

6. **Increased Customer Satisfaction :** Faster and more convenient processes improve customer satisfaction, as they can complete transactions from anywhere with an internet connection. E-signatures also provide a more transparent and accountable process, building trust with customers.

7. **Compliance and Legal Validity :** E-signatures are legally recognised and can be used for a wide range of banking transactions. Banks can rely on e-signatures to ensure compliance with regulations and legal requirements.

2.5.6 Digital signature vs e-signature

Although often used interchangeably, they are different concepts. The term e-signature is more general, referring to any form of electronic signing of a document, while digital signatures entail particular cryptographic techniques aimed at providing a higher level

of security and authenticity. Digital signatures use two keys: a private key for verifying the identity of the signer and the integrity of signed documents.

As per Section 2 (p) "*Digital Signature means authentication of any electronic record by a subscriber by means of an electronic method or procedure in accordance with the provisions of section 3.*"

Table 2.5.1 Digital Signature Vs. Electronic Signature

Digital Signature	Electronic Signature
A digital signature relies on public key infrastructure which authenticates the electronic signature.	An electronic signature is simply a legally valid electronic replacement of a handwritten signature.
Digital signatures carry a user's information along with electronic signatures.	Electronic signatures do not contain any authentication attached to them.
A digital signature secures a document.	An electronic signature verifies the document.
Digital signatures are validated by licensed certifying authorities such as e-Mudhra.	Electronic signatures are not validated by licensed certifying authorities.
Digital signatures come with encryption standards.	Electronic signatures do not come with encryption standards.
A digital signature consists of various security features and is less prone to tampering.	An electronic signature is less secure and is more vulnerable to tampering.
A digital signature acts as an electronic fingerprint that consists of a person's identification.	An electronic signature can be a file, image, or symbol attached to a document to give consent for a signature.
A digital signature is created via cryptographic algorithms.	An electronic signature offers lower security, and no cryptographic algorithms are used in creating a simple electronic signature.
A digital signature is authenticated using a digital signature certificate.	An electronic signature is authenticated using a phone number, SMS, etc.

Recap

- An e-signatureis a digital method of signing documents using electronic devices.
- Speed and efficiencyquicken the signing process and enable remote and real-time signing.
- Steps of e-signature creation include hash creation, encryption, transmission,and verification.
- Hash creationgenerates a unique fingerprint of the document.
- Encryption encrypts the hash using the sender's private key.
- Transmissionsends the document and signature together.
- In verification, the receiver decrypts using the public keyand compares hashes.
- E- signature -Eliminate the costs

Objective Questions

1. Under which act is an electronic signature legally recognised in India?
2. Which section of the IT Act defines electronic signature?
3. What is used to encrypt the hash value when generating a digital signature?
4. What ensures that the contents of a digitally signed document have not been altered?
5. What is the main function of a digital signature certificate?
6. What is a key benefit of using e-signatures for Customer Onboarding and KYC processes?
7. What does a digital signature primarily ensure in electronic records?
8. Under which section of the Information Technology Act, 2000, is the use of digital signatures legally recognized in India?

Answers

1. IT Act, 2000
2. Section 2 (ta)
3. Sender's private key
4. Integrity.
5. Authenticate digital signatures.
6. Faster onboarding with fewer physical visits
7. Authentication and integrity of the document
8. Section 3

Assignments

1. Define an electronic signature and explain its legal recognition in India.
2. Explain how e-signatures contribute to environmental sustainability.
3. Discuss three major disadvantages of e-signature implementation.
4. What is the difference between integrity and authentication in digital signature usage?
5. Describe the process of generating a digital signature.
6. How does e-signature improve customer experience in banking?
7. Why is key management important in digital signature systems?
8. Identify two scenarios in banking where e-signature can be effectively applied.
9. Analyse the use of e-signatures in the loan disbursal process at a commercial bank and suggest improvements.
10. Prepare a case study highlighting the impact of e-signatures on cost reduction and efficiency in a bank.
11. Conduct a survey among users to determine their awareness and acceptance of e-signatures in financial services and interpret the results.

Reference

1. *Banking Class XI*. (n.d.). BSE Institution Ltd.
2. *Banking Law and Practice*. (2014). The Institute of Company Secretaries of India.
3. *Banking Standard XII*. (n.d.). BSE Institute Ltd.
4. Gordon, E., & Natarajan, K. (2008). *Banking Theory, Law and Practice* (Revised). Himalaya Publishing House.
5. Hildreth, R. (2001). *The History of Banks: To Which Is Added, A Demonstration of the Advantages and Necessity of Free Competition in the Business of Banking*. Batoche Books Limited.
6. James, C., & Houston, J. (1996). EVOLUTION OR EXTINCTION: WHERE ARE BANKS HEADED? *Journal of Applied Corporate Finance*, *9*(2), 8–23. https://doi.org/10.1111/j.1745-6622.1996.tb00112.x
7. Lewis, M. K. (1992). Modern Banking in Theory and Practice. *Revue Économique*, *43*(2), 203. https://doi.org/10.2307/3501990
8. *ESign | CCA*. (5th May 2025). https://cca.gov.in/eSign.html
9. Limited, E. (2024, 3rd October). Role of Digital Signature Certificates (DSC) in the banking sector. *eMudhra*. https://emudhra.com/blog/role-of-digital-signature-certificates-dsc-in-banking

MODEL QUESTION PAPER SETS

SREENARAYANAGURU OPEN UNIVERSITY

Model Question Paper (SET- 1)

QP CODE: ……

Reg. No:.....

Name: ……

UNDER GRADUATE (CBCS) DISTANCE MODE EXAMINATIONS

SIXTH SEMESTER

GENERIC ELECTIVE

B21CM01GE – BANKING

CBCS – UG Regulations 2021 - 2022 – Admission Onwards

Time: 3 Hours Max Marks: 70

Section A

(Answer any 10, each carries 1 mark)

(10x1=10)

1. Expand CDM.
2. Define E- signature
3. Name any two development banks
4. Which is the central bank of India
5. What are exchange banks
6. Define banking.
7. Expand IDBI
8. In which year NABARD was established?
9. What do you mean by core banking?
10. Expand RTGS
11. Which network was established by the RBI for banking communication?
12. Which act provides legal recognition to digital signatures and procedures in India?

Section B

(Answer any 5, each question carries 2marks)

(5x2=10)

13. What do you mean by CIBIL score?
14. Short note on CORE banking.

15. List out the benefits of EFT

16. Explain the IFSC code

17. Lis out different types of Banking

18. What is the relationship between the customer and the banker?

Section C

(Answer any 4, each carries 5 marks)

(4x5=20)

19. Explain the uses of ATM

20. Difference between Debt card and Credit card

21. What are the steps in POS?

22. Briefly explain the objectives of ECS

23. Explain the types of electronic fund transfer

24. Central banks in different countries

Section D

(Answer any 2, each question carries 15 marks)

(2x15=30)

25. Essay on advantages and disadvantages of E- e-signature

26. Explain the different types of banks

27. Discuss the significance of the Indian banking system

28. Elaborate the different development banks in India

SREENARAYANAGURU OPEN UNIVERSITY

Model Question Paper (SET- 2)

QP CODE: ……

Reg. No:.....

Name: ……

UNDER GRADUATE (CBCS) DISTANCE MODE EXAMINATIONS

SIXTH SEMESTER

GENERIC ELECTIVE

B21CM01GE – BANKING

CBCS – UG Regulations 2021 - 2022 – Admission Onwards

Time: 3 Hours Max Marks: 70

Section A

(Answer any 10, each carries 1 mark)

(10x1=10)

1. Mention any one feature of a bank.
2. Name any one type of relationship between banker and customer.
3. What is meant by Branch Banking?
4. Name one feature of Unit Banking.
5. Name the apex bank of India.
6. What is the main role of Cooperative Banks?
7. What does IDBI stand for?
8. Name any one general policy of RBI.
9. Mention one objective of the central bank.
10. What does the CIBIL Score indicate?
11. Name one type of cybercrime in banking.
12. Give one use of an e-signature in banking.

Section B

(Answer any 5, each question carries 2marks)

(5x2=10)

13. Write any three features of banks
14. Write short notes on:
    a. Unit Banking
    b. Group Banking

15. List any three types of Commercial Banks in India.
16. State the objectives of NABARD.
17. Mention the purpose of any two development banks.
18. Write any two objectives of a Central Bank.
19. Write short notes on:
    a. IFSC
    b. SWIFT
20. Define electronic signature

Section C

(Answer any 4, each carries 5 marks)

(4x5=20)

21. Illustrate the evolution of banks over time
22. Briefly explain the advantages, disadvantages, and applications of e-signature in the banking sector
23. Discuss the different types of security threats in E-Banking.
24. Explain the meaning and functions of NEFT, RTGS, UPI, and SWIFT.
25. Describe the functions of the following: ATM, Debit Card, Credit Card, Smart Card, and POS.
26. How has IT impacted the banking industry? Explain with examples.

Section D

(Answer any 2, each question carries 15 marks)

(2x15=30)

27. Explain the evolution, meaning, features, and importance of banks in the modern economy.
28. Discuss the functions of the Reserve Bank of India (RBI).
29. What is an E-Cheque? Explain the working, importance, and differences between E-Cheques, and Truncated Cheques.
30. What are Development Banks? Explain the functions, objectives, and roles of IDBI, SIDBI, NABARD, and EXIM Bank in economic development.

സർവ്വകലാശാലാഗീതം

വിദ്യയാൽ സ്വതന്ത്രരാകണം
വിശ്വപൗരരായി മാറണം
ഗ്രഹപ്രസാദമായ് വിളങ്ങണം
ഗുരുപ്രകാശമേ നയിക്കണേ

കൂരിരുട്ടിൽ നിന്നു ഞങ്ങളെ
സൂര്യവീഥിയിൽ തെളിക്കണം
സ്നേഹദീപ്തിയായ് വിളങ്ങണം
നീതിവൈജയന്തി പാറണം

ശാസ്ത്രവ്യാപ്തിയെന്നുമേകണം
ജാതിഭേദമാകെ മാറണം
ബോധരശ്മിയിൽ തിളങ്ങുവാൻ
ജ്ഞാനകേന്ദ്രമേ ജ്വലിക്കണേ

കുരീപ്പുഴ ശ്രീകുമാർ

SREENARAYANAGURU OPEN UNIVERSITY

Regional Centres

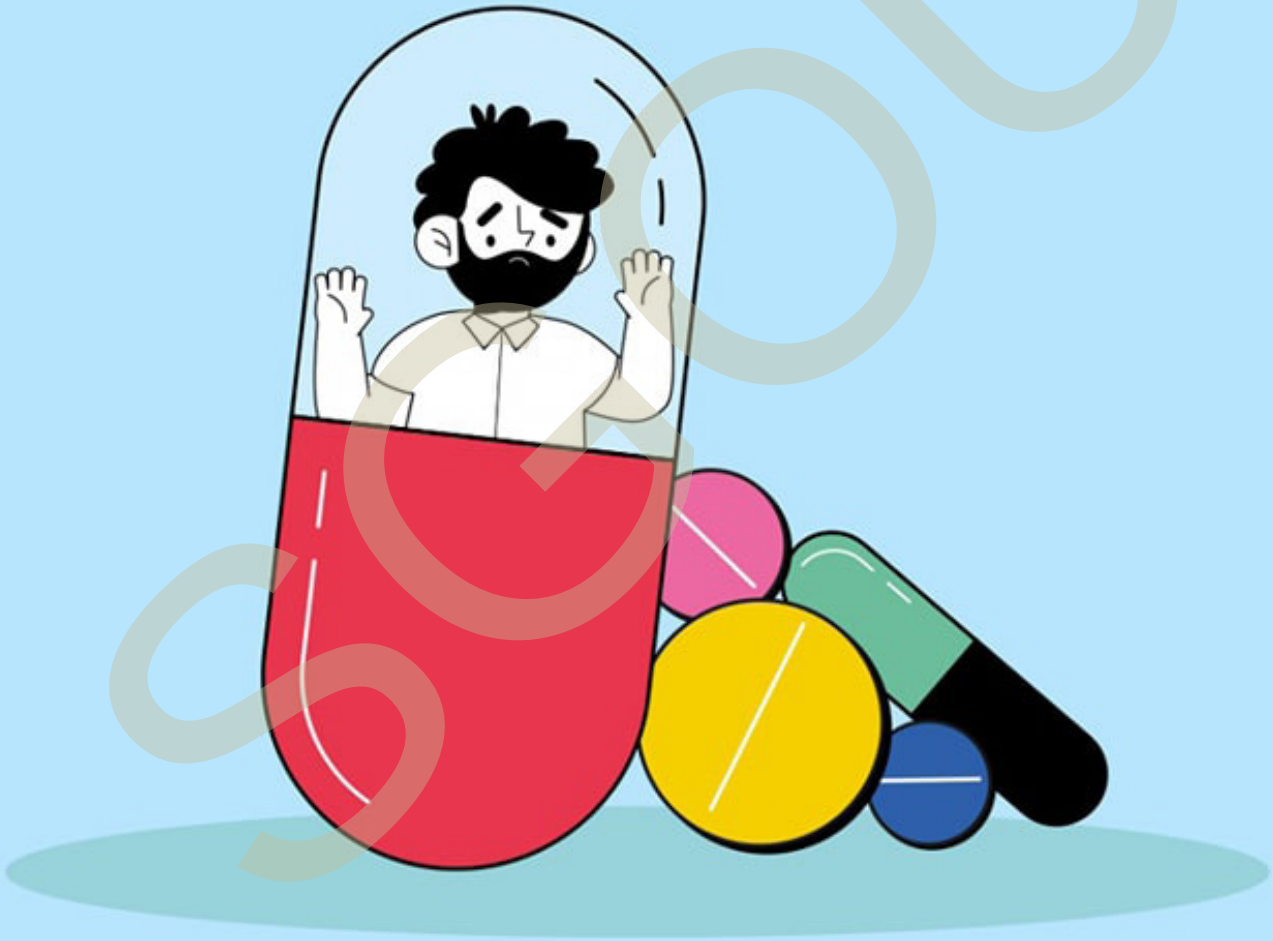
Kozhikode
Govt. Arts and Science College
Meenchantha, Kozhikode,
Kerala, Pin: 673002
Ph: 04952920228
email: rckdirector@sgou.ac.in

Thalassery
Govt. Brennen College
Dharmadam, Thalassery,
Kannur, Pin: 670106
Ph: 04902990494
email: rctdirector@sgou.ac.in

Tripunithura
Govt. College
Tripunithura, Ernakulam,
Kerala, Pin: 682301
Ph: 04842927436
email: rcedirector@sgou.ac.in

Pattambi
Sree Neelakanta Govt. Sanskrit College
Pattambi, Palakkad,
Kerala, Pin: 679303
Ph: 04662912009
email: rcpdirector@sgou.ac.in

NO TO DRUGS തിരിച്ചിറങ്ങാൻ പ്രയാസമാണ്



NO TO DRUGS

ആരോഗ്യ കുടുംബക്ഷേമ വകുപ്പ്, കേരള സർക്കാർ

BANKING

COURSE CODE: B21CM01GE

SGOU

Sreenarayanaguru Open University
Kollam, Kerala Pin- 691601, email: info@sgou.ac.in, www.sgou.ac.in Ph: +91 474 2966841

ISBN 978-81-986991-6-9