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## UNIT 9 PORTFOLIO INVESTMENT

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### Structure

- 9.0 Objectives
- 9.1 Introduction
- 9.2 Meaning, Definition and Forms of Capital Flows
  - 9.2.1 Meaning of Capital Inflow
  - 9.2.2 Forms of Foreign Capital Flows
- 9.3 FDI Versus Portfolio Investment
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### 9.0 OBJECTIVES

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After going through this unit, you will be able to:

- explain the concept of Capital flows;
- distinguish between direct investment and portfolio investment;
- describe the world scenario of portfolio investment; and
- bring out the relationship between portfolio investment and national income accounting.

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### 9.1 INTRODUCTION

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In a closed economy saving and investments are equal. This means the income generated gets distributed either between the consumption expenditures and investments, or consumption and saving. This automatically results in investment equalising to the savings. But a closed economy is a thing of the past. Now no economy can survive as closed economy. Rather there is an emphasis of opening up the economy to the extent that the domestic economy does not suffer. In other words, so long as it positively affect the growth of the GDP of an economy, the economy is integrated with the world economy.

With the opening up of the economy there is either a deficit or a surplus on the current account. It is rarely that there is an exact balance on the current account. In case of a surplus on the current account there is a deficit on capital account i.e. the country has sent more capital to the partner country or it accumulates the exchange reserves. Here, for the time being, we do not contemplate a

situation of a change in the exchange reserves. Then there is a shift in the capital. The reverse will happen when there is a deficit on the current account i.e. there will be a surplus on the capital account i.e. more capital will be coming in and less capital will go out.

Now when there is an excess of capital inflow i.e. more capital comes in, this could happen in three ways i.e. by way of raising debt, foreign direct investment and foreign portfolio investment.

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## 9.2 MEANING AND DEFINITION OF CAPITAL FLOWS

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### 9.2.1 Meaning of Capital Inflow

It is desired that first we understand the meaning and place of inflow of capital from abroad (i.e. foreign investment in a country) which will help us subsequently to understand the Portfolio Investment by the Foreign Institutional Investors (FII). For this, we start from a very simple example by considering a household. Now in case in a household you want to buy a TV, fridge or another gadget, you can buy it either from your own saving or by borrowing either from a bank, a relative or some financing company. Thus, if buying a household gadget by you is an investment, there are two ways of financing it, either by household own saving or by borrowing from outside.

In the same way, in an economy, total investment in a year, can be financed either by generating domestic saving or borrowing from abroad. In technical term it is called “inflow of capital from abroad”. We can also put total investment in a year in an economy as follows:

$$TCF = DS + ICA$$

where TCF is Total Capital Formation (or investment), DS is Domestic Saving and ICA is inflow of capital from abroad.

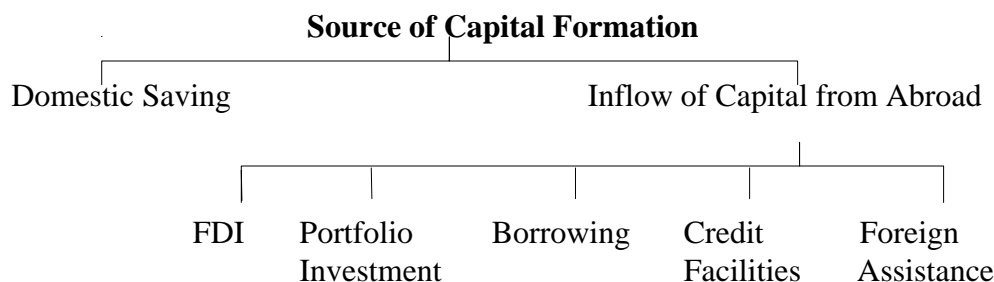
In the present lesson we will not go in details of the domestic savings. Therefore, we split-up inflow of capital from abroad.

### 9.2.2 Forms of Foreign Capital Flows

Capital flow from abroad or foreign capital may flow in an economy by various ways. Some of the important forms of foreign capital inflows are:

- Foreign Assistance
- Borrowing
  - i) Long-term borrowing
  - ii) Short-term borrowing
  - iii) Trade Credit facilities
- Investments
  - i) Portfolio Investment
  - ii) Foreign Direct Investment
  - iii) GDR

This is depicted in a diagram below:



Of these forms of inflows present lesson is concerned with the Portfolio Investment only.

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### 9.3 FDI VERSUS PORTFOLIO INVESTMENT

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Of the two types of investments, direct and portfolio, the former is better than the latter. In the case of FDI at least it brings with it the new technology. The local production and over the period there is a transfer of technology, how slow it may be. On the other hand foreign portfolio investment (FPI) is devoid of this virtue, at least over a short to medium terms of investments. In the free play foreign investor through FPI may acquire the management rights in the local units and exist whenever they like. There is no permanent stake in the case of portfolio holding.

The **capital account** is a record of the inward and outward investment and amortization flows between a country and the rest of the world. The capital transactions recorded include those that result from the purchase or sale of real or financial assets.

Capital account transactions can be classified in one of two ways. The first way is to classify them as private or public transactions, that is, transactions made by private investors or by the government. The second way is to divide capital account transactions into **direct investment** or **portfolio investment**. Direct investment is a transaction in which the investor has a controlling share or participates in the management of the firm. Portfolio investment, on the other hand, is a transaction in which securities are held purely as a financial investment. It is often difficult to distinguish between direct investment and portfolio investment and, typically, the classification depends on the promotion of the firm held by the investor. The cut-of level of ownership beyond which an investment is classified as direct investment varies across countries but is usually around 10 per cent.

The accounting rule for capital transactions is based on the same logic as that used to record transactions in the current account. The sale of assets to foreigners and borrowing of funds abroad are transactions that are recorded with a positive sign because these transactions result in an inflow of international funds. Thus, a surplus in the capital account implies a decrease in the net holding of foreign assets by domestic residents. Analogously, the purchase of foreign assets is recorded with a negative sign.

#### Check Your Progress 1

- 1) Explain very briefly the meaning of capital inflow.
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- 2) What are the various forms of capital inflow flow abroad?
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- 3) State very briefly the distinction between the FDI and Portfolio Investment. Which one you would prefer and why?
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### 9.4 WORLD SCENARIO PORTFOLIO INVESTMENT

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With the rapid progress of an economy, after a stage the rate of return on the capital declines. This happens owing to two reasons: (i) a decline in the demand expansion rate and (ii) as the capital base expands the total profits may rise but the rate of increase is likely to decline. This is the case with industrialised economy specially that of the United States and Western European countries. In view of this the capitalist in these countries look at the investment possibilities in those countries where the capital base is low and demand for goods and services is much higher.

The world scenario in respect of the portfolio investment over the past two decades has to be reviewed in this context.

Portfolio investment during the nineties has increased very rapidly all over the World. The progress is much better in the case of developing countries. In developing countries the increase in portfolio investment was from US\$ 11 billion in 1992 to US\$ 46 billion by 1996, a growth rate of 43 per cent per year.

However, India's share over the period, though has increased but is still lowest compared to Brazil, China, Indonesia, Malaysia and Thailand (Table 1).

**Table 1: Portfolio Equity Flows**

(US\$ million)

| Country                        | 1992  | 1993  | 1994  | 1995  | 1996  |
|--------------------------------|-------|-------|-------|-------|-------|
| Brazil                         | 1734  | 5500  | 5082  | 4411  | 3981  |
| China                          | 1194  | 3818  | 3915  | 2807  | 3466  |
| India                          | 241   | 1840  | 4729  | 1517  | 4398  |
| Indonesia                      | 119   | 2452  | 3672  | 4873  | 3099  |
| Malaysia                       | 385   | 3700  | 1320  | 2299  | 4353  |
| Thailand                       | 4     | 3117  | 538   | 2154  | 1551  |
| Philippines                    | 333   | 1445  | 1407  | 1961  | 1333  |
| All Developing Countries (DCs) | 11000 | 45000 | 33000 | 32000 | 46000 |
| Share of India in LDCs (%)     | 2.19  | 4.09  | 14.33 | 4.74  | 9.56  |

**Source:** *Global Development Finance*, (Vol. I & II). The World Bank.

There is evidence to show that India has managed to occupy a quasi – “top of mind” slot in the preceding years among foreign investors. The spate of newspaper articles and features in prominent newspapers, and articles demonstrate that India has been able to attract media attention. The impact of these developments will take some time to be felt. These include:

- Amendment of Foreign Exchange Regulation Act;
- Reduced list of industries requiring industrial licensing;
- Dilution of MRTP;
- Reduction in number of industries reserved for Public Sector;
- Liberalisation of imports and reduction in tariffs;
- Convertibility of rupee on Current Account;
- Opening up of the capital market to foreign investors.

Additionally, as part its initiatives to promote and protect investments, India became a member of Multilateral Investment Guarantee Agency. Bilateral investment promotion and protection agreements have also been signed with U.K., Russia, Germany, Malaysia, and Denmark. Several others are in the process of being finalised.

Liberalisation policy and procedural framework has in general been accompanied by revising of special policy-cum-incentive packages for key industrial sectors like telcom, hydrocarbons, tourism, drugs and pharmaceuticals, etc.

The subsequent restructured Foreign Investment Promotion Board (FIPB) and streamlining of procedures is another positive endeavour in the direction of augmenting foreign investment. A new Foreign Investment Promotion Council has been constituted to formulate policy guidelines and targets as also devise an approach for enlarging foreign investment into the country. The Council comprises of mainly professionals from the corporate sector.

Foreign Capital can flow into India either as FDI (Foreign Direct Investment) or as foreign investment in Indian securities.

Foreign investment in India securities flows in as:

- a) Portfolio investment through purchase and sale of securities in Indian capital markets. The Indian capital market is partially open to investment by Foreign Institutional Investors (FIIs) within the prescribed limits. Disinvestment and dividends declared by FIIs are fully repatriable.
- b) Investment in Global Depository Receipts (GDRs) and Euro convertible issued by Indian companies in overseas markets.

Substantial reforms have been undertaken to facilitate foreign portfolio investment in the debt and equity market. The relaxations that have been permitted in FII investment are

- 1) An FII can hold upto 10% in the equity of any company.
- 2) FIIs can invest in unlisted companies and in debt securities without prior investment in equity.
- 3) With a view to increasing the flow of funds to the gifts market, the RBI recently allowed Foreign Institutional Investors, including proprietary funds, to invest in dated Government securities and set up dedicated debt funds.
- 4) FIIs, Non Resident Indians and overseas corporate bodies can collectively investment upto 30% in a single company
- 5) FIIs have been given in-principle approval to invest in treasury bills.
- 6) FIIs have been permitted to take forward covers on their currency exposures on debt instruments.

In general, surges in capital inflows hold the potential for raising investment and growth. The larger the role of structural and fiscal policy changes in attracting the inflows, the greater seems to be the favourable impact on growth. However, the benefits are accompanied by potentially destabilizing effects, including inflationary pressures, appreciating real exchange rates and widening current account deficits. Inefficiencies in the financial system show up as widespread banking defaults and stock market volatility. Most countries initially respond to the inflows by sterilization, which seems to prevent widening of the current account deficit and substantially increases international reserves. Countries that have benefitted most from foreign inflows seem to have tightened fiscal policy as a means of controlling inflation and avoiding a real appreciation, especially in the years immediately after the surge in inflows. However, lack of public support and the need to develop infrastructure make it difficult to sustain fiscal restraint.

**Check Your Progress 2**

1) What is the need for investment in a developing economy by capitalist from a developed economy?

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2) Why did India’s share in world portfolio investment it change between 1992 and 1996.

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3) What steps have been initiated by India to attract Portfolio Investment?

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**9.5 FLOW OF FOREIGN PORTFOLIO INVESTMENT**

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Continued liberalisation in developing countries and the need for portfolio diversification in developed countries will ensure that the long-term outlook for sustained net inflows of private capital remains favourable. As the new investor base of institutional investors and pension funds expands, more of the private capital flows are likely to take the form of portfolio-especially equity flows.

In India, portfolio investment by Foreign Institutional Investors (FIIs) is wholly a post economic reform phenomenon. The comprehensive economic reform programme launched by the Indian government in 1991, encompassing financial sector deregulation as well as trade and industrial policy reform resulted in liberalisation of the financial markets and a substantial easing of restrictions on private capital inflows.

The initial surge of portfolio investment came in 1993-94, when FIIs were allowed to invest in securities in the Indian capital market. In the post-reform

period, FII inflows have increased from \$4.3 million in 1993-93 to \$2.4 billion in 1996-97, with the share of FII investment in total foreign capital inflow to India rising from 0.2% to 37.16% in the same period.

Table 2

| Year    | Net Investment<br>(US\$ million) | % Change Over the Previous<br>Year |
|---------|----------------------------------|------------------------------------|
| 1992-93 | 4.3                              | -                                  |
| 1993-94 | 1634.1                           | -                                  |
| 1994-95 | 1528.3                           | -6.5                               |
| 1995-96 | 2035.6                           | 33.2                               |
| 1996-97 | 2432.1                           | 19.5                               |
| 1997-98 | 1649.4                           | -32.2                              |

**Source:** Government of India, Ministry of Finance, **Economic Survey 1997-98**, p. 60.

In 1998-99, the behaviour of share prices in India was affected by the trend in FII investment in other Asian capital markets. The turbulence in Asian financial markets affected overall FII investment in the region. In pursuance of the proposal made in the Union Budget for 1998-99, FII investing via 100 per cent debt route have been permitted to invest in unlisted securities. The procedure for granting such account registration in respect of registered FIIs has also been simplified. In order to facilitate investment by overseas investors, including NRIs, SEBI has created an overseas investment cell.

While FIIs continued to repose their confidence in the Indian securities market and its regulatory framework, their response to investment in the Indian market was affected by the reduction in their exposure to Asian markets.

The net FII investment (equity plus debt) declined by US\$ 634 million or by about 6.8 per cent from US\$ 9284 million in March 1997 to US\$ 8650 million in December, 1998.

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## 9.6 PORTFOLIO INVESTMENTS AND NATIONAL INCOME ACCOUNTING

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The economic reform programme that included both fiscal adjustment and reform of the industrial and trade policy framework, played an important role in creating a favourable environment for FII investment. These reforms are briefly outlined here.

The fiscal deficit was brought down from 8.3% of GDP in 1990-91 to around 5.7% by 1992-93. The initial reduction in deficit (in 1991-92) was brought about due to a reduction in cash subsidies on exports and fertilizers and reduction in plan expenditures. But subsequently, the decline was achieved largely through cuts in public investment. In 1993-94, there was a temporary setback as fiscal deficit rose up to 7.4% of GDP due to a combination of lower realisation of receipts and higher expenditure. In 1994-95 and 1995-96 increased revenue



receipts (as a result of tax reform) and PSU disinvestment proceeds helped in the fiscal correction process. A better measure of fiscal consolidation is the primary deficit, which has improved from 4.3% in 1990-91 to 1.1% in 1996-97. The budgetary deficit (as a % of GDP) has also declined continuously in this period.

In the pre-reform period, the Indian Financial System was driven by the development motives set for it, and it operated under a policy of controlled interest rates, directed credit to the priority or weaker sectors, excessive Government per-emption of savings and over-regulation of the capital market. Liberalisation of the capital market was initiated in 1991 with the introduction of free pricing of capital issues and the subsequent establishment of the Securities and Exchange Board of India (SEBI) as a capital market regulatory body. The capital market reforms agenda included measures such as the modification of the traditional carry-forward system, introduction of capital adequacy norms for brokers, improving settlement practices and transparency in trading and minimisation of insider trading the price rigging. The computerisation of existing stock exchanges and the creation of the countrywide screen based network of the National stock exchange have further improved the quality increase of trading in the country.

The money market matches short term cash surpluses and deficits of banking and non-banking institutions and the corporate sector through the call money market, intercorporate deposits, commercial paper, certificates of deposits and treasury bills. A wide variety of instruments have appeared in this market and greater access has been provided to non-bank participants. Secondary market liquidity has improved with the introduction of primary dealers and the setting up of the Discount and Finance House of India.

The initiation of bank reforms in 1992 has improved capital adequacy among nationalised banks and resulted in the adoption of prudential accounting norms in line with international standards. Further, the RBI permitted the re-establishment of banks in the private sector in 1992, which has brought in welcome competition with respect to customer service and technological upgradation. Para-banking services are provided by a large network of non-banking finance companies that operate both in the public and the private sector. Deregulation of interest rates has led to greater competition and finer pricing among banks and development finance institutions. In 1992, private sector participation was allowed in the mutual fund industry and by end-1996, there were around 20 private sector funds in the country, many with foreign collaboration.

In order to ensure that the gains from the devaluation of the rupee in 1990-91 were not “dissipated in inflation”, the monetary policy was simultaneously tightened. The main concern of the RBI in the period 1990-91 to 1992-93 was inflation control and this was achieved by hiking key interest rates in the economy, including the bank rate, prime lending rate and the deposit rate. In October 1991, the nominal prime lending rate was as high as 20%. Thus, from 1990-91, when the economic reforms programme was initiated, to 1993-94, when the first surge in foreign inflows took place, interest rates in India were much higher than that in overseas markets. The return on the RBI all shares index also rose in that period, providing attractive investment opportunities in equity. As interest rates rose due to tight monetary policy and administered

increases, the interest rate differential between India and the USA was as high as 12.8% in 1992.

Interest rate differentials between domestic and foreign interest rates would, however, need to be adjusted for expected depreciation appreciation of the Rs./\$ exchange rate in order to satisfy the interest rate parity condition across economies. That is, the interest rate differential must be large enough to compensate for the cost of the forward premium on the dollar. This has not generally been the case for India. In the long run, expectations of a weak rupee may erode the attractiveness of investment in India notwithstanding the higher interest rates prevailing here.

In industrial policy reform, the Government has focused on industrial delicensing and dismantling of controls, thus reducing entry barriers for the private sector in areas previously reserved for the public sector. At the same time, in order to make domestic industry globally competitive, customs duties were gradually reduced and export incentives were increased.

Apart from interest rate differential we would attempt to look at the differentials in the returns on equity between India and the US and Europe as well as between India and the East Asian Markets. This would involve looking at return differential as well as the correlations between the returns in these markets with those on Indian stock markets. It is now accepted that emerging markets offer higher returns than developed markets, where market efficiency ensures that any potential profits are immediately wiped out through arbitrage. However, the importance of Indian stocks to international investors is based not so much on the higher returns but on the low correlation between India's market index and foreign market indices. On the basis of data pertaining to a 17 year period, the average correlation between monthly returns on the S&P 500 index and the NSE-50 index is found to be -0.0198, which is lower than the correlation between OECD countries or other emerging markets and the USA. The low negative correlation implies that investment in Indian markets can be used to hedge investments in the US markets. Further, the high correlation between other indices in south-east Asia and the S&P index suggests that the cycles in the Indian stock market are completely different from those in south-east Asian economies, which further reinforces the significance of the Indian markets in international risk diversification, several new banks to be set up in the private sector. Private banks are expected to bring better customer services and innovative products to the banking sector.

The liberalisation of the capital market was initiated with the repeal of the Capital issues (Control) Act, which gave companies the freedom to price their capital issues in accordance with its fundamental worth and market perception. Simultaneously with the abolition of the office of the Controller of Capital Issues (CCI), the Securities and Exchange Board of India (SEBI) was armed with the statutory powers to regulate and reform the capital market and most primary and secondary market intermediaries were brought within its regulatory framework with the following measures:

- Abolition and subsequent modification of the manipulative and investor unfriendly carry forward or 'badla' system;
- Issuance of guidelines to minimise price rigging and insider trading;

- Improving the quality of disclosures in the prospectus;
- Reducing settlement periods and improving settlement practices;
- Indicating strict pricing norms for preferential issues to promoters;
- Increasing transparency in client-broker relationships by segregating client and broker accounts;
- Introducing capital adequacy norms for brokers; and
- Tightening entry norms for issuers of equity.

Mobilisation of resources in the primary capital market through equity grew phenomenally between 1990-91 and 1994-95, rising from Rs. 39.64 bn to Rs. 360.19 bn. The post CCI equity boom was sustained till 1994-95. In the period 1995-97, the depressed conditions in the equity market have resulted in increased mobilisation of funds through debt issues. The market capitalisation of shares on the Bombay Stock Exchange (which lists about 7000 scrips) has grown from Rs. 1102.79 bn in 1990-91 to Rs. 4710.39 bn in 1995-96.

In 1992, the Over The Counter Exchange of India (OTCEI) was set to promote resource mobilisation and trading in small capital companies. Established on the lines of the NASDAQ system in the USA, the OTCEI requires a minimum post issue capital of Rs. 30 lakh, as against Rs. 10 crore for the BSE. The OTCEI also trades in debt instruments and units of US - 64, which is one of the most popular schemes managed by the UTI.

In 1994, the National Stock Exchange commenced operations as a screen based, order driven trading system with a country wide network of members connected to the central computer in Mumbai through VSATs. By December 1996, the NSE network spanned 66 cities, out of which 49 have not stock exchanges. The transparent trading and widespread reach of the NSE have ensured that its trading volumes have been consistently higher than those of the BSE and market capitalisation has grown to Rs. 4200 bn (January 1997).

In 1994-95, the value of tradable debt outstanding was estimated at Rs. 3000 bn - comprising Rs. 2600 bn of bonds and Rs. 350 bn of money market instruments. In addition, there is an untraded debt market estimated at about Rs. 600 bn, including small savings instruments and company fixed deposits. Government bonds accounted for almost 80% of the outstanding debt in 1994-95. However, the slump in the equity market in the period 1995-97 has resulted in substantial debt issues by corporates both in the public and private sector, bringing down the share of Government debt to about 66% of the outstanding debt in March 1996. The setting up of the NSE marked the establishment of the first formal debt trading system in the country. The OTCEI also trades debt instruments, both of companies that are listed and not listed with it. However, trading in Government securities accounted for about 90% of the turnover of the debt segment of the NSE in 1995-96.

In order to integrate the corporate sector with the global markets, the finance ministry permitted Indian companies to make Euro issues of GDRs and Euro convertible bonds in 1991-92. In the period May 1992 to December 1996, Indian companies raised \$6.70 bn through Euro issues out of which \$5.43 bn (81%) was through GDRs and the remaining through convertible bonds.

In 1995, the BSE changed from its antiquated open-outcry trading system to the VSE Online Trading System (BOLTS), which facilitates electronic trading in the 6000 odd listed scripts. Seven other exchanges, including Delhi, Madras, Calcutta and Ahmedabad were computerised in 1996, and a few more are expected follow suit in 1997.

Trading systems were improved further with the setting up of the National Securities Depository Ltd. (NSDL) in November 1996 and the NSE commenced trading in dematerialised shares by the end of 1996.

The liberalisation of the economy and measured to encourage the inflow of foreign capital also included reform of the exchange rate regime. During the era of Bretton Woods System of fixed exchange rates, the rupee was pegged to the pound sterling at a fixed parity. A margin of 1 per cent on either side of the parity was allowed within which the RBI committed to buy and sell spot pound sterling against the rupee at fixed buying and selling rates. With the breakdown of the Bretton Woods System in 1971, and the consequent emergence of floating exchange rate system, the rupee was pegged to the US dollar for a short period (from August to December 1971), retaining the pound sterling as the intervention currency. With the realignment of currencies in December 1971, the rupee was delinked from the dollar and relinked to the pound sterling, at a fixed but adjustable parity with a wider margin of 2.25 per cent on either side (giving a band of 4.50 per cent), as was permitted by IMF to all member countries. When the pound sterling was floated freely in June 1972, uncertainties crowded the exchange rates of the rupee by putting server free market pressure and the rupee was to be revalued frequently in response to the continued depreciation of the pound sterling.

On September 25, 1975 the rupee was delinked from the pound sterling and linked to an undisclosed basket of currencies. This arrangement, which continued till February, 1992 retained the pound sterling as the intervention currency and the RBI established the daily rupee-sterling rate. The exchange rate against other currencies were determined on the basis of cross rates with the rupee-sterling rate and the exchange rate of sterling against the concerned currencies, based on the London closing rates. A five per cent margin in either side allowed RBI to make adjustments. The margin transformed the basket linked arrangement into a flexibly managed floating currency, in practice.

The system of basket linked management of exchange rates was withdrawn in March 1992 and the RBI stopped setting the external value of the rupee through the rupee-sterling rate. Partial convertibility of the rupee was introduced in the form of the Liberalised Exchange Rate Management System (LERMS). Under this system all forex receipts on current account transactions were required to be submitted to the Authorised dealers of foreign exchange in full, who in turn would surrender to RBI 40% of their purchases of foreign currencies at the official exchange rate announced by RBI. The balance 60% could be retained for sale in the free market. As the exchange rate aligned itself with market forces, the Rs/\$ rate depreciated steadily from Rs/\$ 25.83 in March 1992 to Rs/\$ 32.65 in February 1993. The LERMS as a system in transition performed well in terms of creating the conditions for transferring an augmented volume of foreign exchange transactions onto the market. Consequently, in March 1993, India moved from the earlier dual exchange rate regime to a single market determined exchange rate system.

As the exchange rate became more market-determined, the foreign exchange markets also became more dynamic. For a long time the only hedging option available to Indian corporates was the forward cover. The Indian market is illiquid beyond six months and forward contracts are ordinarily available only for a period of six months though there are no restrictions on ADs offering cover for longer periods. In August 1997, the RBI allowed ADs to provide forward covers to foreign institutional investors with respect to their investments in debt. This is expected to provide greater liquidity to the forward market and bring in more foreign investment in debt instruments.

In January 1994, banks allowed to offer cross currency options on a fully covered basis. Corporates were allowed to cancel the option only once and they were not permitted to rebook options against the same exposure. However, the corporate could hedge the exposure using the forward market. In the absence of a rupee yield curve, banks are unable to price or offer rupee based currency options. Further, restrictions imposed on cancellation and rebooking and the high cost of upfront premium have ensured that these options have not become popular. Till recently, ADs were allowed to undertake rupee swap transactions subject to RBI approval, which was granted on a case-by-case basis. In the monetary policy announced on 15 April 1997, the RBI allowed corporates to undertake rupee forex swaps through ADs without prior permission from the RBI.

The forward market provides the conditions for the integration of the foreign exchange market with the money market, particularly the call money market. For instance, tight liquidity conditions in the money market and high call money rates may induce a demand for swaps where by banks acquire spot rupees to be swapped for forward dollars. This, in turn, would push the swap premia upwards. The recent abolition of reserve requirements on net interbank liabilities is expected to develop a rupee yield curve and enable better integration of the call money and forward rates.

In addition on the above measures steps are being taken to make the rupee fully convertible in the next few years by achieving capital account convertibility. Capital account convertibility refers to the freedom to convert local financial assets into foreign financial assets and vice versa, at market determined rates of exchange. Therefore, capital account convertibility implies the right to import or export capital without restrictions. As a part of the ongoing process of economic reforms, current account convertibility was established in August 1994. However, controls continued to operate on transfer of capital abroad by resident individuals as well as capital inflows and outflows by banks and institutional entities. In order to lay out the road map to capital account convertibility, a committee was appointed by the Reserve Bank of India under the Chairmanship of Mr. S. S. Tarapore, which submitted its report in May 1997. The Tarapore Committee has recommended that full convertibility of the rupee should be achieved in three phases by 1999-2000, and the process should be subject to the fulfillment of certain pre-conditions. The first phase of the implementation of convertibility commenced from the financial year 1997-98.

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## 9.7 LET US SUM UP

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This unit dealt with a topic that was at a slight tangent to the usual topics in national income accounting. Portfolio investment are investments made by

individuals and institutions which are in the form of financial securities. The unit discussed in detail the meaning and definition of capital flows with special reference to India.

The unit carefully distinguished between portfolio and direct investments, the latter being addition to real capital. The unit discussed the flow of foreign portfolio investment, with special reference to India. The unit discussed the relationship between portfolio investment and national income accounting.

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## 9.8 KEY WORDS

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|--------------------------|---|
| <b>Capital Account</b>   | : A record of the inward and outward investment and amortization flows between a country and the rest of the world. |
| <b>Direct Investment</b> | : Investment where the investor has a controlling share or participates in the managing of the firm.                |

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## 9.9 SOME USEFUL BOOKS

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Agarwala, S.K., (1998), *National Income Accounting*, Bookland Publishers, Delhi

Dhingra, I.C. (2005), *Indian Economy*, Sultan Chand and Sons, Delhi.

Hicks, J.R., Mukherjee, M, and Chosh, S.K. (1984), *The Framework of the Indian Economy*, Oxford University Press, Delhi.

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## 9.10 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

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### Check Your Progress 1

- 1) See subsection 9.2.1
- 2) See subsection 9.2.2
- 3) See subsection 9.3

### Check Your Progress 2

- 1) See subsection 9.4
- 2) See subsection 9.4
- 3) See subsection 9.4

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# UNIT 10 CONSUMPTION AND SAVING BEHAVIOUR OF THE ECONOMY

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## Structure

- 10.1 Objectives
- 10.2 Introduction
- 10.3 Classification of Goods and Services
  - 10.3.1 Consumer Goods and Services
  - 10.3.2 Intermediate Goods and Services
  - 10.3.3 Capital Goods
- 10.4 Consumption
  - 10.4.1 Meaning
  - 10.4.2 Sources of Consumption Expenditure
  - 10.4.3 Problems in Estimating Consumption Expenditure
- 10.5 Categories of Consumers
  - 10.5.1 Government's Final Consumption Expenditure (GFCE)
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## 10.1 OBJECTIVES

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You are already familiar with the concepts of consumption and consumption expenditures, and savings. These concepts were introduced in Unit 2. The objective of the present unit is to further explain these concepts. After going through this unit, you will be able to:

- differentiate between the intermediate and final consumption;
- distinguish between household and government consumption expenditures;
- describe consumption behaviour in India over the past years; and
- discuss meaning of saving, types of savings, and saving behaviour in India over the past years.

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## 10.2 INTRODUCTION

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Consumption by definition means what has been used up for satisfaction of wants. Some define consumption as destruction of utility of a commodity. Looking from another angle, consumption is that part of income which has been used up by persons, individually or collectively for the purchase of goods and services for satisfaction of wants.

In fact the income of an individual or a household can be split up into (i) consumption expenditure, and (ii) saving. A part of the national income generated is spent on consumption. That part of the income which is not spent on consumption is taken to be saved.

What holds, in splitting the individual income into consumption and saving, with marginal modifications, also holds for splitting the national income into consumption expenditures and savings. This will become more clear as we proceed in the present unit.

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## 10.3 CLASSIFICATION OF GOODS AND SERVICES

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Goods and services produced by the producing units are used by different categories of users. The users are households, enterprises and general government. With the households we also club the 'private non-profit institutions serving households (PNPISH)', popularly known as NGOs (Non-Government Organisations) in India. The goods and services used by these groups are classified into three categories : (1) consumer goods and services (2) intermediate goods and services and (3) capital goods.

### 10.3.1 Consumer Goods and Services

These goods and services purchased by the households and general government. Consumer goods can be further classified into durable or non-durable. Durable consumer goods are those which can be used a gain and again. Some examples of durable goods used by the households (including NGOs) include cars, VCRs, TV sets, refrigerators, washing machines, air-conditioners, etc. durable goods are those which can be used only once. Some examples of such goods consumed by households and general government include food items, soaps, oils, ink, pencils, writing paper, petrol, etc. These goods and services form part of their final consumption expenditure. Durable and non-durable goods are also called durable-use and single use goods respectively.

### 10.3.2 Intermediate Goods and Services

*Goods and Services* purchased by production units from other production units during a year and completely used up in production process during the same year.



**Intermediate goods and services.** This include purchases of all non-durable goods and services by production units like raw materials, electricity, water, expenditure on repairs and maintenance, etc.

### 10.3.3 Capital Goods

**Capital goods** include all durable goods acquired by production units for use in production and net addition to the stocks during the year. All durable goods like factory buildings, machines, plants, equipments, roads, dams, bridges, aircraft, trucks, taxis, etc., are the examples of capital goods. Net addition to the stock of raw materials, finished goods and semi-finished goods is also treated as capital goods.

Having classified goods and services into three categories (i) consumption goods and services , (ii) intermediate goods and services and (iii) capital goods, let us explain the term consumption in more detail.

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## 10.4 CONSUMPTION

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### 10.4.1 Meaning

*Consumption refers to an activity leading to satisfaction of human wants.* All goods and services acquired with the intention of satisfying wants are classified as consumer goods and services. The expenditure incurred on these goods and services is called consumption expenditure. It is not the nature of the good but the use of the goods that determines whether a good or a service is a consumer good or not. Bread purchased by a household is acquired for satisfaction of hunger and, therefore, it is a purchase for consumption good. Bread purchased by a restaurant is acquired to produce other goods and, therefore, not a consumer good but a producer good. Services of an electrician rendered to a household are consumer services while those rendered to a factory are producer services.

### 10.4.2 Sources of Consumption Expenditure

There are three sources of consumption expenditure in a country.

- 1) One source is *households* or individuals who acquire goods and services for satisfaction of wants of family members.
- 2) Another is *Private Non-profit Institutions Serving Households (PNPISH)* who provide free services to households on collective basis. Some examples of such institutions are found in private charitable societies running schools, dispensaries, places of worship etc., neighbourhood associations, trade unions, and so on.
- 3) The third source is *general government* which runs the administration of the country on behalf of the people and spends on goods and services for meeting collective wants of the people. Such an expenditure is on police, courts, military, maintenance of public properties, sanitation, charitable hospitals, schools, colleges, training institutions and many more such items.
- 4) The sum total of consumption expenditure in the country is taken as the sum of such expenditures incurred by households, private non-profit institutions serving households and general government.

### 10.4.3 Problems in Estimating Consumption Expenditure

We have pointed out the distribution between single-use and durable use because it creates problems in estimation of consumption expenditure. Single-use goods do not create much of a problem because most of these are used up for consumption in the year in which they are purchased. Durable use goods create accounting problems. Take, for example, an item of furniture bought in a particular year by a household.

This item of furniture will actually be used for a number of years. So expenditure on this must also be spread over the number of years. If this costs Rs.500 and its use life is 5 years, the consumption expenditure in a particular year should amount to only Rs.100. What is true about the item of furniture is true about how many items like TV set, cars, transistors, books, expensive clothes, etc. These items create problems in estimation of consumption expenditure. To estimate yearly consumption value of a durable consumer, the estimator must have data about quantity, quality, life span, etc. of such goods. Such type of data is not available in practice. As such, the estimators have no option but to treat such goods as entirely used up during the year in which they were purchased. The estimators thus, account for the whole of such expenditure in the year in which the durable use goods were purchased. As such durable use goods are deemed to be consumed in the year of purchase.

#### Check Your Progress 1

- 1) Explain what do you mean by intermediate goods.  
.....  
.....  
.....  
.....
- 2) State whether the following items are intermediate, capital or consumer goods.

| <b>Goods</b>                             | <b>Type</b> |
|--|-------------|
| 1) A Taxi                                |             |
| 2) A personal car                        |             |
| 3) Flour used in the household           |             |
| 4) Maida used by a baker                 |             |
| 5) Fridge used by a doctor in his clinic |             |
| 6) Wheat in a flour mill                 |             |
| 7) Steel used in a factory.              |             |
- 3) Explain the meaning of a consumer good.

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## 10.5 CATEGORIES OF CONSUMERS

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Demand for final consumption comes from the households, PNPISH, and General Government. There are three categories of consumers in an economy:

- i) General Government;
- ii) Households; and
- iii) Private Non-profit Institutions serving house holds .

### 10.5.1 Government's Final Consumption Expenditure (GFCE)

#### Meaning

The government incurs expenditure on producing services and provides them free to the people of the country. The government provides services such as defence, law and order, education, public health and other social services. The value of such services provided free to the people constitutes GFCE.

#### Estimation

It should be noted that the value of final consumption by the government is not equal to the cost of services at which these are provided to the citizens, but it is equal to their cost to the government. Generally speaking, a welfare government does not provide services at their full cost to the citizens. These are sold at a price which is far less than their cost to the government. For example, children get education in government schools by paying a nominal fee. The actual cost may be many times higher than the fee paid. Similarly, government accommodation is available to its employees at nominal rent which is far lower than the market rent.

GFCE is taken as equal to its cost to the government. The cost to the government is taken as equal to :

GFCE = Compensation of employees paid by general government

- + Intermediate Consumption
- + Consumption of fixed capita
- + Indirect Tax
- Sales
- Own account capital formation.

Intermediate consumption of the government includes purchases of non-durable goods and services and net current transfers from abroad. Compensation of employees includes wages and salaries in cash and in kind. The sale of goods and services includes all payments made by individual households to the government at full or the nominal cost.

The intermediate consumption expenditure of the government also includes direct purchase of goods and services made abroad on Current Account. The government has to make purchases non-durable goods and services abroad for its diplomatic staff.

### 10.5.2 Households' Final Consumption Expenditure (HFCE)

Resident households make purchases both from within the domestic territory of the country and abroad. Therefore,

HFCE = **Net** expenditure on consumption by residents in the domestic market

- direct purchases made abroad

Net expenditure in the above equation means expenditure on new goods less sale of second hand goods.

The goods and services purchased by households for final consumption can be classified into the following categories:

1) **Consumer Durables**

The consumer goods which have a life of more than one year are classified as durable goods. These can be repeatedly used over a long period. A television set is a durable consumer goods. It lasts for a number of years. A fan is a durable good which provides utility over the years to a household.

2) **Consumer Non-durable**

Households also consume non-durable goods such as food, drinks, medicines, fuel, etc. Normally, the goods which have a life of less than one year are treated as non-durables.

3) **Consumer Services**

Final consumption of households includes different kinds of services such as transport, telephone, telegraph, health care, education, recreation at clubs and theatre, etc. There is no time-lag between the production and consumption of a service. It is produced and consumed instantaneously.

**10.5.3 Final Consumption Expenditure of Private Non-Profit Institutions Serving Households (FCE-PNPISH)**

In the domestic territory of a country certain non-profit institutions also operate to serve the households. These include institutions like charitable trusts, charitable hospitals, social organisations, cultural organisations, trade unions, etc. These institutions do not operate for profit motive, but they are organised to serve households. These non-profit organisations do produce goods and services but do not sell them in the market for profit. These also employ the services of certain factor inputs. The final consumption expenditure of the non-profit organisations is calculated in the same way as that of general government. It is as follows:

- FCE - PNPISH = Compensation of employees paid
- + Intermediate Cost
- + Consumption of fixed capital
- + Indirect Taxes
- Sales
- Own account fixed capital formation

**Check Your Progress 2**

- 1) Name the three categories of final consumers.  
.....  
.....  
.....
- 2) Government final consumption expenditure equals to =
- 3) Households final consumption expenditures equals to =
- 4) Draw a distinction between durable consumer goods and non-durable consumer goods. Give examples of both.
- 5) Explain the meaning of services with the help of a few examples.

## 10.6 CONSUMPTION EXPENDITURES IN INDIA

In an earlier lesson we have discussed how the national disposable income is estimated. National disposable income (NDI) of a country is calculated as follows :

$$\text{NDI} = \text{NNP}_{\text{mp}} + \text{Net current transfer from the rest of the world.}$$

### 10.6.1 Distribution of Income between Consumption and Savings

The consumption and saving of a society are seen only in relation to national disposable income. The consumption behaviour in India has been presented in Table 10.1 in relation to the disposable income of India.

You will find in (Table 10.1) that total consumption expenditure in 1980-81 formed about 87 per cent of the disposable income. Of this private final consumption expenditure was about 77 per cent and GFCE about 10 per cent of disposable income.

The table 10.1 also reveals that over the period consumption expenditures as a percentage of the disposable income has declined, Government's consumption expenditures as a percentage to the disposable income has somewhat increased. PFCE, on the other hand, has come down. As compared to 1980-81, GFCE as a percent of disposable income in 1994-95 increased from 10.1% to 12.34%; that of PFCE declined from 76.94% to 70.06%.

**Table 10.1: Distribution of National Disposable Income into Consumption Expenditures (at Current Prices)**

(Rs. Billions) (1 Billion = 100 crores)

| Year    | Total Consumption Expenditure |                |                | Disposable Saving Income |                 |
|---------|-------------------------------|----------------|----------------|--------------------------|-----------------|
|         | GFCE                          | PFCE           | Total          |                          |                 |
| 1980-81 | 131<br>(10.1)                 | 993<br>(76.9)  | 1124<br>(87.0) | 167<br>(13.0)            | 1291<br>(100.0) |
| 1990-91 | 618<br>(13.1)                 | 3324<br>(70.4) | 3942<br>(83.5) | 778<br>(16.5)            | 4720<br>(100.0) |
| 1991-92 | 695<br>(13.1)                 | 3851<br>(72.4) | 4546<br>(84.4) | 777<br>(14.59)           | 5323<br>(100.0) |
| 1992-93 | 786<br>(13.1)                 | 4353<br>(72.7) | 5139<br>(85.8) | 848<br>(14.2)            | 5987<br>(100.0) |
| 1993-94 | 899<br>(13.0)                 | 4989<br>(71.9) | 5888<br>(84.9) | 1052<br>(15.1)           | 6940<br>(100.0) |
| 1994-95 | 1004<br>(12.3)                | 5698<br>(70.1) | 6702<br>(82.4) | 1432<br>(17.6)           | 8134<br>(100.0) |

**Source:** CSO: National Accounts Statistics, 197, p.16.

- Note:**
- 1) GFCE = Government Final Consumption Expenditures.
  - 2) PFCE = Private Final Consumption Expenditures.
  - 3) Figures in brackets are percentages.
  - 4) CSO's discrepancy item is adjusted in PFCE.

## 10.6.2 Distribution of PFCE

The distribution of households' consumption expenditure in India between the durable goods, non-durable goods and services has been analysed in Table 10.2.

In India, a very high percentage of the consumption expenditure is on non-durable goods and services. These two taken together account for about 97 per cent. The expenditures on durable goods like car, TV, fridge, etc. is very low. It is about 3 per cent of the total expenditure.

However, over the period, the percentage of expenditure on non-durables has declined. This is in line with the classical economic law which states that as the income in the society increases, people tend to spend a lesser percentage on food and clothing. It should be noted here that lower percentage does not necessary imply a decline in the absolute term. A percentage may decline whereas the expenditures in absolute term may be rising.

Table 10.2: Distribution of PFCE

(Rs. Billion) (1 billion = 100 crores)

| Year    | Durable Goods | Non-durable Goods | Services       | Total           |
|---------|---------------|-------------------|----------------|-----------------|
| 1980-81 | 15<br>(1.5)   | 802<br>(80.7)     | 176<br>(17.8)  | 993<br>(100.0)  |
| 1990-91 | 79<br>(2.4)   | 2568<br>(77.3)    | 676<br>(20.3)  | 3323<br>(100.0) |
| 1991-92 | 83<br>(2.2)   | 2797<br>(77.3)    | 791<br>(20.5)  | 3851<br>(100.0) |
| 1992-93 | 100<br>(2.3)  | 3348<br>(76.91)   | 905<br>(20.8)  | 4353<br>(100.0) |
| 1993-94 | 113<br>(2.3)  | 3854<br>(77.2)    | 1022<br>(20.5) | 4989<br>(100.0) |
| 1994-95 | 143<br>(2.5)  | 4388<br>(77.0)    | 1167<br>(20.5) | 5698<br>(100.0) |
| 1995-96 | 178<br>(2.8)  | 4969<br>(77.0)    | 1306<br>(20.2) | 6453<br>(100.0) |

Source: CSO: National Accounts Statistics, 1997, p.16.

- Note:**
- 1) GFCE = Government Final Consumption Expenditures.
  - 2) PFCE = Private Final Consumption Expenditures.
  - 3) Figures in brackets are percentages
  - 4) CSO's discrepancy item is adjusted in PFCE.

The percentage of expenditure on the services have increased. The expenditure on services like medical, education, transport, etc. is mostly incurred by the middle class and rich class. A rising percentage on services and also on durable goods may be due to a higher increase in the income of these two classes as compared to the poor class.

We have also looked at the PFCE from a slightly another angle of distribution. We have taken 8 broad commodity groups and distributed the total expenditures amongst these groups of items. These are given in Table 10.3 below:

**Table 10.3: Distribution of PFCE by Commodity Groups**

(Percentages)

|                               | 1980-81      | 1995-96      |
|-------------------------------|--------------|--------------|
| 1) Foods                      | 58.8         | 53.1         |
| 2) Clothing and Footwear      | 11.2         | 11.4         |
| 3) Fuels                      | 12.6         | 8.9          |
| 4) Furniture, etc.            | 2.8          | 3.7          |
| 5) Medical                    | 3.0          | 2.2          |
| 6) Transport & Communications | 5.1          | 12.3         |
| 7) Education                  | 3.0          | 3.6          |
| 8) Other Services             | 3.5          | 4.8          |
| <b>Total</b>                  | <b>100.0</b> | <b>100.0</b> |

The results are in line with those obtained for durable, non-durable and services. Here food, clothing, fuel, etc. accounts for 83 per cent. Compared to this furniture, etc. accounts for 2-3 per cent whereas rest falls in the services category.

The pattern of distribution of PFCE in India is quite different from those in the advanced industrialised countries. In these countries, the percentage of total expenditures on durable goods is much higher 8-10 as compared to 2-3 in India. Therefore one may expect that with the economic development in India, the percentage of total expenditures, on durable goods is likely to go up.

### Check Your Progress 3

- 1) In 1995-96 what was the share of durable consumer goods in the total private final consumption expenditure in India ?

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- 2) As between durable goods, non-durable goods and services, state whose share has increased and whose share has declined in the total private final consumption expenditures between 1980-81 and 1995-96.

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## 10.7 MEANING OF SAVING

It has been stated in the beginning that in national disposable income is splitted into (i) consumption and (ii) savings. Of the total income of an individual ( or a household) that part of income which is not spent on consumption is saving. Thus, income (inclusive of current transfers) is identically equal to consumption plus savings. Thus, if the society spends all of its income on consumption it will save nothing. Saving can be done only by not spending the whole of disposable income on consumption.

Saving = Disposable Income – Consumption Expenditure

Simply speaking, saving is that part of national disposable income which is not spent on consumption. The rate of saving is expressed as a percentage of GDP at market price. This can be measured as follows:

$$\text{Rate of Saving} = \frac{\text{Gross Domestic Saving}}{\text{Gross Domestic Product (at Market Prices)}} \times 100$$

## 10.8 SECTORAL DISTRIBUTION OF SAVINGS

There are three main sources of domestic savings. These are:

**Households Sector :** In India, for the purposes of estimating savings household sector includes all consumer households, private non-profit institutions serving households and unincorporated business enterprises.

**Private Corporate Sector** includes non-financial public and private limited companies and corporate banks and co-operatives.

**Public Sector** includes central and state governments, local authorities, government statutory corporations (like LIC), departmental enterprises (like railways) and government companies (like Coal India Ltd.).

Of the three sectors of domestic savings, the **household sector** occupies the most important place. In India, it contributes more than 80 per cent of the total savings. The private corporate sector and the public sector occupy the second and third positions respectively. Table 10.4 below gives the percentage contribution of these three sectors in our gross domestic savings (GDS).

**Table 10.4: Sources of Gross Domestic Savings (GDS) in India (at current prices)**

(In Percentage)

| Year    | Household | Private Corporate Sector | Public Sector | Total |
|---------|-----------|--------------------------|---------------|-------|
| 1950-51 | 74.3      | 6.8                      | 18.9          | 100.0 |
| 1960-61 | 74.4      | 18.4                     | 12.2          | 100.0 |
| 1970-71 | 91.0      | 5.4                      | 3.6           | 100.0 |
| 1980-81 | 75.9      | 7.9                      | 16.2          | 100.0 |
| 1990-91 | 84.0      | 12.0                     | 4.0           | 100.0 |
| 1996-97 | 76.8      | 14.8                     | 7.4           | 100.0 |

Data given in the above table indicate that the largest contribution to GDS is made by the household sector. It is important to point out here that a major



share of the household savings comes from the urban households. The percentage contribution of the rural household is relatively lower.

The private corporate sector has contributed relatively a small percentage to gross domestic savings. Its share has ranged from about 7 to 15 per cent during 1950-97. The main reason for this is its small size. However, over the period, the percentage share of this sector has increased.

The public sector contributed about 19 per cent in gross domestic saving in 1950-51. Then by 1970-71 its percentage share declined to 3.6 per cent. During the seventies the share again rose to more than 16 per cent. Subsequently the share again declined. In 1996-97, it was 7.4 per cent.

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## 10.9 CAUSES OF LOW SAVINGS AND MEASURES TO PROMOTE SAVINGS IN INDIA

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### 10.9.1 Causes of Low Savings

The level of savings in India is low. The main causes are :

- i) Low-level of per capita income;
- ii) Insufficient agencies (i.e. banks, etc.) to mobilise savings;
- iii) Increase in unproductive expenditure due to demonstration effect;
- iv) Low public sector savings because of poor performance of public sector enterprises;
- v) Low private corporate sector saving because of its small size; and
- vi) Lack of taxation in agricultural sector.

### 10.9.2 Measures to Promote Savings

To raise the level of savings in India, the following steps can be taken:

#### ***Public Sector's Savings***

The following steps can be taken to increase savings of the public sector:

- i) ***widen the tax base***: this means the rich and wealthy farmers, who until now are exempted, need to be taxed to raise savings of government.
- ii) ***strengthen tax-collecting machinery*** to prevent large-scale tax evasion.
- iii) ***Heavier taxation on luxury goods***.
- iv) Effective steps need to be taken so as to ***raise the efficiency and productivity of public sector enterprises***. These enterprises, then would generate surpluses.

#### **Private Corporate Sector Savings:**

- i) Profits diverted to investment should be given liberal tax concessions.
- ii) Curbs on the unproductive business expenses should be imposed.

### Household Sector Savings

The household sector in India occupies a significant position as far as savings are concerned. It, thus, becomes necessary to increase propensity to save of the households. The following measures in this direction are suggested:

- i) Efforts should be made to mobilise savings particularly in the rural household sector by adopting measures like *extension of bank branches* in rural areas.
- ii) Appropriate interest rates to encourage savings.
- iii) Rate of inflation should be kept under control, because increase in price-level has adverse effect on savings.
- iv) Proper propaganda and advertisement should be done for inculcating a habit of thrift among the people.

#### Check Your Progress 4

- 1) Explain the meaning of saving.  
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- 2) What were the shares of households, private corporate sector and public sector in gross domestic savings in India during 1996-97.  
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- 3) What are the causes of a low rate of saving in India.  
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### 10.10 FORMS OF SAVINGS

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In what forms does one keep his savings? We keep it in the form of currency in our safe. We keep it in the form of deposits with banks companies etc. We buy shares and debentures from our savings, we lend money to the government, buy life insurance policy, contribute to provident funds and so on. All these forms of keeping savings are financial forms.

In what other forms we can keep our savings. We can buy a house, a machine, or any other asset for use in production. We can use our savings for stocking up of goods. All these forms are the physical forms.

CSO has classified the financial savings of the household sector into the following forms:

- 1) Currency;
- 2) Net deposits;
- 3) Shares and debentures;
- 4) Net claims on government;
- 5) Life Insurance Funds; and
- 6) Provident and Pension Funds.

CSO has classified saving in the form of physical assets by households into investment in fixed assets of construction and machinery and equipment and change in stocks.

Broadly thus there are two ways of keeping one's savings: (i) in the form of financial assets and (ii) in the form of physical assets. Out of these financial assets are important in case of private corporate sector and public sector.

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## 10.11 FINANCIAL SAVINGS

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Let us now discuss saving in different financial assets:

**Currency:** With saving in currency, we mean change in the currency held by the public. For instance, if on 31.3.97, the stock of currency with the public were, Rs.40,000 crores and on 31.3.1998 say, Rs.50,000 crores, then saving in the form of currency during 1997-98 comes to Rs.10,000 crores. This amount by the public is taken to be held in the hard cash in the house.

**Net Deposits:** Like the saving in the form of currency, the net deposits in the banks are also changes in the deposits in the bank. If I had a balance of Rs.10,000 in my saving accounts on 31.3.97 and of Rs.12,000 on 31.3.98, then my saving in net deposits is equal to Rs.2,000 in 1997-98.

**Shares and Debentures:** A person can save and invest in shares and debentures. Limited companies (private sector or public sector) have their base capital as share capital. These are distributed mostly in the denomination of Rs.10 and in some cases Rs.100. These shares could be purchased or sold in the share market.

**Net claims on Government:** Then there is a lending by the people to the Government in the form of bonds, etc. As in the other two cases, saving in this form is calculated by taking the total lending to the Government at the end of the current year and subtracting the out-standing at the end of the previous year.

**Life Insurance Funds:** In India and other economies people also save in the form of contributing money to life insurance schemes. The contribution made by the people towards their life insurance fund is also included in the saving.

**Provident Fund:** People also save by making contribution to the provident funds. At present there are three types of provident funds in India, **Contributory Provident Fund** (CPF) in which employers and employees both contribute on monthly basis. Then, there is General Provident Fund, for public servants, where contribution is made only by the employees. Finally lately, the Indian Government has also set up a Public Provident Fund in which any person can

make contribution any time in a year. This also enjoys some legal protection as in the case of other two provident funds.

**Other Small Savings:** Besides, the instruments stated above there are other small savings, specially in the Post Office Saving Scheme, like National Saving Scheme (NSS), Vikas Patra, etc.

**Check Your Progress 5**

- 1) What are the various Financial Assets in which people put in their savings.

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- 2) If you hold Rs.1000 at the end of the year, how you will calculate your saving in the form of currency during the year.

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- 3) Is construction of a residential house a saving or a consumption activity.

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- 4) Consider that you have Rs.5,000 in your saving account in a bank at the end of the year. How you will calculate your saving in the form of deposits.

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**10.12 LET US SUM UP**

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Capital formation plays a key role in economic development. It enables the country to set up factories, to make use of round about techniques of production. It creates employment opportunities. The capital formation is directly and solely dependent on : (a) volume of saving and (b) mobilisation of saving. There are three main sources of domestic saving in India: (i) The household sector; (ii) the private corporate sector; and (iii) public sector. The share of the household sector in the gross domestic saving has been the highest. Presently it contributes more than 80 per cent of the total savings. Causes of low savings in India are as follows: (i) low per capita income, (ii) lack of banking facilities, (iii) increase in unproductive expenditure, (iv) low savings in public sector.

There have been several measures to promote savings in India: (i) Agricultural taxation; (ii) Heavier taxes on luxury goods; (iii) improvement of public sector enterprises; (iv) Check on unproductive business expenses; (v) expansion of banking facilities ; (vi) attractive interest rates; (vii) check on rising prices; and (vii) publicity of saving schemes.

Capital formation or investment refers to the net addition to the existing stock of physical assets. Saving is that part of national disposable income which is not spent on consumption. Rate of saving is expressed as a percentage of GDP. Household Sector includes all households, unincorporated business enterprises and non-profit-making institutions. Private Corporate Sector is made up of non-government corporate sector and corporate banks and cooperative societies. Public Sector: includes government administration, departmental enterprises, government companies and statutory corporation. Propensity to save is the ratio of saving and income.

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### 10.13 KEY WORDS

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| <b>Capital Goods</b>                      | : Goods produced for use in future productive processes.   |
| <b>Consumer Durables</b>                  | : Consumer goods which have a life span of more than one year . These can be repeatedly used for over a long period . Examples – TV, Radio, Motor Car, House Building, Fridge etc.   |
| <b>Consumer Non-durable</b>               | : Goods get destroyed in their first act of consumption. Normally, the goods which have a life of less than one year are treated as non-durable. For example water , milk, fruits, vegetable. <i>Saving</i> : That part of income which is not spent on consumption. |
| <b>Consumption</b>                        | : An activity leading to satisfaction to human wants. All goods and services acquired with the intention of satisfying wants are known as consumer goods and services.   |
| <b>Financial Asset/ Financial Savings</b> | : Assets/savings in the form of paper titles like currency notes, deposits in banks, shares and debentures, life insurance premium, Units of UTI etc.  |
| <b>Intermediate Goods</b>                 | : Goods used for further production process. Such goods are purchased by production units from other production units for producing final goods. Examples are- raw materials, electricity, water, repairs and maintenance.   |
| <b>Non-durable Capital Goods</b>          | : Goods which are used only ones in the process of production . As per example – raw material.   |

**Physical Saving**

: That part of saving which is done in the form of house construction for residential purposes, plant and machinery, inventory etc. Saving in physical asset necessarily equal to the investment made.

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**10.14 SOME USEFUL BOOKS**

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Abraham, W.I (1969) *National Income and Economic Accounting*. Prentice Hall, New Jersey.

Agarwala, S.K. (1998) *National Income Accounting* Delhi : Bookland Publishers.

Beckerman, W. (1976) *An Introduction to National Income Analysis* ELBS, London.

Hicks, J.R. (1971) *The Social Framework*, Oxford University Press, Delhi.

Hicks, J.R, Mukerjee M. and Ghosh, S.K.(1984) *The Framework of the Indian Economy*. Oxford University Press, Delhi.

Ruggles, R and Ruggles, N.D. (1956) *National Income Accounts and Income Analysis*, McGraw Hill, New York.

Studenski, Paul *The Income of Nations*, Part-II (1958), New York University Press, New York.

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**10.15 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES**

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**Check Your Progress 1**

- 1) *Intermediate goods*: Goods purchased by production unit from other production units during a year and completely used up in production process during the same year.
- 2)
  - i) Taxi – capital goods
  - ii) Personal Case – consumer goods
  - iii) Floor used in the household – consumer goods
  - iv) Maida used by baker – intermediate goods
  - v) Wheat in a Flour Mill – intermediate goods
  - vi) Steel used in a factory – intermediate goods
- 3) *Consumer goods*: goods purchased by the households and general government this can be further classified into durable and non-durable consumer goods.

**Check Your Progress 2**

- 1) The three categories of final consumer's are:
  - a) consumer durable
  - b) consumer non-durable
  - c) the final consumption expenditure of private non-profit institution serving households

- 2) For Government's Final Consumption Expenditure (GFCE) see section 10.5.1
- 3) See Section 10.5.2
- 4) Durable consumer's goods are those which can be used again and again. Some e.g. are – cars, VCR, TV sets, Refrigerators, Washing Machines, Air-conditioners, etc. non-durable goods are those which can be used only ones some e.g. are food items, soaps, oils, writing paper, petrol etc.
- 5) Services are produced and consumed simultaneously some e.g. are transport, telephone, telegraph, health care, education etc.

### **Check Your Progress 3**

- 1) In 1995-96 the shares of consumer goods in the total private final consumption expenditure was 2.8 per cent.
- 2) The share of durable goods has increased and non-durable goods has declined services sectors share has increased during the first decade during 1980-81 to 1990-91. However, it is roughly having a constant share of 20.5 per cent during the nineties.

### **Check Your Progress 4**

- 1) See Section 10.7
- 2) See Section 10.8, Particularly Table 10.4
- 3) See Subsection 10.9.1

### **Check Your Progress 5**

- 1) See Section 10.11
- 2) If you holed Rs.1000/- at the end of the year, say, 2000 , you will have to see what was the amount at the end of year 1999. The difference between the two will be saving in the form of currency during the year.
- 3) Construction of residential house is a saving activity.
- 4) Calculation of saving in the form of deposit will be done on the basis of the amount added to the saving suppose in 1997-98 deposit was Rs. 5000/- and in 1998-99 it was Rs.6000/- thus the addition made to the previous balance will indicate the increasing deposit.

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# UNIT 11 FLOW OF FUNDS IN THE ECONOMY

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## Structure

- 11.0 Objectives
- 11.1 Introduction
- 11.2 Concept of Flows of Funds
- 11.3 Origin of Flow-of-Funds System of Accounts
- 11.4 Flow-of-Funds System of Accounts and other Accounting Systems
- 11.5 Construction and Presentation of Flow of Funds Accounts
- 11.6 Application of Flow-of-Funds
- 11.7 Flow of Funds Accounting Practice in India
- 11.8 Limitations of Flow-of-funds System of Accounts
- 11.9 Let Us Sum Up
- 11.10 Key Words
- 11.11 Some Useful Books
- 11.12 Answers or Hints to Check Your Progress Exercises

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## 11.0 OBJECTIVES

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After going through this unit, you will be able to:

- explain the origin and definition of flow-of-funds accounting system and its relationship with other accounting systems;
- describe the construction and presentation of flow-of-funds system;
- discuss the usefulness and application of flow of funds;
- describe the flow-of-funds Practice in India; and
- state the limitations of flow-of-funds.

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## 11.1 INTRODUCTION

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In an economic system, one finds two-way relationship between goods and services and, the money in circulation. Flow of credit and money affects all the goods and services produced. The latter are known as real activities. All those activities in turn affect the flow of credit and money. Real flows are reflected in the system of national accounts. These accounts take into account the measurement of values created in current productive activity in different sectors and their distribution among the factors of production in addition of giving a break-up of final expenditure between consumption, capital formation and exports.

There is no doubt that National Income Accounts is the most frequently used



and discussed method of accounting system. These accounts seek to present the essential facts about nation's economic activity in a schematic manner. Just as Company's accounts relate to its business activity, national accounts relate to different economic activities of a nation. In addition of national accounts, there are three more equally important accounting systems. These systems are: (1) National Balance Sheet; (2) Input-Output analysis; and (3) Flow of funds accounts.

National Income accounts as stated above measure the output, income, expenditure, saving and investment of the economy for a given period of time, normally a year. The Balance of Payment accounts present the transactions of the domestic economy with the rest of the world. In fact, they are also a part of the national income accounts. The National Balance Sheet presents the various assets and liabilities of the economy at sector and national levels for a particular day of the year. That means, it gives the stock position of assets held and the liabilities created to acquire the assets. The input-output analysis depicts the inter-industry transactions during a year. They, thus, indicate the technological relationship between the inputs and outputs of various industries/ commodities.

These accounts, however, do not give full information, as financial flows remain ignored in these accounts. There is thus a need to have a complementary system that could explain the manner in which all the real and financial flows could be represented simultaneously.

The flow of funds system of accounts as a tool of general economic analysis is relatively of recent origin. This system was originally known as "Moneyflows accounting". The Flow of Funds Accounts represents a set of accounts designed to show transactions between different economic units effected through medium of money and credit. Each sector identifies and measures its sources and uses of funds. These accounts help in finding out the various channels through which funds flow to finance and act as a support to the real economic activity. The detailed definition of such an accounting system is given in the following section.

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## 11.2 CONCEPT OF FLOWS OF FUNDS

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The flow of funds is a system of social accounting that gives a statement of the "sources-and-uses-of-funds" of the each sector in which the economy is divided. This statement may also be called as the flow-of-funds matrix for the economy as a whole.

These accounts are prepared by dividing the economy into institutionally homogeneous groups, called sectors. For each sector, these accounts show the various transactions effected through the medium of credit and money. Each sector account identifies and measures the main sources and uses of funds. Thus, these accounts give money flows, of all transactions that involve the use of money or credit, with the financial relations between various segments of the economy, and with the relations between financial and non-financial transactions. Broadly speaking, the financial flow accounts reveal borrowing and lending operations of individual sectors from "whom to whom" and "in what manner" bases.

**Flow-of-funds account and financial and non-financial flows:** The flow of funds can be divided into the following two types:

- 1) **Financial Flows:** These flows cover all those transactions that relate to borrowing and lending operations resulting in borrowing or debt repayment and accumulation of or decrease in financial assets.
- 2) **Non-financial Flows:** These flows include all those transactions that relate to current receipts, current payments or current expenditures. These transactions should involve exchange of goods and services for money or near money holdings or unilateral transfers, such as, taxes, gifts, donations, etc, and the real assets formation including fixed assets formation and increase in inventories.

It would be noticed that non-financial transactions relate to the acquisition of goods and services and transfer payments, and financial transactions are concerned with the acquisition of financial assets and contraction of debts. For many analytic purposes, it is considered quite useful to distinguish in the non-financial transactions, the type of goods and services exchanged or the immediate purpose served by them. Similarly in the financial transactions, it is important to note the type of financial instruments used for payment or in exchange for other financial claims.

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### 11.3 ORIGIN OF FLOW-OF-FUNDS SYSTEM OF ACCOUNTS

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The origin of flow-of-funds account can be traced back to the year 1944. In that year, Professor Copeland was invited by the National Bureau of Economic Research “to direct an exploratory project to determine what could be done to provide a fuller statistical picture of the money circuit.” In that study, he set out a conceptual framework to a detailed accounting framework for money flows.

Encouraged by Professor Copeland’s work, the Board of Governors of Federal Reserve System of the United States in 1948 decided to continue with the study of the “flow-of-fund”. In 1955, the concepts and methods of this system together with the relevant data and the sources of the material, were laid down in “Flow-of-Funds in the United States, 1939-53”. Since 1959, the publication of flow-of-funds has been a regular publication. This practice was followed by a large number of other countries including Canada, Japan, Mexico, Italy, the Netherlands, France, West Germany, Norway, and Yugoslavia. There have been many conceptual and structural changes and refinements in the system of flow-of-funds accounts during the last so many years.

#### Check Your Progress 1

- 1) Define flow-of-funds system of accounts.  
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- 2) Why is Flow-of-funds system of accounts is considered as the most comprehensive accounting system?

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- 3) Differentiate between financial flows and as non-financial flows.

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- 4) Discuss the origin of flow-of-funds accounts.

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#### **11.4 FLOW-OF-FUNDS SYSTEM OF ACCOUNTS AND OTHER ACCOUNTING SYSTEMS**

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Flow of funds system of accounts can be differentiated from other systems namely national income accounting system, input-output system and the national balance sheet on the following grounds:

- 1) The central focus of each accounting system is different. Thus, National income accounting concentrates on: (i) measuring “output”; (ii) the uses in terms of the final purchases in the economy; and (iii) the types of factor income and other payments generated by economic activity.

Input-output accounting is designed to study the way the technological production functions of various industries affect inter-industry relationships. In this manner, input-output accounting determines the industrial structure of the country.

The National Balance Sheet shows the assets and liabilities of different sectors of the economy. This is closely related to flow-of-funds account except that it deals with stocks rather than flows. Similarly, National income accounts and input-output analysis deal with the flows during a year.

The scope of flow-of-funds accounting, on the other hand, is much more comprehensive. It sets forth the flow of payments and receipts, not only for goods and services but also for instruments of ownership and debt. It focuses on the sources and uses of funds that are essential for the support of economic activity. For instance, flow-of-funds system of accounts distinctly shows the purchase and sale of existing assets including transactions in land, tangible assets, and second hand goods. They exclude barter; book-keeping transfers of internal nature pertaining to a particular unit; intra-unit transactions and imputed transactions. Flow-of-funds therefore, do not contain any information on the real sector.

On the contrary, national accounts are not concerned with all those transactions linked to the receipt and payments of money or decrease (increase) in the credit (debit). There is no room for imputed incomes in the flow of funds system; but these are recorded and recognized in national accounts.

- 2) Flow-of-funds account employ different sector breakdown of the economy. The sectoring is designed in terms of both functional and institutional classifications. That reveals the borrowing and lending taking place in the system along with the income payments and purchases of goods and services. The sector classification in national income accounting is too consolidated. The sectoring has to be designed in terms of the functional aspects of economic activity. Therefore, consumers, producers, and government sectors are distinguished in addition of the rest of the world and saving and investment accounts. The classification adopted in input-output accounting highlights individual industries classified by the type of product produced and by the industrial processes used. This shows inputs consumed by each industry and the distribution of output produced by each industry. The sectoring although is much more detailed; it is not suitable for revealing the sources and uses of funds in the system.
- 3) The flow-of-funds sectoring has a different objective. It lays down a considerable stress on (a) financial institutions, including banking and insurance and (b) on differences in institutional forms of business and government, e.g., corporate vs. non-corporate, and central vs. state and local. The same is not true either about input-output table and national income accounting.

As shown above, different economic accounting systems have different purposes, and therefore, they should not be compared with each other in absolute terms. In fact, all these methods can play an important complementary role. All these accounting systems pertain to the same economy and are inter-linked. They also overlap or coincide for many transactions. They can be employed together as no single system can serve all purposes. However, they can be seen in terms of how efficiently they meet the purposes for which they were designed, and also, how important each of the various uses is in helping to solve the major problems facing the world today.

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## **11.5 CONSTRUCTION AND PRESENTATION OF FLOW OF FUNDS ACCOUNTS**

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It has been brought out in the above pages that flow of funds system provides a statement of sources-and-uses-of-funds. It, in fact, is a hybrid accounting

system. It combines sector's balance sheets and income statement. The most important points worth remembering while constructing and presenting these accounts are the following:

First, this system requires that the economy be divided into different sectors. The major sectors may be known as financial institutions, non-financial enterprises, Central and State Governments, households and private non-profit institutions. These sectors are further split into different categories.

Secondly, and this is very important, this framework of accounts uses quadruple entry system. That is, every transaction is recorded four times. For instance, suppose households purchase products worth Rs. 50 from some corporate firm, known as non-financial enterprise. There will be the following four entries:

- i) Payment of money (Rs. 50) by the household sector;
- ii) Acquisition of goods by the household sector worth Rs. 50;
- iii) Goods parted away by the corporate firm worth Rs. 50;
- iv) Receipt of money (Rs 50) by the corporate firm.

Thirdly, all the transactions represent receipts and payments and can be seen as flows of purchasing power. These can be further divided into financial and non-financial flows and also as sources and uses. Thus, money received can be treated as source, whereas its parting away with may termed as payment or use. From this a general rule may be deduced. That is, use would indicate acquisition of an asset or reducing a liability, whereas source would indicate disposing of an asset or incurring of a liability.

Fourthly, flow of funds accounts can be constructed in many ways, i.e., from a household account, balance sheet, and even from a balance of payment account.

**Example I – Constructing flow of funds account from the transactions of an individual salary earner**

One of the easiest methods is to understand the construction of flow of funds accounts is with the help of an account of an individual salary earner household. This is clear from the following hypothetical example:

**Table 1: Transactions of an individual salary earner**

| Uses of funds              |            | Sources of funds          |            |
|----------------------------|------------|---------------------------|------------|
| Consumption expenditure    | 183        | Wages & Salary            | 153        |
| Taxes                      | 15         | Transfers (Cur )          | 15         |
| Rents paid                 | 38         | Consumers credit          | 30         |
| Interest on loans          | 23         | Interest on bank deposits | 76         |
| Construction of house      | 611        | Rents from old property   | 8          |
| Provident fund             | 15         | Insurance claims          | 76         |
| Payment. of insu. Premiums | 15         | Loans from office         | 458        |
| Repayments of old debts    | 61         | Loans from fin inst       | 153        |
| Currency and deposits      | 38         | Other loans               | 30         |
| <b>Total</b>               | <b>999</b> | <b>Total</b>              | <b>999</b> |

It may be noticed that double entry system is used to maintain the account book of a salary earner. The receipts are shown both as wages as well as currency and deposit. The consumption of Rs. 183 constitutes of cash purchases of

Rs. 152 and purchases from consumer's credit of Rs.30. The amount of Rs.38 shown as currency and deposits is the amount that represents the final outcome after all pluses and minuses have been added together. Data given above contains items of current and capital nature involving movement of goods and services and transfer payments or acquisition of financial assets and contracting debts.

The information given above can be translated into national accounts as well as flow of funds for the household sector in the following manner:

**Table 2: National Accounts Showing Incomes and Outlays of an Individual Salary Earner**

| <b>Outgoing</b>        |            | <b>Incoming</b>               |            |
|------------------------|------------|-------------------------------|------------|
| Consumption            | 183        | Wages & Salary                | 153        |
| Property income        |            | Property income               |            |
| (i) Rent paid          | 38         | (i) Interest on bank deposits | 76         |
| (ii) Interest on loans | 23         | (ii) Rents from old property  | 8          |
| Taxes                  | 15         | Insurance claims              | 76         |
| Insurance premium      | 15         | Transfers (Current )          | 15         |
| Saving                 | 54         |                               |            |
| <b>Total</b>           | <b>328</b> | <b>Total</b>                  | <b>328</b> |

It is also clear from the above data that sources of funds are equal to uses of funds in the following manner:

$$\begin{aligned}
 \text{Sources of funds} &= \text{Gross saving} + \text{increase in external financial liabilities} \\
 &= \text{Uses of funds} \\
 &= \text{Gross domestic capital formation} + \text{net financial investment abroad for the economy as a whole}
 \end{aligned}$$

**Table 3: Capital Finance Accounts of an Individual Salary Earner**

| <b>Outgoing</b>                     |           | <b>Incoming</b>                             |            |
|-------------------------------------|-----------|---|------------|
| Gross capital formation             | 611       | Savings                                     | 54         |
| Net lending                         | -557      | Capital consumption                         |            |
| <b>Total</b>                        | <b>54</b> | Capital Transfers (net)                     |            |
|                                     |           | <b>Total</b>                                | <b>54</b>  |
| Provident fund                      |           | Consumers' credit                           | 30         |
| Reduction of old debts              |           | Loans from Government                       | 458        |
| Currency & deposits                 |           | Loans from Financial Institutions           | 153        |
|                                     |           | Other loans                                 | 30         |
|                                     |           | Net lending                                 | 557        |
| <b>Total</b>                        |           | <b>Total</b>                                | <b>114</b> |
| Net acquisition of financial assets |           | Net incurrence of liabilities & net lending |            |

**Table 4: Flow of Funds Accounts of the Individual Salary Earner**

| <b>Items</b>                               | <b>Sources</b> | <b>Uses</b> |
|--|----------------|-------------|
| <u>Non-financial</u>                       |                |             |
| Wages & Salaries                           | 153            | -           |
| Rents                                      | 8              | 38          |
| Interest                                   | 76             | 23          |
| Dividends                                  | -              | -           |
| Net withdrawal by proprietors              | -              | -           |
| Insurance claims and premiums              | 76             | 15          |
| Grants and donations                       | 15             | -           |
| Taxes and tax refunds                      | -              | 15          |
| Capital acquisitions                       | -              | 611         |
| Purchases and sales of other goods & servs | -              | 183         |
| <b>Total</b>                               | <b>328</b>     | <b>885</b>  |
| <u>Financial</u>                           |                |             |
| Currency & deposits                        | -              | 38          |
| Cent & State Govt Obligations              | 458            | -           |
| Mortgages                                  | -              | -           |
| Corporate fin securities & loans           | 153            | -           |
| Provident funds                            | -              | 15          |
| Other debts                                | 30             | 61          |
| Trade Credits                              | 30             | -           |
| <b>Total</b>                               | <b>671</b>     | <b>114</b>  |
| <b>Grand Total</b>                         | <b>999</b>     | <b>999</b>  |

On the above pattern, flow of funds accounts for all the households can be prepared. This exercise can be repeated for all the other sectors of the economy. Once we take the entire economy, income equals expenditure, and saving equals domestic capital formation plus net increase in foreign assets.

**Method II – Constructing flow of funds with the help of a balance sheet**

The other common method to construct flow of funds account is to make use of the balance sheet. The different steps are given below:

**Step 1:** Let us have a generalised balance sheet for any sector. It would appear something like the following:

**Table 5: General Balance Sheet**

| <b>Assets</b>             | <b>Liabilities and Net Worth</b> |
|---------------------------|----------------------------------|
| A. Financial assets       | C. Liabilities                   |
| 1. Money                  | A. Short Term                    |
| 2. Near Monies            | B. Long Term                     |
| 3. Others                 |                                  |
| B. Real Assets            | D. Net worth                     |
| <b>Total assets (A+B)</b> | <b>Total liabilities (C+D)</b>   |

Thus  $D = (A + B) - C$

A balance sheet similar to the above (Table 1) can be drawn up for each sector.

However, there will be one important difference as regards the characteristic items that would appear under each heading. Each real asset appears only on one balance sheet, that is of its owner. On the contrary, each liability by its very nature as a debt must necessarily imply the existence of a liability of equal amount on some other balance sheet (s). Similarly, each financial asset must necessarily imply the existence of a liability of equal amount on some other balance sheet. Thus liabilities and assets in one sector may not be equal but for the entire economy they would be equal.

For the purpose of constructing flow of funds account, this balance sheet can be rearranged as follows:

**Table 6: Rearranging the above Statement**

| <b>Assets</b>        | <b>Liabilities &amp; Net Worth</b> |
|----------------------|------------------------------------|
| 1. Real Assets       | 4. Net Worth                       |
| 2. Financial Assets  | 5. Liabilities                     |
| 3. Money             |                                    |
| Total Assets (1+2+3) | Total Liabilities (4+5)            |

**Step 2:** A balance sheet shows “stocks” as of moment in time rather than “flows” over a period of time. But data can be converted from stock to flow form by taking into account the changes in two balance sheets over the last two years.

In case we take into account financial assets and liabilities (ignoring real assets and net worth for the moment), we would get financial sources-and-uses-of-funds statement of a sector. It need not balance, since it is derived from partial rather than complete balance sheet. A financial use of funds for a sector (households, business firms, governments, and financial institutions) is to increase in its holdings of financial assets (lending) or to build up their stock of money (hoarding).

**Step 3:** Non-financial sources and uses are equally important and have to be considered. It is because a sector would also like to rely on those sources of funds. These sources may arise from current or capital account transactions. Changes in real assets and in net worth are non-financial transactions on capital account. Accordingly, the above balance sheet can be rearranged to take into account financial and non-financial uses and sources.

**Table 7: Uses and Sources of Funds Shown in a Balance Sheet**

| <b>Uses</b>                         | <b>Sources</b>                   |
|-------------------------------------|----------------------------------|
| $\Delta$ Real Assets ( Investment)  | $\Delta$ Net Worth (Saving)      |
| $\Delta$ Financial Assets (Lending) | $\Delta$ Liabilities (Borrowing) |
| $\Delta$ Money (Hoarding)           |                                  |
| Total                               | Total                            |

The symbol  $\Delta$  denotes “ changes in “.

The statement mentioned above (Table 7) is very useful. It shows that a deficit sector with investment greater than saving must disboard, borrow or sell financial asset in an amount equal to its deficit. And, on the contrary, a surplus sector with saving exceeding investment must repay debt, hoard or lend an amount equal to its surplus.

**Step 4:** The statement discussed above is, however, incomplete. It does not take into explicit account of current transactions. That implies it ignores current



receipts as a source of funds or current expenditures as a use or income statement. Incorporating current transactions, we get the following statement.

**Table 8: Uses and Sources of Funds Shown in a Balance Sheet**

| Uses                               | Sources                          |
|------------------------------------|----------------------------------|
| Non-Financial Uses                 | Non-Financial Sources            |
| Current Expenditures               | Current Receipts                 |
| Saving ( $\Delta$ Net Worth)       | -----                            |
| -----                              | $\Delta$ Net Worth (Saving)      |
| $\Delta$ Real Assets ( Investment) | $\Delta$ Liabilities (Borrowing) |
| $\Delta$ FA (Lending)              |                                  |
| $\Delta$ Money (Hoarding)          |                                  |
| Total                              | Total                            |

$\Delta$ =Changes in;

The excess of current receipts over current expenditures is generally termed as saving when it applies to the household sector; it is budget surplus in the case of government sector and retained earnings for business sector. As use of funds on current account, saving take the form of non-spending of accumulation or retention. As such, it becomes available as a source of funds for capital account and represents an addition to net worth.

**Step 5:** The above statement can be presented in the flow of funds matrix for a specified time period. It would appear as follows:

**Table 9: Flow of Funds Matrix –Three Sector Economy**

|                         | Sec-A |   | Sec-B |   | Sec-C |   | All Sec |   |
|-------------------------|-------|---|-------|---|-------|---|---------|---|
|                         | U     | S | U     | S | U     | S | U       | S |
| Saving ( $\Delta$ NW)   |       |   |       |   |       |   |         |   |
| Investmt ( $\Delta$ RA) |       |   |       |   |       |   |         |   |
| Lending ( $\Delta$ FA)  |       |   |       |   |       |   |         |   |
| Hoarding ( $\Delta$ M)  |       |   |       |   |       |   |         |   |
| Borrowing ( $\Delta$ L) |       |   |       |   |       |   |         |   |

**Notes:** NW = Net Worth; RA = Real Assets; FA = Financial Assets; M = Money; L = Liabilities.

This Statement is the most widely used form of sources and uses of funds statement. Since the income statement must balance and the changes in the balance sheet must balance, the summation of all the sources must equal the summation of all the uses of funds. The current receipts and current payments appear under Current Account, whereas the real assets formation and its financing appear under Capital Account.

The complete matrix of the flow of funds forms an interlocking self-contained system. It shows the balanced sources and uses-of-funds statements for each sector, the interrelations among the sectors and the aggregate totals of savings, investment, lending, hoarding, and borrowing for the economy as a whole.

## 11.6 APPLICATION OF FLOW-OF-FUNDS

Flow-of-funds accounting system is a comprehensive method. It furnishes information about sources and uses of funds accounts presented in the form of one large cross tabulation for all sectors. In these accounts, financial claims are ordered; users and suppliers of credit are identified; and owners of money

in circulation and government debt and financial flows are integrated with the savings and investments of each major sector of the economy. This information and data are useful to the policy makers, economists and social scientists in indicating, as argued by Professor Copeland, “how our economy works”. The specific uses are clear from the following points:

- 1) The analysis and examination of sector-wise flows and their interaction with the other individual sectors would help in identifying the problems relating to liquidity and its repercussions for the economy. For instance, when the economy is passing through the inflationary or deflationary phases, the flow of funds accounts would help in locating the sectors in which expansionary or contractionary pressures are building up.
- 2) The flow of funds accounts give an idea of all the real world changes in quantified terms that are related to economic institutions, the legal framework and the other institutional aspects. It is because money and credit flows are strongly influenced by the institutional, legal and other such arrangements of the economic system.
- 3) The study of the process in which transaction flows expand and contract would highlight the problems relating to economic fluctuations. For instance, the analysis of the structure of assets and liabilities of the different sectors will throw light upon the determinants of the changing behaviour overtime.
- 4) The flow-of-funds provides detailed sector-wise data on many financial and non-financial aspects. This information plays helps in analysing the changing pattern of liquidity in the different sectors of the economy. On this basis, indicators of financial development can be prepared. This information can be of great use for monetary analysis and capital market studies.
- 5) The sources and uses of funds of each sector portray the deficit or the surplus of each sector. Such accounts, for instance, would point out what kind of financial assets surplus sectors bought and what kinds of liability deficit sectors had incurred. These accounts will enable the government to design policies to channelise surplus funds for financing economic development.
- 6) Flow-of-funds accounts are useful in the field of financial planning and in indicating how the each sector is being financed. Sector-wise estimates of investment and saving give a good idea of the resources required to be mobilised for planning investment. Given this background, one can work out the probable effects of contemplated changes in economic policies.
- 7) Long term information on flow of funds helps in estimating the behaviouristic pattern of inter-sectoral disposition of funds and saving / investment variables. This system strives to link financial transactions and the financial structure of the economy with non-financial transactions and the productive structure of the economy. The accounting system, thus, explains the routes of financing the investment and also the interaction between economic activity and financial activity portraying simultaneously, the funds transacted between different economic units.

**Check Your Progress 2**

1) Differentiate among the different system of accounts.

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2) How are flow of funds accounts constructed and presented?

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3) What are the important uses and application of the flow of funds accounts?

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**11.7 FLOW OF FUNDS ACCOUNTING PRACTICE IN INDIA**

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In 1955, Shri Deshmukh, the then Finance Minister, made a suggestion to construct flow-of-funds accounts. Some tentative arrangements were made in the year 1956 under the joint auspices of the Central Statistical Organisation (CSO) and the Reserve Bank of India (RBI). Consequently, an attempt was made in 1957 to build up the accounts for banking and corporate sectors for the First Plan Period.

In 1959, Prof. H.W. Arndt of the National University of Australia visited India at the invitation of the Indian Statistical Institute and he prepared a memorandum on “Financial Flows of Indian Economy, 1951/52-1957/8”. The economy was divided into four broad sectors, viz., government, banks, rest of the world, and residual. The analysis was confined to borrowing and lending only. The main object of the accounts was to show as to how and in what forms domestic savings had become available to government for financing its expenditure.

Later on, the work of Prof. Arndt, was broadened by the “Working Group” constituted for the purpose. The “Working Group” had representatives from Central Statistical Organisation, the RBI, the Ministry of Finance and the Indian Statistical Institute. The Report of the Working Group gave a very

comprehensive account of Flow-of-Funds system of accounts. The Report had four sections. While presenting flow of funds accounts, the economy was divided into six sectors and 20 sub-sectors. Financial and non-financial transactions had ten categories. The Report gave the consolidated flow of funds accounts for the whole economy for the year 1957-58, in addition of the sectoral statements of sources and uses of funds separately both for financial and non-financial flows.

The RBI since then continued to improve methodology of constructing flow-of-funds system of accounts. These have also been published regularly. Following Bank's institutional classification, the Indian economy is divided into 6 broad sectors. They are: (1) banking (2) other financial institutions, (3) government, (4) private corporate business, (5) rest of the world and (6) households (residual). Each of these sectors is further divided into sub-sectors. Dis-aggregation of the sectors depends upon the availability of data of different institutions. The household sector includes individuals, households or consumers, non-corporate non-farm business, farm business, private non-profit organisations and all other units not covered in other institutional sectors. Flow of fund accounts, also require classification of the transactions into economically meaningful groups. These transactions are classified both instrument-wise as well as sector-wise. Their detailed accounts are given in Table 10 and Table 12.

These tables show the following points:

- 1) Total claims are issued by the financial and non-financial sectors. The former includes banking and other financial institutions and the latter includes private corporate business, government, rest of the world and the households.
- 2) The proportionate share of all the financial institutions (in uses) is about 26 per cent as compared to 74 per cent share of the non-financial sectors. The increased share of the non-financial sectors would indicate that secondary issues are considered more important as compared to the primary issues. A rising share of the financial institutions over the period would generally indicate the increasing financial intermediation in the economy.
- 3) Among the non-financial sectors, the leading sectors are the Government followed by private corporate sector and the household sector.
- 4) The most important instruments (as uses) in the Indian economy are loans and advances followed by currency and deposits, investments and provident funds. Within investments, the leading instrument is central and State governments followed by corporate securities.
- 5) The resource gap defined as the saving-investment gap adjusted for capital transfers can be worked out by taking the difference between sources and uses. These gaps are found both in sector-wise as well as instrument-wise financial flows. This is found very high in the case of Central and State Government securities. In case, investment of a sector is in excess of savings generated by it, this implies that this sector borrows directly from other sectors by issuing claims on them which are held by sectors having surplus resources as also through borrowings from the financial intermediaries.

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## 11.8 LIMITATIONS OF FLOW-OF-FUNDS ACCOUNTS

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- i) **Problem of Sectorisation:** The most important problem in the construction of flow of funds accounts is the division of economy into homogenous and meaningful sectors. A sector represents a group of transactions that have common characteristics capable of being distinguished for the purpose of analysis.

Sectorization of the economy is a difficult area because there are too many conceptual as well as statistical problems. Two most important conceptual problems relate to, one, Sectorisation and two, definition of each sector.

The criteria for identifying and delimiting the economic units which are to be brought together be, (i) Sectors should include all the activities of any economic unit; (ii) each sector be limited to units which show generally similar reactions to change in their assets and liabilities. The second conceptual problem relates to, whether the definition of each sector should be made on an institutional basis or on a functional basis. While defining a sector, one has to consider (a) the activity-financial or real (b) the functional homogeneity, (c) the institutional homogeneity and (d) data availability. One may observe that there quite often, appear a clash between institutional and functional classification of sectors. However, the sectoral classification should depend upon the institutional set up of the economy and also keeping in view the purpose for which the accounts are utilised.

- ii) **Presentation of accounts either on gross or net basis.** Financial flow accounts can be presented both on gross or net basis. Generally speaking, the gross transactions are preferable to net transactions for analytical purposes and also because the latter may conceal significant deviations in behaviour. However, the presentation of accounts on a gross basis depends on the availability of data and the form in which they are available for each sector.
- iii) **Consolidation of accounts:** The accounts of each institution or sub-sector have to be consolidated as transactions in each sector are presented 'from whom-to-whom' basis and sector-wise classification is presented under each instrument. In consolidating the accounts, intra sub-sector transactions are eliminated. This however, depends on the adequate availability of data.
- iv) **Valuation of transactions:** Transactions are recorded at the price at which they are sold or purchased. However, the same price may or may not be reported by the seller and the purchaser because the value reported in their books of accounts may be book value of face value or current market prices
- v) **Selection of Accounting Period:** The accounting period set for the flow of funds accounts is April-March. The period is also the same in the case of national income accounts. However, the accounting period is not common for all the institutions or sub-sectors of the Indian economy. These sectors include cooperative banks and societies (July-June); insurance companies (January-December) and financial corporations (July-

June). All these accounting periods have to be approximated for April to March for the purpose of flow of funds accounts.

- vi) **Discrepancies:** In principle, the flow of funds account constitutes an interlocking and balancing set of accounts. Total sources of funds become equal to total uses of funds for each sector. However, at the economy level, discrepancies between total financial sources of funds and total financial uses of funds arise due to many factors. These include factors like timing, valuation, coverage, classification and such statistical inadequacies relating to error in basis data or omission of pertinent transaction or transactors.

**Check Your Progress 3**

- 1) Write a brief note on the historical background of the first flow of funds account in India.

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- 2) Name the different sectors in which Indian economy is divided for the purpose of “sources and uses of funds” statement?

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- 3) Discuss the limitations of flow-of-funds accounts.

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**11.9 LET US SUM UP**

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National Income accounts measure the output, income, expenditure, saving and investment of the economy for a given period of time. The Balance of Payment accounts present the transactions of the domestic economy with the rest of the world. These accounts, however, do not give full information, as financial flows remain ignored in these accounts The Flow of Funds Accounts represents a set of accounts designed to show transactions between different economic units effected through medium of money and credit. The flow of funds, thus, is a system of social accounting that gives a statement of the “sources-and-uses-of-funds” of the each sector in which the economy is divided.

Flow of funds accounts covers both financial and non-financial transactions. Financial transactions are concerned with the acquisition of financial assets and contraction of debts. Non-financial transactions, on the other hand, relate to the acquisition of goods and services and transfer payments.

The origin of flow-of-funds account is attributed to the work of Professor Copeland in 1944. This system is different from other systems. These systems can be seen in terms of, the central focus of these accounts, the sector-wise breakdown of the economy, and the objectives underlying the construction of different types of accounts..

The information and data provided in flow of funds serve a useful purpose. The important users include policy makers, economists and social scientists. As argued by Professor Copeland, flow of funds, indicate “how our economy works”. For instance, flow of funds accounts facilitate the nature of the interrelationships of the financial and non-financial variables, their functioning and its implications for the economy. This information can be used for better monetary planning and also for future projections.

In India, the first time attempt was made 1956 under the joint auspices of the Central Statistical Organisation (CSO) and the Reserve Bank of India (RBI). As a result, in 1957, the accounts for banking and corporate sectors for the First Plan Period were constructed. The most important problems encountered while constructing the flow of funds accounts relate to, the division of economy into homogenous and meaningful sectors, presentation of accounts either on gross or net basis, consolidation of accounts and deficiencies arising from differences in reporting, timing, valuation, as well as estimation procedures.

## 11.10 KEY WORDS

- Flow-of-funds** : The flow of funds, thus, is a system of social accounting that gives a statement of the “sources-and-uses-of-funds” of the each sector in which the economy is divided.
- Financial Flows** : Financial transactions are concerned with the acquisition of financial assets and contraction of debts.
- Input-Output Accounts** : Input-output accounting is designed to study the way the technological production functions of various industries affect inter-industry relationships. In this manner, input-output accounting determines the industrial structure of the country.
- Non-financial Flows** : Non-financial transactions relate to the acquisition of goods and services and transfer payments.
- Sector** : A sector represents a group of transactions that have common characteristics capable of being distinguished for the purpose of analysis.

**“Sources” and “uses” of funds**

: These terms are used in flow of funds particularly in order to differentiate between receipts and payments, or “incoming” and “outgoing”. The use of “sources” and “funds” is preferred because payments generally convey the meaning of spending as well as lending and do not include the increases in money held. Similarly, “receipts” or “incomings” do not cover the funds available for investment or uses out of the depletion of money held in hand or in a bank.

**Stock and flow variables**

: Stock variables are measures at a particular point of time whereas flow variables are measured over time. For instance, balance sheet represents a stock situation whereas profit and loss account represents flow situation. Similarly, capital is a stock variable whereas investment is a flow variable.

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## **11.11 SOME USEFUL BOOKS**

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Central Statistical Organisation (1963) (CSO), Government of India: Report of the Working Group on Flow of Funds, New Delhi.

Roy Choudhuri, Uma Datta (1995) National Income Accounting, Macmillan, New Delhi.

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## **11.12 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES**

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### **Check Your Progress 1**

- 1) See section 11.2
- 2) See section 11.2
- 3) See section 11.2
- 4) See section 11.3

### **Check Your Progress 2**

- 1) See section 11.4
- 2) See section 11.5
- 3) See section 11.6

### **Check Your Progress 3**

- 1) See section 11.7
- 2) See section 11.7
- 3) See section 11.8



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## UNIT 12 INVESTMENT

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### Structure

- 12.0 Objectives
- 12.1 Introduction
- 12.2 Meaning and Importance of Capital Formation
  - 12.2.1 Capital Formation-Meaning
  - 12.2.2 Capital Formation vs. Capital
  - 12.2.3 Importance of Capital Formation
- 12.3 Classification of Capital Formation
- 12.4 Ways of Acquiring Capital Goods
  - 12.4.1 Introduction
  - 12.4.2 Ways of Acquiring New Durable Assets
  - 12.4.3 Types of New Assets
  - 12.4.4 Net Purchases of Second Hand Physical Assets from Abroad
  - 12.4.5 Change in Stocks Inventories
- 12.5 Gross versus Net Investment
  - 12.5.1 Net Domestic Capital Formation
  - 12.5.2 Depreciation Obsolescence and Capital Loss
- 12.6 Estimates of Investment in India
  - 12.6.1 Introduction
  - 12.6.2 Investment by Type of Institution
  - 12.6.3 Investment by Type of Assets
  - 12.6.4 Investment by Industry of Use
- 12.7 Public Sector versus Private Sector Investment in India
  - 12.7.1 Distribution of Investment
  - 12.7.2 Trend in the Distribution
- 12.8 Investment and Growth in an Economy
  - 12.8.1 Introduction
  - 12.8.2 Some Concepts
  - 12.8.3 Relation between Rate of Investment and Rate of Growth
- 12.9 Let Us Sum Up
- 12.10 Key Words
- 12.11 Some Useful Books
- 12.12 Answers or Hints to Check Your Progress Exercises

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### 12.0 OBJECTIVES

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After going through this unit, you should be able to:

- explain the concept of investment in an economy;
- examine the sources of financing the investment;

- describe the estimates of investment are arrived at by the CSO and the rate of capital formation in India;
- analyse the way investment helps in raising the production of goods and services; and
- describe various issues related to investment at the macro-economic level.

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## 12.1 INTRODUCTION

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Investment is a flow concept. It is also known as capital formation. Investment is a part of the national product which has not been consumed. The national income may be either consumed or saved. Normally, a part of the national product is consumed during the year and the remaining part is saved. Thus, we have  $Y = C + S$  this is the income side.

On the expenditure side we have  $E = C + I$ . National income and expenditure are identically equal. We get,  $C + S = C + I$ . Thus, investment  $S = I$  is saving. This, however, is an accounting identity. In national accounting all savings are taken to have been “invested” once they have taken place. But, not all expected savings are realised as investment. This is simply because savers are not themselves always the investors and some forms of saving may, in fact, amount to withdrawal of resources from production. The equilibrium relationship between saving and investment is different from the accounting identity. This circular of income goes on moving continuously with no disruption. Saving comes back to the economy in the form of investment.

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## 12.2 MEANING AND IMPORTANCE OF CAPITAL FORMATION

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### 12.2.1 Capital Formation – Meaning

In economics the two terms, investment and capital formation are used interchangeably and both these terms carry exactly the same meaning, i.e. an increase in the capital stock of an economy during a given year. The only difference in the two being that the term investment is more popular in economic analysis, whereas the term capital formation is preferred to be used by the national accountants.

By capital formation (or investment), we mean the addition to the country’s physical stock of capital during a period. It signifies that part of national product which is not consumed but used for increasing productive capacity in a country. It includes setting up of new factories, construction of rails, roads, bridges, dams, buildings, creation of new machinery and equipment, adding to stocks, etc. In short, the process of creation or formation of real capital in various forms is known as ‘capital formation’ or ‘investment’.

To sum up, capital formation in national income accounting is defined as = the surplus of production over consumption in an accounting year.

### 12.2.2 Capital Formation vs. Capital

It is important to note here a conceptual difference between capital and investment. Capital means all capital goods in existence at a particular point of time while investment signifies only addition to capital during a given period.

Capital is a stock while capital formation is a flow. Let us take an illustration. Suppose capital stock of a country, was worth Rs.1000 crores on 1 April, 2000. Further, suppose that on 31 March, 2001 it was Rs.1200 crores. It means that Rs.200 worth of addition is made to the capital stock during the year. This addition to the capital stock is called 'capital formation'.

**Capital formation during a year = capital at the end of the year - capital at the beginning of the year**

Investment, i.e. additions to capital assets, may be deliberate or just a matter of 'no option'. Investment in fixed asset is mostly deliberate and planned. But investment in stocks may partly be deliberate and partly a matter of compulsion. Every production unit has to keep a certain minimum amount of materials and goods as a matter of convenience. But sometimes a production unit is not able to sell whole of the output produced during the year. Its unsold output becomes a part of closing stock of the year which is treated as investment. Thus, both planned and unplanned addition to capital goods during a year is investment. This is true about both a production unit and about the country as a whole.

### 12.2.3 Importance of Capital Formation

Capital formation plays a key role in economic growth of a country. Its importance can be judged from the following facts:

- i) it opens up the possibilities of large scale production. Large scale production units which require huge investment can be established in the country.
- ii) It enables the country to make use of modern techniques of production. In this process of helps in making scientific inventions and technological advances.
- iii) It provides the necessary tools and equipments for production.
- iv) It creates employment opportunities. New factories, irrigation projects, construction work certainly add to the existing opportunities of employment.
- v) It may also lead to industrialisation.

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## 12.3 CLASSIFICATION OF CAPITAL FORMATION

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Capital formation is classified into two categories:

- a) Gross fixed capital formation (GFCF)
- b) Increase in stocks

Gross Fixed Capital Formation in India's further classified into the following:

- 1) Construction:
  - i) building construction;
  - ii) other construction ; and
  - iii) land improvement and development of plantation and orchard.

- 2) Machinery and equipment
- 3) Additions to all kinds of live stocks, i.e., breeding stocks, drought animals, dairy cattle and other live-stock.
- 4) 'Increase in stocks' consists of increase in the stocks of
  - i) materials and supplies;
  - ii) work in progress (i.e., semi-manufactured goods);
  - iii) finished goods;
  - iv) stocks of strategic materials and other important commodities (like food-grains) held by the government; and
  - v) young livestock.

In India, the share of gross fixed capital formation is far more as compared to that of increase in stocks. Not only that, it has improved over the years. In fact, this is a healthy development. The share of machinery and equipment in the GFCF has increased from 23.3 per cent in 1950-51 to 51.8 per cent in 1990-91. During the same period, the share of construction has fallen from 61.2 per cent to 40.2 per cent. This shows that the demand for machinery and equipment has been rising faster. Machine-building industry has made considerable progress in the country, but at the same time we have been importing machinery and equipment increasingly to meet their rising demand.

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## **12.4 WAYS OF ACQUIRING CAPITAL GOODS**

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### **12.4.1 Introduction**

Capital formation during a year consists of acquiring durable capital goods and net addition to stocks of materials, goods, etc. Acquiring of durable capital goods is called gross domestic fixed capital formation (GDFCF). The acquired durable capital goods, (i.e. GDFCF) is the sum of (1) new assets, and (2) the net purchases of second and physical assets from abroad in an accounting year.

### **12.4.2 Ways of Acquiring New Durable Assets**

New Assets can be acquired in three ways:

- a) by purchasing from the domestic market.
- b) own account production, i.e. production by the producing units for their own use.
- c) by importing from abroad.

### **12.4.3 Types of New Assets**

The types of new assets in India are classified into the following:

- a) Buildings. These include both residential buildings as well as non-residential or commercial premises like godowns, warehouses, factory buildings etc.

- b) Roads and Bridges. It includes the construction of roads and bridges.
- c) Other Construction Activity. This includes minor irrigation, telephone and telegraph, drainage, parking areas, etc.
- d) Transport Equipments. These include locomotives, carriages, rail-lines, buses, trucks, aeroplanes, etc.
- e) Machinery, Plants and other equipments. These include tools, machinery, equipment, etc., used by agricultural, industrial and service sectors of the economy.

#### **12.4.4 Net Purchases of Second Hand Physical Assets from Abroad**

Purchases of old assets (second hand assets) also form part of fixed capital formation. Producing units dispose of their outmoded and obsolete physical assets and acquire new ones to keep pace with the changing technology. These secondhand assets are purchased by less resourceful enterprises.

It should, however, be remembered that sale and purchase of physical assets within the domestic territory do not affect the overall capital formation in the country. Such a sale and purchase leads to only change in the ownership of assets. It does not make any net addition to the assets. For example, if the government disposes of the old military vehicles to the corporate sector, it will bring a fall in capital formation in the government sector, but raise capital formation in the private corporate sector. In other words, the value of gross domestic capital formation remains unaffected.

However, the sale and purchase of secondhand physical assets to and from abroad does affect gross domestic capital formation. In case, the purchase of secondhand assets from abroad is more than their sales to abroad, the net purchases of assets will be positive. As a result, the value of gross domestic capital formation will increase.

#### **12.4.5 Change in Stocks (Inventories)**

Gross fixed capital formation is also influenced by the changes in stocks. Changes in stocks in India are classified into the following:

- 1) Change in the stock of raw materials, semi-finished and finished goods held by households, corporate and non-corporate enterprises.
- 2) Stock of strategic materials, food grains, etc., held by the government.
- 3) Livestock raised for slaughter by enterprises.

The value of change in stock is obtained by sub-tracing the value of opening stock from the value of closing stock.

Change in Stock = Closing Stock – Opening Stock

Opening stock refers to the total quantity of goods that are available with a producing unit in the form of raw materials, semi-finished and finished goods in the beginning of an accounting year. Closing stock, on the other hand, refers to the quantity of raw materials, semi-finished and finished goods available with a producing unit at the end of an accounting year. Change in stock is the difference between the closing stock and the opening stock.

Opening stock refers to the total quantity of goods that are available with a producing unit in the form of raw materials, semi-finished and finished goods in the beginning of an accounting year. Closing stock, on the other hand, refers to the quantity of raw materials, semi-finished and finished goods available with a producing unit at the end of an accounting year. Change in stock is the difference between the closing stock and the opening stock.

**Check Your Progress 1**

- 1) Define the term investment.

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- 2) Distinguish between capital and investment.

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- 3) What is the importance of investment in an economy?

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- 4) What are the main components of the investment?

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**12.5 GROSS VS. NET INVESTMENT**

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**12.5.1 Net Domestic Capital Formation**

A fixed capital asset has a limited life. It depreciates every year and is to be replaced when its life is over. The normal wear and tear of fixed capital assets during the year is termed as ‘consumption of fixed capital’ or depreciation’. This reduces the amount of effective capital stock in the country.

Addition of new capital goods during the year is investment. In fact, it is gross investment. It is called gross because the consumption of fixed capital or

depreciation during the year has not been deducted from the addition of new capital. By deducting consumption of fixed capital from gross investment we get a measure of net investment. Thus, gross investment is a measure of gross addition to capital while net investment is a measure of net addition to the capital during a year.

Gross domestic capital formation (GDCF) is not a true indicator of the production potential and economic growth. For that we will have to acquaint ourselves with the concept of net domestic capital formation (NDCF). It is calculated as follows:

$$\text{NDCF} = \text{GDCF} - \text{Consumption of fixed capital}$$

### 12.5.2 Depreciation, Obsolescence and Capital Loss

In the process of production machinery and other capital equipments are made use of. In this process, the capital equipment undergoes wear and tear. The useful life of the capital equipment gets reduced. This wear and tear of capital equipment is known as depreciation, or consumption of fixed capital.

The useful life of the capital equipment may also get reduced due to economic, technical or external changes. For example, with the introduction of electronic typewriters and word processors, manual typewriters have become obsolete. This is known as obsolescence of capital equipment. If such an obsolescence is foreseen in advance and is taken care of while calculating depreciation, it is called consumption of fixed capital.

The capital equipment may also lose its utility due to unknown or external factors like natural calamities such as floods, earthquakes, storms, etc. Such losses to capital equipment are known as capital losses. Unforeseen obsolescence is also treated as capital loss.

In order to keep the production process going smoothly it is essential that the old and obsolete physical assets are replaced by new ones. This will not only keep the physical assets intact, but also help in the acquisition and use of new assets which may be technically far more superior and productive. Provision made for replacing the old assets by new fixed assets is known as depreciation provision or replacement cost of fixed assets.

Consumption of fixed capital is nothing but replacement cost of existing fixed capital. Making depreciation provision keeps the value of existing capital intact.

There are two sources of financing gross capital formation: Gross domestic saving and net capital inflow from abroad. Gross domestic saving is made up of (i) provision of depreciation funds and (ii) net domestic saving. On saving we have discussed in details in unit –10.

Net capital inflow from abroad includes –(i) net capital transfer from abroad and (ii) Net borrowings from abroad. By ‘net’ here we mean inflow minus outflow from an economy.

For the sake of convenience and simplicity, only two broad sources of finance, viz., gross domestic saving and net capital inflow are considered here. The data relating to these two sources in percentage terms in the Indian economy is given in Table 12.1.

The financing of capital formation is mainly by saving generated in the domestic economy. These estimates of domestic saving have been discussed in Chapter-10.

However, domestic saving, specially in a developing economy, is not always sufficient to finance the total development plan requirements of the economy. Therefore, domestic savings are supplemented by the inflow of capital from abroad. Thus, total capital formation in an economy equals to domestic saving plus net inflow of capital from abroad.

**Table 12.1: Financing of Gross Domestic Capital Formation in India**

| Five Year Plans | (In Percentage)       |                                |
|-----------------|-----------------------|--------------------------------|
|                 | Gross Domestic Saving | Net Capital Inflow from Abroad |
| I               | 96.5                  | 3.3                            |
| II              | 81.0                  | 19.0                           |
| III             | 85.5                  | 14.5                           |
| IV              | 95.6                  | 4.4                            |
| V               | 102.4                 | -2.4                           |
| VI              | 93.6                  | 6.7                            |
| VII             | 89.4                  | 10.6                           |

Table 12.1 reveals that the relative contributions of gross domestic saving and net inflow of funds have been different over different five year plans. Upto the second five year plan, the country's dependence on the outside world for financing its gross capital formation increased. But, after Second Five Year Plan, there was a continuous decline in dependence on this source. The fifth plan was, in fact, a different plan. During this period, gross domestic savings were higher than the amount required to finance GDCF by 2.4 per cent. In other words, there was a net outflow of funds from India to the rest of the world. Thereafter, share of gross domestic savings again declined. Our dependence on foreign funds again has grown during sixth and seventh plan periods.

With the recent changes in our economic policy, efforts are being made to remove all possible restrictions on the inflow of foreign capital. A favourable environment is being created to attract direct foreign investment. The new policy will, therefore, raise the share of foreign investment in the coming years.

**Check Your Progress 2**

- 1) Differentiate between gross capital formation and net capital formation.  
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- 2) What are the various sources of financing the capital formation.  
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- 3) What do you understand by the term 'Net inflow of capital from abroad' (NCA).

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## 12.6 ESTIMATES OF INVESTMENT IN INDIA

### 12.6.1 Introduction

Investment at the macro level can be measured in two alternative ways:

- i) As an excess of production over consumption: In other words, the part of country's production which is not acquired for consumption is investment, i.e.  $\text{Investment} = \text{Production} - \text{Consumption}$ .
- ii) Alternatively, investment is measured as the addition made to the total stock of capital in a country during the year. Capital refers to the stock of capital goods that exist at the beginning of the year. Investment is the net addition made to this during the year.

For illustration, suppose capital stock at the beginning of the year i.e. 1.4.96 is Rs.1000 crores. Suppose at the end of the year i.e. on 31.3.1997 capital stock is Rs.1100 crores. This addition of Rs.100 crores of capital assets during the year is investment.

$$\begin{aligned}
 \text{Investment} &= \text{Capital stock at the end of the year} - \text{Capital stock at the} \\
 &\quad \text{beginning of the year} \\
 &= 1100 - 1000 \\
 &= \text{Rs.100 crores.}
 \end{aligned}$$

In India estimates of investment are prepared by the Central Statistical Organisation (CSO). CSO prepares estimates of capital formation in three forms : (i) by type of institution, (ii) by type of asset, and (iii) by industry of use.

### 12.6.2 Investment by Type of Institution

By type of institution, the Indian economy is divided into (i) Public Sector; (ii) Private Corporate Sector; and (iii) Household Sector.

In practice, CSO prepares estimates for the total economy by using commodity flow method. Having obtained the total estimates, the estimates for the Public Sector and the Private Corporate Sector, are prepared separately. These are deducted from the estimate of the whole economy to obtain the estimates for the household sector. Thus, the estimates are first made for the economy, for the Public Sector and for the Private Corporate Sector. The estimate for the Household Sector is the residual.

### 12.6.3 Investment by Type of Assets

In the method of estimates of capital formation by type of assets, CSO uses

commodity flow method. The commodity flow method as used by the CSO is described briefly as follows.

$$\begin{aligned} \text{Gross Capital formation} = & \text{Production of Capital goods at ex-factory prices} \\ & + \text{Excise duty paid on such goods} \\ & - \text{Addition to Stocks} \\ & + \text{Imports} \\ & - \text{Exports} \\ & + \text{Trade and transport margin} \end{aligned}$$

**Types of fixed assets** : CSO classifies fixed assets into construction and machinery and equipment, Construction for military purposes, Defence equipment, durable goods in the hands of the households and increase in the stocks of defence materials are excluded from the scope of capital formation. However, capital outlays of defence enterprises on ordnance and clothing factories are included.

**Construction:** Construction covers all new construction, alternations and repairs of buildings, highways, streets, bridges, airports, rail-lines, communication systems, improvements on agricultural land, dams, etc.

**Machinery and Equipment:** This covers all types of machinery used in agriculture, power generating, manufacturing, etc. and also transport equipment, furniture and furnishings. Addition in livestock in respect of breeding stock, drought animals, dairy cattles and other animals raised for wool clippings are also covered. Additions to livestock other than these are accounted for under change in stocks.

**Changes in Stocks** : Changes in stocks consist of materials and supplies, work-in-progress and finished products and goods in the possession of producers and dealers. Stocks of strategic materials, grains and other commodities of special importance to the nation in the possession of government are also included in the estimates of change in stocks.

#### 12.6.4 Investment by Industry of Use

As stated earlier, CSO also prepares estimates of capital formation by industry of use.

For the Agricultural sector, estimates are separately separately for the public sector, Private Corporate Sector and Household Sector.

The Manufacturing sector is bifurcated into registered and unregistered. For registered manufacturing, the estimates are using the ASI data. In the case of unregistered sector, estimates are first prepared for the base year. These estimates are then updated with the help of index number of gross value added by this sector.

In the construction sector estimates for the public sector are made by using budgetary data. For the private corporate sector the estimates are prepared by the RBI . In the case of Household Sector, estimates are first prepared for some base year and for subsequent years estimates are obtained by using output ratios.

In the case of Transport, estimates for railways are obtained by using data in the Railway Budget. The remaining part of the transport is divided into organised sector like Air Transport, State Road Transport, etc. and Unorganised part. For organised part data are available whereas for the unorganised part the estimates are for some base year are prepared first and then updated by using suitable indicators.

For communication, Banking and Public Administration and Defence as the relevant data are available from various sources, the same are compiled and estimates of capital formation obtained.

For the rest of the sectors, as data are not available in the desired form, the estimates for bench mark years are prepared by using Survey data. These estimates are updated by using suitable indicators like output ratios, etc.

## 12.7 PUBLIC SECTOR VERSUS PRIVATE SECTOR INVESTMENT IN INDIA

### 12.7.1 Distribution of Investment

As we know, the public sector has been assigned an important role in Indian planning. As a result of it, almost equal share of investment has taken place in the Public Sector. This is clear from the following Table 12.2.

Table 12.2: Capital Formation by Public and Private Sector in India

| Plan          | Public Sector | Private Sector | Total |
|---------------|---------------|----------------|-------|
| I (1951-56)   | 46.4          | 53.6           | 100.0 |
| II(1956-61)   | 54.6          | 45.4           | 100.0 |
| III(1961-66)  | 60.6          | 39.4           | 100.0 |
| IV(1969-74)   | 60.3          | 39.7           | 100.0 |
| V(1974-79)    | 43.3          | 56.7           | 100.0 |
| VI(1980-85)   | 47.8          | 52.2           | 100.0 |
| VII(1985-90)  | 45.7          | 54.3           | 100.0 |
| VIII(1992-97) | 32.1          | 67.9           | 100.0 |

### 12.7.2 Trends in the Distribution

The share of Public Sector Investment to total investment has continuously been increasing upto fourth plan. It declined during the Fifth Five Year Plan. It accounted for only about 43.0 per cent of the total investment in the fifth plan as against 60 per cent during third and fourth plans. There was no change in this during sixth and seventh plans. But a major change of the trend was seen in eighth plan. This plan was weighed in favour of the private sector. As result of it, the share of private sector in the total investment has increased sharply. During the eighth plan, the private sector investment was 67.9 per cent of the total investment while that of public sector was only 32.1 per cent.

## 12.8 INVESTMENT AND GROWTH IN AN ECONOMY

### 12.8.1 Introduction

Let us now study the relationship between investment and growth, i.e., how it is essential for the growth of an economy that investment not only takes places but it is made at an increasing rate.

### 12.8.2 Some Concepts

However, before presenting the relationship between investment and growth, a few terms have to be understood clearly. By dividing the total capital stock in an economy by the total output (income) in a year we get the capital output ratio.  $\frac{K}{Y}$  Let this be denoted by  $\bar{K}$ . Similarly, if we divide investment by  $\Delta Y$  (i.e. increment in the capital stocks) by increase in the output, we get increment capital-output ratio (ICOR). This is denoted by  $\frac{\Delta K}{\Delta Y}$ .

Another term is the rate of investment. This equals to the total investment in a year divided by the total output ( or income) in that year. Finally, we have the concept of rate of growth of output which is denoted by  $\frac{\Delta Y}{Y}$ . Given these parameters, we proceed as follows.

### 12.8.3 Relation between Rate of Investment and Rate of Growth

Now, productivity of capital in an economy equals the output per unit of capital employed. This is denoted by  $Y/K$ . This is the reciprocal of the capital-output ratio  $K/Y$ . Therefore, if capital-output ratio (COR) and ICOR are equal, the productivity of capital and investment will also be equal. Therefore, if we multiply rate of investment

$(\frac{\Delta K}{Y})$  by the productivity per unit of investment  $\frac{\Delta Y}{\Delta K}$ .

$$\frac{\Delta K}{Y} \times \frac{\Delta Y}{\Delta K} = \frac{\Delta Y}{Y} = g$$

Thus, it will be seen that in this case, ‘g’ i.e. growth rate in output depends directly on the rate of investment in an economy.

Not only that, investment should increase at the same rate at which the income is increasing. Only then  $\frac{\Delta K}{Y}$  will remain stable. In case  $\Delta K(= I)$  is increasing at a lower rate than  $Y$ , the ratio will decline and consequently the growth rate also. The vis-a-versa also holds.

Therefore, in the above conditions one can say that investment is very crucial for the growth rate in the economy.

### Check Your Progress 3

- 1) Who prepares estimates of investment in India?

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2) State the types of estimates of investment prepared in India.

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3) What has been the share of investment in the Public Sector in India during the eighth Plans?

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4) State briefly the relationship between investment and growth in an economy.

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## 12.9 LET US SUM UP

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- 1) Capital formation plays a key role in economic development. It enables the country to set up factories, to make use of round about techniques of production. It creates employment opportunities.
- 2) The process of capital formation is directly and solely dependent on (a) Volume of saving and (b) mobilisation of saving.
- 3) Capital formation is made up of :
  - a) Gross Fixed Capital Formation (GFCF) (b) increase in stocks.
- 4)  $GFCF = \text{Construction} + \text{Machinery and equipment} + \text{Live stock}$ .
- 5)  $\text{Increase in stock} = \text{Raw materials, semi-finished goods and finished goods} + \text{stocks of strategic materials held by the government} + \text{young livestock}$
- 6) Of the two main components of GFCF, the share of machinery and equipment is higher than that of construction in India.
- 7) In the eighth plan the private sector accounted for 67.9 per cent of the total investment as against only 32.1 per cent by the public sector.
- 8) There are three main sources of financing gross capital formation in an economy. These are : (I) consumption of fixed capital ; (ii) Net Domestic Saving; and (iii) Net inflow of funds from the rest of the world.
- 9) Major finance for capital formation comes form domestic savings.

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## 12.10 KEY WORDS

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|--|---|--|
| <b>Capital Formation</b>                         | : | Net addition to the existing stock of physical assets.   |
| <b>Rate of Capital Formation</b>                 | : | It is the ratio of the gross capital formation to the gross domestic product at market prices.                                 |
| <b>Incremental Capital-Output Ratio</b>          | : | The ratio of gross capital formation and the related increase in GDP.  |
| <b>Saving</b>                                    | : | that part of national income which is not spent on consumption.  |
| <b>Rate of saving</b>                            | : | Ratio of gross saving to GDP.  |
| <b>Household Sector</b>                          | : | It includes all households, unincorporated business enterprises and private non-profit-making institutions serving households. |
| <b>Private Corporate Sector</b>                  | : | It is made up of private corporate sector and corporate banks and societies.   |
| <b>Public Sector</b>                             | : | It includes government administration, departmental enterprises, government companies and statutory corporations.              |
| <b>Net Borrowings from the Rest of the World</b> | : | It refers to the excess of net incurrence of liabilities over the net acquisition of financial assets.                         |
| <b>Propensity to Save</b>                        | : | The ratio of saving and income is termed as propensity to consume.   |

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## 12.11 SOME USEFUL BOOKS

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Bhatia, D.P. (1992) *Capital and Productivity*, Khama Publishers, New Delhi, Chapters 2, 3 and 7.

Bhatia, D.P. (1996) *National Accounts – Concepts and Estimates*, Khama Publishers, New Delhi, Chapters 1,13 and 14.

CSO (1989) *National Accounts Statistics – Sources and Methods*, New Delhi.

CSO (2005) *National Accounts Statistics*, New Delhi.

Government of India, Ministry of Finance, Economic Division, *Economic Survey*, (various years).

Junankar, P.N. *Investment: Theories and Evidence*, Macmillan, London.

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## 12.12 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

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### Check Your Progress 1

- 1) Investment means an increase in Capital stock of an economy during a given year it signifies that part of national product which is not consumed

but used for increasing productive capacity in a country. It includes setting up of new factories, construction of rails, roads, bridges, dams, buildings, creation of new machinery and equipment, adding to stocks, etc. In short, the process of creation of formation of real capital in various forms is known as 'capital formation' or 'investment'.

- 2) Capital means all capital goods in existence at a particular point of time while investment signifies only addition to capital during a given period. Capital is a stock while capital formation is a flow.
- 3) The importance of investment in an economy can be explained as under:
  - a) It leads to round about process of production as it uses division of labour which leads to specialisation.
  - b) Helps large scale production
  - c) Makes it possible to use modern techniques of production. It also in making technological progress.
  - d) Creates employment of opportunities
  - e) Leads to industrialisation
- 4) Components of investment are:
  - a) Gross fixed capital formation and
    - i) New Assets
    - ii) Roads,
    - iii) Bridges,
    - iv) Buildings
    - v) Construction activities
    - vi) Transport
    - vii) Equipment
    - viii) Machinery, plant
  - b) Increase in stocks
    - i) change in the stocks of finished and semi-finished goods and raw materials with the firms
    - ii) change in the stock of strategic materials and foodgrains with the government
    - iii) change in the livestock raised for slaughter by enterprises.

### Check Your Progress 2

- 1) Addition of new capital goods during the year is gross investment. It is called gross because consumption of fixed capital or depreciation during the year has not been deducted from the addition of new capital by deducting consumption of fixed capital (depreciation or wear and tear) we get net investment. Thus, gross investment is a measure of gross addition to capital while net investment is a measure of net addition to the capital during a year.

- i) Gross investment is not a true indicator of production potential and economic growth. However, net investment is the true indicator of Economic growth.
  - ii) **Depreciation**: In the process of production capital equipment under goes wear and tear . The useful life of the capital equipment gets reduced.
  - iii) **Obsolescence**: Due to economic, technical or external changes useful life of capital equipments get reduced.
  - iv) **Capital Loss**: When capital equipment lose its utility due to unknown or external factors like natural calamities such as flood, earth quakes, cyclone etc, unforeseen obsolescence is also treated as capital loss.
- 2) There are three sources of financing the capital formation:
- i) domestic saving and
  - ii) Net Capital transfer from abroad and
  - iii) Net borrowing from abroad
- 3) Net inflow of capital from abroad (NCA) means inflow of capital from abroad minus outflow from an economy.

### Check Your Progress 3

- 1) In India estimates of investment are prepared by the central statistical organisation (CSO) .
- 2) Estimates in three forms (a) by type of institutions (b) by type of asset, and (iii) by industry of use.
- 3) During the eight five year plan (1992-97) the share of public sector investment in total investment was 32.1 per cent.
- 4) Growth rate in output depends directly on the rate of investment in and economy investment is very important for increasing the growth rate of economy.