Module 4
Macroeconomic Concepts

The Circular Flow of Income

The circular flow of income and expenditure refers to the process whereby the national income and expenditure of an economy flow in a circular manner continuously through time. The various components of national income and expenditure such as saving, investment, taxation, government expenditure, exports, imports, etc. The following are the 3 models:

1. Circular Flow in a Two Sector Economy
2. Circular Flow in a Three- Sector Economy
3. Circular Flow in a Four- Sector Economy

Circular Flow in a Two Sector Economy

We begin with a simple hypothetical economy where there are only two sectors, the household and business. The household sector owns all the factors of production, that is, land, labour and capital. This sector receives income by selling the services of these factors to the business sector.

The business sector consists of producers who produce products and sell them to the household sector or consumers. Thus the household sector buys the output of products of the business sector. The circular flow of income and expenditure in such an economy is shown in Figure 1 where the product market is shown in the upper portion and the factor market in the lower portion.

$$Y = C + I$$

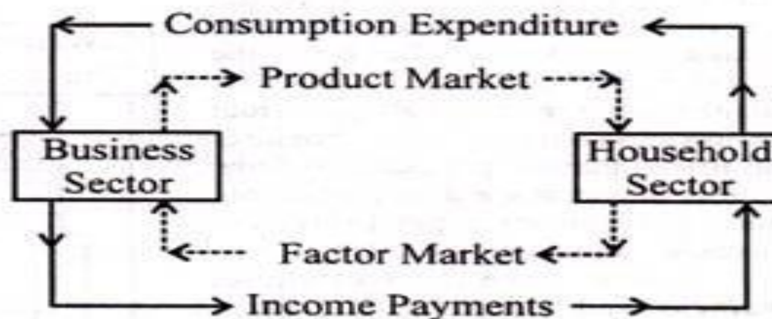

Fig. 1.

In the product market, the household sector purchases goods and services from the business sector while in the factor market the household sector receives income from the former for

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providing services. Thus the household sector purchases all goods and services provided by the business sector and makes payments to the latter in lieu of these.

Circular Flow with Saving and Investment (Banking Sector) Added

Figure 2 shows how the circular flow of income and expenditure is altered by the inclusion of saving and investment.

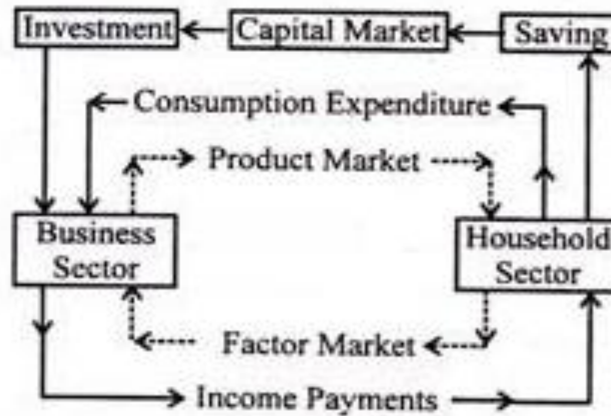

Fig. 2.

Three- Sector Model

We add the government sector so as to make it a three-sector closed model of circular flow of income and expenditure. For this, we add taxation and government purchases (or expenditure) in our presentation.

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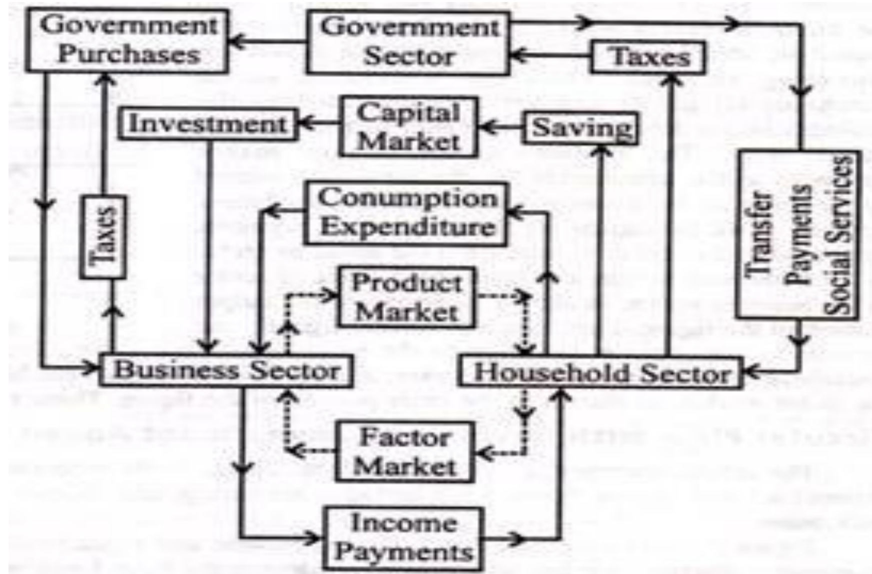

Fig. 3.

$$Y = C + I + G$$

Four Sector Model

The actual economy is an open one where foreign trade plays an important role. Exports are an injection or inflows into the economy.

$$Y = C + I + G + (X - M)$$

Y = Total Income

C = Consumption

I = Investment

G = Government Expenses

X = Exports

M = Imports

(X – M) = Net Exports

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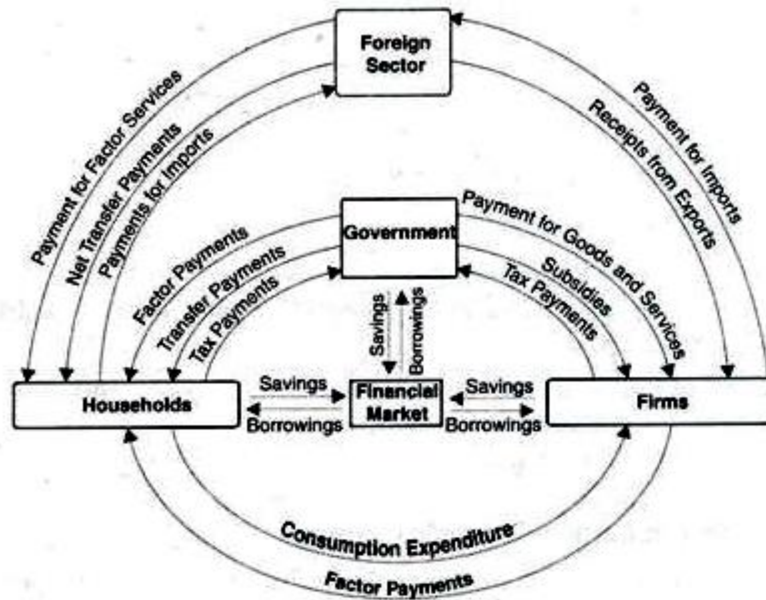

Fig. 1.7

Stock and Flow

- Stock is a quantity measurable at a particular point of time. E.g. total wealth of a person.
- Flow is a quantity measured over a period of time E.g. annual salary of an individual.

Stock	**Flow**
Point of time	Over a period of time
No time dimension	Involves time dimension
Static Concept	Dynamic Concept

Final Goods and Intermediate Goods

Intermediate goods are referred to as those goods that are used by businesses in producing goods or services. These goods are also known as producer goods.

Final goods are referred to as those goods which do not require further processing. These goods are also known as consumer goods and are produced for the purpose of direct consumption by the end consumer.

Intermediate goods are used for producing final goods or consumer goods or it can be said that they act as inputs in other goods and constitute the final goods as an ingredient.

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National Income (NI)

- NI is defined as the money value of the total goods and services produced in a country during a financial year. It is the total income of nation
- In India, it is central statistical organization (CSO) who is responsible for national income accounting

Gross Domestic Product (GDP)

- It is the market value of all final goods and services produced in an economy during a financial year

Gross National Product (GNP)

- It is the market value of all final goods and services produced in an economy during a financial year plus net factor income from abroad (NFIA)

GDP = GNP – NFIA

GNP = GDP + NFIA

National domestic product (NDP)

- It is the market value of all final goods and services produced in an economy during a financial year after deducting depreciation (consumption of fixed capital)
- Deprecation refers to the fall in value of capital due to wear and tear

NDP = GNP – Deprecation

Market price & Factor cost

- Market price is the price paid by the buyer of a commodity in the market
- Factor cost is the cost paid by the producer to the factor of production for their contribution in the production of commodity
    - **MP = Cost of production + Indirect taxes – Subsidies**
    - **FC = Cost of production - Indirect taxes + Subsidies**

Personal Income (PI)

- It is the sum of all income actually received by an individual from different sources in a country during financial year

Disposable income (DPI)

DPI = Personal income – Direct taxes

Percapita Income (PCI)

It is the per person average national income

PCI = NI / Population

METHODS FOR ESTIMATING NATIONAL INCOME

3 METHODS

1. Output method / Production method
2. Income method
3. Expenditure method

Output method / Production method

- It is also known as value added method.

Steps

1. Production units divides into different sectors like agriculture , industry , services sectors
2. Estimating the net value added by each sector
3. Summing it up to get the value of the domestic product (GDP)
4. Add NFIA with the domestic product > NI

Income Method

- Using this method , NI is obtained by adding up all the income of all individuals and business enterprises in the economy
- Income earned in the form of Rent (Land) , Wage (Labour) , Interest (Capital) , Profit (Organization)

NI = Rent + Wage + Interest + Profit

Steps

- Production units divides into different sectors like agriculture , industry , services sectors

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- Estimating factor income (Rent , Wage , Interest , Profit)
- Calculate NFIA

Domestic Factor Income + NFIA = NI

Expenditure Method

- It is also known as consumption – saving method
- This method considers the computation of NI by adding up all the expenditure made on goods and services during a given year

Types of Expenditures

1. Consumption expenditure (C) by households
2. Investment expenditure (I) by firms
3. Government expenditure (G)
4. Net Exports (X – M)

NI = C + I + G +(X – M)

Difficulties in the estimation of NI

- Income generated from the process of production for self- consumption
- All transfer payments
- Illegal income like smuggling , Black money etc.,
- Value of second hand goods
- Service of house-wives
- Lack of statistical data
- Problem of double counting
- Illiteracy
- Non- availability of data

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- Lack of accountability

3 sectors of the economy

- **Primary Sector**: This sector deals with the extraction and harvesting of natural resources such as agriculture and mining.
- **Secondary Sector**: This sector comprises construction, manufacturing, and processing.
- **Tertiary Sector**: Retailers, entertainment, and financial companies make up this sector

INFLATION

- It is the persistent increase in general price level or persistent decline in the real income of the people
- It means as the price rises, the value of money declines

Definition

Coulborn "Too much money chasing too few goods"

Inflation occurs due to an imbalance in demand and supply of money

Types of Inflation

1. Demand pull inflation: It happens when an increase in aggregate demand in the absence of an increase in aggregate supply or a relatively less increase in aggregate supply.
2. Cost push inflation: It is the result of increase in cost of production. As the cost of production increases, the supply decreases and the prices go up.
3. Creeping inflation > 0 – 3 %
4. Walking inflation > 3 – 10 %
5. Galloping inflation > More than 10%
6. Hyper inflation > More than 50%

Causes of Inflation

- Causes of inflation has been classified into two: Demand side factors and Supply side factors

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Demand side Factors

- Increase in money supply
- Increase in disposable income
- Increase in consumer spending
- Black money
- Increase in exports
- Cheap monetary policy
- **Supply side factors**
- Shortage in factors of production
- Industrial dispute
- Natural calamities
- Artificial scarcity (Hoarding)
- International factors

Methods to control Inflation

Monetary measures

- Bank Rate: The bank rate policy is used as an important instrument to control inflation. The Bank rate, also called as the Central Bank rediscount rate is the rate at which the central bank buys or redsicounts the eligible bills of exchange and other commercial papers presented by commercial banks to build their reserves.
- Open market operations: The open market operations are characterized by the sale and purchase of government securities and bonds by the central bank. The central bank buys and sells the government securities and bonds to the public through commercial banks. The government securities are sold via commercial banks such that a certain amount of bank deposits is transferred to the central bank. As a result, the credit creation capacity of the commercial banks reduces. Thus, the flow of money from the banks to the public also gets reduced.

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- Variable reserve ratio: The variable reserve ratio, also called as the Cash Reserve Ratio (CRR) is a certain proportion of total demand and time deposits that the commercial banks are required to maintain in the form of cash reserves with the central bank.
- The cash reserve ratio is often determined and imposed by the central bank with a view to controlling the money supply. When the central bank raises the CRR, the lending capacity of the commercial banks reduces due to which the flow of money from the banks to the public also decreases. Thus, it helps in controlling the rise in the price to the extent it is caused by the bank credit to the public.

Fiscal Measures

- Reduction of unnecessary expenditure: A cut in the public expenditure reduces not only the government's demand for goods and services but also private consumption expenditure. Therefore, the excess demand decreases more than a given cut in the public expenditure.
- Increase taxes: Taxation of income reduces the disposable income. As consumer demand is a function of disposable income, consumer demand decreases due to taxation. Thus, a well-designed taxation policy reduces aggregate demand and thereby brings the inflation under control.
- Increase savings: Promote savings so as to decrease the money supply in the public.

Other measures

- Increase output: Increase production in the economy
- Price control: Government has to intervene in the market to control process.
- More imports: Increased imports will reduce the money supply in the economy.
- Control black money: government has to take polices to control lack money in the economy.

Business financing

Business finance refers to funds availed by business owners to meet their needs that may include commencing a business, obtaining top-up funds to finance business operations, obtaining finance to purchase capital assets for the business, or to deal with a sudden cash crunch faced by the business.

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Sources of Capital

- Internal self – finance: An important source is the saving of the unit itself.
- Public Deposits: I t is mostly short – term finance. People keep their money as deposit with these companies for a period of 6 months a year, two years or so. Depositors receive a fixed interest. This money is used by companies to meet their expenses.
- Loans from Bank: Commercial banks also provide funds for meeting short- term needs for working capital.
- Indigenous Bankers: These banks charge heavy rate of interest.
- Development finance institutions: It caters the financial needs of large and small industries.

Bonds and Shares

A bond is a fixed-income instrument that represents a loan made by an investor to a borrower (typically corporate or governmental). Bonds are used by companies, municipalities, states, and sovereign governments to finance projects and operations. Owners of bonds are debtholders, or creditors, of the issuer. Bond details include the end date when the principal of the loan is due to be paid to the bond owner and usually include the terms for variable or fixed interest payments made by the borrower. A bond is referred to as a fixed-income instrument since bonds traditionally paid a fixed interest rate (coupon) to debtholders.

How Bonds Work

When companies or other entities need to raise money to finance new projects, maintain ongoing operations, or refinance existing debts, they may issue bonds directly to investors. The borrower (issuer) issues a bond that includes the terms of the loan, interest payments that will be made, and the time at which the loaned funds (bond principal) must be paid back (maturity date). The interest payment (the coupon) is part of the return that bondholders earn for loaning their funds to the issuer. The interest rate that determines the payment is called the coupon rate.

Shares

A share represents a unit of equity ownership in a company. Shareholders are entitled to any profits that the company may earn in the form of dividends. They are also the bearers of any losses that the company may face. In simple words, if you are a shareholder of a company, you hold a percentage of ownership of the issuing company in proportion to

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the shares you have bought. Shares are perpetual investment and they do not have specific maturity period.

Bonds	Shares
The investor lends money to the company	The investor owns part of the company
Risk is low	High risk
Issued by Govt. Institutions, Financial institutions etc.,	Issued by Corporate enterprises
Bond holders get interest, as a fixed payment	Shareholders get dividend
Return is certain	Return is uncertain
Maturity period is fixed	No maturity period

Money Market and Capital Market

A financial market is a place where buyers and seller come together to trade in financial assets such as bonds, stocks, derivatives, currencies and commodities. The main objective of a financial market is to fix prices for global trade, increase capital and transfer risk and liquidity.

Thought the financial market has various components; the two most important components are the money market and capital market. In the money market, only short-term liquid financial instruments are exchanged. Whereas, in the capital market, only long term securities are dealt with.

Capital Market plays a significant role in the growth of a country's economy as it provides a platform for mobilising the funds. Similarly, the money market holds a range of operational characteristics.

The Money Market

The money market is a good place for individuals, banks, other companies, and governments to park cash for a short period of time, usually one year or less. It exists so that businesses and governments that need cash to operate can get it quickly at a reasonable cost, and so that businesses that have more cash than they need can put it to use. The money market is less risky than the capital market while the capital market is potentially more rewarding.

Capital Market

A kind of financial market where the company or government securities are generated and patronised with the intention of establishing long-term finance to coincide the capital necessary is called Capital Market. The capital market is a type of financial market where

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financial products like stocks, bonds, debentures are traded for a long duration of time. They serve the purpose of long-term financing and long-term capital requirement.

In this market, the buyers use funds for longer-term investment. The nature of the capital market is risky markets. Therefore, it is not used for short-term funds investment. Most of the investors obtain the capital markets to preserve for education or retirement.

Features of Money Market

1. It is fund-term market funds.
2. It's maturity period up to one year.
3. It trades with assets that can be transformed into cash easily.
4. All the transactions take place through phone, email, text, etc.
5. Broker not required for the transaction
6. The components of a money market are the Commercial Banks, Non-banking financial companies and Central Bank, etc.

Features of Capital Market

1. Unites entrepreneurial borrowers and savers
2. Deals with long-term investments.
3. Agents are required.
4. It is controlled by government rules and regulations.
5. Deals in both commercial and non-commercial securities.
6. Foreign Investors.

Capital Market	Money Market
Long-term securities are traded in capital markets	Short-term securities are traded in money markets
Capital markets are well organized	Money markets are not that organized
Instruments in money markets are a low risk	Capital markets are the comparatively high risk
Capital markets generally give higher returns	Money markets give a low return on investments

Stock Market

Stock markets are venues where buyers and sellers meet to exchange equity shares of public corporations. The stock market refers to public markets that exist for issuing, buying, and selling stocks that trade on a stock exchange or over-the-counter.

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Stock markets are vital components of a free-market economy because they enable democratized access to trading and exchange of capital for investors of all kinds.

Functions of Stock Market

- Fair Dealing in Securities Transactions: the stock exchange needs to ensure that all interested market participants have instant access to data for all buy and sell orders, thereby helping in the fair and transparent pricing of securities.
- Pricing of securities: Stock markets need to support an efficient mechanism for price discovery, which refers to the act of deciding the proper price of a security and is usually performed by assessing market supply and demand and other factors associated with the transactions.
- Investor Protection: Along with wealthy and institutional investors, a very large number of small investors are also served by the stock market for their small amount of investments.
- Safety of transaction: the membership of a stock market is well-regulated and its dealings are well defined according to the existing legal framework.
- Contributes to economic growth: A well functioning stock market helps in the economic growth of the nation.

Demat Account

A Demat Account or Dematerialised Account provides the facility of holding shares and securities in an electronic format. During online trading, shares are bought and held in a Demat Account, thus, facilitating easy trade for the users. A Demat Account holds all the investments an individual makes in shares, government securities, exchange-traded funds, bonds and mutual funds in one place.

Demat is the abbreviation for "Dematerialization", which means to convert physical shares and securities into electronic form. Demat Accounts are required to hold shares in electronic form instead of paper form. Demat Accounts keep the shares safe, thereby preventing loss of shares or risks related to forgery. It is an easy method to trade securities quickly. A Demat account and a trading account are necessary to carry out the trading of shares in the stock market.

Trading Account

A trading account is an investment account for transacting in securities. We can buy or sell assets frequently through your trading account. Trading account acts as an investment account to holds your securities and other holdings. A trading account is used to buy or sell equity shares in a stock market.

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Sensex

The Sensex was launched on Jan. 1, 1986. It is an investable index used to track the performance of India's 30 largest and most financially sound companies. These companies are listed on the BSE (previously known as the Bombay Stock Exchange) and represent some of the biggest and most important sectors of the Indian economy. The term 'Sensex' is a blend of words 'Sensitive' and 'Index' and was coined by stock market expert Deepak Mohini. The Sensex reflects the movements in the Indian stock market. It is considered the benchmark index of the Indian stock market. It is the oldest index in India and provides time series data from 1979, BSE, which was previously known as Bombay Stock Exchange.

NIFTY

The Nifty meaning is a derivation from the mix of two words, i.e. "National Stock Exchange" and "fifty". It is an abbreviation of the National Stock Exchange Fifty. It is a collection of top performing 50 equity stocks that are actively trading in the index. However, 51 stocks are currently trading on Nifty. Hence, Nifty is also known as Nifty50 or CNX Nifty. Nifty is a popular stock index. The National Stock Exchange of India introduced it. This index was founded in 1992 and started trading in 1994. It is owned and managed by India Index Service & Products Limited (IISL).

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