such a case, the utility from camel would be negligible and goods without utility lose its value. On the other hand, if the individual exchanges the full camel in exchange of one horse, then he/she would incur losses. The loss incurred by the individual would be equal to the utility value of one horse. Therefore, in the barter system, it was difficult to exchange indivisible goods.

- **Store of Value:** Refers to one of the reason for the failure of the barter system. According to the barter system, value is stored in the form of commodities, such as cereal grains and cattle. However, storing wealth in the form of commodities is difficult because of the following reasons:
  - **Perishability of Goods:** Refers to one of the main difficulties in storing wealth in the form of commodities. Perishable goods include vegetables, cattle, and fruits, which cannot be stored for a longer time as they get spoiled. This causes loss of wealth of individuals.
  - **Quality of Goods:** Implies that the quality of goods declines if they are stored for a longer period of time. As a result, goods lose their value.
  - **Space for Goods:** Refers to the fact that storing value in the form of commodities, such as cattle and grains, require lot of space. The huge space for storing goods may not be always available.
  - **Expenses on Goods:** Constitutes the main difficulty in storing value in the form of commodities. Generally, storing commodities, such as cattle, involves high cost. This is because of the reason that one has to spend a lot for procuring feed for the cattle and maintaining hygienic conditions.

Jevons has explained the drawback of storing value in the form of commodities with the help of an example. In his example, he has cited a singer who belonged to Paris. The singer visited an island of Africa to give a singing performance. At that time, barter system was prevalent in Africa. Therefore, the singer received grains and cattle as a reward. The cattle ate up the grains received by him, thus, the singer left with cattle only. Besides this, during his return to Paris, his cattle also died due to some disease. In this way, he was not able to store value in the form of commodities. Thus, it can be said that storing value in the barter system was very difficult.

- **Deferred Payments:** Refer to one of the most important drawback of the barter system. Deferred payments involve those payments that are made sometime in future. For example, interests, rents, loans, and insurance premium. In the barter system, commodities are used as a medium of exchange; therefore, it is very difficult to make deferred payments. Chandler, the economist, has mentioned certain reasons that made deferred payments difficult in the barter system, which are as follows:
  - Leads to disputes with respect to the quality of goods. For example, if deferred payment is made in terms of wheat, then the quality purchased today may differ from the quality of wheat returned to the creditor of wheat after a period of time.
  - Leads to disputes with respect to the nature of goods.
  - Leads to disputes with respect to changes in the value of commodities used for deferred payments over a passage of time.

Owing to various difficulties, the barter system was insufficient to cater to the ever growing needs of individuals. Therefore, the concept of money was introduced by economists. Let us understand the concept of money in detail in the next section.

20.3 Concept of Money

Money is derived from a Latin word, Moneta, which was another name of Goddess Juno in Roman history. The term money refers to an object that is accepted as a mode for the transaction of goods and services in general and repayment of debts in a particular country or socio-economic framework. In simple words, money can be defined as a medium for transaction of goods and services.

Some of the popular definitions of money are as follows:

Robertson has defined money as "Anything which is widely accepted in payment for goods, or in discharge of other kinds of obligations."

*According to **Hawtrey**, "Money is one of those concepts which like a teaspoon or an umbrella, but unlike an earthquake or buttercup are definable primarily by the use or purpose which they serve."*

Money can be in various forms, such as notes, coins, credit and debit cards, and bank checks. Traditionally, economists considered four main functions of money, which are a medium of exchange, a measure of value, a standard of deferred payment, and a store of value. However, in modern days, only three functions of money, such as a medium of exchange, measure of value, and a store of value are taken into consideration. Let us discuss these four functions of money in detail in the next section.

20.3.1 Functions of Money

As discussed in the previous section, economists considered four main functions of money, which are a medium of exchange, a measure of value, a standard of deferred payment, and a store of value. These functions are broadly grouped into two categories, which are shown in Figure-1:

Radcliffe Committee of United States endorsed the central bank approach. *According to this committee, "the similarity between currency and other realisable assets or means of purchasing to the point of rejecting money in favor of some broader concept, measurable or immeasurable."* In other words, money can be any form through which the borrowers receive credit. On the basis of monetary policy and policy targets, the central bank implements different measures to control money supply.

20.3.3 Types of Money

In the previous section, we have discussed types of commodities that are considered as money. However, the different forms of money are classified into the following:

- **Commodity Money:** Refers to a form of money as per the classical approach. The commodity form of money involves commodities, such as cattle, grains, leather, skins, utensils, and weapons. However, in the present time, commodity money is not preferable as it lack certain important characteristics of money, such as uniformity, homogeneity, standard size and weight, portability, and divisibility.
- **Metallic Money:** Includes money made up of metals, such as copper, brass, silver, gold, alloys, and aluminium. The need for metallic money was realized due to the limitations of commodity money. However, the exact period when metallic money was invented is unknown. It is supposed that metallic coins were traded in India around 2500 years ago. Initially, the pieces of metals, such as gold, silver, copper, and aluminum, served the purpose of money. However, in later years, these pieces took the form of coins.
- **Paper Money:** Refers to the form of money printed, authenticated, and issued by the government of a country. Paper money is regarded as the most common form of money and constitutes a large part in the money supply of a country. Some of the countries adopted the dual system of currency notes. For example, in India, both, five rupees notes and coins are issued by Reserve Bank of India (RBI). The currency notes issued by RBI are promissory notes, but they get a status of legal money. For example, on every currency note, it is written, "I promise to pay the bearer a sum of .... Rupees." Paper money was invented as the supply of metallic coins, such as silver and gold, was very less as compared to its demand. In addition, a large amount of metallic money is not easily portable and the value of metallic coins depreciates with time.
- **Bank Deposits:** Refers to money that is in the form of current account deposits, saving account deposits, and time deposits. This form of money was invented with the evolution of the banking system. Unlike metallic money and paper money, this form of money cannot be passed hand to hand for purchasing goods and services. Deposit money is considered as entries in the ledger of the bank to the credit of the holder. These deposits can only be transferred through checks.

Since time immemorial, money has retained some value; therefore has demand. Let us understand the concept of demand for money in the next section.

20.3.4 Demand for Money

The demand for money is different from demand for a commodity. Demand for money refers to the amount of money to be held by individuals and businesses. On the other hand, demand for a commodity is the demand for the continuous flow of goods and services. Therefore, the difference between the demand for money and demand for commodity is that the former focuses on the holding, while later focuses on the flow. Earlier, the demand for money was defined as the amount of money required for making business transactions. In simple terms, the demand for money was dependent on the number of transactions done in an economy. As a result, there was a rapid rise in the demand for money in the boom period, whereas the demand for money fell at the time of depression. On the other hand, modern view on demand of money given by Keynes, demand for money is the demand for money to hold. There are three broad motives on the basis of which money is required by people, which are as follows:

- **Transaction Motive:** Refers to the demand for money to fulfill the present needs of individuals and businesses. Individuals require money to fulfill their current requirements, which is termed as income motive. On the other hand, businesses need money for carrying out their business activities, which is known as business motive. These two motives of money are discussed as follows:
  - ⇨ **Income Motive:** Refers to the motive of individuals who demand money for fulfilling the needs of themselves as well as their family. Generally, individuals hold cash for bridging the gap between the receipt of income and its expenditure. The income is received once in a month but the expenditure takes place every day. Therefore, it is required to hold some part of income to make current payments. The holding amount depends on the amount of an individual's income and interval of receiving income.
  - ⇨ **Business Motive:** Refers to the requirement of money by businesses in liquid form to meet the current requirements. Businesses require money for procuring raw material and paying transport charges, wages, salaries, and other expenses. The money demanded by businesses depends on their turnover. The higher turnover indicates the requirement of higher amount of money to cover up expenses.

- **Precautionary Motive:** Refers to the longing of individuals to hold money for various contingencies that may take place in future. These contingencies can include unemployment, sickness, and accidents. The amount of money need to be held for the precautionary motive depends on the nature of a person and his/her living conditions.
- **Speculative Motive:** Refers to the motive of individuals for holding cash to make out benefit from the movements of market regarding the change in interest rate in future. The precautionary and speculative motive acts as the store of value with different purposes.

20.3.5 Supply of Money

As discussed in the previous section, the demand for money is demand for money to hold. Similarly, supply of money refers to the supply of money to hold. Money needs to be held by individuals, else it does not exist. Supply of money refers to the total amount of money (in any form) that is held by a community in a given period of time. In earlier times, the metallic money was the most common form of money that constituted the major part of money in an economy. In modern times, metallic money has been replaced by currency notes and checkable bank deposits.

The money supply is categorized as M_1, M_2, M_3 and M_4. M_1 refers to the money stock that includes coins, currency notes, and demand deposits. M_2 refers to the money stock that includes coins, currency notes, demand deposits, and time deposits. M_3 refers to the money stock includes coins, currency notes, demand deposits, time deposits, and post office deposits. M_4 refers to the money stock includes coins, currency notes, demand deposits, time deposits, post office deposits, savings bank, and term deposits. The credit control policies imposed by the banking system of a country help in determining the total supply of money.

20.4 Theories of Money

Value of money is a term that is necessary to be understood to get acquainted with the theories of money. In economics, different economists have defined the term value of money differently. Some of the economists explained value of money as the value of gold and silver in terms of their weight and fineness. Other has defined the value of money as the value of Indian currency against foreign currencies. On the other hand, few economists have associated the term value of money with the internal purchasing power of a nation. However, logically, value of money is associated with its purchasing power, which refers to the quantity of goods and services that can be purchased with a unit of money.

The value of money and price levels in a country are inversely proportional to each other. For example, when the price level in a country is high, the value of money is low and vice-versa. The three main approaches are used for the monetary analysis of a country, which are as follows:

- Quantity Velocity Approach/Cash Transaction Approach/Freidman's Restatement
- C[illegible]lances Approach
- I[illegible]enditure Approach

Amon[illegible]e approaches, quantity velocity approach and cash balances approach are grouped under quantity theories of money[illegible]her hand, the income-expenditure approach is the modern theory of money. Let us discuss these theories of oney [illegible]e next[illegible]s.

4.1 [illegible]y V[illegible] Approach

now, [illegible]ists [illegible]at the price level show changes because of the changes in quantity (demand and supply) of ey. H[illegible]he p[illegible]rio, most of the economists have believed that quantity theory of money is not applicable in cal [illegible]uant[illegible]y comprises cash (M) and its velocity (V). The velocity of circulation of cash depends on s fa[illegible]freq[illegible]nsactions, trade volume, type of business conditions, price levels, and borrowing and lending s.

in[illegible]y th[illegible]y, the changes in price level of a country occur due to changes in the quantity of money in io[illegible]g ot[illegible] constant. In other words, an increase or decrease in the price level would occur due to [illegible]e q[illegible]oney. Therefore, it can be concluded that price level and quantity of money are directly [illegible]r. I[illegible]xtreme conditions, an increase in the quantity of money would lead to a proportional [illegible]one[illegible]ng other factors at constant and vice versa. In the quantity theory, the other factors that [illegible]lov[illegible]

tic[illegible] Refers to the frequency at which a single money unit flows from one individual to [illegible]e circulates through 10 individuals, then the quantity of money would be 100, but not

... maturity date.

... exchange is an unconditional order in writing addressed by one person to another, signed by the person giving it, requiring the person to whom it is addressed to pay on demand or at fixed or determinable future time a sum certain in money to order or to bearer."

The facility of discounting of bill is used by the organizations to meet their immediate need of cash for settling down current liabilities. Conditions laid down by the bank for discounting of bill are as follows:

- Must be intended to specific purpose
- Must be enclosed with the signature of the two persons (company, bank or reputed person)
- Must be less than the face value
- Must be produced before the maturity period

Commercial banks

22.4 Credit Creation by Commercial Banks

A central bank is the primary source of money supply in an economy through circulation of currency. It ensures the availability of currency for meeting the transaction needs of an economy and facilitating various economic activities, such as production, distribution, and consumption. However, for this purpose, the central bank needs to depend upon the reserves of commercial banks. These reserves of commercial banks are the secondary source of money supply in an economy. The most important function of a commercial bank is the creation of credit. Therefore, money supplied by commercial banks is called credit money. Commercial banks create credit by advancing loans and purchasing securities. They lend money to individuals and businesses out of deposits accepted from the public. However, commercial banks cannot use the entire amount of public deposits for lending purposes. They are required to keep a certain amount as reserve with the central bank for serving the cash requirements of depositors. After keeping the required amount of reserves, commercial banks can lend the remaining portion of public deposits.

*According to **Benham's**, "a bank may receive interest simply by permitting customers to overdraw their accounts or by purchasing securities and paying for them with its own cheques, thus increasing the total bank deposits."*

Let us learn the process of credit creation by commercial banks with the help of an example.

Suppose you deposit ₹ 10,000 in a bank A, which is the primary deposit of the bank. The cash reserve requirement of the central bank is 10%. In such a case, bank A would keep ₹ 1000 as reserve with the central bank and would use remaining ₹ 9000 for lending purposes. The bank lends ₹ 9000 to Mr. X by opening an account in his name, known as demand deposit account. However, this is not actually paid out to Mr. X. The bank has issued a checkbook to Mr. X to withdraw money. Now, Mr. X writes a check of ₹ 9000 in favor of Mr. Y to settle his earlier debts. The check is now deposited by Mr. Y in bank B. Suppose the cash reserve requirement of the central bank for bank B is 5%. Thus, ₹ 450 (5% of 9000) will be kept as reserve and the remaining balance, which is ₹ 8550 would be used for lending purposes by bank B.

Thus, this process of deposits and credit creation continues till the reserves with commercial banks reduce to zero. This process is shown in the Table-1:

Table-1: Credit Creation Process

Bank	New Deposits/ Primary Deposits	Demand Deposits	Derivative deposits / Loans
Bank A	10000	1000	9000
Bank B	9000	450	8550
Bank C	8550	855	7695
Bank N	-	-	-
Total	**50000**	**10000**	**40000**

From Table-1, it can be seen that deposit of ₹ 10,000 leads to a creation of total deposit of ₹ 50,000 without the involvement of cash. The process of credit creation can also be learned with the help of following formulae:

Total Credit Creation = Original Deposit * Credit Multiplier Coefficient

Credit multiplier coefficient= 1/ r where r = cash reserve requirement also called as Cash Reserve Ratio (CRR)

Credit multiplier co-efficient = 1/10% = 1/(10/100) = 10

Total credit created = 10,000 *10 = 100000

If CRR changes to 5%,

Credit multiplier co-efficient = 1/5% = 1/ (5/100) = 20

Total credit creation = 10000 * 20 = 200000

Thus, it can be inferred that lower the CRR, the higher will be the credit creation, whereas higher the CRR, lesser will be the credit creation. With the help of credit creation process, money multiplies in an economy. However, the credit creation process of commercial banks is not free from limitations. Some of the limitations of credit creation by commercial banks are shown in Figure-3:

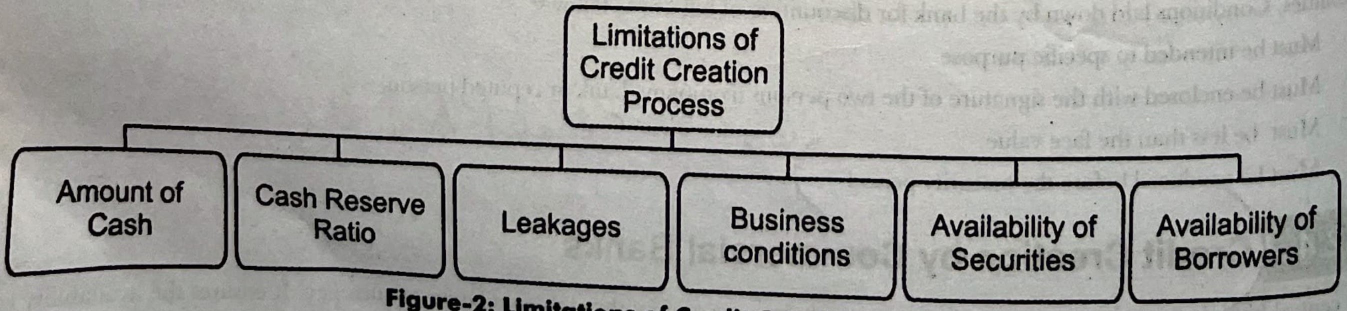

Figure-2: Limitations of Credit Creation Process

The limitations of credit creation process (as shown in Figure-3) are explained as follows:

- **Amount of Cash**: Affects the creation of credit by commercial banks. Higher the cash of commercial banks in the form of public deposits, more will be the credit creation. However, the amount of cash to be held by commercial banks is controlled by the central bank. The central bank may expand or contract cash in commercial banks by purchasing or selling government securities. Moreover, the credit creation capacity depends on the rate of increase or decrease in CRR by the central bank.
- **CRR:** Refers to reserve ratio of cash that need to be kept with the central bank by commercial banks. The main purpose of keeping this reserve is to fulfill the transactions needs of depositors and to ensure safety and liquidity of commercial banks. In case the ratio falls, the credit creation would be more and vice versa.
- **Leakages**: Imply the outflow of cash. The credit creation process may suffer from leakages of cash. The different types of leakages are discussed as follows:
  - ⇨ **Excess Reserves:** Takes place generally when the economy is moving towards recession. In such a case, banks may decide to maintain reserves instead of utilizing funds for lending. Therefore, in such situations, credit created by commercial banks would be small as a large amount of cash is reserved.
  - ⇨ **Currency Drains:** Imply that the public does not deposit all the cash with it. The customers may hold the cash with them which affects the credit creation by banks. Thus, the capacity of banks to create credit reduces.
- **Availability of Borrowers**: Affects the credit creation by banks. The credit is created by lending money in form of loans to the borrowers. There will be no credit creation if there are no borrowers.
- **Availability of Securities**: Refers to securities against which banks grant loan. Thus, availability of securities is necessary for granting loan otherwise credit creation will not occur. According to ***Crowther***, *"the bank does not create money out of thin air; it transmutes other forms of wealth into money."*
- **Business Conditions:** Imply that credit creation is influenced by cyclical nature of an economy. For example, credit creation would be small when the economy enters into the depression phase. This is because in depression phase, businessmen do not prefer to invest in new projects. In the other hand, in prosperity phase, businessmen approach banks for loans, which lead to credit creation.

In spite of its limitations, we can conclude that credit creation by commercial banks is a significant source for generating income. The essential conditions for creation of credit are as follows:

- Accepting the fresh deposits from public
- Willingness of banks to lend money
- Willingness of borrowers to borrow

credit creation

22.5 Central Bank

A central bank plays an important role in monetary and banking system of a country. It is responsible for maintaining financial sovereignty and economic stability of a country, especially in underdevel[...] countries. It issues currency, regulates money supply, and controls different interest rates in a country. Apart from this, th[...] bank controls and regulates the activities of all [...] management experts have [...]tral bank in different ways, which are as follows:

21.1 Introduction

Business cycles can be defined as recurring and fluctuating levels of economic activity of a country. In other words, business cycles refer to ups and downs in aggregate economic activity, measured by fluctuations in various macroeconomic variables, such as Gross Domestic Product (GDP), employment, and rate of consumption. Generally, an economy experiences business cycles over a long period of time. Earlier, business cycles were thought to be periodic with anticipated durations. However, in recent times, business cycles are widely believed to be irregular features of an economy, varying in frequency, degree, and time interval. For example, the period of Great Depression in 1930s experienced a decline in economic activity for more than 40 months. However, since World War II, most of the business cycles have persisted for the period of three to five years.

A business cycle is characterized by a sequence of five phases, namely, expansion, peak, recession, trough, and recovery. When an economy enters into the expansion phase, there is an increase in various economic factors, such as output, national income, employment, prices, and profits. In addition, in the expansion phase, there is also a rise in the standard of living. After a certain point of time, expansion reaches to its maximum level and economic factors become stable. This situation is termed as the peak phase of a business cycle. Gradually, there is a decline in the economic activities, which marks the beginning of the recession phase of a business cycle. In the recession phase, entrepreneurs become pessimistic about their growth and avoid any type of investments. In addition, they start slashing costs by laying off people and discontinuing replacement of capital goods. Consequently, the increased rate of unemployment causes a rapid decline in income and aggregate demand. This decline in economic factors reaches a certain limit after which there is no further fall in economic factors. This is known as the trough phase of a business cycle. In the trough phase, individuals and organizations assume that after a decline in economy there would be expansion, thus, develop an optimistic approach. As a result, the economic activities start expanding, which is the starting of the recovery phase. When an economy moves from expansion phase to recovery phase, it marks the completion of a business cycle.

The chapter begins by explaining the concept of a business cycle. Further, it discusses different phases of a business cycle, such as expansion, peak, recession, trough, and recovery. Next, the chapter elaborates on various theories of business cycles. Some of the theories are Pure Monetary Theory, Monetary Over-Investment Theory, Schumpeter's Theory of Innovation, and Keynes Theory. Finally, it details upon stabilization policies for controlling business cycles.

21.2 Concept of a Business Cycle

Business cycles, also called trade cycles or economic cycles, refer to perpetual features of the economic environment of a country. In simple words, business cycles can be defined as fluctuations in the economic activities of a country. The economic activities of a country include total output, income level, prices of products and services, employment, and rate of consumption. All these activities are interrelated; if one activity changes, rest of them would also show changes. These changes in the economic activities together produce a bigger change in the overall economy of a nation. This overall change in an economy is termed as a business cycle. Business cycles are generally regular and periodical in nature. Some of the management experts have defined business cycles in the following ways:

> *According to Arthur **F. Burns** and **Wesley C. Mitchel**, "Business cycles are a type of fluctuation found in the aggregate economic activity of nations that organize their work mainly in business enterprises: a cycle consists of expansions occurring at about the same time in many economic activities, followed by similarly general recessions, contractions, and revivals which merge into the expansion phase of the next cycle; in duration, business cycles vary from more than one year to ten or twelve years; they are not divisible into shorter cycles of similar characteristics with amplitudes approximating their own."*

> *According to **Parkin** and **Bade's**, "The business cycle is the periodic but irregular up-and-down movements in economic activity, measured by fluctuations in real GDP and other macroeconomic variables. A business cycle is not a regular, predictable, or repeating phenomenon like the swing of the pendulum of a clock. Its timing is random and, to a large degree, unpredictable."*

> *According to **Keynes**, "Trade Cycle is composed of periods of good trade characterized by rising price and low unemployment percentage altering with periods of bad trade characterized by falling price and high unemployment percentage."*

From the aforementioned definitions, business cycles are characterized by boom in one period and collapse in the subsequent period in the economic activities of a country. Business cycles affect the business decisions of organizations to a large extent and set future business trends. For example, the period of boom opens up several investment, production, and credit opportunities for organizations. On the other hand, period of economic slump reduces business opportunities for organizations. Therefore, an organization needs to analyze the economic environment of a country before making any business decisions.

EXHIBIT-1

Characteristics of a Business Cycle

A study of business cycles has discovered two most important characteristics of business cycles. The two characteristics are periodicity and synchronism, which are discussed as follows:

- **Periodicity:** Refers to the cyclical nature of business cycles. Periodicity signifies the occurrence of business cycles at regular intervals of time. The interval for the occurrence of business cycle is not accurate, but the degree at which the cycles repeat determines the periodicity. It is examined that a business cycle requires seven to ten years to complete itself.
- **Synchronism:** Refers to the general nature of a business cycle. Synchronism regards business world as a single economic unit. If one sector of business gets affected, then it would also impact the rest of the business sectors. Therefore, if one industry is facing recession, then other industry would also show some signs of recession.

21.3 Phases of a Business Cycle

As discussed earlier, business cycles are characterized by boom in one period and collapse in the subsequent period in the economic activities of a country. These fluctuations in the economic activities are termed as phases of business cycles. The fluctuations are compared with ebb and flow. The upward and downward fluctuations in the cumulative economic magnitudes of a country show variations in different economic activities in terms of production, investment, employment, credits, prices, and wages. Such changes represent different phases of business cycles. The different phases of business cycles are shown in Figure-1:

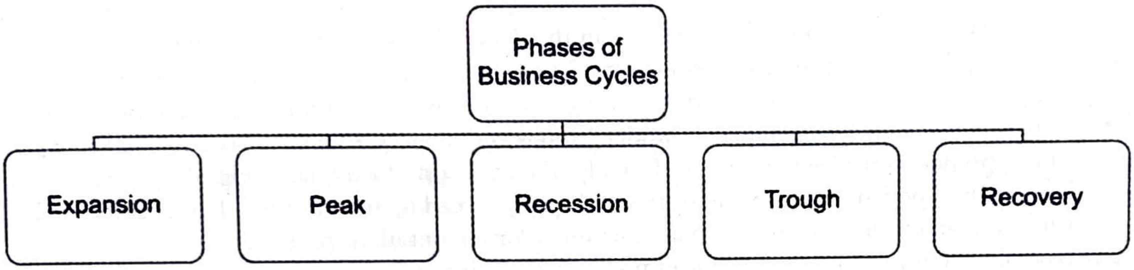

Figure-1:Different Phases of a Business Cycle

There are basically two important phases in a business cycle that are prosperity and depression. The other phases that are expansion, peak, trough and recovery are intermediary phases. Figure-2 shows the graphical representation of different phases of a business cycle:

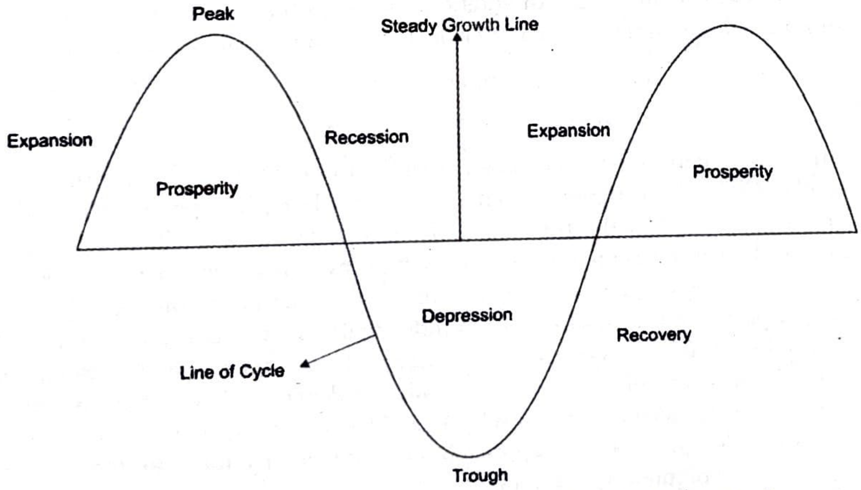

Figure-2: Representation of Phases of a Business Cycle

As shown in Figure-2, the steady growth line represents the growth of economy when there are no business cycles. On the other hand, the line of cycle shows the business cycles that move up and down the steady growth line. The different phases of a business cycle (as shown in Figure-2) are explained in the next sections.

21.3.1 Expansion

The line of cycle that moves above the steady growth line represents the expansion phase of a business cycle. In the expansion phase, there is an increase in various economic factors, such as production, employment, output, wages, profits, demand and supply of products, and sales. In addition, in the expansion phase, the prices of factor of production and output increases simultaneously. In this phase, debtors are generally in good financial condition to repay their debts; therefore, creditors lend money at higher interest rates. This leads to an increase in the flow of money. In expansion phase, due to increase in investment opportunities, idle funds of organizations or individuals are utilized for various investment purposes. Therefore, in such a case, the cash inflow and outflow of businesses are equal. This expansion continues till the economic conditions are favorable.

21.3.2 Peak

The growth in the expansion phase eventually slows down and reaches to its peak. This phase is known as peak phase. In other words, peak phase refers to the phase in which the increase in growth rate of business cycle achieves its maximum limit. In peak phase, the economic factors, such as production, profit, sales, and employment, are higher, but do not increase further. In peak phase, there is a gradual decrease in the demand of various products due to increase in the prices of input. The increase in the prices of input leads to an increase in the prices of final products, while the income of individuals remains constant. This also leads consumers to restructure their monthly budget. As a result, the demand for produts, such as jewellery, homes, automobiles, refrigerators and other durables, starts falling.

21.3.3 Recession

As discussed earlier, in peak phase, there is a gradual decrease in the demand of various products due to increase in the prices of input. When the decline in the demand of products becomes rapid and steady, the recession phase takes place. In recession phase, all the economic factors, such as production, prices, saving and investment, starts decreasing. Generally, producers are unaware of decrease in the demand of products and they continue to produce goods and services. In such a case, the supply of products exceeds the demand. Over the time, producers realize the surplus of supply when the cost of manufacturing of a product is more than profit generated. This condition firstly experienced by few industries and slowly spread to all industries. This situation is firstly considered as a small fluctuation in the market, but as the problem exists for a longer duration, producers start noticing it. Consequently, producers avoid any type of further investment in factor of production, such as labor, machinery, and furniture. This leads to the reduction in the prices of factor, which results in the decline of demand of inputs as well as output.

21.3.4 Trough

During the trough phase, the economic activities of a country decline below the normal level. In this phase, the growth rate of an economy becomes negative. In addition, in trough phase, there is a rapid decline in national income and expenditure. In this phase, it becomes difficult for debtors to pay off their debts. As a result, the rate of interest decreases; therefore, banks do not prefer to lend money. Consequently, banks face the situation of increase in their cash balances. Apart from this, the level of economic output of a country becomes low and unemployment becomes high. In addition, in trough phase, investors do not invest in stock markets. In trough phase, many weak organizations leave industries or rather dissolve. At this point, an economy reaches to the lowest level of shrinking.

21.3.5 Recovery

As discussed in the previous section, in trough phase, an economy reaches to the lowest level of shrinking. This lowest level is the limit to which an economy shrinks. Once the economy touches the lowest level, it happens to be the end of negativism and beginning of positivism. This leads to reversal of the process of business cycle. As a result, individuals and organizations start developing a positive attitude toward the various economic factors, such as investment, employment, and production. This process of reversal starts from the labor market. Consequently, organizations discontinue laying off individuals and start hiring, but in limited number. At this stage, wages provided by organizations to individuals is less as compared to their skills and abilities. This marks the beginning of the recovery phase. In recovery phase, consumers increase their rate of consumption, as they assume that there would be no further reduction in the prices of products. As a result, the demand for consumer products increases. In addition, in recovery phase, bankers start utilizing their accumulated cash balances by declining the lending rate and increasing investment in various securities and bonds. Similarly, adopting a positive approach other private investors also start investing in the stock market. As a result, security prices increase and rate of interest decreases.

Price mechanism plays a very important role in the recovery phase of economy. As discussed earlier, during recession, the rate at which the price of factor of production falls is greater than the rate of reduction in the prices of final products. Therefore, producers are always able to earn a certain amount of profit, which increases at trough stage. The increase in profit also continues in the recovery phase. Apart from this, in recovery phase, some of the depreciated capital goods are replaced by producers and some are maintained by them. As a result, investment and employment by organizations increases. As this process gains momentum, an economy again enters into the phase of expansion. Thus, a business cycle gets completed.

- Suspects the constancy of multiplier in changing economic conditions. Without practical evidence, the accelerator and multiplier cannot be assumed to be constant.
- Takes into consideration the abstract theory, which cannot be applied in the real world.

21.5 Controlling Business Cycles–Stabilization Policies

Business cycles can have positive or negative effects on an economy. For example, in the expansion phase, there can be a rapid economic growth, whereas unemployment and poverty may exist in a country during the recession period. Therefore, government and economists strive to take different measures for controlling economic fluctuations and make the economy run back on growth path. These measures came into existence after 1930s, when the whole world was facing great depression. Before great depression, economists had a view that market forces work automatically to make the economy stable. However, great depression proved that the market forces do not work automatically otherwise depression would not take place.

Therefore, government formulates certain policies and takes measures for increasing and maintaining the growth rate of economy. These measures help in controlling severe fluctuations in an economy. Preventing the economy from severe fluctuations is termed as stabilization of economy. A stabilized economy is characterized by relatively an increased level of employment, output, and consumption. In addition, in a stabilized economy, the government plays a major in controlling the business activities of public and private sectors. The main problem of developing countries in stabilizing their economy is to control prices, whereas in developed countries, the problem is to control the further decline of growth rate.

The main goals of policies formulated for stabilizing the economy are as follows:

- Avoiding extreme fluctuations in the economy and encouraging fluctuations that are required for economic growth
- Making optimum utilization of available resources
- Inspiring free competitive enterprise that would not affect the overall market economy
- Preventing dispute between internal and external economy

The two most commonly used stabilization policies are fiscal and monetary policies. In case, these two policies fail to overcome the economic problem, then the government uses various direct control measures.

Case Study-1: The Business Cycle of ABC Country

... such as production, prices, savings, and investment, of ... They considered it minor ... services

In the present scenario, individuals need to save money to [illegible], such as food, clothing, education, and housing. Apart from this, they also save money for different contingencies that may take place in future. In ancient days, individuals used to save money in their homes. In this way, savings were available for use whenever required. However, it involved a high risk of loss due to theft, robbery, and other accidents. Thus, individuals were in a need of a place where money could be saved safely and made available anytime. Banks are such places where people can deposit their money that can be withdrawn on demand.

The economic condition of any country is closely related to the efficiency of its banking system. A bank is a financial institution that carries out lending and borrowing activities in an economy. In other words, a bank can be defined as an organization that is involved in accepting deposits and granting loans for short and long-term purposes. It also renders many other useful services, such as collection and payment of bills and safekeeping of jewelry and other valuable items. Banks act as an intermediary between people having surplus money and those requiring money for different purposes. Moreover, they encourage savings habit among individuals; thereby, making funds available for productive use. In India, there are various types of banks that operate to fulfill the financial requirements of different categories of people engaged in agriculture, business, and other professions. Therefore, on the basis of functions, banks are broadly categorized into two types, namely, central bank and commercial banks.

A central bank acts as an apex body that is entrusted to guide and regulate the banking system of a country. It enjoys an exclusive right to issue currency notes and regulate their circulation in the country. Moreover, it advises the government on monetary and fiscal policies and decides the interest rates on loans granted by commercial banks. Therefore, a central bank essentially acts as a government's banker. On the other hand, commercial banks deal with the public by accepting its deposits, transferring funds from one bank to another, and creating money by advancing loans. The main difference between a central bank and a commercial bank is that a central bank works for the economic development of a country, whereas a commercial bank operates for profit motive.

The chapter begins by explaining the concept of a bank and its importance in detail. Next, it details upon the significance of commercial banks and their functions. The chapter also sheds light on the process of credit creation by commercial banks. Further, it details upon the importance of central bank in the economic development of a country. Toward the end, the chapter discusses the different functions of a central bank at length.

22.2 Concept of a Bank

Banking contributes an indispensable part in the economic development of a country. A bank refers to a financial institution that is engaged in borrowing and lending activities. In simple terms, bank can be defined as an organization that deals in money. It acts as a financial intermediary between lenders and borrowers. Some of the popular definitions of banks are as follows:

In the words of ***Findlay Shirras****, "A banker is a person or firm or company having place of business where credit are opened by the deposits, collection of money or currency or subject to be paid or remitted upon draft, cheque or where money is advanced or loaned on stocks, bonds, bullion, bill of exchange and promissory notes are received for discount or sale."*

According to Prof. ***Sayers****, "A bank is an institution whose debts are widely accepted in settlement of other people's debts to each other."*

As per the ***Indian Banking Act 1949****, "A banking company means any company which transacts the business of banking. Banking means accepting for the purpose of lending of investment of deposits of money from the public, payable on demand or other wise and withdraw able by cheque, draft or otherwise."*

Apart from this, banks also provide a number of other useful services, such as collection and payment of bills and safe-keeping of jewelry and other valuable items. They accept deposits from the general public and provide interest, which is added to the original amount of deposits. On the basis of deposits, banks provide loans and advances to farmers, traders, and businessmen on a specific rate of interest for carrying out their businesses. In this way, they contribute to the economic development of the country and welfare of the general public.

In addition to banks, there are other financial institutions that are engaged in lending and borrowing activities. Some of the financial institutions in India are TATA Mutual Fund and Reliance Mutual Fund. These financial institutions are different from banks in two ways. Firstly, bank deposits are checkable, while deposits with financial institutions are not checkable. Checkable implies withdrawal of money by writing checks. Banks allow depositors to withdraw their money by writing checks without any intimation. Secondly, banks are involved in money creation, whereas financial institutions do not. Banks create money by granting loans to individuals and businesses.

A banking system is a two-tier structure, which is central bank and commercial banks. A central bank controls and regulates commercial banks, whereas commercial banks strive to fulfill the financial requirements of the general public under the guidelines of the central bank. Now, let us discuss both the types of banks in detail in the next sections.

22.3 Commercial Bank

Commercial banks are the most important components of the whole banking system. A commercial bank is a profit-based financial institution that grants loans, accepts deposits, and offers other financial services, such as overdraft facilities and electronic transfer of funds. *According to* **Culbertson**, *"Commercial Banks are the institutions that make short make short term loans to business and in the process create money."* In other words, commercial banks are financial institutions that accept demand deposits from the general public, transfer funds from the bank to another, and earn profit. Commercial banks play a significant role in fulfilling the short-term and medium-term financial requirements of industries. They do not provide long-term credit, so that liquidity of assets should be maintained. The funds of commercial banks belong to the general public and are withdrawn at a short notice; therefore, commercial banks prefers to provide credit for a short period of time backed by tangible and easily marketable securities. Commercial banks, while providing loans to businesses, consider various factors, such as nature and size of business, financial status and profitability of the business, and its ability to repay loans. Commercial banks are of three types, which are as follows:

- **Public Sector Banks:** Refer to a type of commercial banks that are nationalized by the government of a country. In public sector banks, the major stake is held by the government. In India, public sector banks operate under the guidelines of Reserve Bank of India (RBI), which is the central bank. Some of the Indian public sector banks are State Bank of India (SBI), Corporation Bank, Bank of Baroda, Dena Bank, and Punjab National Bank.
- **Private Sector Banks:** Refer to a kind of commercial banks in which major part of share capital is held by private businesses and individuals. These banks are registered as companies with limited liability. Some of the Indian private sector banks are Vysya Bank, Industrial Credit and Investment Corporation of India (ICICI) Bank, and Housing Development Finance Corporation (HDFC) Bank.
- **Foreign Banks:** Refer to commercial banks that are headquartered in a foreign country, but operate branches in different countries. Some of the foreign banks operating in India are Hong Kong and Shanghai Banking Corporation (HSBC), Citibank, American Express Bank, Standard & Chartered Bank, and Grindlay's Bank. In India, since financial reforms of 1991, there is a rapid increase in the number of foreign banks.

Commercial banks mark significant importance in the economic development of a country as well as serving the financial requirements of the general public. Let us study the different functions of commercial banks in detail in the next section.

22.3.1 Functions of Commercial Banks

As discussed earlier, commercial banks are institutions that conduct business for profit motive by accepting public deposits for various investment purposes. The functions of commercial banks are broadly classified into primary functions and secondary functions, which are shown in Figure-1:

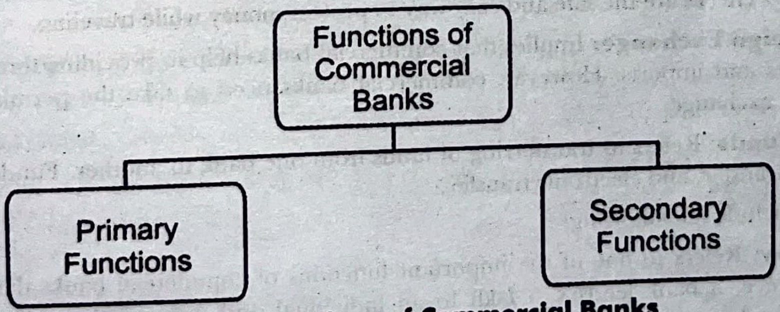

Figure-1: Functions of Commercial Banks

The functions of commercial banks (as shown in Figure-1) are discussed as follows:

- **Primary Functions:** Refer to the basic functions of commercial banks that include the following:
  - ⇨ **Accepting Deposits**: Implies that commercial banks are mainly dependent on public deposits. There are two types of deposits, which are discussed as follows:
  - ⇨ **Demand Deposits**: Refer to kind of deposits that can be easily withdrawn by individuals without any prior notice to the bank. In other words, the owners of these deposits are allowed to withdraw money anytime by simply writing a check. These deposits are the part of money supply as they are used as a means for the payment of goods and services as well as debts. Receiving these deposits is the main function of commercial banks.
  - ⇨ **Time Deposits**: Refer to deposits that are for certain period of time. Banks pay higher interest on time deposits. These deposits can be withdrawn only after a specific time period is completed by providing a written notice to the bank.

EXHIBIT-1

Types of Accounts

A commercial bank offers the following accounts to individuals for depositing their money:

- **Current Accounts:** Refer to accounts that are mainly meant for businesses and other public and private organizations. Current accounts are check-operated accounts that are not for saving purposes as no interest is paid on deposits in these accounts.
- **Savings Accounts:** Refer to accounts that promote savings among individuals while allowing them to use their funds when required. Apart from this, individuals get interests on deposits in savings account.
- **Fixed Deposit Accounts:** Refer to accounts in which deposits are made for a fixed period. The deposits in these accounts can be withdrawn before the expiry of the period. The profits are higher, if the period of deposits is longer.

⇨ **Advancing Loans:** Refers to one of the important functions of commercial banks. The public deposits are used by commercial banks for the purpose of granting loans to individuals and businesses. Commercial banks grant loans in the form of overdraft, cash credit, and discounting bills of exchange, which are discussed later in the chapter.

- **Secondary Functions:** Refer to crucial functions of commercial banks. The secondary functions can be classified under three heads, namely, agency functions, general utility functions, and other functions. These functions are explained as follows:

⇨ **Agency Functions:** Implies that commercial banks act as agents of customers by performing various functions, which are as follows:

⇨ **Collecting Checks:** Refer to one of the important functions of commercial banks. The banks collect checks and bills of exchange on the behalf of their customers through clearing house facilities provided by the central bank.

⇨ **Collecting Income:** Constitute another major function of commercial banks. Commercial banks collect dividends, pension, salaries, rents, and interests on investments on behalf of their customers. A credit voucher is sent to customers for information when any income is collected by the bank.

⇨ **Paying Expenses:** Implies that commercial banks make the payments of various obligations of customers, such as telephone bills, insurance premium, school fees, and rents. Similar to credit voucher, a debit voucher is sent to customers for information when expenses are paid by the bank.

⇨ **General Utility Functions:** Include the following functions:

⇨ **Providing Locker Facilities:** Implies that commercial banks provide locker facilities to its customers for safe keeping of jewelry, shares, debentures, and other valuable items. This minimizes the risk of loss due to theft at homes.

⇨ **Issuing Traveler's Checks:** Implies that banks issue traveler's checks to individuals for traveling outside the country. Traveler's checks are the safe and easy way to protect money while traveling.

⇨ **Dealing in Foreign Exchange:** Implies that commercial banks help in providing foreign exchange to businessmen dealing in exports and imports. However, commercial banks need to take the permission of the central bank for dealing in foreign exchange.

⇨ **Transferring Funds:** Refers to transferring of funds from one bank to another. Funds are transferred by means of draft, telephonic transfer, and electronic transfer.

⇨ **Other Functions:** Include the following:

⇨ **Creating Money:** Refers to one of the important functions of commercial banks that helps in increasing money supply. For instance, a bank lends ₹ 5 lakh to an individual and opens a demand deposit in the name of that individual. Bank makes a credit entry of ₹ 5 lakh in that account. This leads to creation of demand deposits in that account. The point to be noted here is that there is no payment in cash. Thus, without printing additional money, the supply of money is increased.

⇨ **Electronic Banking:** Include services, such as debit cards, credit cards, and Internet banking.

EXHIBIT-2

Commercial Banks in India

A list of commercial banks is as follows:

- Abu Dhabi Commercial Bank Ltd.
- American Express Bank Ltd.
- Arab Bangladesh Bank Limited
- Allahabad Bank
- Andhra Bank
- Axis Bank

- The Development
- The Hongkong & Shanghai Banking Corporation Ltd.
- Tamilnad Mercantile Bank Ltd.
- The Bank of Rajasthan Limited
- The Dhanalakshmi Bank Limited.
- The Federal Bank Ltd.
- The HDFC Bank Ltd.
- The Jammu & Kashmir Bank Ltd.
- The Nainital Bank Ltd.
- The Sangli Bank Ltd.
- The South Indian Bank Ltd.
- The Ratnakar Bank Ltd.
- The Royal Bank of Scotland N.V.
- The Lakshmi Vilas Bank Ltd
- Union Bank of India
- United Bank Of India
- Vijaya Bank
- Yes Bank

22.3.2 Types of Credit Offered by Commercial Banks

A commercial bank offers short-term loans to individuals and organizations in the form of bank credit, which is a secured loan carrying a certain rate of interest. There are various types of bank credit provided by a commercial bank, as shown in Figure-2:

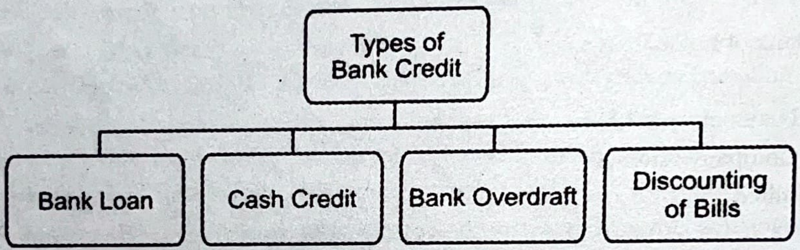

Figure-1: Showing Types of Bank Credit

Bank Loan

Bank loan may be defined as the amount of money granted by the bank at a specified rate of interest for a fixed period of time. The commercial bank needs to follow certain guidelines to extend bank loans to a client. For example, the bank requires the copy of identity and income proofs of the client and a guarantor to sanction bank loan. The banks grant loan to clients against the security of assets so that, in case of default, they can recover the loan amount. The securities used against the bank loan may be tangible or intangible, such as goodwill, assets, inventory, and documents of title of goods.

The advantages of the bank loan are as follows:

- Grants loan at low rate of interest
- Involves very simple process of loan granting
- Requires minimum document and legal formalities to pass the loan
- Involves good customer relationship management
- Consumes less time because of modern techniques and computerization
- Provides door-to-door facilities

In addition to advantages, the bank loan suffers from various imitations, which are as follows:

- Imposes heavy penalty and legal action in case of default of loan
- Charges high rate of interest, if the party fails to pay the loan amount in the allotted time

- Adds extra burden on the borrower, who needs to incur cost in preparing legal documents for procuring loans
- Affects the goodwill of the organization, in case of delay in payment

Cash Credit

Cash credit can be defined as an arrangement made by the bank for the clients to withdraw cash exceeding their account limit. The cash credit facility is generally sanctioned for one year but it may extend up to three years in some cases. In case of special request by the client, the time limit can be further extended by the bank. The extension of the allotted time depends on the consent of the bank and past performance of the client. The rate of interest charged by the bank on cash credit depends on the time duration for which the cash has been withdrawn and the amount of cash.

The advantages of the cash credit are as follows:

- Involves very less time in the approval of credit
- Involves flexibility as the cash credit can be extended for more time to fulfill the need of the customers.
- Helps in fulfilling the current liabilities of the organization
- Charges interest only on the amount withdrawn by the customer. The interest on cash credit is charged only on the amount of cash withdrawn from the bank, not on the total amount of credit sanctioned.

The cash credit is one of the most important instruments of short-term financing but it has some limitations. These limitations are mentioned in the following points:

- Requires more security for the approval of cash
- Imposes very high rate of interest
- Depends on the consent of the bank to extend the credit amount and the time limit

Bank Overdraft

Bank overdraft is the quickest means of the short-term financing provided by the bank. It is a facility in which the bank allows the current account holders to overdraw their current accounts by a specified limit. The clients generally avail the bank overdraft facility to meet urgent and emergency requirements. Bank overdraft is the most popular form of borrowing and do not require any written formalities. The bank charges very low rate of interest on bank overdraft up to a certain time.

The advantages of the bank overdraft are as follows:

- Involves no documentation for the extension of overdraft amount
- Imposes nominal interest on the overdraft amount
- Charges fee only on the amount exceeding the account limit

The disadvantages of the bank overdraft are as follows:

- Incurs high cost for the clients, if they fail to pay the amount of overdraft for a longer period of time
- Hampers the reputation of the organization, if it fails to pay the amount of overdraft on time
- Allows the bank to deduct overdraft amount from the customers' accounts without their permission

Discounting of Bill

Discounting of bill is a process of settling the bill of exchange by the bank at a value less than the face value before maturity date. According to ***Sec. 126 of Negotiable Instruments***, *"a bill of exchange is an unconditional order in writing addressed by one person to another, signed by the person giving it, requiring the person to whom it is addressed to pay on demand or at fixed or determinable future time a sum certain in money to order or to bearer."*

The facility of discounting of bill is used by the organizations to meet their immediate need of cash for settling down current liabilities. Conditions laid down by the bank for discounting of bill are as follows:

- Must be intended to specific purpose
- Must be enclosed with the signature of the two persons (company, bank or reputed person)
- Must be less than the face value
- Must be produced before the maturity period

Commercial banks

- **Amount of Cash**: Affects the creation of credit by commercial banks. Higher the cash of commercial banks in the form of public deposits, more will be the credit creation. However, the amount of cash to be held by commercial banks is controlled by the central bank. The central bank may expand or contract cash in commercial banks by purchasing or selling government securities. Moreover, the credit creation capacity depends on the rate of increase or decrease in CRR by the central bank.
- **CRR:** Refers to reserve ratio of cash that need to be kept with the central bank by commercial banks. The main purpose of keeping this reserve is to fulfill the transactions needs of depositors and to ensure safety and liquidity of commercial banks. In case the ratio falls, the credit creation would be more and vice versa.
- **Leakages**: Imply the outflow of cash. The credit creation process may suffer from leakages of cash. The different types of leakages are discussed as follows:
  - ⇨ **Excess Reserves:** Takes place generally when the economy is moving towards recession. In such a case, banks may decide to maintain reserves instead of utilizing funds for lending. Therefore, in such situations, credit created by commercial banks would be small as a large amount of cash is reserved.
  - ⇨ **Currency Drains:** Imply that the public does not deposit all the cash with it. The customers may hold the cash with them which affects the credit creation by banks. Thus, the capacity of banks to create credit reduces.
- **Availability of Borrowers**: Affects the credit creation by banks. The credit is created by lending money in form of loans to the borrowers. There will be no credit creation if there are no borrowers.
- **Availability of Securities**: Refers to securities against which banks grant loan. Thus, availability of securities is necessary for granting loan otherwise credit creation will not occur. According to **Crowther**, *"the bank does not create money out of thin air; it transmutes other forms of wealth into money."*
- **Business Conditions:** Imply that credit creation is influenced by cyclical nature of an economy. For example, credit creation would be small when the economy enters into the depression phase. This is because in depression phase, businessmen do not prefer to invest in new projects. In the other hand, in prosperity phase, businessmen approach banks for loans, which lead to credit creation.

In spite of its limitations, we can conclude that credit creation by commercial banks is a significant source for generating income. The essential conditions for creation of credit are as follows:

- Accepting the fresh deposits from public
- Willingness of banks to lend money
- Willingness of borrowers to borrow

Credit creation

22.5 Central Bank

A central bank plays an important role in monetary and banking system of a country. It is responsible for maintaining financial sovereignty and economic stability of a country, especially in underdeveloped countries. It issues currency, regulates money supply, and controls different interest rates in a country. Apart from this, the central bank controls and regulates the activities of all commercial banks in a country. Some of the management experts have defined central bank in different ways, which are as follows:

According to **Samuelson**, *"Every Central Bank has one function. It operates to control economy, supply of money and credit."*

According to **Vera Smith**, *"The primary definition of Central Bank is the banking system in which a single bank has either a complete or residuary monopoly of note issue."*

According to **Kent**, *"Central Bank may be defined as an institution which is charged with the responsibility of managing the expansion and contraction of the volume of money in the interest of general public welfare."*

According to **Bank of International Settlement**, *"A Central Bank is the bank in any country to which has been entrusted the duty of regulating the volume of currency and credit in that country."*

Bank of England was the world's first effective central bank that was established in 1694. As per the resolution passed in Brussels Financial Conference, 1920, all the countries should establish a central bank for interest of world cooperation. Thus, since 1920, central banks are formed in almost every country of the world. In India, RBI operates as a central bank.

Central banks differ from the commercial banks in various ways, which are shown in Table-2:

Table-2: Differences between a Central Bank and Commercial Bank

Central Bank	Commercial Bank
Works for the public welfare and economic development of a country. A central bank is governed by the government of a country.	Operates for profit motive. The majority of stake is held by the government as well as the private sector.

Table-2: Differences between a Central Bank and Commercial Bank

Central Bank	Commercial Bank
Controls and regulates the entire banking system of a country.	Operates under the direct control and supervision of the central bank. In India, all the commercial banks work under the guidelines issued by RBI.
Does not deal directly with the public. It issues guidelines to commercial banks for the economic development of a country.	Deals directly with the public. It serves the financial requirements of the general public by providing short and medium-term loans and depositing and securing money that can be drawn on demand.
Issues currency and controls the supply of money in the market	Does not issue currency, but only adds to the money supply by creating demand deposits.
Acts as a state owned institution.	Acts as a state or private owned institution.
Acts as a custodian of foreign exchange of the country.	Performs foreign exchange business only on the approval of the central bank.
Acts as a banker to the government.	Acts as agents of the central bank.
Controls credit creation in economy, thus, acts as a clearing house of other banks.	Acts as a clearing house only as an agent of the central bank.

22.6 Functions of Central Bank

As discussed earlier, the central bank does not deal with the general public directly. It performs its functions with the help of commercial banks. The central bank is accountable for protecting the financial stability and economic development of a country. Apart from this, the central bank also plays a significant part in avoiding the cyclical fluctuations by controlling money supply in the market. As per the view of Hawtrey, a central bank should primarily be the *"lender of last resort."* On the other hand, Kisch and Elkins beilved that *"the maintenance of the stability of the monetary standard"* as the essential function of central bank. The functions of central bank are broadly divided into two parts, namely, traditional functions and developmental functions. These functions are shown in Figure-4:

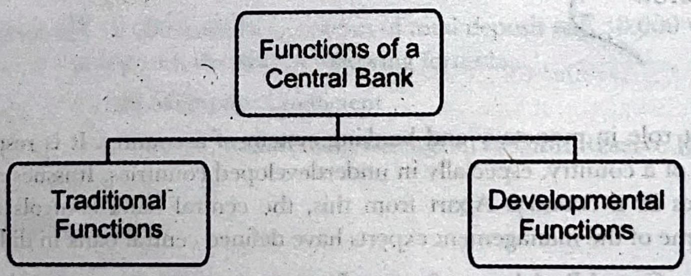

Figure-3: Different Functions of a Central Bank

The different functions of a central bank (as discussed in Figure-4) are explained as follows:

- **Traditional Functions:** Refer to functions that are common to all central banks in the world. The traditional functions of the central bank include the following:
  - ⇨ **Bank of issue**: Possesses an exclusive right to issue notes (currency) in every country of the world. In the initial years of banking, every bank enjoyed the right of issuing notes. However, this led to a number of problems, such as notes were over-issued and the currency system became disorganized. Therefore, the governments of different countries authorized central banks to issue notes. The issue of notes by one bank has led to uniformity in note circulation and balance in money supply.
  - ⇨ **Government's banker, agent, and advisor:** Implies that a central bank performs different functions for the government. As a banker, the central bank performs banking functions for the government as commercial banks performs for the public by accepting the government deposits and granting loans to the government. As an agent, the central bank manages the public debt, undertakes the payment of interest on this debt, and provides all other services related to the debt. As an advisor, the central bank gives advice to the government regarding economic policy matters, money market, capital market, and government loans. Apart from this, the central bank formulates and implements fiscal and monetary policies to regulate the supply of money in the market and control inflation.

- **Custodian of cash reserves of commercial banks:** Implies that the central bank takes care of the cash reserves of commercial banks. Commercial banks are required to keep certain amount of public deposits as cash reserves with the central bank, and other part is kept with commercial banks themselves. The percentage of cash reserves is decided by the central bank. A certain part of these reserves is kept with the central bank for the purpose of granting loans to commercial banks. Therefore, the central bank is also called banker's bank.
- **Custodian of international currency:** Implies that the central bank maintains a minimum reserve of international currency. The main aim of this reserve is to meet emergency requirements of foreign exchange and overcome adverse requirements of deficit in balance of payments.
- **Bank of rediscount:** Serve the cash requirements of individuals and businesses by rediscounting the bills of exchange through commercial banks. This is an indirect way of lending money to commercial banks by the central bank. Discounting a bill of exchange implies acquiring the bill by purchasing it for the sum less than its face value. Rediscounting implies discounting a bill of exchange that was previously discounted. When owners of bill of exchange are in need of cash they approach the commercial bank to discount these bills. If commercial banks are themselves in need of cash they approach the central bank to rediscount the bills.
- **Lender of last resort:** Refer to the most crucial function of the central bank. The central bank also lends money to commercial banks. Instead of rediscounting of bills, the central bank provides loans against treasury bills, government securities, and bills of exchange.
- **Bank of central clearance, settlement, and transfer:** Implies that the central bank helps in settling mutual indebtness between commercial banks. Depositors of banks give checks and demand drafts drawn on other banks. In such a case, it is not possible for banks to approach each other for clearance, settlement, or transfer of deposits. The central bank makes this process easy by setting a clearing house under it. The clearing house acts as an institution where mutual indebtness between banks is settled. The representatives of different banks meet in the clearing house to settle inter-bank payments. This helps the central bank to know the liquidity state of the commercial banks.
- **Controller of Credit**: Implies that the central bank has power to regulate the credit creation by commercial banks. The credit creation depends upon the amount of deposits, cash reserves, and rate of interest given by commercial banks. All these are directly or indirectly controlled by the central bank. For instance, the central bank can influence the deposits of commercial banks by performing open market operations and making changes in CRR to control various economic conditions.

- **Developmental Functions:** Refer to the functions that are related to the promotion of banking system and economic development of the country. These are not compulsory functions of the central bank. These are discussed as follows:
  - **Developing specialized financial institutions:** Refer to the primary functions of the central bank for the economic development of a country. The central bank establishes institutions that serve credit requirements of the agriculture sector and other rural businesses. Some of these financial institutions include Industrial Development Bank of India (IDBI) and National Bank for Agriculture and Rural Development (NABARD). These are called specialized institutions as they serve the specific sectors of the economy.

EXHIBIT-3

National Bank for Agriculture and Rural Development

NABARD is an apex development bank, planning and operating in the field of agriculture and its allied activities. It provides credit facilities to farmers, small-scale industries, and other related organizations working for the development of the agricultural sector. It was established in the year 1982, through an Act of Parliament to integrate the development of rural sector with the growth of other sector. NABARD grants short-term loans to both the farming and non-farming sectors for technically and financially feasible projects. Some of the important functions performed by it are as follows:

- **Refinancing:** Refers to the financial assistance provided to the lending institute working for the development of the agricultural sector. It extends the date of maturity of the loans to the lending institute on the basis of their credit rating, which are associated with the development of the rural sector. With the help of refinancing, the loan structure are modified, lower rate of interest is imposed on the loan, so that lenders can return them on time.
- **Promote Rural Development:** Refers to the promotional scheme launched by NABARD to promote rural development by providing financial assistance to farmers to earn their livelihood.
- **Evaluate and Monitor the Client Bank:** Refers to the supervision function of NABARD towards its client bank. It is the responsibility of NABARD to evaluate, monitor, and inspect the working of the client bank time-to-time.
- **Assist RBI and Government Body:** Refers to the assistance provided by NABARD to RBI and different government bodies in implementing various schemes related to the rural development.

⇨ **Influencing money market and capital market:** Implies that central bank helps in controlling the financial markets. Money market deals in short term credit and capital market deals in long term credit. The central bank maintains the country's economic growth by controlling the activities of these markets.

⇨ **Collecting statistical data:** Gathers and analyzes data related to banking, currency, and foreign exchange position of a country. The data is quite helpful for researchers, policymakers, and economists. For instance, the Reserve Bank of India publishes a magazine called Reserve Bank of India Bulletin, whose data is useful for formulating different policies and making macro-level decisions.

Case Study-1: Process of Credit Creation

Mr. A deposited ₹ 10, 0000 in Punjab National Bank (PNB). The cash reserve requirement of PNB is 10%. The bank lends ₹ 90,000 to Mr. B by opening a demand deposit account in his name. Suppose Mr. B pays his creditor ₹ 90, 000 through a check. This check is further deposited by the creditor in State Bank of India (SBI). In SBI, cash reserve requirement is 15%. Thus, some amount will again be kept as reserve and balance is used for lending purposes.

Questions:

Q 1. Calculate the amount of reserves kept by PNB when A deposits ₹ 100000.

Ans. The cash reserve requirement of PNB is 10%. Thus, the amount of reserves kept by P[illegible] deposits ₹ 100000 is:
100000* 10%= ₹ 10, 000

Q 2. Calculate the amount lend by SBI.

Ans. Cash reserve requirement is 15% in case of SBI. Thus,